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## REPORT

OF THE

# SECRETARY OF THE INTERIOR; 

BEING PART OF

# THE MESSAGE AND DOCUMENTS <br> COMMUNICATED TO TIE 

TWO HOUSES OF CONGRESS

AT THE

BEGINNING OF THE SECOND SESSION OF THE FIFTY-FOURTH CONGRESS.

IN FIVE VOLUMES.

VOLUME V-IN TWO PARTS.
PAR'T 2.
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## PARTII.

## CHAPTER XX.

## EDUCATION IN SWEDEN AND ICELAND.

## I.

## Education in Sweden. ${ }^{1}$

TOPICAL OUTLINE.-General features; Sehools and their methods; Secondary education; The teaching force; The cation of women; The peoples' high school for women; Schools for coeducation; : yrsity education; Women in the universities; Technical and sloyd training; Dairy, agricultural, and horticultural schools; Cooking and Housekeeqsing schools; Fresh air fund colonies; Teachers' Association. ${ }^{2}$

Authorithes Consulted.-Berättelse om Statens allmänna läroverk för Gossar; Berättelse om folkskolorna i liket; Redogörelse för Kongl. Universitet i Upsala; Slöjd Undervisningsblad; Vor Ungdom; Das höhere Schulwesen Sohuedens, von' H. Klinghardt; Rapport de Mlle, Matrat sur les écoles samdinaves; Thesis of Dr. N. G. W: Lagesstedt; Palmgrenska Samskolan i Stockholm; Reposts from the Swedish Ladies' Committee to the World's Colmonbian Exposition at Chicags in 1893; Statesman's Fear-Book.

Articles on Swedish cducation in previous reports.

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| Resume of Swedish school | 1871 | 477-480 |
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| Conditions of secondary education; statistics from kindergarten to puiversity; weight of school children from 5 to 16 years of age; Swedish system of gymnastics; elementary school statisties; chief officer of education. | 1889-50 | $\begin{array}{r} 366, \\ 551-55, \\ 1103-1108, \\ 1201-1212, \\ 1672-1677 \end{array}$ |
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## GENERAL FEATURES. ${ }^{1}$

Constitutional monarchy ; Area, 172,876 square miles; Population, 4,824,150 on December 31, 1893; Capital, Stockholm; Population, 257,037 in 1893; Minister of education and ecclesiastical affairs, Gustaf Frederick Gilljam, appointed November 6, 1891; Total number of youth in schools, 713,304, or 14 per cent of the population; Number in elementary schools, 694,218 , or 97.3 per cent of the pupils in all schools.
The general features of the school system indicate that it is established by authority of the State. A law of 1842 provided for a stationary school (fasta folkskola) in each church district or parish, or for ambulatory schools (flyttande folkskola) where the character of the country prevented attendance on the stationary schools. Preparatory schools (smäskolor) for children from 7 to 9 years of age are to be established in mountainous districts. A teachers' seminary (normalskola) is to be established in each chief town of a diocese. Higher grade elementary schools (högre folkskolor) have been obligatory since 1858 in villages and districts where there are more than 60 pupils.

The secondary grades (högre allmänna läroverken) include two divisions, which correspond to the classical or Latin schools, and to Real schools with course of study fitting for practical life. Professional schools, special schools, and the universities complete the public school system.

The elementary schools are maintained by the district with help from

[^1]the State; secondary and normal schools receive aid ${ }^{1}$ from the State, which also gives subsidies to private schools of this grade. There are special State subsidies for the extension of sloyd training, for technical instruction, and for the universities and medical school.

The general control of the schools is vested in central boards of officers connected with the different ministries at Stockholm. The ministry of education and ecclesiastical affairs has two educational divisions, the one having general control of elementary and normal, the other of secondary and higher schools.

The universities are under direct charge of a council, which is affiliated with the ministry, but has the chancellor or rector of the university as chief officer. Special schools are adjuncts of the ministry of the interior or of finance; military schools of the ministry of army and navy. Special inspectors have oversight of elementary schools in each diocese, visiting the schools and reporting to the district-school board and consistory, and later to the department or ministry of education and ecclesiastical affairs. Each district has its school board, which is under the control of the church authorities; it superintends all elementary and preparatory schools, extends a certain supervision over private schools, and reports to the chapter of the bishopric of the diocese. Thus, it may be seen that one of the main features of the Swedish school system is the influence of the church over the school. The bishop and chapter (consistory) in every diocese carefully supervise all schools, watching over their development. The secondary schools have a board of school directors for local management, but the bishop as ephor of all the schools of the diocese outranks this board. The normal schools are under the direct supervision of the chapter of the diocese in which they are situated, but a higher control over these trainiug schools for teachers is exercised by the chief of the division of the ministry of education and ecclesiastical affairs at Stockholm liaving special charge of normal schools. The local officials report to the higher officials in Stockholm, as above indicated, and these in turn to the King, who is the highest educational authority, possessing in school matters both legislative and executive power.

## SCHOOLS $A N D$ THEIR METHODS. ${ }^{2}$

The main features of the administration of the school system having been summarized on the preceding page, it remains to present whatever may appear to be additional to the statements presented in former reports published by this office. The present conspectus necessarily reiterates much that has been said before, but, as it is taken in the main from the "Reports from the Swedish Ladies' Committee to the World's

[^2]Columbian Exposition at Chicago, in 1893," there is a noticeable feminine tone, and special stress is laid upon the woman's side of the educational question, the training of girls, etc.

To promote education it is stated that larger amounts "are expendel in Sweden than in other European countries in proportion to the insig. nificant national property of the country." Instruction in the State or national schools is mainly gratuitous-and scholarships are bestowed annually. Admission to Government offices requires a high standard of knowledge, and hence the school standard is kept up proportionall Education in the national or common schools is similar for both sexes, but secondary education for boys is differently organized from that for girls. The boys are educated by the State free of cost; while the higher education for girls is " an entirely private undertaking." Private schools sometimes obtain State and municipal grants; boarding schools are not found in Sweden. There are none for boys and only one of special importance for girls.

The object of the national schools is to give to the rising generation of Sweden the first elements of education. Thus they correspond to the Volks or Elementarschulen of Germany, the Ecoles- primaires of France, and the board schools of England.

The establishment of such schools goes as far back as the end of the sixteenth and the beginning of the seventeenth century.

According to the ecclesiastical law of 1686 nobody could get married withont knowing Luther's catechism, ${ }^{1}$ and the rector of each parisi, moreover, was to take special care that the young people of his district learned to read "out of a book." The duty of teaching this subject devolved upon the chaplain and the sacristan.

By means of voluntary contributions from private people as well as from parishes, several national schools were established by degrees; but as late as 1840 more than half of the parishes in the Kingdom liad no such schools. Many children, however, learned to read at home.

By the ordinance of June 18, 1842, it was settled that in each parish there should be at least one school (stationary if possible) with a duly approved teacher, and that the attendance should be compulsory, with an exception only for those children who obtained correspondin兔 instruction at home or at another school.

The school expenditures were then defrayed by the parishes; a poor parish could, however, obtain a grant from the State for the teacher's salary.

Since 1875 the State has paid two-thirds of a teacher's salary, which amounted to 700 crowns ( $\$ 187)^{2}$ The rest is paid by the parish. The parish expenses for the national schools amounted in the year 1890 to 19.1 per cent of the sum total. ${ }^{3}$ The State allows the parishes more

[^3]than $4,500,000$ crowns $(\$ 1,206,000)$, that is, 8 per cent of the whole budget. In 1891 the expenses for the national schools amounted to $13,566,825$ crowns ( $\$ 3,635,915$ ):

In the same year the pupils were 692,093 of both sexes, the whole population amounting to $4,774,409$ persons.

The instruction is free and equal for boys and girls.
Coeducation is everywhere prevalent up to 10 years of age; in the rural schools it is generally carried on throughout the school period.

The cost of schoolhouses and apparatus is paid by the parish, and both are-particularly in the-large towns-of superior quality. New schoolhouses are built every year, but nevertheless, the classes in town generally have 30 to 40 children each.

The school age is from 7 to 14. In the "Normal plan for instruction in national and infant schools" of 1878, the course of study in a stationary infant school was fixed for two years and that of a stationary national school-being a continuation of the former-for four years or six years.

Within each school district containing a parish, the board-chosen by the voting members of the parish-exercises an immediate influence over the instruction of the people. Above this board is the bishop and the chapter of each diocese. The supreme direction remains with the Government through the medium of the department of instruction, which since 1861 has appointed inspectors, who visit the schools on its behalf.
The national schools are of several kinds:
(1) Infant schools (småskolor) were established in 1858. The object of the infant school is to teach the children the elements of reading, writing, religion, arithmetic, and (in the towns) needlework according to new, practical methods. Sometimes these schools are connected with the national schools. In Stockholm there exist no separate infant schools.
(2) National schools proper (egentliga folkskolor), which must be provided with teachers examined at the training colleges. ${ }^{1}$ These schools impartinstruction in plain and fluent reading of the Swedish language, printed in Roman as well as black-letter type, generally acquired by the phonetic method; in religion and Bible history, up to the standard required by the clergy for being allowed to attend a confirmation class; in church singing, with exception for those who have no ear for music; in writing, and the four rules of arithmetic. The result gained is that all read well (in Sweden there exist, according to the statistics furnished at the enrollment of conscripts in 1890 , only 0.5 per cent of analphabets and among the emigrants to America there are no illiterates); that the majority write a good hand (for good handwriting the national schools of Stockholm carried the first prize at the Philadelphia Exposition of 1876); and they spell fairly well. Beyond this compulsory minimum

[^4]course, instruction is imparted in geography, Swedish and general history; arithmetic, to and including double rule of three in whole numbers and fractions; geometry, geometrical drawing, and natural history In the national schools gymnastics and military drill are also taught, and in some of them gardening and manual work. A special grant for manual work (sloyd) for boys was not given until 1878. Needlework is learned in school in towns by the girls and in some of the schools in the country-in all about one-third of the schools. There is a movement to to bring it into every school. In the upper classes for girls cookery has begun to be introduced since 1889, and has led to good results. ${ }^{1}$ These schools, however, do not prepare for the higher schools, though there are always pupils passing from the one to the other.
(3) Minor schools (mindre folkskolor), which are to be found in the provinces, and are but few in number, can be said as a rule to extend their.instruction only to the minimum course. The teachers in them are not required to pass the national teachers' examination, and have generally a lower salary.
(4) Besides, there are so-called continuation schools (fortsättni skolor), the object of which is to give in one or two years further instave. tion to those pupils who, with good testimonials, have passed through the national school and wish to increase their knowledge for practiol purposes.
(5) Higher national schools (högre folkskolor) are schools possessed in common by several parishes in the country and arranged with the purpose of giving an opportunity to the children of the working classes to attain a higher standard of learning, while at the same time the pupils may continue their manual labor. These schools are open bnt twenty-four weeks a year. Only those pupils who have gone through the national schools are admitted. The subjects are the same as in the schools before named, except that a foreign language is sometime taught. The teachers must have studied at the university. These schools are not many in number, and should not be confounded with the people's high schools (folkhögskolor) or the burgher schools (borgar skolor) in the towns. About half of these schools are mixed. The others are for boys. If a school claims a State grant for the teacher' salary the annual time of instruction must extend over eight months in a year at least. The daily hours of attendance in the national school ought not to exceed six and in the infant school not more than five. As a rule, the instruction at almost all of the infant schools has been kept up by women teachers, and for that reason the appointment of women as teachers in national schools may be counted from the time these schools were established (in 1858). Before that time female school teachers were only few in number. At the national school proper the employment of female teachers in ordinary was sanctioned by the stat-

[^5]ute of October 21,1859 , which fixed at the same time the establishment of female training colleges. In 1868 the number of female teachers amounted to 29.6 per cent, compared to that of males. To what extent female teachers have been further employed at the schools appears from the synopsis below:

|  | Year. | Male teachers. |  | Fenaale teachers. |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Number. | Percent. | Number. | Per cent. |
| 1876. |  | 4,832 | 51.8 | 4,479 | 48.2 |
| 1880. |  | 4,829 | 40.9 | 5,538 | 59.1 |
| 1885 |  | 4,900 | 42 | 6,754 | 58 |
| 1890. |  | 5,060 | 39.7 | 7,684 | 60.3 |

Out of the whole number of female teachers in 1885, no less than 4,624 were employed in the infant schools and 850 at minor schools, while only 1,280 served in the national schools proper. Of the last group, 776 were teachers in ordinary, viz, in the country 368 and in towns 408 (in Stockholm alone, 184). Revierving the state of things in the whole country, such as they presented themselves in 1890, we find 60.3 per cent of the teachers to be women and 39.7 per cent men. Thus, during each of the last twenty-four years, the number of female teachers has on the average risen more than 1 per cent. In the country the salary for male and female teachers is the same; in Stockholm a female teacher receives about two-thirds as much.

The burgher's school (borgarskola) of Stockholm is thus described: The origin of the high, or burgher's, school for the working and middle classes in Stockholm was a Sunday and evening school for men, founded in 1836 by a private society. In 1882 the school was thoroughly reorganized, and advanced classes were established by the side of the lower oues existing before. In 1880-81 female pupils were admitted and at the same time female teachers were appointed. The school is supported by the annual fees of the society members, an appropriation from the city council, the artisan union, etc., and the school fees of the pupils. These, however, are excessively low, 2 crowns ( 53 cents) a term for twelve hours a week. The national school buildings are thrown open to the free use of the burgher school, the hours of attendarce being Sundays 8.30 to $10.30 \mathrm{a} . \mathrm{m}$. and 2.30 to 6.30 p . m. ; week days 5 to 9.30 p. m. The subjects of instruction are, in the lower division, Swedish, arithmetic, writing, geometry, free-hand and geometrical drawing; in the higher division (where the subjects are optional), the same, with the addition of bookkeeping and the German and English languages. Lectures are held upon history and geography, history of Swedish literature, politics and national economy, hygiene (with ambulance), chemistry, physics, astronomy, and other natural sciences, out of which four to six are to be found on each year's reading plan. A circulating library is open to the pupils free of cost. The school is managed by a head master with eight male teachers in ordinary and thirty-two assistant teachers, of whom ten are women. In 1890-91 the number of
pupils in nine parallel classes was $1,352,410$ of whom were females. These attend the lectures and the language classes simultaneously with the male pupils. Their age ranged from 14 to 30 or above.

## SECONDARY EDUCATION.

The secondary scheols include the "högre allmånna å Latinlinien fullständige läroverken" and the "högre realläroverken"-that is, classical and modern schools. They were 75 in number in 1892-93, with 14,608 students. It is stated that only about 30 of them fulfill requirements leading to the universities. The cost of instruction amounts to from $\$ 8$ to $\$ 10$ for each student. In 1891 there were 650 students ( 15 women) who passed the required examination for admittance to the universities. Expenditures for secondary education amount to about. $\$ 1,000,000$ annually. These schools are described by Dr. N. G. W. Lagerstedt as follows:

The secondary schools "do not form a direct continuation of the primary schools as in the United States," although they are preparatory to university education. They aro all complete in their organization, although usually considered to be of two kinds, the higher or complete schools with nine classes, and the lower or incomplete schools with two, three, or five classes. Yet "tho teaching in these classes agrees precisely with that of the corresponding classes of the complete secondary schools." The secondary schools consist of the classical and "modern" (Real) schools. The curriculum comprises nine years and the boys (girls are not admitted to these schools) must be 9 years of age before entering. The plan of instruction is the same for the first three years; during that period German is the only foreign language taught: Then a bifurcation takes place, some pursuing the Latin (classical) course, others the English (modern) course. Still, in all subjects other than Latin and English, instruction is as a rule the same for tho two following jears. French is taken up in the fifth year, both in the modern and the classical side. The last four years, the sisth to the ninth, the pupils of the modern and classical lines are separated, and at the same period-the sixth year-a new division takes place on the classical side. Greek is taken up ly some, English by others-that is, there is "a full classical section and a half classical section." At the close of the secondary course the maturity, or graduation, examination takes place; the diploma attained, the student may then pass to the university, to military or forestry schools, or to low-grade positions in the Government service. This maturity examination is quite a severe one, and the boys of the modern (Real) side, not lhaving studied Latin, must give special evidence of greater knowledge in mathematics, natural sciences, and modern languages than the boys on the classical side.

According to reports of discussions, the intention is to bring the elementary and secondary grades more nearly together by "eliminating one or more of the lower classes of the secondary schools and by making the elementary directly preparatory to the secondary school."

## TIIE TEACHING FORCE. ${ }^{1}$

When the infant schools were established in 1858 it was resolved that female teachers should be employed in them, and that a pupil who had passed the two lower classes of a training college for national schools

[^6]lad the right to present herself as a candidate for the post of an infant school teacher. Special training colleges were also established by the district or diocesan authorities or else by private enterprise.

The instruction at these colleges has hitherto generally covered a period of eight months, but has now in many places been extended to one or even two years.

The training colleges provided by the anthorities of the district or diocese are at present seventeen in number; those established by private individuals are five. They are all attended by female pupils; in some of the former there are also male pupils.
The subjects of study at these training colleges are religious instruction, Swedish language, arithmetic, didactics (in some also history and geography of Sweden and natural history), handwriting, drawing, singing, gymnastics, and needlework.

In some districts there is a head master; in others, a head mistress. The assistant teacher at the infant school for practice connected with these training colleges is nearly always a woman. The salary of a head mistress varies between 1,200 and 2,000 crowns ( $\$ 321$ to $\$ 536$ ).

Besides the training colleges mentioned, there are in the far north of Sweden two establishments maintained by the State for the purposo of training male and female infant school teachers for the Finnish and Lapp schools in that part of the country. The Finnish training school at Haparanda has a course of study extending over three years and is managed by a head master, three male teachers, and a female teacher of needlework. The Lapp training school at Mattisudden (a village in Lapland) has a course of study extending over two years and is managed by a head master and an assistant female teacher.

The instruction, which is carried on in Swedish in both, comprises the following subjects: Religious instruction, Swedish, Finnish (only at Haparanda), Lapp (only at Mattisudden), arithmetic, object lessons, handwriting, drawing, singing, gymuastics, and needlework.

To be qualified for the profession of a national school teacher in Sweden it is necessary to have passed through one of the training colleges of the Kingdom. In 1860 the right of applying for admission to a training college was extended to women, and several female training colleges were established.

Since 1878, to the three classes, of one year's cluration each, has been added a fourth, so that the course now extends over four years. The time of instruction at a training college extends annually over thirtysix weeks, divided in two terms. At the end of the spring term a final examination is held with the pupils of class four and an anuual one with the three lower classes. The daily sessions are six hours in length, the time for gymnastics not included.

The varions subjects of instruction (which are the same at the male training colleges, with the addition of military dxill), comprise:
Religious instruction: Bible reading, sacred history, catechism, several hymns, and the outlines of church history.

Swedish language: Grammar, spelling, elocution, recitation, and composition.

Arithmetic: Elementary arithmetic, solving simple equations of one unknown quantity, extraction of the square and cube roots of numerical quantities, and bookkeeping.

Geometry: Geometrical object instruction, measurement and calculation of certain plane and solid figures.

History: Swedish history (detailed) and the political constitution of the country, chief events and lives of the most famous personages out of general history.

Geography: Physical and political (that of Sweden most minutely).
Natural history and science: Zoology (comprehending knowledge of the human body and the laws of health), botany, chemistry, physics, the elements of geology and astronomy.

Pedagogy and methods: Outlines of psychology, a pedagogical and methodical representation of the development of national schools.

Dratwing: Freehand and model drawing (also designing of easy objects of art and sloyd), the elements of perspective, and mechanical drawing.
Music and singing: Solo and part singing of chorals and patriotic songs, liturgies and hymns, scales and technical exercises, the principles of harmony, organ.

Gymnastics: With or without apparatus, marches, etc.
Gardening and planting of trees: The elements.
Needlework: The same courses as those of the national schools.
The practical training begins in class 2 , the pupils of which teach in the infant classes of the school for practice; it is continued with the pupils of class 3, who teach sacred history, elocution, and arithmetic in the national school classes, and is finished off in class 4, the pupils of which teach the other strbjects in the same divisions of the school. The number of hours devoted to practical training are: In class 2, four hours a week; in class 3 , four, and in class 4 , fourteen.

The teachers at each training college are to be a male head master (rector) and at least four assistant teachers, of whom one must be a woman. The qualifications for a coadjutrix are: (1) To have reached the age of 23 years; (2) to have passed the complete final examination at the higher training college of Stockholm and to have obtained the highest testimonial in didactics and the second best in pedagogy and methods; (3) to have served at least a year at one of the State training colleges and to have gained a good character in that employment, and (4) to have given evidence of practical skill of instruction before the consistory to which the training college is subordinate.

A female teacher, having been nominated coadjutrix, only obtains a warrant of her appointment. If, after that time, she marries, it remains (in virtue of a new statute) with the consistory to decide whether she may keep her place or not. The obligatory time of instruction is
twenty-four to twenty-eight hours a week. A coadjutrix enjoys the same salary as a coadjutor, from 1,750 up to 3,500 crowns ( $\$ 467$ to $\$ 978$ ). Besides the coadjutrixes, there are female assistant teachers engaged at the schools for practice connected with the training colleges. At a female training college, teachers in the so-called subjects of exercise, drawing, music, singing, and gymnastics, ought also to be women.

At the Riksdag of 1844 the first claim was made on the State to take measures for the purpose of training able female teachers for the higher schools. The matter was dropped at that time, but at the Riksdag of 1859-60 a subsidy was granted for the foundation of a higher female training college. It was established in Stockholm in 1861, and in 1862 a higher school for girls (State model school) was attached to it, in which the pupils had the opportunity of learning how to teach from practice.

The conditions for admitting a pupil to the training college are that she have the standard of education imparted in a complete higher girls' school, which always comprises three modern languages. These conditions, however, have been raised by the fact that there are more applicants than places. The age of admittance was 17 , but has now been raised to 18 years. The instruction is free of cost.

The course of study extends over three years, to which a fourth (with complete liberty in the choice of subjects) can be added by those who wish to perfect themselves as teachers of some special subject. Terms, hours of attendance, hygienic conditions, etc., are equal to those of the higher schools. About twenty-five pupils are generally admitted every autumn.

The subjects of instruction in the first division are: Religion, Swedish, French, German or English, geography, history, mathematics, natural history and science, and pedagogics. In the second division, physiology and hygienics are taught also; geography is dropped; German and English, mathematics, with the exception of arithmetic, as well as the conversational classes in foreign languages, are optional. In the third division this is also the case with natural sciences, foreign languages, drawing, and singing. The pupil must, however, study either one language or natural sciences.

The instruction at the training college is adapted to what may prove of use to the future teacher. The courses of study are strictly limited; clearly defined, thoroughly mastered, and the teaching is very methodical. Great importance is attached to the correct writing and speaking of the Swedish language, as also to the prounciation and grammar of foreign languages studied.

The practical training of pupils is brought about partly by listening to lessons in the model school and giving oral or written accounts of them, partly by exercises in questioning and narrating, and then by giving lessons in the model school.

The fourth course, with the purpose of training specialists, was not
established till 1891．In that course the pupil carries on private studies in one to three subjects under the direction of the teachers at the training college．These stadies should be more independent and less limited than the preceding ones，which might be said to form a continuation of the systematic school studies．In some of the subjecte⿻木⿴囗丷． passed by a pupil during the fourth course her knowledge is considere equal to that for a bachelor＇s degree．

Instruction is imparted by masters and bachelors of art，paid by the State，and at the same rate with teachers in the boys＇schools．They also teach in the model school connected with the training college．Con－ versational classes in foreign languages are kept up by foreign ladies or persons who have spent a long time abroad．At the head of the training college is a head master and a head mistress．As the number of applicants is very large the establishment of another training college has been spoken of，but since the universities are now open to women there will most likely be no need of it．

## the education of women．${ }^{1}$

In 1884 a commission of inquiry was appointed by the Government to examine into higher elementary education for girls and present a scheme for its improvement．This commission inquired carefully into the state of the schools，gathered copious statistics（presented to the public in the report of 1885 ）and worked out a plan for the higher edu－ cation of girls．This work，however，has not as yet led to any practical result，either in one way or the other．

The State has attended to the superior education of women by founding special female training colleges and by giving women the same rights as men in studying at the universities．

Women are excluded from the professional schools of Sweden（for engineering，shipbuilding，veterinary surgery，etc．），but the fine－art schools and those for sloyd and gymnasties are open to both sexes． Private industrial schools also exist．

The pedagogical influence exercised by woman upon the rising generation within the house may be said to have aided woman to find a new sphere of action outside her own home．As teachers，head mis－ tresses of schools，members of school boards，lady inspectors，writers on pedagogies，etc．，women have attained an influence which is steadit increasing．Woman＇s work also affects the ligher education of her own sex．

As a general observation it may be mentioned that the social position of a woman teacher in Sweden，be it as a governess or a school mis－ tress，is a highly esteemed one．Daughters of higher officers in public service or otherwise，belonging to the best families，devote themselves to this noble calling．Many of the largest young ladies＇colleges are founded and chiefly managed by ladies；and the number of lady teachers
increases with every year. In 1889 women obtained the right of being chosen members of parochial school boards, which exercise their influence on the national schools. Miss Lilly Engström, teacher at the State Model School for Girls, was the first woman elected to this important function, and since then one lady after another has been chosen member of the board. The zeal shown by women in this new office has already been acknowledged.

Parents who do not wish to send their daughters to the national schools, and who want them to get a knowledge of foreign languages, either send them to the higher schools for girls or to private classes, or else have them taught at home by governesses. The latter expedient prevailed up to the middle of our century, and with families living in the country is still in general use.

In Göteborg a merchant, Mr. Kjellberg, founded a school for girls in 1826, and in Stockholm the historiographer, A. Fryxell, and J. O. Wallin, later archbishop, another in 1840. These schools are still in existence, and may be looked upon as the oldest girls' schools of Sweden, in which the course of study includes several modern languages, mathematics, and natural sciences. In the fourth and fifth decades of this century women themselves took the initiative in the direction mentioned, and Miss Cecilia Fryxell and Mrs. Jane Tengberg established schools in Westerås and Upsala, whicli have exercised great influence on female instruction in Sweden.

At the Riksdag of 1862 a subsidy was granted to a morlel school for girls in connection with the higher female training college founded the year before, which is the only school for girls that has a staff paid by the State. This school was soon enlarged to a college of eight classes, and became more or less a model for other schools, though this was done voluntarily and without any intervention of the State.

In Sweden there exist at the present moment about 124 higher schools for girls, which fall under two heads.

Endowed schools, with an annual State grant not exceeding 2,000 crowns ( $\$ 536$ ), and which receive a certain number of free pupils. These schools are under the control of the State, but are at liberty to plan their instruction independently. These number 76. Then there are unendowed schools.

Schools of the two categories belong to parishes, associations, or private individuals. If district authorities contribute toward a girls' higher school, this generally involves the right of electing one or more members of the school board. In most of these girls' schools the board consists of men; at one school it is made up of women exclusively. Some schools have obtained donations from private individuals and societies, but as a rule they are supported by fees, varying between 50 and 200 crowns ( $\$ 13.40$ and $\$ 53$ ) a year for each pupil.

In many places the location of the schools is far from satisfactory, especially when compared with the boys' colleges, which are built like
palaces by the parish and the State. The appliances can rarely bear comparison with those of the boýs' schools. Connected with most of the schools for girls is a preparatory school with two or three classess receiving beginners (often including boys) generally at 6 years of age:

The higher school proper has in the larger towns eight classes, of one year's duration each. In some of the larger towns there exists, connected with the higher school proper, a so-called continuation school ${ }_{y}$ having for its objects (1) to prepare for admission to the university or (2) to the higher training college; (3) training of teachers, or (4) imparting knowledge necessary for a good general education or one required in practical occupations.

The school year is divided into two parts-the spring and the autumn terms. The summer holidays extend over the months of June, July, and August. In general, the annual instruction covers only a time of thirty-two weeks. In the preparatory school the hours of attendance are mostly three to four a day; in the school proper and the continuation school, generally five (home work excepted). Of the three modern languages studied in school, two are, as a rule, optional. In many schools this is also the case with geometry, needlework, singing, and drawing.
Instruction by means of questions and answers is the one chiefly in use. Examinations at the end of the school year rarely take place at girls' schools, except in those schools which prepare for the university. The pupil is examined on admission, and then, if at the end of the spring term she has a sufficient number of marks at the repetitions, moves into a higher class; if not, she has the opportunity of making up her marks by studying during the long summer vacation.

Competitions and distributions of prizes hardly ever occur.
Religious instruction begins in the preparatory school with narratives from sacred history, orally rendered and illustrated by pictures, and with easy hymns learned by heart. In the school proper, Bible history is studied out of a text-book; Luther's smaller catechism is learned, with explanatious; later on, a Bible manual, and, in the highest classes, church history. Bible reading takes place partly during the Scripture lessons and at morning prayers.

The girls' school of Swedeu attempts more and more to make the Swedish language its principal subject. The pupils are taught to express themselves clearly and distinctly in speaking and writing their mother tongue. They are also made acquainted with our best poets and prose writers. Reading is taught by the phonetic method. At about 10 years of age the study of grammar begins; later, composiftion, which first consists of writing down something told or read to the pupil. In the higher classes, the history of Swedish literature is studied; Norwegian and Danish authors are also read.

Instruction in Swedish history generally begins in the highest class of the preparatory school. In this, as well as in the lower classes of
the school proper, the historical facts are imparted chiefly by the teacher's oral narratives out of ancient Scandinavian history. In teaching, attempts are made more and more to abandon that method which consists of the mere learning of names, dates, and dry compilations, and instead to give the pupils a detached and connected description of historical events.

The study of general history begins at the age of 11 to 12 (the study of Swedish history is continued), and is carried on according to the same principles as those for Swedish history. In the higher classes a thorough review is undertaken with the help of more detailed textbooks than those used in the lower classes. In a few schools politics are also taught.

The foreign languages taught are French, German, and English; in the schools preparing for the university Latin is also taught. The first foreign language, generally French, is begun at 8 years of age; the second, usually German, at 10; and the third, English, at 12. In the few schools where Latin occurs it is not studied until after the age of 16 . There are modern pedagogues who vote for the precedence of the English language, as being the easiest from a grammatical point of view. Experiments have been made in this direction. Reading, grammar, translation, as well as speaking and writing, are taught.

The question about the proper way of teaching languages has, at the present moment, a wakened a most lively interest. The excessive study of grammar has been given up and practical methods are prevailing more and more. The aim and object of the instruction is that the pupil should acquire the ability to understand and speak the language taught. In several schools the instruction in question is given in the foreign language itself. Foreign languages are also the most favored subjects in the girls' schools. A pupil learning the three modern languages devotes more than half of her compulsory time for homework to that study. At school the languages occupy more than 25 per cent of the time for instruction.

Geographical instruction in the preparatory school has for its chief object to clear up geographical ideas by studying the map and learning the geography of Sweden and of Scandinavia in general, thereby gaining a solid foundation for study. Then the other parts of the world are studied. By providing the school library with good and authentic books of travel, the interest of the pupils is awakened to the need of private study. In the highest classes astronomy is generally studied and there is detailed repetition of the geography of Sweden.

The text books of late endeavor, as a rule, to do away with a superfluity of names, to concentrate the study of geography which the pupil then more unfailingly commits to memory. The new methods serve to connect with geography parts of natural history-for instance, botany, zoology, and mineralogy. In some schools map drawing is taught.

Zoology and botany generally begin in the second class (tenth year),
and are taught during the next four years. In the higher classes physies as well as chemistry and geology are taught. In class 6 (fourteenth year) rules of health are imparted in connection with the study of auatomy, and in the highest class of many schools hygiene forms a special subject of study. In some schools domestic economy and chemistry applied to household affairs are studied in the highest or in the finishing class (in the so-called continuation school).

Since 1892 practical instruction in cooking has been imparted to the pupils in the continuation class of the State model school, the teaching of which is carried on in a cooking school founded by Mrs. Anna HiertaRetzius and placed at the disposal of the higher training college and the model school. Other schools in Stockholm and Göteborg also teach cooking.
In spring and autumn botanical excursions are made. The duty of collecting a certain number of living plants during the summer holidays is enjoined upon the papils. The appliances for instruction vary according to the financial circumstances of the schools.

Arithmetic begins in the preparatory scliool and is taught objectively by means of little balls. Great importance is attached to readiness in mechanical ciphering, which is brought about partly by mental arithmetic and partly by exercises written at school and at home. In class 3 (eleventh year) the pupil should know the four rules of arithmetie properly. Then common and decimal fractions follow, with their applin cation to interest, discount, division of profit and loss, etc. Special importance is attached to the learning of the metric system. In the continuation school algebra is taught, or an easy course of bookkeepin and economical arithmetic is gone through, by those who are geing to devote themselves to practical professions.

Geometry beginsinclass 5 with geometrical object lessons; theaim is to give a clear idea about lines, angles, surfaces, and geometrical figures, In classes 6 to 8 the three first books of Euclid are generally studied.

Drawing is taught by copying diagrams, models, living plants, plaster casts, architectural and other ornament, and by drawing from life.

The lessons in needlework aim to make the pupils skilled in such kinds of work as may be deemed necessary to every woman. Knitting, darning, patching, and plain needlework are compulsory; opportunity is also given to learn art needlework. In some schools wood sloyd and dressmaking are taught.

Of late great attention has been devoted to the hygienic conditions of schools. In the larger schools physicians are appointed, in part to superintend the hygienic conditions in general, in part to examine the state of health of the pupils and judge whether they may be admitted to gymuastics. The pupils are drilled every day in Ling's gymnastice In schools possessing a building of their own there is generally a gymnasium provided, with apparatus and dressing room, where the pupils put on their gymnastic costumes.

Attention has been drawn to the danger of intellectual overexertion and attempts have been made to arrange school work so as to allow the pupils out of door exercise during the earlier part of the day.

Instruction in girls' schools is chiefly managed by women teachers. For the training of female teachers there are in Sweden five training colleges for female national school teachers and one higher training college, all founded by the State, and with instruction quite free of cost. Other femalo teachers have qualified for the university or for a bachelorship, or else, when teaching forcign languages, have perfected their education abroad. In the higher classes, male teachers from the boys' higher schools sometimes give instruction by the hour.

In smaller schools as well as in private teaching, similar methods are followed and the same subjects are studied as those mentioned above, with considerable modifications.

## THE PEOPLE'S HIGH SCHOOLS FOR WOMEN. ${ }^{1}$

The pupils of these schools are grown-up girls, chiefly belonging to the farmers' class. There is no ontrance examination, neither is any stated preparatory knowledge required. As a rule, the pupils are presumed to possess the standard of knowledge imparted in the national sehools.

The movement leading to this kind of school began in Denmark. The Swedish schools developed however independently. The first school for women of this class was founded in 1869; now there are 13.

The object of the people's high schools for women is to develop the mental faculties of the pupils, to make them comprehend true womanliness and to excite an interest in subjects relating to general education and training in manual work.

The people's high school is no housekeeping school and does not want to be considered as chiefly aiming to impart such knowledge to the girls as exclusively belongs to the province of housework. The object in view is principally to develop the mental faculties of the girls as far as this can be attained by a knowledge of the language, history, and character of the native country, by acquaintance with the laws of nature, and by reading the best that our literature offers. In addition to this are held, especially at.the Tärna school, so-called free lectures on religio-ethical subjects.

The school admits the importance of the rougher housework most women have to take part in, and for this reason attempts to organize the iustruction so as to make the young girl acquainted with the nature of what surrounds her in daily life, as for instance the air, the water, the articles of food, etc., as well as to acquaint her with those laws which rule even in the most ordinary occupations of everyday life, so that she may be able to understand the reason why a thing is done in

[^7]such or such manner and so that she may be thoroughly trained for life's duties.
The subjects of study are: The Swedish language. The instruction aims to teach the pupils to read poetry and prose well; to understand properly the contents of what is read, and to express their thoughts in writing. Literature with recital of excellent excerpts in the evenings, History and geography. Free lectures on religio-ethical subjects. Hygiene, including the structure of the human body, the laws of health, general rules on the proper treatment of diseases, nursing of infants, etc. Knowledge of natural science, including some of the principles of chemistry and physics. In this connection housekeeping is studied, as for instance laundry, cleaning, boiling, roasting and frying, preserving, pickling, etc: French ironing is taught at several of the schools for women. Dairy training (the outlines). Arithmetic, domestic bookkeeping, writing, singing, solo and part singing. Gymnastics are practiced only at three people's high schools for women, but gymnasiums are going to be built within a few years at many schools.

By teaching needlework, the effort is to meet and encourage the girls to like female manual work (sloyd) and, at the same time, to develop taste and sound views within that sphere. The instruction in needlework comprises mending and darning, various kinds of knitting and crochetwork, plain sewing and cutting, white, colored, and flat embroidery, hemstiteh and masking of several kinds, making of fringe and tassels, etc.

For the second years' pupils, as well as for those who have proved themselves clever in other kinds of needlework, there are lessons in lace-making and weaving of ancient Scanian textile fabrics for curtains, furniture staffs, etc. The pupils must be quite expert in ordinary plain weaving to be taught art weaving at the school.

To the development of their skill in manual work the school attaches great importance, and a stated plan is followed in the teaching of this subject. The pupils first must prove themselves skilled in mending, knitting, and plain needlework, then they are allowed to choose between the ornamental kinds of work.

Time of instruction.-All the people's high schools for women are connected with those for male pupils, have the same head master, and are in the same localities. The Tärna school has a head mistress of its own, however. While the course for men is kept up during the six winter months, November-April, that for women covers the three summer months, May-July, during which period the farmers are considered as most able to spare their young daughters. One female school (at Bollnäs) is open during the three autumn months; one at (Fornby) during the four months, February-May, simultaneously with the school for men. Coeducation, as at the people's high schools of Finland, is not customary in Sweden. The course for women is comparatively short, as the same teachers are employed for the summer and winter terms.

Any pupil is welcome to remain for several consecutive terms, though far the greater number only go through one. Separate schools for women with a term of six winter months no longer exist. The morning hours are in most of the schools devoted to study; the afternoon hours to heedlework and singing.

Mode of teaching.-The instruction is chiefly imparted by the teacher orally. The pupils are advised to study suitable text-books, by the help of which they can follow the teacher's instruction. By means of questions and repetitions, by conversation and written papers, the certainty is arrived at that what has been imparted has been well understood. As the pupils come to these schools with very different fundamental knowledge, the teacher tries to arrange his instruction so that all may profit by it.

The school fee varies betreen 10 and 38 crowns ( $\$ 2.68$ and $\$ 10.28$ ) a course. In some schools the fee is reduced for penniless pupils or clse they get a free place. The second year's pupils generally pay less than the first. Less well-to-do pupils are permitted to apply for scholarships, which are paid by the treasury and usually vary between 10 and 50 crowns ( $\$ 2.68$ and $\$ 13.40$ ).

To lhave one household in common for the head master and the pupils, as is the case at the Danish people's high schools, is not customary in Sweden. In some places, however, the papils live in the school; at those of Tärna and of Tjörn a woman is engaged to cook the pupils' own provisions for them. As a rule, the pupils lodge in the neighboring peasant homes, where, as at Hvilan for instance, they can board at a rate of about 90 öre a day. The ordinary arrangement, though, is for the girls to bring provisions from home, which are cooked by their landlady for a small gratuity. This turns out to be the cheapest way. At Tärna and Lunnevad the pupils live in the schoolhouse.

Examinations.-The people's high school, not having as an object the qualifying of the pupils for any special employment, gives no testimonial on leaving. The pupil can have at her own request a general statement concerning diligence, conduct, and standard of knowledge acquired. No examination is held on leaving school, this being deemed of no use, bat rather apt to impair school work. During the short time allotted to school work attention is directed to the aims of life, not to a more or less successful examination. The school is always open to anyone wanting to obtain proof of the work done. Exhibitions of industrial art made by the pupils are arranged at the breaking up of the school.

The school staff generally consists of male teachers, who also manage the people's high school for men. The head master's wife generally assists in the teaching.

The people's high school, being comparatively young and depending on individual efforts, has been an object of much misunderstanding and a good deal of criticism. Because of the short time allotted to it,
people lave deemed it able to cffect nothing but superficial work and to render the young farm girls dissimilar to their own class. The pupils find time to acquire an astonishing amount of knowledge in the short time given them; their diligence is so great that it rather needs keeping down than spurring on, and it is to be hoped that the impulse they get at school may be such as to serve them as a basis for the sehool of life.

The sehool, always located in rural districts, does not remove them out of their ordinary conditions of life, which at school are quite as simple as at home. The people's high school is striving, more than any other school, to be a home to its pupils-a large, good, loving home, where the most intimate intercourse of thought and feeling exists between teachers and pupils. The pupils generally like to spend most of their recreation time at the school. The conntry people of the neighborhood enjoy coming there to refresh themselves from their everyday toil by listening to the singing and the lectures. In this way the school becomes the center of its neighborhood. The country girl, when returning home, carries with her increased knowledge as well as increased practical abilities; and in addition a mind opened and made acceptable for wider views.

Since the fourth decade of this century the higher education of women has been in a state of progress, and attempts have been made to raiso the standard of female education. One party has been trying to make the instruction of girls equal to that of the boys; another has attempted to create an independent form of female instruction; a third one, again, to bring about schools for coeducation by assimilatitig the standard of knowledge for boys and girls.

## SCHOOLS FOR COEDUCATION. ${ }^{1}$

The principle of coeducation has acquired many sincere friends $y_{q}$ but still it can not bo said as yet to have made any considerable progress in wider circles, though it is realized in the lower classes of the nationa? school. The question about founding higher schools for coeducation has, however, been discussed of late in the pedagogical periodicaltas as well as at teachers' meetings and at other conferences called together by persons taking an interest in the question. A few schools for coedrcation have also been established by private individuals at Stockholim and at Upsala, and are working with good results.

The oldest and largest is the Palmgren school in Stockholm (founded in 1876 by Mrs. A. Hierta-Retzius and by others interested in the question), which has developed under the guidance of the head master whose name it now bears. The school attaches great importance to sloyd, has a State subsidy, and may be said to have served as a model for the coeducational schools of Finland. Coeducation is carried on up to the
qualifying for the university. This school was founded in 1876, and has passed 21 pupils in the final examination. ${ }^{1}$

In the Riksdag of 1893 a government bill was presented which proposed to reorganize the boys' schools of three classes, found in some smaller towns, into schools for coeducation, and where the instruction is to be imparted by male as well as female teachers.

## UNIVERSITY EDUCATION. ${ }^{2}$

The State universities at Upsala and Lund have complete philosophical, legal, medical, and theological faculties. The student is free to follow any course. Each faculty confers three degrees: Oandidate, licentiate, and doctor; and it is stated that to be a lawyer, doctor, or clergyman in Sweden one must be a university graduate. The universities are under the charge of a board of council, with the chancellor of the university as its chief officer. The academic year has two terms, from September 1 to December 15, and from January 1 to June 1. The salaries of professors range from $\$ 605$ to $\$ 1,206$, with the addition of tuition fees, which range from $\$ 263$ to $\$ 402$.

The universities of Stockholm and Göteborg have only been in existence a short time, and it is conceded that before long they. will pass from private initiative to the same rights, in matters of subsidies, examinations, etc., as the older universities. These new universities intend to admit special students, and their aim is to compete with the older universities "as centers of higher scientific teaching, and to make their instruction and resources accessible to wider circles of students." Number of students in Upsala, 1,446 in 1894, and 638 at Lund; at Göteborg, 743 in 1893; at Stockholm, 160 in 1892.

## WOMEN IN THE UNIVERSITIES. ${ }^{3}$

The universities of Upsala and Lund•were founded in 1477 and 1668, respectively, and from both women were excluded. It was not until the fourth decade of this century that a call arose for the abolition of this statute. At the Riksdag of 1865 a Swedish yeoman, Carl Johann Svensen, presented a bill for the admission of women to tho universities.

This bill occasioned a lively debate. The one side pronounced women to be lacking in both the physical and practical power requisite for carrying on higher studies; the other side showed how unreasonable it was to form a decided opinion on that question when no opportunity lhad been given woman to try the power of her intellect. Her fitness for the professions of teacher and plysician was specially put forth. The result of the debate was a petition for the intervention of Goyernment,

[^8]demanding for women the right to pass the examinations prescribed by the law for becoming teachers aud physicians.

On the 3 d of June, 1870, a writ was issued, conferring upon woman the right of passing the examination for the university, of matriculating at the universities, and of following the profession of a physician. Since that time the number of female students has been increasing year by year. This number, however, only comes up to about 1 per cent of that of the male students, but these, in proportion to the population, are too numerous.

During the first years the young ladies passed their examinations at some boys' school, but since 1875 the right of qualifying for the university has been conferred upon girls' schools also. At the present moment there are at least five schools that prepare female pupils for this examination.

The examination for the university is passed either in the classical division or in the mathematical division. The classical division comprises the following compulsory subjects of examination: Swedish composition, theology, Latin, French, German, mathematics and physics, history and geography, zoology and botany, and propædeutics of philosophy. Optional subjects are: Greek, Hebrew, and Englisl, one of which is obligatory.

In the mathematical division classical languages are not studied, but the claims on knowledge in the three modern languages, German, French, and English, in mathematics, and in physics are greater than in the classical department, and, besides, chemistry has to be studied.

Most of the women have passed their examination in the classical department. Of the young ladies who have passed the examination for the university only about 38 per cent have matriculated at the universities. - Some have gone back into private life and some have found employment as post, railway, or bank officials, or else as teachers.

The theological faculty in the universities is not open to women.
In the faculty of jurisprudence there are several examinations, out of which the one for a "candidatus juris utriusque" is the principal of those most commonly taken. It requires about five years' hard study. This examination has been passed by one lady.

The course of study in the medical faculty extends over seven to nine years from the time of matriculation. Two ladies have finished their medical studies and are practicing as physicians; a considerable number of women are studying medicine. The medical faculty in Stockholm is opened also to women, and follows the same rules for the examinations.

The philosophical faculty is divided into a philological and a mathematical section.

The examinations within both these sections are:
(1) Baccalaureate, requiring several compulsory subjects arranger in different groups.
(2) Licentiate, a scientific examination comprising one principal subject and two secondary ones.

A licentiate, after having written a scientific dissertation and successfully defended it against opponents chosen by the university, is created doctor of philosophy, with ceremonies which have been in practice for hundreds of years. The baccalaureate, with certain compulsory subjects, and followed by one year's teaching at one of the State schools, qualifies for minor tutorship at these schools.

The licentiate entitles to tutors' higher appointments. About 23 women have passed the baccalaureate, while only one woman has passed for the licentiate, receiving the degree of Ph. D. in 1883. Several women have studied in the philosophical faculty, but, without passing the examination, have applied themselves to scientific works later on. This has been the case with those studying zoology and botany in the faculty of sciences in Stockholm, which, founded in 1878, has, like the faculty of philosophy and philology at Göteborg (founded in 1890), opened its lecture halls to women.

It may be stated here that, although permitted to become a practicing physician, a woman can not hold any Government office in this capacity.

The question whether a woman may become a lawyer is still unsettled. In 1892 the first Swedish woman graduate at law finished her theoretical studies, but is still pursuing the prescribed practical part of her juridical studies in a district court. She aspires to be admitted as an attorney, but may not become a judge.

## TECHNICAL AND SLOYD TRAINING.

This subject has been so fully treated in the Report of the Commissioner of Education for 1891-92 (pp. 427-429, 437-440) that no further elucidation seems necessary. It may be stated, however, that in 1892 about 4,775 men and 1,306 women were receiving technical instruction of some kind, while sloyd was taught in about 1,400 schools. The number of schools receiving aid from the State for sloyd since 1884 are enumerated in the Slöjdundervisningsblad, No. 12, 1895, as follows: In 1884 there were 584 ; in 1885, 727; in 1886, 872 ; in 1887,991 , to 1,167 in 1888; increase to 1,278 in 1889, to 1,392 in 1890; still further increase to 1,492 in 1891, to 1,624 in 1892; thence to 1,787 in 1893 and 1,895 in 1894. Thus the needs or benefits of sloyd training seem to be thoroughly understood in this division of Scandinavia.

## DAIRY, AGRICULTURAL, AND HORTICULTURAL SCHOOLS.

The Government and agricultural societies aid 25 agricultural schools, which aim to give practical education to young men so that they may carry on farms of their own. .Dairy schools (2) and dairy stations (18) give regular instruction in dairying, and similar courses are carried on in connection with the agricultural societies. The
standard of education is that of the elementary school; the theoretical instruction includes writing, arithmetic, also bookkeeping; practical instruction includes domestic work about the household as well as dairying.

A horticultural school at Norrviken opened in 1890, is coeducational in character. It is the only school of its kind in Sweden, and in a two years' course trains in the practical management of a garden and in floriculture. COOKING AND HOUSEKEEPING SCHOOLS. ${ }^{1}$
In Sweden it is only exceptionally that cooking and domestic work are taught at the girls' schools. ${ }^{2}$ To supply this deficiency in the education of the young ladies, several families send their daughters, after having finished school, to a housekeeping school in the country, where they spend from six to twelve months.

The housekeeping school at Björnsnäs for the education of housewives, receives boarders from the age of 16 , and teaches cooking, the principles of housekeeping, practically and theoretically, preserving, baking, salting and curing, washing and ironing, cleaning, weaving, art needlework, etc. The annual time of instruction comprises an autumn term, from August 15 to December 15, and a spring term, from January 15 to June 15. The annual fee is 750 crowns ( $\$ 201$ ).

Other provincial housekeeping schools, established on the same principles, are the practical school at Samuelsberg for teaching young ladies housekeeping and manual work; Miss Ellen Möller's housekeeping school for young girls; the Alingsås school of languages and domestic work, which, besides imparting instruction in household work, offers an opportunity of learning modern languages, etc.

In Stockholm there are also several housekeeping schools, where the young girls, while living at home, are taught housekeeping during some hours' daily attendance. Such is (1) the new housekeeping school, which teaches educated young ladies the theory and practice of plain or more elaborate cooking, preserving fruit and vegetables, ironing, and other domestic occupations; it thus enables them in a practical way to manage a house. Each course comprises a time of four and one-half months. A limited number of pupils are admitted to each course. To those who have attended three months at least a testimonial is given. The pupils assemble every week day at $8 \mathrm{a} . \mathrm{m}$., and the work is kept up till 4 or $5 \mathrm{p} . \mathrm{m}$. The fee is 225 crowns ( $\$ 60$ ) for a complete course. For a shorter time, 60 crowns (\$16) a month. (2) The Stockholm cooking school, founded in 1882 by Mrs. Anua Hierta-Retzius with a grant of 5,000 crowns ( $\$ 1,340$ ) from the foundation of "In Memoriam of Lars Hierta," is the first school in Sweden where cooking solely (with baking

[^9]and preserving) was taught with the exclusion of other housework. For this reason, the course has since the very beginniag been limited to three months only. In this cooking school, the physiology of nutrition and domestic economy are first theoretically taught by means of lectures on those subjects. The pupils are also trained in marketing under the teacher's guidance. Those who have passed a complete course obtain a testimonial. The food is served à la carte to ladies and gentlemen taking their dinners at the school (from 2 to $4.30 \mathrm{p} . \mathrm{m}_{\mathrm{s}}$ ).
The original object of this school was to introduce cooking as a subject of information among the daughters of the working classes, to qualify them for honsework in their own homes after having passed through the national school. During the first three years the fee was 10 crowns (\$2.68) a month (and dinner free of charge), but was later increased to 20 crowns ( $\$ 5.36$ ) a month, and, to make the school selfsupporting, admission was granted, with a double fee, to two or three married or unmarried young ladies of the cultured classes, who, up to that time, had no opportanity of learning in so short a time. For ladies engaged to be married a shorter course (of six weeks) was arranged.

Finally, cookery teachers have been trained at this school, to facilitate the introduction in future of cooking as a subject of education in the national sehools.

In September, 1892, instruction in cooking and domestic coonomy having been introduced as a subject of information at the higher training college, Mrs. Hierta-Retzius's Cooking School was made over to the board of the above-mentioned college, the founder, however, having undertaken to guarantee the school funds.
Cooking at a national school was first tanght in 1889 at the parish of St. Nicholas, in Stockholm, the information on this subject beirg introduced on the initiative of Mrs. Sofi Nilsson, a national school teacher, who during many years' work had realized the necessity of raising the standard of practical work.

The school board having agreed to fit up a kitchen in one of the schoolhouses, five to six girls from the highest class were allowed to leave their school work at $10 \mathrm{a} . \mathrm{m}$. in order to learn to cook tho food gratuitously distributed to their younger schoolfellows.
On the initiative of Mrs. Hierta-Retzius and by means of an endowment from the foundation of "In Memoriam of Lars Hierta," a national school teacher, Miss Brolinsson, was sent to London to attend "The National Training School of Cookery" in South Kensington, and to study cooking as it is taught in the board schools in London.

On her return the cooking school of St. Mary was founded, partly after the English plan, where a course was given to future cookery teachers. These women, who had previonsly passed a practical free course at Mrs. Retzius' cooking school and had practiced as cookery teachers in the school kitchen of St, Mary, passed an examination,
received a certificate, and have since obtained employments as managers or assistants at cooking schools in Stockholm, Göteborg, and Vesterås.

In four of the Stockholm national schools, those of St. Nicholas, St.. Clara, St. Mary, and Hedvig Eleonora, the girls in the highest classes, generally to the number of thirty from each school, have been taught cooking and baking and have undertaken by turns to carry out such work. The girls, who do the washing up, the house cleaning, etc., seem to keep up a lively interest in the matter, and many opinions expressed in the children's homes show that the parents also duly appreciate the instruction given. One thing strictly impressed upon the children is the necessity of cleanliness, order, and economy.

The ingredients of the various dishes, the cost, and the method of preparation are written down by the girls in special books. The quantity and price are, as a rule, calculated for six people. Thus, when finishing school, the girls bring home with them a little cookery book mado by themselves and containing receipts tried by them and comprising the dishes mostly used in ordinary, simple houses. The expenses for these cooking schools are defrayed partly by private people, partly by the respective parishes.
The teaching of this subject having begun to gain more sympathy in the national schools of the capital, the following general rules have been established and are to be enforced from the beginning of 1892: (1) The girls who take part in the work at the cooking school are divided into groups of four to six each; (2) these groups are selected out of the two highest girls' classes of the school; (3) the girls who dering their school time have taken a share in the cooking work will be allowed to continue it for one term after having left school; (4) no more than three groups (exceptionally and for special reasons, four) are selected out of each school class; (5) each group has instruction for two consecutive days in cooking; (6) after the groups from one class in school have in turn attended the cooking school, four days at least must elapse before they begin again (during the interval, groups from the other class are taught); (7) school girls belonging to the cooking school must, before going there, attend the first two lessons of the day (from $S$ to 10 ).

In 1870 a practical housekeeping school was inaugurated in Stockholm, which served as a model school for those since created in Upsala, Göteborg, Land, etc. Opening with six pupils some 200 girls (in 1891) had received three years' practical training. Pupils are received at 16 years of age, "if of good disposition;" they learn the duties of laundress, waitress, chambermaid, and have instruction "in finer cooking." In 1879 the school established a shop of its own for the sale of bread, cake, etc., and in 1881 established a store for cooked provisions. The mending of garments is taught one afternoon each week, and there is regalar instruction in the sewing room.

## FRESH-AIR FUND COLONIES.

As will be observed, the Swedes give practical training of many kinds to their youth, and they do not neglect the "weak and sickly children" nor the hygienic side of education. ${ }^{1}$
In 1885 the Society of the Fresh-Air Fund was established in Stockholm, its object being to provide summer homes in the country for weak and sickly school children, especially from the public schools of Stockholm. From that date to 1891 there were 148 colonies sent out, which included 3,352 children. The uumber in a colony is usually.limited to 25 .

As the principal objects of the sojourn are rest and opportunity to be in the fresh air as much as possible, all school work is forbidden, but the children are not idle in consequence. The girls have to keep the rooms in order, set the table, assist in the kitchen; the boys keep the yard and vicinity of the house in good order, carry water and wood, carry the mail, etc. The children have to keep their clothing in order also, under the direction of the matron of the colony or her assistant. The regular life, where strictness with regard to order, cleanliness, and good conduct is the governing principle, has proved most successful in the moral development of the children in the colony homes, and agreeable changes in their behavior after their return to the city lave been recognized by their teachers and parents.

The result of the colony life, from a sanitary point of view, is considered by physicians to be especially successful. The examination of 58 children of an average age of 10 years, who had been in two separate colonies in 1891, showed that "the boys gained 1.03 kilograms in weight, 1.3 centimeters in height, and 8 centimeters in breadth of chest, while the girls gained 1.19 kilograms in weight, 1.7 centimeters in height, and 1 centimeter in breadth of chest. The painful and dull expression and the weak, shaffling motions which were observed at the beginning of the outing disappear during the two months' visit in the country, and the bright, happy faces, the clear and frank gaze, the healthy appearance and lively movements, all witness to the benefit gained, not only for a short summer but doubtless for life."

The Woman's Union in Göteborg sent out 181 colonists in 1891, and the cities of Norrkjöping and Gefle are also sending out summer colonies of school children.

## TEACHERS' ASSOCIATION.

The seventh meeting of the Scandinavian School Congress (Sjünde Allmäanna Nordiska Skolmötet) was held in Stockholm, August 6-8, 1895. This congress meets every five years at one of the three Scandinavian capitals. In attendance were nearly 7,000 teachers; 3,700 from

[^10]Sweden, 1,200 from Norway, 1,500 from Denmark, and 300 from Finland. During the three-day's session about fifty papers were read and discussed, interest in them being shown by educators and also by the authorities. The minister of public instruction, Mr. Gilljam, took part in the meetings which were presided over by prefect Themptander. The subjects awakening the most earnest discussions were, religious education in the school, historical instruction, and the peace movement. Papers were also read on the peasant high schools, on university extension, the Swedish school system, sloyd instruction, etc. The social pleasures attendant upon this congress were a special feature of the occasion, and the fraternal feeling between the countries seemed strengthened'by this congress.

An historical presentation of the peasants' high schools-the first having been established in Rodding, Denmark, in 1844-was given, and due honor was done to N. F. S. Grundtvig, who is considered their founder. The strong development of the Real school, with its practical training for life's duties, was clearly brought out. The absolute need of thoroughness in the mother tongue before other languages are studied was discussed, also the study of phonetics. Physical education awakened interest; stress was laid upon the necessity of the teacher' knowledge of his pupils' organization, or injury, instead of improvement, might result from overtraining. Reform methods in different grades of schools were presented, the desire being to prevent overburdening of mind with its natural reaction upon the body. Hygienic and sanitary methods were discussed from the standpoint of the teachers present from the three countries. In the matter of reform spelling and phonetic曹 the pioncers of this phase of education in different countries were referred to, and those teachers taking part in the discussions recognize the fact that changes might be made which would be beneficial to people of various nationalities (Vor Ungdom, 1895, Hefte 1-6).

## II.

## Education in Iceland. ${ }^{1}$

> Actinorities: Letter from Mr. Magnus Stephensen, governor-general of Iceland; Bnisson; Dictionnaire de Pédagogio et d'Instruction Primaire, v. 2, 1 ro partie; Encyclopedia Britannica, Vol, XII; International Encyclopedia, v. 7; Johnson's Encyclopedia, v. 4; Barnard's Journal of Education, Vol. XXIII; XIX Century, r. 8; Revee Internationale de l'Enseignement, Aoat, 1890; Statesman's Year Eook, $189{ }^{\circ}$.

## AREA AND POPULATION.

Etmologically and politically considered Iceland is an integral parte of Scandinavia, that group of kindred countries nsually called the North (Norden) by their own peoples. The countries so designated are the "United Kingdoms" (De forenede Riger), Sweden and Norway,

[^11]and Denmark, whose chief dependency, Iceland, is 39,200 square miles in area, or 7,000 more than that of Ireland. The greatest length of the island is 300 miles from east to west, and its greatest breadth 201 miles.

It is supposed that the population of Iceland was once 100,000 , but it subsequently diminished. Since 1840 , when it amounted to 57,094 , a gradual increase has taken place, until, in 1880, it had reached 72,000 . The chief town is Reykjavik, with about 2,500 inhabitants.

## ADMINISTRATION. ${ }^{1}$

Formerly Iceland was divided into four quarters-the east, south, west, and north. Now the north and the east are united under one gevernment and the south and the west under another.

The island is further divided into 18 counties (syslu), and these again into 169 rapes $^{2}$ (hreppa) or poor law distriets. Ecelesiastically Ieeland constitutes one bishopric, divided into 20 deaneries, and these again into 290 parishes. Iceland has its own constitution and administration under a charter which came into force August 1, 1874. By the terms of this charter the legislative power is vested in the "Althing," consisting of 36 members, 30 elected by popular suffrage and 6 nominated by the King. A minister for Iceland, nominated by the King, resides at Copenhagen, but is at the head of the administration. He submits to the King for confirmation the legislative measures proposed by the Althing. It may here be said that the language, laws, and traditions of Iceland are quite distinct from those of Denmark, and its position so remote that there might seem to be difficulties in governing it properly as an integral part of the Danish Kingdom.

The highest local authority is vested in the governor-general, who resides at Reykjavik.

He carries on the Government according to the views of the minister at Copenhagen.

The governor-general (Landshöföingi) has two aids (or under-governors), one for the south and west, another for the north and east. Then there are the sheriffs (sýslumenn), who act as tax gatherers, and notaries public. The "sýslu-maər" has an assistant or "hreppstjori," in every poor law district. In such district there are also committees of from three to five members who administer the poor laws and look after the general affairs. These committees are controlled by the committees of the county boards, and these again by the quarter board of three members. The State church is Lutheran, and all Icelanders, without exception, belong to it.

## HISTORY.

Notwithstanding its isolated situation, its few natural advantages and sparse population Iceland is of great interest to historian, philologist, and littérateur.

[^12]The historian is delighted with the exactitude of its historical records and the strange phases of life to which they bear witness, and the singular circumstances which have determined the existence and life of the Teutonic community for a thousand years apart from the rest of the European family.

The philologist looks upon the island as the home of a language which unost nearly represents in a living form the torgue of our earliest Teutonic forefathers. Others believe that Iceland had a brilliant period of intellectual life long before the literary eras of England and Gert many, and a literature superior to any worth of the Alps before the Renaissance.

The historical phase is the only one we can touch upon here, as the present conditions are an outcome of the past.

The unit of Icelandic administration was the homestead, with its franklin ${ }^{1}$ owner ("búandi"), its primal organization, the hundred-moot ("thing"), its tie the chieftainship ("góðrð"). The chiefs who led kinsmen to a new land held considerable power, and at first there was no higher organization; but disputes, uncertainties as to laws, etc. brought about the constitution of Ulfliot (in 930). Through this a central moot or "Althing" was created for the whole island, and "a speake to speak a single law" (principally that followed by the "gula"-moot in Norway). In 964 the reforms of Thord Gellir fixed a certain number of local moots and chieftaincies, dividing the island into four quarters, to each of which a head-court or quarter-court was assigned. Ecclesias: tical innovations (Christianity was introduced in 1000) caused uphearals, eventually putting an end to the commonwealth, which had produced men of mark and encouraged progress. The practical rule of Iceland was transferred by the union of the three crowns to Denmark in 1280; it had formerly been under Norwegian viceroys and Norwegian law; the island then received a foreign governor (Earl, Hirdstjóri or Stiftamstmaðr) and was divided into local counties (syslui), administered by sheriffs (sy'slumenn); local affairs were attended to by the bailiff (hreppstjóri) and the quarter-courts were abolished.

The ideas agitating Europe percolated through Scandinavia to Iceland and successful efforts were made to educate the peasant class, who were about all that were left after the cruel wars of the thirteenth century had broken down the great houses which had monopolized the chieftaincies. The "Althing" had existed for fully nine hundred years, but sometimes as a mere council of powerless delegates. It was suppressed but reorganized in 1843. Thirty years' agitation brought about home rule in 1874. The absolutism of the sheriffs and the governor was replaced by officials assisted by elected boards. The goverament may be said to have been at first hierarchic and aristocratic; afterwards it became a kind of aristocratic republic.

[^13]
## GENERAL CONDITIONS.

Two peculiar conditions exist in Iceland; these are the absence of towns and the equality of society in a sense which exists in no other European country. The priest, who has the title "sira," enjoys certain rank and distinction; but even the governor, with his office of power and dignity, is liable to be accosted familiarly by farmer or fisherman.

The people are distinguished for honesty, purity of morals, and a wonderful love of education. Notwithstanding their poverty and other adverse circumstances, it is rare to find an Icelander who cau not read and write.

At Reykjavik is the governor's residence; the "Althing," which once met in the valley at Thingvalla, meets here; the bishop has his home here; there is an observatory, a public library of 10,000 volumes, and Reykjavik is the seat of an Icelandic society established in 1794. Three new spapers are printed here, and since 1530 (when the first printing press was set up by Mathieson, a Swede) books, original and translated, have been aunually printed in Icelandic. The translations have included portions of Milton's Paradise Lost, Shakespeare, Pope, and Cowper.

As for the language, as a genuine living dialect, spoken and written and even printed in newspapers of the present, Icelandic may claim to be the oldest in Europe. The Romaic has dropped many cases and tenses; Danish and Swedish are modernized and simplified dialects, while Icelandic retains the archaic forms of the ancient Scandinavian tongue once in use throughout northern Europe.
The literature reflects and perpetuates the beliefs and manners of the people through successive generations. Both language and literature are of historical and living interest to scholar and statesmen. Icelandic literature has always been much studied by the people and written in popular idiom; it has preserved the ancient language almost unchanged and hence is an isolated survivor of a bygone historical period.

GENERAL FEATURES OF EDUCATION.
Considering the extent of country, the sparseness of population, and the difficulties of intercommunication, the diffusion of knowledge seems astonishing, even to those familiar with the history of this island. In Reykjavik, and among the clergy in general, men of high literary culture are to be found, some of them scholars who would do credit to any seat of learning in Europe. A child of 10 who is unable to read is not to be found from one eud of the island to the other. A peasant understanding several languages is no rarity, and the amount of general information is quite noticeable. Formerly all children were taught by their parents or neighbors; now a few elementary schools have been started ; classical and general studies are found at a college in Reykjavik, which has about one hundred students and seven professors.

The general physiciau of the island, assisted by tro medical men, gives lectures to medical students. Those who propose to enter upon a course of law have to attend the University at Copenhagen. There is also a flourishing academy in Mödruvellir, in the north of Iceland; au agricultural college at Olafefjord. The island also supports four seminaries for young women, the first one having been established in Reykjavik in 1876. Iceland has always been a land of learned men, and to this day erudite Icelanders may be found in almost every university of Europe ; in no country is a scholar held in more esteem ; yet it is stated that the Icelandic student devotes himself more exclusively to languages and literature, to the neglect of science and mathematios, In 1886 a limited suffrage was granted to women, permitting them to vote in the selection of clergy for the parishes. In the same year women were admitted as students in the higher institutions of learniog.

Owing to the difficulties attendant upon obtaining any very precise information regarding education in Iceland, a letter was sent, in the autumn of 1895, to the governor-general requesting more specific data. The reply of His Excellency Magnus Stephensen, the governor-general of Iceland, is here incorporated. He says:
In reply to your letter of the 18 th September, I havo much pleasure in sending you the following notes on education in Iceland. As the bulk of the population is scattered over the country in isolated farmhouses, with long distances betweat them, schools are impracticable in the rural districts, and the children receive the rudiments of learning from their parents or any other qualified member of the household. This instruction is superintended by the clergyman of the parish, whose duty it is to examine candidates for confirmation, not only as to their religious knowledge, but also as to their proficiency in reading, writing, and the first rules cf arithmetic, and to refuse or postpone that rite until the children hare acquired the necessary knowledge. Of late years a system of "circuit teachers" has been organized and is in operation in many country districts. These teachers travel from place to place during the winter, remaining for several weeks at each centrally situated farmhouse and teaching the children from all the surrounding farms within reach. They are supported by the people of their clistricts, and receive a small grant from the Icelandic treasury. In 1894 these circuit teachers numbered 165 , and they taught 3,280 children, the subjects boing reading, writing, orthogras phy, arithmetic, and religious instruction.
In the towns, trading stations, and fishing villages there are 26 children's schools, which in 1894 were attended by 896 children. These schools are open in the winter time for six to eight and a half months, and hare generally one, bat sometimes two, teachers. The subjects taught are reading, writing, orthography, arithmetic, religious knowledge, geography, the rudiments of natural science, and Icelandie grammar. Some schools in addition to these teach history, Danish, English, singing, gymnastics, and swimming. All these schools are locally supported, receiving in addition grants from the treasury.

The higher and specialized schools are three schools for women, where the higher branches of education, needlework, and housekeeping are tanght; two "Real schools," one at Mödruvellir, supported entirely by the Government, with three teachers; the other, called "Flensborg school," is supported by private ondowment and Government grant, and serves also during part of the year as a sominary for teachers; one Latin school or high school in Reykjavik, with seven masters, besides assistants, and 115 papils last year; fonr agricultural schools, and one nautical school.

There is also a school for the deaf and dumb.

The professional schools are a theological seminary and a school of medicine, each with four teachers, both situated in Reykjavik.

Tuition is free in all the higher schools; most of them provide free lodging for their pupils, and bursaries are attached to some.

## METHODS OF EDUCATION.

Iceland furnishes a singular example of a country which has almost no primary schools, and yet primary education is universal. The pastors refuse to give illiterates in marriage, and these are rarely to be found. The mothers teach their children reading, writing, and arithmetic. ${ }^{1}$

## At 7 years of age [says an Icelander] all children know how to read and write

 their language, and they know how to reckon. Evon among the poor fishermen there are none who have not had a good elementary education. The mothers are the instruct ors; the rural home (boer) is the schoolroom. The nearest clergyman watches over the progress of the children, and the child who does not indicate suff cient knowledge for his years and the instraction given is refused confirmation. The mother of the family would die of chagrin if such were the case; hence she makes all effort to suitably prepare the child. Ask the first child whon you meet who taught him the history and geography of the country, the names of birds and flowers; his answer is invariably, my mother (modre min). Each house is in itself a school of intellectual, religious, and industrial training, after a crude fashion. The long winter evenings are givon to reading, to traditional lore, to indoor occupation, by which every child is trained to such handicrafts as the nocessities of their position require-making fishing tackle, boats, casks, sails, etc.-and the women to knitting, aud working up moss, skina, feathers, and eider down into marketable and domestic use. Every able-bcdied adult can do something for a livelihood, and the highest dignitary of Iceland, judge, governor, or bishop, can, if occasion requires, shoe his omn horse and repair his own boat and tackle or land vehicle and harness.The landed proprietors are responsible not only for the education of their own children, but those of their servants and of the families who are their tenants. The clergymen and their aids are expected to observe what progress has been made at least twice a jear.

## STUDIES PURSUED.

In a few towns on the coast there exist a number of villiges which have primary schools. According to terms of the law the course of study includes moral and religious education, national history, reading, writing, and arithmetic.

At Reykjavik there is a gymnasium with 100 pupils, faculties of theology, medicine, and law; at Mödruvellir a school of agriculture, a course of study covering agriculture, Icelandic, Danish, and English languages, geography, history, physics, chemistry, and mineralogy.

The impresision seems to be gaining ground that in this little country of the far North the learned men are taking a firm stand in regard to the carrying on of higher studies, and even now the humanities are thoroughly comprehended.

[^14]
## UNIVERSITY EDUCATION. ${ }^{1}$

At the close of the session of the "Althing" in 1893 thirty members formed themselves into a committee to inaugurate a national movement contemplating the founding of a university in Iceland. The committee considers that such an institution would be of material benefit to the country and will add greatly to its moral and intellectual culture: A subcommittee has charge of this effort to establish a university and to take up a subscription in Iceland for that purpose. They hope before long to place funds provisionally in the hands of professors of the law school of Iceland whilst awaiting the decision of the King of Denmark that the university may be opened.

[^15]
## CHAPTER XXI.

## TYPIOAL INSTITUTIONS OFFERING MANUAL OR INDUSTRIAL TRAINING. ${ }^{1}$

I. City Public Schools.-Denver, Colo.; Washington, D. C.; Chioago, Ill.; Moline, Ill.; Louisville, Ky.; Portland, Me.; Baltimore, Md.; Boston, Mass.; Brooleline, Mas8.; Springfield, Mas8.; St. Cloud, Minn.; St. Paul, Minn.; Camden, N.J.; Montclair, N. J.; New York, N. Y.; Cleveland, Ohio; Toledo, Ohio; Philadelphia, Pa.
II, Manual Training Schools.-Throop Polyteohnic Institute; Chioago Manuat Training Sohool; St. Louis Manual Training School; Hebrew Technical Institute; Technical School of Cincinnati.
III. Trade Schools.-California School of Mechanical Artz; Springfield Industriat Institute; Baron de Hirsch Trade School; New York Trade School; Master Builders' Mechanical Trade School; Williamson Free School of Mechanical Trades.
IV. Normal Schools.--Georgia Normal and Industrial College; Teachers' College, New York City; Keystone Stath Normal School; West Chester State Normal School.
V. Schools for Defective Classes.-American School for the Deaf; Colorado School for the Deaf and Blind; Columbia Institution for the Deaf ana Dumb; Illinois Institution for the Education of the Blind; Iowa Institution for FeebleMinded Children; Maryland School for the Deaf; Michigan Sohool for the Deaf; Ohio Institution for Feeble-Minded Youth.
VI. Schools for Colorid Pupils.-Storr's School; Spelman Seminary; TougalooUniversity; Claflin University; Bishop College.
VII. Miscellaneous.-Pratt Institute; Drexel Institute; Spring Garden Institute; Workingman's School; Sloyd Training School; Boston Normal School of Cookery; Girard College; Lasell Seminary; University School, Cleveland; Tyler School, Providence; Carlisle (Pa.) Indian Sohool; Soldiers and Sailors' Orphans' Home, Xenia, Ohio; Friendford Industrial School; Free Industrial Sohool, Worcester; New York State Reformatory; Lyman School for Boys.

[^16][^17](3) Course of study: In what year of school the varions branches are taught; number and approximate age of pupils to whom the several kinds of instruction are giren; methods of instruction; unique features of your work.
(4) Material equipment: Description and plans of buildings; equipment of shops; tools provided for prpils.
(弓) Cost: Value of plant; annual expense of maintenance.
(6) Resilts: Effects of manual (or industrial) training upon other studies, and upon the length of school life; occupations of former pupils after leaving sehool.

All the facts presented on the following pages were, with a few exceptions, obtained in this way. Where quotations have been made from catalogues or printed reports, those documents were farnished in lieu of or to supplement specially propared statements. Plans of buildings and arrangement of shops were discussed in the paper of Dr. C. M. Woodward, on The Rise and Progress of Manual Training, which was published in the report of this Office for 1893-94, pages 877-949. But lititle space, therefore, is given tc those phases of the subject in the following compilation.

## I.-CITY PUBLIC SCHOOLS.

Manual Training High School, Denver, Colo.

[From the catalogue of 1896.]
The purpose of this school is to furnish a liberal elementary education, suitable not only for those who contemplate a higher education later, but especially for those pupils who upon leaving school must enter at once upon the active duties of life. The course of study gives ample preparation to meet the requirements for entrance to colleges and technical schools, except to college departments requiring preparation in Greek.

Tho purpose of manual training is just as truly educational as is that of purely mental training. As a part of public school work it must therefore be broad and liberal in its scopo and universal in its applications.
The shop exercises are carefully planned to embody many constructive principles. and to bring into use, one after another, all of the more common and typical tools of modern handicraft:
The articles mado in the shops are not offered for sale, and indeed seldom have auy intrinsic value, sare as illustrations of certain forms and principles.
Since the whole object of this training is educational in character, the student, as soon as he has mastered the principle or process involved in a certain exercise,-is set to work upon another. Mere mechanical dexterity is regarded as of secondary importance; thorough mastery of principles, 'compreheusion of the logical steps of the process, together with intelligent execution of the same is all that we demand. Further repetition would doubtless result in greater mechanical dexterity, but as an educational process it would be lacking in mental.training. Movements that have become automatic, that is, which no longer require the active suporvision of the mind, can not be regarded as highly educational in character. When this point is reached, therefore, it is time for the student to drop that particular exercise and turn to something else.

Notice that we said, "intelligent" execntion of the exercise is demanded. This is the ley to the wholo plan. Students must know how to do certain things, and also why certain processes are employed. They do not blindly copy a piece of work, but trace the logical steps of a process to its legitimate result.
This kind of training can not fail to make thoughtful, intelligent workers; and who will deny that we need more of theso in the world?

It is unreasonable to expect that all of our graduates will become mechanics. Some of them doubtless will, and we confidently expect a good account of them. Others will find that their natural abilities lead them in other directions, and they will turn aside into business channels, or push onward through the higher technical school or college toward the professions, such as the law, medicine, engineering, and the various oceupations requiring extended scientific training. It is predicted with entire confidence, however, that each and every student will be benefited and strengthened by his manual training work. He will go forth into the world with a mental training, the vigor and practical worth of which could not hare been obtained in any other way than by personal contact with tools and materials.

It will be observed that while no specific trades aro tanght, we do teach the underlying mechanical principles of a great many trades; and that the possible economic applications of these acquired principles is almost limitless in number.

Each pupil will be helped by his school work to discover his nataral capabilities and aptitudes, and to make an intelligent choice of occupation.

Visitors to the school sometimes carry away a false impression of its character, because the manual training departments from their novelty attract an undue amount
of thoir attention. It must be borno in mind that manual training work, although imporfant, is not intended to supersede legitimato literary work. It will be fornd upon investigation that the academic work required of pupils in this school is superior in character. An outline of each year's work will be found herein.

It will also be found that the manual training high school is no asylum for lâzy boys and girls; on the contrary, they will be as sadly out of place here as in any other placo where activity and industry is clemanded.

The object of manual training, as introduced into the public schools, is to develop the faculties through the education of the hand and oje; to familiarize the pupil with tools, materials, and processes, to cultivate habits of thoughtful, intelligent, and accurate work, and thus to bring into close relationship, knowing and doing.

## Course of Study.

Note.-The figures after the stadies indicate the number of school hours per wrek deroted to that enbject.

First year.-Mathematics (5) : Algebra and plane geometry. Science (4): Physical geography until January; botany. History and English (3): American literaturo and rhetoric until January; Greek history. Language (4): Latin or Germau. Drawing (4): Free-haud (2); mechanical (2). Manual work (10): For boys-Joinery, 16 weeks; wood turning, 12 weeks; wood carving, 10 weeks. For girls-Plain sewing; joinery on alternate days from January to June. Music (1): Chorus singing. Plysical culture.
Sccond year.-Mathematics (4): Algebra; plane and solid geometry. Science (5): Physics with laboratory practice. History and English (3): Roman history until January; rhetoric; English and American literature. Language (4): English or German. Drawing (4): Free-hand (2); mechanical (2). Manual work (10): For boys--Pattern making and molding, 20 weoks; forging, 18 weeks; lessons in brazing and soldering. For girls-Drafting patterns; cutting and fitting undergarments; machino sewing; wood carving on alternato days from January to Juno. Music (1): Chorus singing. Physical culture.

Third year.-Mathematics (4): Algebra; plane trigonometry; bookkeeping. Scienco (7): Chemistry with laboratory practice (5); steam electricity and magnetism ${ }^{1}$ (2). History and English ( $5^{2}$ ): English history; English literature; civil government. Language (4): English or German; French.s Drawing (4): Free-hand (2) ; mechanical (2). Manual work for boye: Vise work; machine tool work; construction. For girls: Cooking; household science. The mannal work of this year occupies 8 hours per week for 16 weeks, and 6 hours per week for 22 weeks: Music (1): Chorus singing. Physical culture.

Fourth year--Mathematics (4): Spherical trigonometry; surreying; bookkeoping. Science (5): Advanced chemistry (5), or advanced physics (5). Manual work (8): For boys-Machine tool work and construction. For girls-Cooking; household science. Or the pupil may elect advanced work in any of the lines of shop worik already pursued. History (4): One-half year. Study of some period of American history; political economy. Paychology (4): One-half year. Language (5) : French, or German, or English. Drawing (2 to 10): Free-hand; mechanical; modeling. Music (1): Chorus singing. Physical culture.

From the above, with the approval of the principal, the student chooses 30 hours' work per week, at least 13 of which must be chosen from the following lines of work: Mathematice, science, history, language. The manual work is required of all students.

## DRAWING.

The drawing work of the school may be classified under three heads: Constructive, representative, and decorative work. The time is divided equally between free-hand and mechanical work, the two being carried along side by side throughout the entire course.
The equipment of the drawing rooms includes a good assortment of models, casts, and studies.

Constructive drawing: Includes all drawing relating to the facts of form, such as free-hand and mechanical working drawings, geometric problems, surface developments, projections, intersection of solids, and drawings relating to machine and building construction.

Representative drawing: Drawings dealing with the appearance of form, such as drawing from cast and object with charcoal, pencil, and pen and ink. Perspective problems.

[^18]Decorative drawing: Includes work relating to the decoration of form, viz, elementary design, historic ornament, decorative design in color.

First year.-Free-hand: Working drawings of solids; elementary perspective in outline; water coloring in flat washes; charcoal and pencil drawings from object and cast; historic ornament and design.

Mechanical: Instruction in use of drawing tools; working drawings to a scale; sections, elevations, and details of machines and parts of machinery; geometric construction; problems in orthographic projection; development of surfaces; isometric projection; lettering and borders.

Second year.-Free-hand : Elementary perspective in light and shade from object with charcoal, pencil, pen and ink; water color shading; sketches of machinery; historic ornament and design, conventional forms, designs for ornamental ironwork.

Mechanical: Isometric projection; intersection of solids and development of surfaces; architectural working drawings; elementary perspective; projection of shadows; machine drawing; lettering and borders.

Third year:-Free-hand: Drawing from cast in charcoal and penciI; decorative art work; pen sketching ana shading; perspective; designing.

Mechanical: Machine design and construction; perspective; shades and shadows; geometric problems. A finished drawing with full details, embodying all that the pupil has learned in drawing.

## CLAY MODELING.

This work is done the first half of the second year, and consists of modeling from casts, plant forms, carvings, and designs.

It is intended to give the pupils along. with this work a knowledge of the modeling of the various styles of relief decoration, such as the Greek, Roman, Romanesque, and Renaissance. Also in modeling from plant forms to teach the pupil to see broadly, and while getting the character of the leaf or flower, to eliminate the nonessentials and those features impossible of reproduction in plastic form.

In disciplinary value, the manual work rises to the dignity of laboratory work, and holds equal rank with the regular academic studies. It embodies a training in habits of careful, patient, systematic, intelligent labor.
The pupil is made to feel from the beginning the necessity for planning his work with the utmost care and exactness, in order to secure accurate resilts. All exercises made in the shop maust agree precisely in form and dimensions with the drawing, usually in the form of a blue print, with which each pupil is provided.

Each exercise is carefully planned to embody some definite mechanical principle, and to bring into use, one after another, the various shop tools. The shop teacher explains the construction and use of each tool as it is needed and gives directions for its care. Then in the presence of the class he shows exactly how to perform the work, and also occasionally by way of a caution, "How not to do it."

Economy of time, labor, and material is taught and enforced by careful supervision. Special attention is given to the formation of habits of neatness and order, and to the employment of workmanlike methods.

For boys the work is as follows:
First year.-Joinery, turning, carving : In the joinery course only hand tools are employed. The object of the course being to give practice in the use of the principal woodworking tools and teach the elementary principles of construction.
The course in wood carving affords instruction in the use of the principal woodcarving tools, and a further training in appreciation of beauty of form in design.

After the work at the bench, wood turning is taught. No kind of shopwork is more fascinating to the student, or presents a greater opportunity for developing an appreciation for grace, symmetry, and beanty in form.

Throughout the year frequent talks are given by the instructor upan such topics as these: Distribution of forests; processes of lumbering; the principal varieties of wood and their leading uses; physical properties of wood; its behavior under various conditions; its proper distribution in construction; preservation of timber, etc.

Second year.-Patterv making, molding, forging: Some foundry work precedes the pattern making, in order that the student may better understand the construction of patterns.

The course in pattern making will consist in plain work; pulley, pipe, gear, and core work. In the foundry the students are taught to make molds and cores, each student pouring for himself into the molds that he has made.

Forging: Exercises in drawing, upsetting, shaping, bending, welding, punching and cutting, hardening and tempering of steel.
During the course each student forges and tempers a set of steel lathe tools, to be used in the shopwork of the following year.

A short course in ornamental ironwork closes the year's work.
Third year.-Vise work and machine tool work: The vise work includes chippingr, surface filing, straight, angular, and round fitting, scraping, and finishing.
The machine tool work is designed to teach the uses of the most common machine tools and the elementary principles of machine construction.
It consists of a series of graded exercises involving the uses of the lathe, drill, planer, shaper, milling, and grinding machines, and will include work in cast and wrought iron, steel, and brass.

The ground covered may be summarized as follows:
Lathe work, consisting of centering, drilling, and countersinking, straight and taper turning, chuck work and screw cutting, also hand turning, filing, and polishing.

Planing and shaping, including the production of both plane and curved surfaces, and key seating.

Straight and spiral milling, includes key seating, gear cutting, and the fluting of taps, drills, and reamers.

Grinding and fitting,-including the sharpening of milling cutters and reamers, and the grinding of hardened steel arbors and gauges.

During the year some project such as a small motor, dynamo, steam engine, or machine tool is constructed.

## MANUAL WORK FOR GIRLS.

First year.-Sewing, joinery : Instruction and practice is given in all the important varieties of plain sewing by hand, including mending and darning, also drafting and cutting patterns of undergarments.

Lectures are given by the teacher upon the nature and manufacture of the materials used in the work. Local mills and factories are visited by the classes.

From January to June, joinery alternates with the sewing. This work is intended to familiarize the girls with the principal wood-working tools, and elementary constructive principles, and thus serve as a basis for their work in wood carving in the following year.
Second year.-Sewing, wood carving: Cutting and fitting garments; care and use of the sewiug machine, instruction in selecting and purchasing materials.

From January to June, wood carving alternates with sewing. Instruction is given in correct methods of handling wood-carving tools, and in the principles of applied design for relief ornament. A variety of woods, from soft to hard, are employed.

Third year.-Cooking, domestic economy : The instruction in cookery is both theoretical and practical, and is intended to furnish many illustrations of applied chemistry.
Laboratory methods are employed, and habits of neatness, order, economy, and systematic work encouraged and cultivated.
The course in domestic economy is designed to give instruction upon the subjects of foods, their constituents, comparative values, and proper methods of cooking. Instruction is also given in plain and fancy cooking, invalid cookery, chemistry of foods, adulterants, dietetics, and the care of the house.

The work of the kitchen is done by three housekeepers appointed from the class each day; instruction is given in the use of sapolio and scouring agents, the care of silver, and sweeping and dusting.

Foode are treated in relation to the demands of the body, with attention to physiological subjects. Milk is taken as a type of a perfect food, and its analysis forms the basis of all analytical work. Special study is given to economics and the food questions in household economy, such as the production of the most nutritious foods from the cheapest materials, the best methods of cooking, and the advantageous use of food remnants.
The equipment of the cooking room includes a coal range, a gas range, and an Aladdin oven. The room fittings are designed to accommodate class sections of twenty-four at one time.
The arrangement of the subject-matter of the course for the year is as follows:
Fall term.-Fruit cookery, water, starch, milk, eggs, fish, meats, soup stock, and simple desserts. Special attention is given to the housework, and only the simplest methods of cooking are employed.

Winter term.-Marketing, baking powder, yeast, batters, doughs, bread, and the more elaborate desserts. Work in physiology and dietetics.

Spring term.-Fancy cooking, invalid cookery, preparation of economical menus, dietetics, questions of ventilation and sanitation, practice in laying the table and serving.

## EQUIPMENT OF THE SHOPS, ETG.

The joinery shop is 32 by 51 feet. It has 13 double cabinetmaker's benches with set of tools for each bench; each bench has 6 locked drawers in which are kept the individual sets of edge tools of the pupils working at the bench.

The pattern shop is 32 loy 60 feet. It is furnished with 12 double cabinetmakers benches, with set of tools for each bench; the same provisions for individual edge tools are made here, as in the joinery shop, with the addition of a set of turning gouges and chisels. The equipment also includes 25 wood lathes, a band saw, and 2 grindstones.
The foundry has accommodations for class sections of 24 . For the present lead is the only metal used in casting.
The forge shop.is 35 by 58 feet. It is located on the ground floor, and is equipped with 25 Buffalo Forge Company's improved down-draft forges. The blast is furnished by a fan driren from the motor in the engine room. The equipment also includes 25 anvils and sets of hand tools, a tool rack containing a complete assortment of special tools, a post drill, a powerful hand punching and shearing nachine, and 5 vises mounted on the benches which surround the room. In the benches are locked drawers which contain the pupils' work aprons and unfinished work.
The machine shop is 32 by 60 feet. It is equipped with the following machive tools: 6 Reed engine lathes, 14 -inch swing, 5 -foot led; 8 Putnam engine lathes- 1 inch swing, 5 -foot bed; 1 Pratt \& Whitney engine lathe, 16 -inch swing, 7 -foot bed; 1 Putnam engine lathe, 20 -inch swing, 7 -foot bed; 2 Pratt \& Whitney hand lathes, 9 -inch swing, 30 -inch bed; 1 Brown \& Sharpe 9 -inch universal hand lathe; 1 Pratt \& Whitney hand lathe, 14 -inch swing, 5 -foot bed; 1 13-inch Slate sensitive upright drill;-1 $22 \frac{1}{2}$-inch Barnes upright drill; 1 grindstone; 1 Diamond Machine Company wet emery grinder; 1 Cincinnati Milling Machine Company universal cutter and reamer grinder; 1 Cincinnati Milling Machine Company No. 1 universal milling machine; 1 Gould \& Eberhardt 12-inch shaper; 1 Gray planer, 22 -inch by 6 -foot bed; 1 gas blowpipe for hardening, tempering, and brazing.
Two sides of the room are lined with Wenches on which are mounted 18 Prentiss vises, for work in chipping and filing. Underneath each vise is a drawer containizg steel scale, try'square, hand rise, dividers, chipping hammer, etc. In addition to these, each student has a separate drawer in which to keep his assortment of files, ehisels, and latho tools, as well as his unfinished work.
The tool room, which occupies a space 9 by 16 feet in one corner of the shop, contains a complete assortment of necessary appliances, such as chucks, drills, reamers, taps, dies, gauges, surface plates, micrometer calipers, etc.
The engine room is situated directly under the machine shop, and contains a 60horsepower Reynolds Corliss engine, "1890" frame. It is fitted with indicator pipe and reducing motion, so that by means of the Crosby indicator and Amsler polar planimeter, students are taught how to properly adjast the valves, calculato the horsèpower, etc.

This engine furniehes the power for the shops, while a 15-horsepower, slide-valve engine is used to drizo the two large ventilating fans which furnish a constant supply of fresh air of an nniform temperature to all parts of the building.
A 12 -kilowatt 500 -volt Edison motor is used to drive the blower which supplies the blast to the forge shop. The current is supplied from one of the city power plants.
Tools and materials required in the shops are furnished by the school. When the exercise maile in school is something which the pupil is to carry away and retain, then he is required to furnish the material.

> [From a letter from C. A. Bradley, principal of the school.]

Cost value of plant is about $\$ 135,000$. The annual expense of maintenance is difficult to tell. Our school is a new one, and this is the first year that all of the departments are in working order. So far as materials for the shops and laboratories are concerned I think that the cost per pupil will average abont $\$ 6$ for the year. In other directions the cost of maintenance will not differ from that of any other first-class high school.

So far as my experience goes it seems that the effect of manaal training upon other studies is to stimulate them, or rather to make it possible to do more and better Work in the same time. The effect in the laboratory work is quite marked; pupils who have had manual training work are much superior to those who havo not hadit.

## Washington, D. C.

## WHITE SCHOOLS.

[Statement by J. A. Chamberlain, director of manual training.]

1. The central idea in the instruction. -There are two classes of pupils who are attracted by the opportunities presented by the manual instruction. The first hare higher technical study in viow, and this preliminary instruction may be said to thus be "educational only." The other class do not expect to go on to ligher study but,
while $\begin{gathered}\text { hey } \\ \text { have not in every case a definite trado or occupation in view, jet they or }\end{gathered}$ their ${ }^{2}$ visers beliove the manual instruction would prove valuable in almost any line of work. For this class the instruction may be said to be moro or less a direct pueparation for actual work. In planning a course of study, therefore, it has seemed necessary to consider the motives leading both these classes of pupils to take the manual work.
The aim in the Washington schools has bcen to make the educational idea paramount, but it is believed that while serving educational ends the so-called practical side can also be recognized without inviting the criticism that the instruction is temding toward industrial or trades teaching, neither of which is considered proper程 pablic-school work.
In grammar grades seven and eiglt the instruction is obligatory except for a very small percentage who present valid excuses. In the high sohool the work is elective. It may be taken as a minor, or half, study for two perieds a week, or as a major study for six periods a week.
2. Organization.-Manual training is part of the regular public school course of study. Annual appropriation is made by Congress for the purchase of supplies and for pay of teachers. There is no charge for tuition.
3. Course of study.

| Kind of work. | Grade of school. | Number of pupils. | Appreximatè age. |
| :---: | :---: | :---: | :---: |
| Joinery . | 7 and 8 | 1,860 | 12-15 |
| Wood turning and pat- | First year, Jigh school | 112 | 15 |
| Forging .............. | Second year, high school | 68 | 16 |
| Machine-shop work. | Third and fourth years, high school | 40 | 17-18 |

## Mechanical drawing: All years and pupils indicated abovev

Tho instruction is largely individual, although the class method is follorred somewhat. The latter is always supplemented by the former, and to the greatest extent with the youngest pupils. Tho exercise is executed by the teacher in viow of the class, the steps in the process being emphasized. Where possible the uses of the tools are likewise taught by steps. There is no general time limit set for the completion of any piece; each pupil works at his own best gait. When he is through with an exercise he takes up the next in order, regardless of the progress of the rest of the class. The rapid worker is not given more exercises than his slower neighbor. He may be required to produce better results, homever, and later in the year he reaps the benefit of his ability by being allowed to make a larger, more elaborate or more difficult special piece or project. Pupils of less ability are given less choice in the selection of a project, bat their work is treated with the same consideration.
4. Material equipment.-The buildings are old, rented makeshifts, unworthy of consideration in this connection. This statement applies more particularly to the buildings occupied by the high-school shops; many of the shops for the grammar-school work are located in regular school buildings, and answer the parpose very well, except where basement rooms are used.

The 17 bench shops for the use of the seventh and eighth grades are oquipped with, altogether, 216 benches and sets of tools. Tho latter include all tho most generally used woodworkers' tools. In each shop there is also a set of such tools as aro less often needed; these are for use in common by all the boys attending the shop. The first year high-school shop is furnished with 18 wood-turning lathes and sets of tools and 5 benches and sets of tools; the latter are for such bench work as is required by the pattern work. Tho second year high-school shop equipment consists of 16 forges and anvils and sets of tools. Tho machine shop contains 610 -inch, 112 -inch, and 114 -inch engine lathes, 110 -inch hand lathe, 16 -foet planer, 120 -inch drill, 110 -inch shaper, 1 milling machine and 1 tool grinder. In addition to these machines there are the usual small tools found in a well-equipped shop. There are also vises and benches. All tho tools provided for all kinds of work are the best made, and of sufficient variety to insure a suitable diversity of results. As the work is carried on, primarily, for mind training through the hand, many of the "labor-saving" tools and machines are not provided.
5. Cost.-A bout $\$ 17,500$ have been spent for equipment to date. From this sum $\$ 2,500$ can fairly be deducted, because spent, in part, for replacing cheap machines Which were bought at a time when the small amount of money available and the large number seeking accommodation made it necessary, and in part for labor of trice rearranging the high-school shops in the effort to provide needed facilities in buildings inadequate for the purpose in hand.
Making the deduction indicated abovo makes the value of the entire plant about $\$ 15,000$. The annual expense of maintenance is $\$ 3,900$.
6. Results.-The following statements are taken from the reports of regular teachers: "It leads to greater accuracy." "It develops habits of industry." "It relieves the monotony of school work." "It tends to make pupils more skillful in handling sohool apparatus." "The change in occupation and thought has had a beneficial effect."
${ }^{\top}$ There is not much definite information as to the effect of the instruction upon the length of school life, but some instances are known where the pupil remained longer in school than he would have done otherwise, and it is believed that the tendency is to prolung the school life in many cases.

No statistics of the occupations of graduates have ever been collected, though some are known. There is a large number who are advanced students, largely in technical lines. Several have entered the shops of the Washington Navy-Yard as apprentice pattern makers and machinists; several are in railroad and other shops; others are in patent attorneys' offices as draftsmen and assistants, while three are conducting the patent soliciting business on their own account. Three ar3 teachers of manual training.
[From the course of study, 1892.]
WORK IN SHOPS.
Wood-Seventh and eighth years.-Bench work: The correct method of using planes, handsaws, chisels, gouges, brace and bits, hammer, gauge, clamps, and other tools iu the working of different kinds of wood.

All construction is from drawings executed by the pupil.
High school-First year.-Lathe work: The proper use of the hand wood-turning tools in the various operations of turning. Blue prints used are taken by pupil from their own tracings and drawings.

Second year--Forging: The making and management of a forge fire and the forging of small articles of iron involving all fundamental operations.

Steel tool-making, hardening, and tempering.
Third and fourth years.-Machine-tool work: The use of engine lathe, planer, shaper, drill press, and hand lathe in the various processes of metal turning, boring, thread cutting, planing, slotting, drilling, polishing, etc., upon cast iron, wronght iron, steel, brass, and composition.

## COURSE IN COOKING.

Seventh and eighth years.-The object of the course is to give the pupils instruction in plain cooking and in housekeeping, so far as it is dependent on the kitchen. In addition to recipes for ordinary dishes, and making and cooking the same in the school, notes are given on the proper way of mixing ingredients, and on the best manner of arranging and preserving provisions. As much of the chemistry of food is taught as is necessary for intelligent cooking. Two hours a week throughout the two years.

## COURSE IN SEWING.

Third year.-Basting; running; stitching; overcasting; hemming, three widths, one-eighth, one-half, and 1 inch; top sewing; workbag.
Fourth year.-Teach bias fell; French seam; tucking; gathering, plain and French; patching; buttonholes; drafting of seamless waist and making of same.

Fifth year:-Gussets; Buttonholes and buttons; cloth darning, with and without piece, straight and three-cornered; garment mending, both patching and darning; hemstitching; feather stitching; herring-bone stitch; draft skirt and make same.
Sixth year.-Buttonholes, cotton and cloth; stocking darning; draft drawers and make same; drafting of sleeve; cutting and fitting by measurement, from "The M. O. Jones self-adjusting tailor system," as taught in the sixth grades in the southeast and southwest sections of the city.
[From the report of W. B. Powell, superintendent of public schools, 1893-94.]
The manual training departments of the school were prosperous last year. The work of these departments has been extended from year to year, until now every child within the District limits is provided with tuition in manual training branches belonging to his grade of school, excepting only those pupils attending outlying schools which can not without the expenditure of too much time, and therefore at too great a cost to the District, be reached by the teachers of these branches. The number of such pupils is now, however, very small, owing to the fact that means of convenient transit have developed in nearly every part of the District within a few years.

These branches of education continue to be held in high repute by the parents whose children are taught, while the supervisors, who have given much time and careful thought to the consideration of their value as educational factors, as well as
to the ensideration of their relation to the other parts of the school curriculnmare are unanimous in pronouncing all of them valuable acquisitions to our means and processes of education.

This high opinion of the value of these manual exercises in our schools is held by the majority, if not all, of the teachers. The interruptions occasioned by the division of schools when classes are sent to the shops or to the litchens offer opportunify to the teacher to get closer to the minds of the pupils that remain, and to understand their needs better, and to provide for them more intelligently. This interruption at first was a source of annoyañce and the occasion, possibly, of some loss of time, and was, therefore, objected to by some conscieutious and painstaking teachers. But these are not now considered interruptions, but are welcomed as opportunities for doing a work much needed, a work which can be done best when the distracting influences of large numbers are few or altogether absent. The pupil now tilkes readily to the custom of leaving his schoolroom for an honr or two once or twice a week to engage in other profitable and educating pursuits, and, because the change requires the exercise of other faculties and occasions a variation of processes, he has grown to relish the work and to profit by it.

We have so related the mannal training branches of work to the others of the school curriculum, and this articulation or complementary adjustment of school exercises has become so thoroughly understood by the teachers and pupils that not only is economy of work a result, but in many cases certain parts of many subjects are mow taught much more efficiently than ever before. The drawing and everything that pertains to it is now either a necessary introduction to or an accompanying part of or a rational outcome of much of the other manual work, and at the same time lays a necessary foundation upon which to build, or establishes the necessary primary concepts out of which only true art can be built or developed. The cooking gives opportunity for the exercise of thoughtful work in several branches of English composition and is used largely for that purpose. Besides this, the children's knowledge of elementary chemistry, elementary physics, and the application of hygiene is increased and made practical. The child finds that when he is at work in the shop he is demonstrating the truth of what he has learned by experiment or from the textbooks in the regular schoolroom under another subject nominally and under the direction of another teacher. The arithmetic learned under the tuition of the regnlar teacher is applied and enlarged, taking on new meanings and greater significauce by the boys in the carpenter shop and by the girls in the cutting and fitting shops.

The boy's knowledge of nature is enlarged and enriched by learning of the nature of wood, or iron, or other metal, the place of its growth and the uses to which it is put. The girl's knowledge of nature is correspondingly increased by the study of food products, their sources and their multifarious values, in the cooking school, and by a consideration of the sources and values of the materials which she cuts into forin in the cutting and fitting school. These children might study from the one source in the one kind of school and from another source in another kind of school without economy and without making the two schools complementary or mutually helpful and broadening. I am calling your attention to the condition of our schools and the quality of our teaching, about which it is my duty to inform you, to say that this is not the case. The regular and the technical teacher work in harmony alike for the accomplishment of the broader growth of the child, each one supplementing or complementing rather than repeating, under another name or for another purpose, the work of another teacher. It has taken years of labor to accomplish this integration of work or this complementary effort of all who take part in the development of the child. But I need not jemind you that this is to a large degree the legitimate and mandatory office or duty of the superintendent and his assistants. That the work has been fully accomplished is not assumed, but I am glad to be able to state that it has reached a high degree of efficiency and that it is improving year by year, and, what is as gratifying, I may also state that the efforts of the supervising corps to accomplish this are seconded in a most commendable degree by the teachers of the schools.

The effect of the manual training connected with the art work and with the primary reading and language work in the lower grades is very evident since it has been in operation long enough for its results to be tested, when the pupils in the higher grades are set to do more intricate work, work requiring care and skill. The effect of this training is observable in the work of the boys when they first go to the carpenter shop, and its growth is also observable when they go from the carpenter shop to the manual training shops and the chemical, physical, and biological laboratories of the high schools. They learn to do well now in one year or in a given time what pupils could do but indifferently in double the time a few years since. The economy in the expenditure of effort, also, on the part of the child no less than on the part of the teacher, compared with what it was a few years ago to accomplish corresponding results, is noticeable.

## Chicago, Ill.

## ENGLISE HIGE AND MANUAL TRALNING SCHOOL。

[Statement by A. R. Robinson, principal.]

1. The central idea of this school is practical education, Not to make the students mechanics, but to round out their powers in the fullest way. The manual trainigg is obligatory. Those who do not wish it may attend some of the ordinary higle schools.
2. This is one of the public schools of the city of Chicago and is supported by public funds.
3. Woodwork is taught in the first year, ten weeks-being devoted to each of the three branches of it; i. e., wood-turning, joinery, cabinetmaking, and pattern makinge
The second year is given to blacksmith and foundry work.
The third year includes the ordinary work in the machine shop.
The average age of the pupils on entering is about 15 years.
The unique feature of the work is that to the greatest extent possible it is individual and is the propertr of the student when finished.
4. Our buildings havo little or no plan, as they were old buildinge remodeled and added to as the school needed room.
All the tools used are the property of the school.
5. The cost of the plant outside of the buildings was about $\$ 40,000$. The amount appropriated for the school each year is from $\$ 40,000$ to $\$ 50,000$. Last year we expended about $\$ 38,000$, neariy $\$ 30,000$ being for instruction.
6. The effect upon the other studies is good, but the fact that most of the students would not attend any school unless hand training were a part of the course makes it difficult to obtain absolutely reliable statistics.
The occupations the graduates enter are varied. Many enter technical schools, while many others go into some occupation where they can use some of the skill acquired in their school course.

## Course of Instruction.

Note.-Numerals in parentheses refer to the nomber of hours per week in the respective studies.

## FIRST XEAR.

First term.-Algebra (4), biology (zoology) (4), rhetoric and composition (1), mos chanical drawing (4), free-hand drawing (1), joinery and wood turning (10), lecture on wood.
Second term. - Algebra (4) ; biology (zoology and botany) (4), 8 weeks ; rhetoric and composition (4), mechanical drawing (4), free-hand drawing (1), cabinetwork and pattern-work (10), lectures on wood.
Third term.-Algebra (4), - biology (botany) (4), rhetoric and composition (4), mechanical drawing (4), free-hand drawing (1), pattern-work (10), lectures on wood,

First term. -Geometry. (3), physics (3), general history (3), Fnglish or French (3), book reviews and essays, mechanical drawing (4), free-hand drawing (1), foundry and blacksmith work (10), lectures on iron.

Sccond term.-Geornetry (3), physics (3), general history (3), English or Frencie (3), book reviews and essays, mechanical drawing (4), free-hand drawing (1), foundry and blacksmith work (10), lectures on iron.
Third term.-Geometry (3), physics (3), general history (3), English or French (3) book reviews and essays, mechanical drawing (4), free-hand drawing (1), found and blacksmith work (i0), lectures on iron.

## THIBD YEAR.

First term. - Solid geometry or slorthand (3), civill government (3), chemistry (3), English or French (3), book reviews and essays, mechanical or architectural drawing (4), free-hand drawing (1), machine-shop work, chipping, filing, and fitting (10).
Second term.-Higher algebra or bookkeeping (3), shorthand continued and typewriting commenced, political economy (3), English or French (3), chemistry (3), look reviews and essays, mechanical or architectural drawing (4), free-hand drawing (1), machine-shop work (use of lathes and planer) (10), lectures on machinery and its work.
Third term.-Trigonometry or typewriting (3), shorthand continued, political economy (3), English or French (3), chemistry (3), book reviews and essays, mechanical or architectural drawing (4), frec-hand drawing (1), machine-shop work (use of shaper and milling machine) (10), lectures on machinery and its work.

MANUAL TRAINING IN GRAMMAR SCHOOLS.
[From the report of Mr. A. G. Lane, city superintendent, 1895.]
The boneficial results of the introduction of manual training into the seventh and eighth grades of some of the grammar schools hare been clearly demonstrated, and the time has come when the system can be further extended. During the past year assistants were employed in the Tilden School and in the Medill School (to which the class was removed from the Garfield School building), thus allowing the boys from six additional grammar schools to receive instruction and to have shop practice.

Mr. Richard T. Crane, who first provided for manual training in the grammar grades at the Tilden Schnol three years ago, still pays all the expenses connected with that school, except the salary of the assistant teacher, which is paid by the board of education. There are two rooms in the well-lighted basement which are used for shop practice. Classes from the Tilden, Skinner, Brown, Emerson, Hayes, Carpenter, Washington, Armour Street, and Wells schools receive instruction once a week at the Tilden School.
The following schools are accommodated at tho Medill School: Dore, Goodrich, Garfield, Throop, Walsh, Froebel, Cooper, and Clarke schools.
Classes from the Jones, Haven, Moseley, Douglas, and Calumet Avenue schools are taught at the Jones School, and the Agassiz, Alcott, Hawthorne, Knickerbocker, and Prescott schools are accommodated at the Agassiz School.

The work continues to attract and greatly interest all boys who are permitted to reccive instruction. In several instances requests have been received to permit boys in sixth-grade classes to take the shop practice also.
Boys are surprised to find that they can handle tools, make working drawings, and then execute work in accordance with them. They discover their power to do things, to make things. The disciplino of continmous, interesting, and effective work is very valuable.

## Muline Manual Training School, Moline, Ill.

[Statement by O. Curtis Wicks, director of manual training.]
Our school is five jears old, and its central idea is educational, but this being a distinctively manufacturing city we find it best not to ignore the fact that our boys on leaving school enter the shops, and in a sense we teach a trade to meet the needs of the boys. A few of our boys pursue their studies further in the technical school. The work is obligatory on all seventh and eighth grade pupils, but is entirely optional in the high school.

Our school is connected with the public-schools system, is supported from the general fund, and is entirely free.

Course of study.-Seventh grade: Sloyd; cutting tool-knife; laying out toolsgauge, square, compass, rule, pencil. Work taught in regular schoolroom $45 \mathrm{~min}-$ utes per week. Eighth grade: Wifty-five boys; time, one-half day each week; beuch work in wood; elementary useful articles.

Exercises: Gange exercise, pen tray, half-lap joint, tile handle, key label, string winder, round ruler, paper knife, hone, soap tray, blotter pad, spoon, table mat, ruler ( 15 -inch), towel roller, hatchet handle, mail box, try square, wevel square, open mortise and tenon joint, thorough mortise and tenon joint, half-lap dovetail joint, dovetail joint, book rack.

We al ways precede the work by making a drawing either from a model or a dra wing.
High schools.-First jear: Advanced loench work, three periods of 45 minutes each per week, 2 classes of 14 each. Exercises: Bench hook, stool, spoon, knifo box, dovetail joint, framed triangle $45^{\circ}$, framed triangle $30^{\circ}$ and $60^{\circ}$, tusk tenon, scarfed joint, stool, dovetail brace joint, box-dovetail corners, small paneled door, beveled tray, fly-wheel arms, sash (4 lights).

Second year: Lathe work (time, three periods of 45 minutes each per week, 1 class of 9 boys). Exercises: Cylinder, rolling curycs, stepped oylinder, cylinders and concare cuts, potato masher, chair leg, 1 pair indian clubs, 1 pair dumb-bells, rolling pin, chisel handle, ring, mallet, stool, vase form (original).

Our bench ronm is eqnipped with 14 single benches, each supplied with 1 rapidacting vise, 3 planes, b.chisels, 3 saws, 2 gauges, 1 square, 1 pair wing dividers, 1 hammer, 1 mallet, 1 brnsh, 1 bench stop, 1 bevel square, 1 rule, 1 oil stone and can, 2 brad awls, 1 screwdriver, 1 bench hook, 1 gauge, 2 files.

We also have abont $\$ 100$-worth of special tools in cases ou the rall, including braces and bits, pliers, saw set, saw clamp, spoke shaves, plow hand drill, etc. Our machine room is snpplied with 7 wood-turning lathes, 1 scroll saw, 1 circular saw, 1 band saw, and 1 grindstone.
The main aim of our work, as I said before, is educational, but wo also plan our
work thatit may work on lines that shall insure, during and by means of the exercise it affords, the development of the pupil in other definite directions. These are of various kinds. As the more important, it is usual to bring forward pleasure in bodily labor, and respect for it, habits of independence, order, accuracy, attention and industry, increase of physical strength, development of the power of observation in the eye, and of execution in the hand.
Educational manual training has also in view the development of the mental potwer, or in other words, is disciplinary in its aim.

Manual Training High School, Louisville, Ky.
[From the Fourth Annaal Report of 1894-95.]
The school was founded May 2, 1892, when the following proposition was laid before the board of trustees of the Louisville public schools:

## "To the Louisville School Board:

"Gentlemen: I propose to purchase a suitable lot, to erect thereon a building suitable and sufficient to accommodate 300 pupils, to equip said building with furniture, tools, and machinery suitable and necessary for a manual training high school of the first order, and convey said property, when complete, to the Louisville school board in trast aud upon the following conditions:
"First. That the said property shall be used as a manual training high school and not otherwise.
"Second. That the board shall establish and maintain in said building a manual training high school of the first order as a part of the public school system, free to all white boys in the city qualified to enter the male high school, and not under 13 years of age.
"Third. The teachers and professors in the manual department shall in every case be graduates of some reputable manual training school.
"Fourth. The board shall keep the property fully insured, and if destroyed by fire rebuild the property at once.
"F'ifth. That no special trade shall be taught in said school nor any articles manufactured therein for sale.
"Sixth. That if the board at any time fail to comply with the couditions herein the trust shall cease at my option, provided that six months' notice of a purpose to declare said trust ended shall be given by me or my heirs to said loard; and if within that time the terms of the trust be complied with in good faith, said trust shall not cease, but continue upon the same conditions as before.
"Seventh. If the trust be terminated, as provided in the foregoing section, the board shall reconvey the property herein, on demand, to me or my heirs.
"I propose, upon the acceptance of this proposition, to proceed to carry out my part of the above proposition.

"A. V. duPont.

"Leuisville, Ky., May 2, 1892."
This proposition was unanimously accepted by the board.
Mr. duPont lost no time in putting his proposition into execution, and on the $3 d$ of October, 1892, the school was opened.

## PLAN AND PURPOSE OF THE SCHOOL.

The plan of instruction followed in the manual training high school is such as will best fit boys of ability who are mechanically or scientifically inclined, and whos may have neither the time nor means to continue in school after they become 17 or 18 years of age, for positions of usefulness in the various productive and constru, tive pursuits.
This school recognizes the preeminent value and necessity for intellectual develot ment and discipline. Close and thoughtful study is required in both shops and class rooms. The academic work is taken up as thoroughly as in any school and with a view of giving the student a broad general education, without which any specigl course of study or work is, to a considerable extent, of little value. The course of study does not include Greek or Latin, as these are properly the special branche taken up in classical schools. In their places this school offers, as its specigl branches, courses in drawing and in shopwork. In both of these method is tanght, and accuracy and precision are insisted upon.
In all constructive work in the drawing room, laboratories, and shops the primary object is construction, and while many articles of commercial value are made from drawings prepared by the student, they are made for the purpose of instruction, rather than that a finished article may be produced. Similarly, many of the tests
and measurements made in the laboratories would be of cousiderable commercial value if performed in the laborataries of business concerns. Their only value here, however, is the instruction which they furnish.

## COURSE OF INSTRUCTION.

Provision is made for bat one course of study, which occupies three years of two terms each. There are three classes-junior, intermediate, and senior. The junior class enters in September, and entrance examinations for this class are held in the school building in June and September.

No student is permitted to elect any special or partial course. Everyone must take the full work of the class of which he is a member.

Recitations are fifty minutes in length, and the classes are divided into sections, not more than 30 being placed in each division of the junior class, and not more tlan ?24 in each division of the other two classes, so that no more are in recitation at one time than is consistent with thoroughness of instruction.

The subjects composing this course are elementary mathematics, English, German, physiology, physics, chemistry, drawing, and shopwork. The course embraces instruction by text-books, lectures, and laboratory and shop practice, with special reference to practical physics and chemistry, machine design and construction, the properties of materials, etc.

## WOOD-SHOP PRACTICE.

Two large shoprooms are used for instruction and practice in the use of woodworking tools. These are equipped with 30 double wood workers' benches, 48 lathes, 2 circular saws, 2 jig saws, aud 2 grindstones, besides a bench and lathe in each room for the instructor. Necessary hand tools are provided for the accommodation of 150 students. Power for the lathes and saws is furnished by two 10 -horsepower electric motors.

During the junior jear students devote ten periods per week to woodwork. The course includes joinery, turning, pattern making, and carving. The first fifteen weeks are given to joinery. The exercises give practice in the use of the principal wood-working hand tools. Each exercise must be carefully laid out with measuring and guiding tools. The students next spend seven weeks with lathes and wood-turning trols. Pattern making follows turning. The making of patterns gives practice in the use of both bench and lathe tools and in building up and gluing stock for large pieces. This work is conducted in snch a way as to secure accuracy, care, and judgment. During the intermediate year, students use their own patterns in their foundry practice.
Six weeks of instruction in wood carving concludes the course. At the end of this time students become quick and skillful with hand tools, and difficult desigus in grooving and low relief are executed.

## FOUNDRY PRACTICE.

One large room in the shop building is equipped with a brass furnace capable of melting 50 pounds of metal; 12 molding troughs, 24 snap flasks, and a sufficient number of small tools to accommodate 24 boys.
The course in foundry work is given during the first half of the intermediate year. The students are taught the names and uses of tools, and are shown in lectures how molds are made, where mistakes are likely to occur, and the effects of these mistakes upon castings.
Students are then given very simple patternis to mold, and as progress is made more difficult pieces are used. Later the molds are cast, first in white metal and then in brass. Instruction is given in the camposition of varions alloys and in the use of gaggers, chaplets, and cores. From time to time lectures are given upon the manufacture of iron and copper and upon the construction and management of iron cupolas.

## FORGE PRACTICE,

The forge shop is well lighted and ventilated and thoroughly equipped. There are 8 forge stands, each of which has under one hood three separate fires, thus accommodating 24 boys.
The work in this department is taken up by the students in the second year, and is begun with work in lead, the cold lead acting very much as hot iron does under the hammer, except that it can not be welded or upset. The purpose of this exercise is to give the student facility in using the hammer and tongs. Instruction is then given in the building and care of fires. Then the forging of iron is taken up and carried forward by the usual steps, such as drawing out, bending, twisting, setting shoulders, upsetting, and welding.
The course in steel work embraces the making and tempering of such toole as
scrent-drivers, chisels of all descriptions, hammers of various kinds and sizes, and complete sets of lathe tools for use in the machine shop.

In addition to the above course; more or less time is given to project work. This is usually designed by the student himself, and consists in the making of 5 oclock tea stands, umbrella racks, hatracks, flower stands, and other oruannental work. Much ingeṇuity and skill are often shown.

## MACRINE-SHOP PRACTICE.

The machine shop is equipped with 12 engine lathes, 14 -inch swing; 1 engine lathe, 18 -inch swing, with grinding attachment; 6 speed lathes; 222 -inch by 6 -foot planers; 1 shaper; 120 -inch and 124 -inch drill press; 1 universal milling machine; 1 Pratt \& Whitney centering machine; 1 emery grinder; 1 power hack saw, and 1 gastempering forge. Besides the above machines, which are of the most improved paitern, the shop is well equipped with vises, taps, dies, drills, reamers, squares, calipers, etc., sufficient to accommodate 24 boys at one time. The instruction in this department is designed to give to students a thorough knowledge of the construction of machines and practice in the use of machine tools. From time to time lectures are given, discussing general methods of machine-shop practice.

## TEXT-BOOKS AND TOOLS.

The following list comprises text-books and tools prescribed by the Louisville school board. All students are required to prowide themselves with these from time to time, as they are required. Books recommended for collateral reading, books of reference, and tables furnished from the school library are not included in this list:
.Milne's High School Algebra, Wentworth's New Plane and Solid Geometry and. Trigonometry, Waldo's Descriptive Geometry, Shaw's English Composition, Lamb's Tales from Shakespere and Brown's Rab and His Friends from Maynard's Englist Classics, Guest's History of England, Pancoast's Introduction to English Literature Civil Government (Peterman's, or other equally as good), Otis's German Grammax, Bronson's Colloquial German, Storm's Immensee, Avery's Elements of Natural Philosophy, Carhart and Chute's Laboratory Physics, Remsen's Chemistry, Briefer Course; Martin's Human Body, set of drawing instruments, triangular scale, two triangles, one $T$ square, drawing board, drawing paper.
Following is the cost per pupil, for material, for each of the several departmenter for the scholastic year of 1894-95: Machine shop, $\$ 3.59$; forge shop, $\$ 2.93$; moldint and sheet-metal shop, $\$ 3.71$; woodworking shops, $\$ 2.38$; chemical laboratory, $\$ 4.59$ ? physical laboratory, $\$ 0.15$; drawing rooms, $\$ 0.09$; general shop supplies, oil, etc;, $\$ 0.84$; repairs of all kinds, $\$ 0.28$.

The average cost of material of all kinds, except fuel, for heating, was $\$ \overline{5} .89$ per pupil. The total receipts for tuition were $\$ 2,119.58$.

The average enrollment and attendance by years has been as follows: 1892-98 118 average enrollment, 115.8 average daily attendance; 1893-94, 178.9 averaga enrollment, 174.6 average daily attendance; 1894-95, 185.9 average enrollment, 184.4 average daily attendance.
The first class, consisting of 22 young men, was graduated June 15, 1894. Serer of these are now attending higher institutions of learning, as follows: One, the Massed chusetts Institute of Technology, Boston; two, the Rose Polytechnic Institute, Terre Haute; one, the State A. and M. College, Lexington; one, a school of veterinám surgery, Toronto; two, schools of medicine in this city. Number of graduates June 18, $1895,24$.

> [From a letter from H. G. Brownell, principal of the school.]

Our course as a whole might be described as a "junior technical course." We do not pretend to teach trades. The course is obligatory npon all whose health will permit taking it. School is public and free to residents of city; tuition, $\$ 130$ to nonresidents. Cost, $\$ 130,000$. Maintenance costs annually $\$ 26,000$. Our students as a rule obtain better positions than do graduates from classical high schools. Many go away to technical schools and almost invariably are near the heads of their classeel

The shop discipline and the work taken up there improve the academic work. The number of students who drop out is not greater than in other high schools.

## Manual Tralining School, Portland, Me.

[Statement by Geo. H. Babb, principal of manual training.]

1. The central idea is primarily educational. Two and a half hours per week are given to each class and everyone is obliged to attend.
2. Manual training is in connection with the three upper grades of the grammes schools and is supported by the city, no tuition being required.
3. There are abont 600 pupils receiving manual training, and they are rery nearly equally divided between the three grades.

The beginners (third grade) work on thin stock, the knife, rule, and file being the principal tools. No instruction in drawing on payser is given in this grade, as it is sufficient to lay the lessons out on the stock nsed.
During the second year (second grade) three dimension stock is used, and after two or three preliminary lessons in drawing each pupil makes a concise working drawing from the model, being aided when necessary by the instructor. The plan is to have the drawing completed previous to the corresponding lesson in woon.
The third year (first grade) stock of three dimensions is nsed as in the preceding grade, but the work is harder, requiring more accuracy in laying out the work, and. much more care in working to the lines. In this grade every lesson in the courso is planned to be of some use to the loy when completed. The drawings in this grade, like those in the preceding grade, are made from a study of the model, but there is much more individuality to each drawing, as the plan is not to give general instruction, the instructor giving individual help when necessary.
During the year a turning latho and an electric motor have been added to the equipment. As no class instruction can be given with one lathe, only those boys who desire to remain after hours receive instruction, and what has been given has been of a very practical nature, the object of the lathe being to have the boys keep the chisel handles, vise handles, etc., in repair. The grindstone has also been attached to the sharting and is driven loy power.
The boys in the second grade are taught to stone their chisels, planes, ote., only, While those in the first grade are tanght to griad as well as stone all the edge tools.

During the last two years considerable time has been given to the stady of the different kinds of woods in our own locality. A large wood collection has been added to the school by the boys. This work has proven very interesting to both instructor and boys.
4. There are two rooms, each equaipped with 30 benches. Each bench has upon it 4 planes, 3 saws, 3 chisels, 2 files, 1 hammer, 1 brusћ, 1 mallet, 1 marking gauge, 1 level, 1 trisquare, 12 -foot rule, 2 bits, 1 bit brace, 1 nail set, 1 screw driver, a drawing board, T-square, triangle, and a bench hook. Besides the bench equipment each room.has a good equipment of special tools.

One of the rooms is in the fourth story of a school building, and is very inconvenient everyway. Tho other is on the first floor of another school building, and has every necessary convenieuce.
5. The cost of equipping the two rooms was $\$ 1,500$. The annual expense is : Salaries, $\$ 2,300$; cost of material and incidentals per year, about $\$ 400$; total expense per year, $\$ 2,700$. Average cost per boy, about $\$ 4.50$.
6. The results of manual training in the class room have been very satisfactory, because it has helped to stimulate correct reasoning, has decreased triancy, and has served to keep boys in school longer.

Baxtimore, Md.

## BALTMMORE POLYTECHNIC INSTITUTE.

[Statement by Joln W. Saville, president.]
Manual training is intended merely as a stepping-stone to higher technical study. It doos not aim to teach a trade, but does aim to give an insight into many. The central idea of such instruction is to develop all the faculties a youth may possess, whereas in a purely collegiate school we frequently find that there is no association whatever of theory and practice; in a manual training school the two go hand in hand.

Owing to opposition, the promoters of manual training hare not yet met with the success that they feel will one day crown their efforts. I boldly predict, however, that when that day does arrive, the superiority of the manual training school boy to the collegiate student can be easily demoustrated. My belief in this propheoy arises from the fact that in this system of instruction may be found the secret of true education; the mind should be stored with ideas, instead of words, using the latter only so far as they are needer to convey the necessary ideas to the mind.

The Baltimore Polytechnic Institute bears the same relation to the public-school system of Baltimore as do the other pablic schools. It is supported by the taxpayers, thereby making tuition free, excepting to nonresident students, who are obliged to pay a fee of $\$ 50$ per year.

The completion of the entire course requires five years, two of which are devoted to preparatory work. During each year, except the last, the students work alternately in the metal and wood shops, spending half of the year in each shop. This is obligatory; the students hare no choice in the matter. Tho final year they devote entirely to the construction of some one piece of machinery, such as a tripleexpansion engine, a steam pump, lathe, etc. This and the preparatory department constitute the principal unique features of our work.

## SCHEDULE OF STUDIES OF THE PREPARATORY DEPARTMENT.

First year (number of students; 195; average age, 13 years):-Language, reading, writing, arithmetic, algebra, geography, drawing, forty-five minutes each day; sketching from models; free-hand drawing; maps of Maryland and of the United States; woodwork, sixty minutes each day for twenty weeks; care and use of tools-make ten lessons; sheet-metal work, sixty minutes each day for twenty' weeks; care and use of tools and charcoal furnace-make ten lessons.
Second year (number of students, 202; av̈erage age, 14).-Langqage, reading, writing, arithmetic, geography, history of the United States, algebra, drawing? forty minutes each day ; free-hand and maps; woodwork, sixty minutes each day foz twenty weeks; care and use of tools-make ten lessons; metal work, sixty minutes each day for twenty weeks.

## COURSE OF INSTRUCTION IN THE INSTITUTE.

First year (number of students, 150; average age, 15).—Arithmetio algebra, geond etry, spelling, reading, English grammar, historical essay, one per week; declamation ${ }^{\frac{1}{h}}$ geography, map drawing, history of the United States, physics, physiology, Germany writing, drawing, free-hand first half year, geometrical second half year; shop work, carpentry or wood turning and wood carving, blacksmithing, and the proper care and use of tools; lectures on materials and tools-one each week; military drill, once a week.

Second year.-(Number of students, 58; average age, 16).-Algebra, completed geometry, first eight books; plane trigonometry; mensuration; orátory, deliverin essays written by the students; English and American literature, lectures on rhe oric; history, general; physics, Peck's Ganot completed, and lectures with exper ments; physical geography, completed; German; political economy, lectures; stearat engineering, lectures, two each week; writing, notes on lectures and simple correspondence, arrangements of papers, ruling, etc.; drawing, architectural and mechanical; shop work, pattern making and molding or chipping and filing, boiler making and lectures; military drill once a week.
Third year.-(Number of students, 28 ; average age, 17).-Geometry, completef and reviewed, first half year; analytical geometry, elementary, second half yeais trigonometry, plane and spherical ; English composition, outlines, parts of composition, gathering materials for composition, arrangement of materials, etc.; Englisil and American literature, completed; rhetoric, completed; extemporaneous speakin and journalism; chemistry; physics; German; steam engineering, with lecturef civil government, lectures; geology, lectures and field work; history, English; writing, notes and lectures; bookkeeping; drawing, mechanics and machinedesign; shop work, machine shop and decorative work; military drill once a week.

Throughout the course, about one hour per day will be given to drawing, and one hour and a half per day to shop work. The remainder of the school day will be devoted to study and recitation.

## EQUIPMENT.

The general scientific laboratories are very complete. They are substantiak similar to those of other first-class institutions of like grade, and an enameration of their contents here does not seem to be necessary.

## LIBRARY.

The library is furnished with 1,839 volumes of scientific and English literary works and reports, besides nearly all the American scientific weeklies and monthlit for circulation among the instructors and students.

## DEPARTMENT OF STEAM ENGINEERING.

This department is fitted up with forty lecture-room chairs. It contains a working model of the Worthington duplex steam pamp, a model of the Campbell d Zell boiler, both of which were presented to the school by the patentees; a number of steam gauges and salety valves, a hydrometer, a working model of a slide-valve engine (built by the students), a Tabor steam-engine indicator, a pantograp Coffin planimeter and specimens of the different kinds of riveted boiler plates.

COMMERCIAL DEPARTMENT.
A room has been fitted up with offices, etc., as a countingroom or bank, in which practical instruction is given in bookkeeping and banking. This department contains 18 typewriters, and the students are given instraction in this now almost
essential branch of a commercial education. It also contains a mimeograph, a cyclostyle, and other duplicators, which the students are taught to use. The senior class will be divided up into firms, and each firm will conduct a general merchandise business with the others, buying, selling, exchanging, and discounting notes, drawing up business forms, corresponding, banking, etc.

## FIRST DRAWING ROOM (FREE HAND).

Drawing tables for 50 students at one time, or 300 per day, Drawing boards for 300 students, models and copies, plaster cast of the human body, and ornaments.

## SECOND DRAWING ROOM (MECHANICAL).

Drawing tables for 50 students at one time, or 300 per day. Drawing boards, T squares, triangles, and instruments for 300 students, models of fundamental, simple, and complex forms.

## MECHANICAL DEPARTMENT.

First-Wood-working shops.-Twelve (double) carpenters' benches, for 24 students at one time, or 144 per day; five small turning lathes, five scroll saws, and one grindstone, with tools for 144 students. The bench tools consist of a jack plane, smoothing plane, foreplane, cross-cut saw, ripsaw, tenon saw, hand hammer, mallet, brace, 6 bits (assorted sizes), bevel, 2-foot rule, 6 chisels (assorted widths), oilstone, drawing knife, spokeshave, try-square, brad awl, punch, chalk line, oil can, hand brush, bench hook, and note book and pencil.

Second-Wood-working shop. - Twenty-seven (double) carpenters' and cabinetmakers' benches for 54 students at one time, with tools, as in last-named shop, for 172 boys per daý.

Pattern-making shop. - The pattern-making shop is on the south side of the second floor. Its dimensions are 20 by 64 feet. The equipment consists of 12 double benches and 2 single ones, 13 wiood-turning lathes, 1 circular saw, 1 band saw, 1 band-saw filer, 1 jig ssw, 2 grindstones, and an assortment of wood-working tools amply sufficient to instrucl, 25 students at one time, or 150 in each day.

Forge shop.-Located on the first floor, containing 1,609 feet floor space. Fitted with 14 power forges arranged around the four sides of the room. Placed in the center of the ronm is a power grindstone and bench fitted with 4 vises. The forge beds are 3 by 2 feet, a partition for coal, and furnished with blast from a No. 7 steam-pressure blower. Each forge is fitted with hood and piping, through which the products of combnstion are carried off by a No. 6 B pattern exhauster. Placed conveniently to each forge is an anvil of 125 pounds weight, a slack tub, a tool rack containing sledge, hand hammer, tongs with jaws for holding various shapes of iron, hot and cold chisels, swedges, fullers, flatter, set hammer, hardie, heading tools, punches, callipers, and 2 -foot rule.

## SHEET-METAL WORKING DEPARTMENT.

Fitted out with a forge for brazing and annealing, with a sufficient number of benches and gas soldering-iron heaters to accommodate 25 students at one time, or 150 per day; 1 small cornice brake, 1 forming, 1 folding, 1 wiring, 1 beading, 1 turning, and 4 burring machines; 1 mandrel, 2 beak horns, 4 doible-seaming, 1 conductor, 4 square face, 2 blow-horn, 1 creasing, 1 candlestick mold, 2 needle-case, 2 bottom, 2 round head, and 2 hatchet stakes; shears, riveting hammers, raising hammers, chisels, squares, mallets, rivet sets, steel punches, compasses, soldering irons, aud grooving tools; dividers, lead blocks for punching sheet metal, wooden rules, flat chisels, and 6 bench vises.

## MACHINE SHOP.

No. 1 Brown \& Sharpe universal milling machine with overhanging arm; 124-inch swing by 12 -foot engine lathes with table for cylinder, being built by Draper Machine Company; 810 -inch swing by $3 \underset{\text {-foot bed engine lathes, maise by W.C. }}{\text { W }}$ Young \& Co.; 410 -inch swing by 4 -foot bed engine lathes, made by F. E. Reid; 112 -inch swing by 5 -foot bed engine lathe, made by W. C. Young \& Co.; 414 -inch swing by 6 -foot bed engine lathes, and 115 -inch swing by 8 -foot bed engine lathe, made by Prentice Bros.; 116 -inch swing by 9 -foot bed engine lathe, made by W.C. Yoang \& Co.; 1 engine lathe 8 -foot bed by 14 -foot swing, built by students of the institute, class 1894; 1 metal planer 18 inches square; 124 by 24 by 6 foot planer; 1 aniversal cutter and reamer grinder; 150,000-pound testing machine (Riehle) ; planer 18 by 18 by 4 foot table, made by Putnam; 1 Biskford radial drill; drills to center of circle, 5 feet 9 inches; 120 -inch wheel feed drill press; 26 -inch Boyinton \& Plummer shapers, and 1 shaper 15 -inch stroke; 1 double emery grinder for 10 -inch wheels (dry); 124 -inch Barnes's water emery grinder; 1 Worcester twist-drill grinder, style

B; 124 -inch grindstone and trough; 30 rises and benches for same; 1 set pipe tools, from one-eighth inch to 2 inches; one 12 -inch 3 -jaw combination chuck; 37 -inch 3-jaw combination chucks; 34-inch 3-jaw scroll chucks; drill chucks, twist drills, tap reamers, files, chisels, hammers, scales, squares, etc., for 150 students. These shops were fitted up by the students and instructors.

Power is supplied by 2 Campbell \& Zell boilers, and a 25 -horsepower, horizontal direct-acting steam ongine (of 9 -inch diameter of cylinder and 14-inchi stroke of piston) built by the members of the graduating class of 1893.
-The value of our plant is $\$ 60,000$. The annual expense of maintenance is $\$ 30,000$ :
The study of manual training seems to increase the desire of the learner to pursue other stüdies. Seeing, each day, in the mechanical department, the practical application of the rules which they are taught in the academical department, it is but natural that they should take an equal interest in both theory and practice.

## NIGHT CLASSES.

In October, 1894, the board of school commissioners anthorized the opening of night classes to meet the desires of-students who wero unable to attend the day school. Classes wero organized in arithmetic, algebra, bookkeeping and penmanshipd mechanical and free-hand drawing, carpentry, spelling, typewriting stenography and electricity.
The classes in drawing and bookkeeping have been very large. The efforts of the students have been enthusiastic throughout, and they have shown great appreciay tion of their privilege.
The experiment has been very successful and the continuance of these classes is assured. The classes meet on Monday, Wednesday, and Friday nights of each week. The total number in attendance during the year has been 759 .

## SEWING.

[From the report of Mr. Henry A. Wise, city superintendent, for 1893.]
Instruction in sewing is given to the girls in the third grade of the primary schoold and to those of the fourth, fifth, sixtli, seventh, and eighth grades of the grammax schools.

The instruction is given by 14 special teachers under the supervision of a directo ress of sewing. Thirteen thousand six handred and fifty-seven pupils are tanght this branch, each of whom receives an hour's lesson once a week. The reporty received from principals and teachers generally speak very decidedly in favor of tltw great advaritages this instruction is to the girls and of its good offect upon the othes work of the school. It is claimed by some of the principals and teachers that since the introduction of sewing into the schools the interest of parents in the work of tho schools has increased, better attendance hás been secured, the girls have. becoma neater, more orderly, and that more interest has been awakened in the other studies pursued in the schools.

## COURSE IN SEWING.

## [From the report of board of commissioners of public schools, 1894.]

Third grade.-First half year: Practice correct position, thimble exercise, holding the needle, holding the work, moving and threading the needle, making a knok using scissors; stitching canvas, using chenille thread and split zephyr, basting. running, back stitching, overcasting, hemming, and seaming. Second half reas: Instruction about implements and materials for sowing; inch measure; reviev practical work, using colored cotton and sowing needle.

Fourth grade.-Develop cotton plant from the sowing of the seed to the manufal. ture of the cloth; history of the cotton gin; names of the threads, in all woven fabrics; review work of the preceding grade, nsing half-bleached cotton cloth, usiag red and blue cotton; the blue marking the improvement in the work. Basting, running, stitching, homming, overcasting, overhanding.

Fifth grade. -Patching, stocking darning, resoling stocking, hemming gathers and half-back stitch gathers to bands, tucking, gathering, placket, band.

Sixth grade.-Felling, buttonholes, loops and eyelets, tear darning; French hem, buttonholes and buttons.

Seventh grade.-Gussets, gores, bias cutting and piecing, facing, plaịing; Fresch gathers; overhand gathers to band; hooks, eyes, and loops; inserting.

Eighth grade.-Ornamental stitching, hem, herringbone, feather, chain, Kensingtoply outline, blanket, tapestry; buttonholes in cloth; cloth darning.

Boston, Mass.

## MECHANIC ARTS HIGH SCHOOL,

> [From the report of George H. Conley, supervisor, 1896.]

The Mechanic Arts High School will complete the third jear of its existence in June and the class which entered when its doors were first opened will graduate. * **
The course of study following serves at present as a guide for the work of the school, and in all probability, with such changes as in time may prove desirable, it will continue to be observed as the permanent arrangement or the general plan of work; but to arrange a course of study that shall carry out to the best advantage the purposes intended in the organization of this school will require such length of time as shall be amply sufficient to demonstrate its needs. It is only through experience that these needs can be ascertained and that a satisfactory course, one adapted and adequate to meet future demands, can be developed. * * * The intention is, as may be seen from the course of study, to provide in about equal measure for the study of the elements of the mechanic arts and the practical academic branches intimately connected with them:

Course of study.
FIRST YEAR.

| Academio. | $\begin{aligned} & \text { Hours } \\ & \text { per } \\ & \text { wreek. } \end{aligned}$ | Months. | Mechanic arts. | Hours per week. | Months. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Algebra | 5 | 10 | Drawing. | 5 | 10 |
| General history | 2 | 10 | Carpentry | 10 | 7 |
| English....... | 3 | 10 | Wood carving | 10 | 3 |

SECOND YEAR.

| Algebra (alternate days)....... | 21 $\frac{1}{1}$ | 10 | Drawing (alternate days).... | 21 | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Plane trigonometry ............. | 4 | 10 | Wood turning, pattern mak- |  |  |
| History of the United States, civil government (alternato dагs) |  | 10 | Forging ......................................................... | 10 10 |  |
| English............................... | 2 | 10 |  |  |  |
| French | 4 | 10 |  |  |  |

THIRD YEAR.


The study of algebra extends through two years of the course. The first year's work has special reference to the attainment of proficiency in the more important processes and extends through simultaneous quadratics. The second year's work is a review of the work of the preceding year and extends through progression. Algebraic methods are employed in the solution of such problems as are met with in the study of physical science and in the mechanical departments of the school. Also cluring the second year the subject of plane geometry is completed.

The first half of the third year is devoted to the principles of solid geometry and to numerous exercises illustrating and enforcing them, while the remainder of the year is given to plane trigonometry and reviews. The work in trigonometry is designed to familiarize the student with the fundamental principles and formulm that are constantly used in surveying, mechanics, physical science, and the higher mathematics.

The central purpose of the mathematical course is to give pupils clear notions of the value and convenience of mathematical processes in the investigation of practical problems. The readiness with which pupils master the difficult problems of the machine shop that involve the application of mathematical principles testifies to the value of this training.
In history and in civil government the course consists of a rapid survey of general
history, followed by a study of the history of England, with special reference to its influence upon the colonial period in America. A topical review of the history of the United States during the second year is designed to fix in the mind the canses and results of important historical movements. The instruction aims to trace clearly the growth of the principles of free self-government in England and their developy ment when transplanted into America, to give clear notions of the character and functions of the colonial government, and of the municipal, State, and Federal governments of the present day.
The instruction in English aims to cultivate a taste for good literature, and the course is largely determined by the requirements for admission to New Englanit colleges. A careful study of the authors read is made, with a view to awaken a gent ine interest in literature in the pupils, to raise their standard of reading and thinkin? and to improve their literary tastes. This work in literature is supplemented exercises whose merits rather than defects are emphasized for improving the style of expression. Applications of the principles of grammar and rhetoric are drawn from Carpenter's Exercises in Composition and from portions of Hill's Foundation of Rhetoric, and other sources; but these books are used more as aids and for referenoul than as text-books. The distinguishing feature of this work is the emphasic placed upon practice in writing and speaking correctly.
Thie two-years course in French is adapted to enable pupils to read easy French at sight and to give them considerable practice in elementary French composition, It is designed to meet fully the admission requisitions of the leading scientific solools.
The work in physics consists of a limited number of carefully selected laborato exercises that are perforined by allopupils, supplemented by lecture-table expen ments, explanations, and recitations, designed to give clear ideas of the fundamental principles and laws in every department of elementary physics. On account of the training given in the shops, a smaller amount of quantitative laboratory work appoare to be required than in the other high schools, and it is deemed undesirable to limil the work to the narrow range of a brief laboratory course. Spocial attention will be given to the principles of electricity and their recent practical applications. Ample provision has been made to equip the school adequately with illustrative apparatuek so that the course in physics can be made highly interesting and instructive.
The aim of the course in drawing is to teach the proper use of the pencil and drawing instruments, and to give facility in the expression of ideas of form by the various methods of free-hand and mechanical representation. About two-fifthe of the time assigned to drawing each year is devoted to free-hand work and the remaind to mechanical drawing. The free-hand work consists of the drawing of type solidsy simply and iu groups, machinery, historic ornament and original designs for wrought iron work, light and shade in charcoal, and the theory and practice of letterin Much attention is given to the rapid production of drawings of models eufficient accurate for many useful purposes, but by no means finished work. Such sketchêt frequently furnish the data for complete working drawings. The mechanical drawing embraces geometrical problems, elementary principles of working drawings as applied to shop exercises, intersections and developments, isometric projection, appliz cations of principles of projection to working drawings, geometrical problems applicable to machine design, working drawings of machines, and house plans.
It is the aim of the mechanical departments to teach in a thorongh and systematic way the elements of carpentry, joinery, wood carving, wood turning, pattern makiry. forging of iron and steel, chipping, fitting, iron filing, and machine-tool work. For each department a carefully graded series of models has been chosen, the construction of which illustrates every fundamental principle or process. The models in the primary series are made by all the members of a class. Running parallel with the primary series is a set of supplementary models that involve the application of priny"ples already learned to more difficult work. The supplementary exercises are undek taken only by those who are eapable of doing more thau the regular work of the class. This urrangement makes it practicable to adapt the rate of movement of the class to the needs of pupils of fair ability, while the more rapid and skillful workers employ their spare time upon interesting exercises that demand their best efforts. The work is planned so as to require the exercise of judgment, thought, and carc. No tasks are repeated merely for the sake of gaining facility, for the educational value of shop exercises depends largely upon the amount of careful thought they are adapted to develop; and as soon as the difficulties of a given process have been fafrly mastered a new problem is substituted.
It is unnecessary to give a full description of all the branches of work performed in the different departments of shop work, since some of them have been described in former reports. It will suffice to describe briefly the exercises in the machine shop, which was completed and made ready for occupancy in Sep tember last.
The hand tool work at the bench and hand lathe consists of exercises in chipping, filing, fittiug of sliding parts, drilling, ete. Some of the articles made are surface gauges, surface plates, calipers, electric binding posts, and turned brass ornaments.

The machine tool work consists of exercises in grinding and setting tools, and practice upon models that exemplify the various uses of the different machines, such as straight, taper, and irregular turning; screw-cutting, chucking, boring, and reaming; use of boring bars as in the cylinder of the steam engine; plain and irregular work on the planer, shaper, and milling machine.

The models, except at the very outset, consist of articles of practical use, introducing as materials cast-iron, wrought iron, steel, malleable iron, brass, and composition. Some of these articles are bolts, shafts, handwheels, pulleys, tools for various purposes, and parts of machines designed as class projects. When the parts of a machine are assembled, all parts are rejected which would not pass the inspection of a reputable mannfactory. All the exercises are adapted to furnish the pupil with material for earnest thought; to compel him to make careful and accurate observations concerning the nature of different materials, the action of various tools, and the operation of various machines. He soon learns that no work is successful that is not carefully planned and thoughtfully executed.
One purpose of the course of study is to attract to the school those boys who would not ordinarily attend a high school, by offering them an opportunity to pursue practical studies in connection with shop exercises which are, calculated to call forth their best efforts, to develop their judgment, aud to give them a thorough knowledge of the elements of the mechanical arts as well as some degree of mechanical skill. A furtber purpose is to furnish preparation for admission to such institutions as the Massachusetts Institute of Technology and the Lawrence Scientific School. The course as arranged affords excellent preparation to this end, and is sure to aronse in many boys an ambition to continne their studiescin these higher institutions or other scientific and technical schools. However, this is an ulterior purpose; but, fortunately, no better course, it is thought, can be devised for those whose school life is to end with the high school than one that insures satisfactory preparation for the higher scientific schools. In any calling the worth of such preparation will be felt, and in any scientitic pursuit its value is priceless. In the higher scientific and technical schools boys who have passed through good manual training courses liave a decided advantage over those of equal ability who have not had such training, as evidence at hand plainly shows. Mannal dexterity, with a knowledge of tools, materials, machinery, and mechanical processes, tends to insnre in the scientific laboratories a more rapid progress and more ready mastery of difficult subjects.

For all the pupils of the school the subjects of study are the same, but the amonnt of work required in each subject is proportioned to the varying degrees of ability displayed by the pupils. The classes are so divided and the work so arranged that no pupil may be taxed beyond his power, while those who work rapidly receire the stimulus of demands calculated to call forth their best efforts. The amount of work accomplished is deemed relatively unimportant in comparison with the mastery of correct methods and the formation of good habits.

The school has suffered on account of the trying delay in providing for its pressing needs, and the satisfaction is great, indeed, to be able to state that its equipment is now complete. I may add that in regard to the school building, while some changes in construction and finish are desirable and even necessary, the class rooms and shops are all well lighted, perfectly ventilated, and attractive in every way.

GRAMMAR SCHOOLS.
[From the report of Mr. Frank M. Leavitt, principal of mantal training schools, 1895.]
There are at present for the use of the grammar schools 15 rooms equipped for wood working. Considering an average class to be 25 , and that the supply of pupils is limited to the three upper grades, these rooms are capable of accommodating 3,635 boys per week. There are this year 2,522 boys thus accommodated, as follows: Class I, 397; Class II, 1,923; Class III, 202. These boys are receiving instruction in wood working under 12 teachers, 11 special and 1 regular. Each special teacher has weekly an average of 225 pupils in his charge. $*_{*}^{*}$ In addition to the boys classes there is a class of 30 girls from the Bowditch school.

The general need of this department to secure its future welfare is the equipment of more maniual training centers, which will decrease the extent of the districts, and the greatest improvement within our reach is the further introduction of the work into the first or third classes, or both.

The present policy of the school committee permits this extension of manual traiuing in the same spirit as that which dominates the movement to enrich the grammarschool course. Any principal of a grammar school, finding the conditions under which his school is working favorable to the introduction of manual training inte his first or third classes, or both, is invited to make that extension without waiting until every other grammar school enjoys equally favorable conditions.

## COURSE IN MANUAL TRAINING IN GRAMMAR SCHOOLS. ${ }^{1}$

The relation of manual training to the study of elementary science is intimate and essential. Moreover, the relation of both to other departments of school workespecially to language, geography, and drawing-is so close as to result in mutual helpfulness and in economy of time and effort.

The exercises in manual training are a means not only of physical and intellectrax but also of moral, culture. They train to habits of accuracy, neatness, order, an thoroughness; they make a helpful occupation for otherwise unemployed time, or a relaxation from less pleasurable work; they present an incentive to goed work in all directions, and offer at all times and in all connections a moral stimnlus and preparation for usefulness at home and in the community.

Classes VI, V, IV (two hours a week).-Sewing, light tool work, or clay modeling
Note 1.- All the girls in Classes VI, V, and IV are to spend two hours a week sewing. If, however, any girl shall have passed a satisfactory examination in sewing, she will be allowed to substitute for it some other branch of manual traininge

Classes III, II (two hours a woek).-Cookery, wood working, or clay modeling.
Note 2.-Every girl is to pursue a course of twenty lessons of two hours each in cookery as a regular part of the work either of Class III or of Class II. Bnt a girl who shall have passed a satisfactory oxamination in cookery will be allowed to substitute for it some other branch of manual training.

Note 3.-If the whole or a part of the time assigned to specified branchee of manual training be not used therefor, such time may be given to any other of its authorized branches.

Class I (two hours a week).-Drafting and cutting, wood working, or clay modeling.

## PRIMARY SCHOOLS.

Course of observation lessons and manual training.
Cluss III (three hours a week).-Observation lessons on color, form, size, placa, and prominent qualities of objects, to be related to and illustrated by each of the following branches of manual training:

Clay modeling of sphere, cube, and cylinder, and of familiar objects approache these types (e. g., apple, nest, basket; box, house, stove; bottle, rolling-pin, mus also of hemisplere, square prism, and triangular prism, and of familiar obje approaching these types (e. g., bowl, spoon, saucer; cake, brick, steps; cradle, boat, stool).

Paper folding and cutting of faces, edges, and sections of the above-namedi solids, in bluc, red, and yellow papers, carefully measured and divided, with study of squares, circles, angles, and lines.

Sewing in colored threads (blue, red, yellow) on coarso cloth or canvas (stitches over and under, counting threads) in vertical, horizontal, and oblique lines; the same, in parallel lines; and in outline forms as in paper folding.

Stick laying, preceding and conformed to the regular drawing lessons for this grade.

Class II (three hours a week).-Observation lessons on plants, on animals, and on the human body, to be related to and illustrated by each branch of the manaal training and by the drawing: (a) Flower, leaf, stem, root; bud, fruit, seed. (b) Domestic and other common animals. (c) The parts of the human body and their uses and movements; the care and protection of the body.
Clay modeling of the ovoid, ellipsoid, cone, and square pyramid, and of plant and animal forms approaching these types (e. g., leaf, petal, corolla, seed vessels, heads and trunks of varions animals, bills of birds, eggs).

Paper folding and cutting, in colored papers (red, blae, yellow, orange, green), of plane figures made by sections of the above-named solids, and of plant and animal outlines approaching these types (o. g., leaf, sections of fruit, flower, seods, starfish, shells); also of bilateral and radiate designs based upon these, for decorative work.

Serving on canvas, with colored threads, on the same lines of development as iu the paper cutting.

Stick laying, preceding and conformed to the drawing lessons for this grade.
Class I (three hours a week).-Observation lessons on nature, on plants, on animals, and on the human body.

Clay modeling of symmetrical designs on plaques, and of plant and animal forms in relief on plaques, or as models for art.

[^19]Paper folding and cutting in all colors, tints, and shades, for harmony of color and beauty of design; also in bilateral curves confermed to the drawing lessons for this grade.

Serving on soft cloth, in colored worsteds, for harmony of color, beauty of design, and free use of curved lines.
Light cardboard constructive work: Modifications of type forms, for use or beauty; ropresentations of toys, utensils, furniture, etc., with use of glue.

## cooking.

[Based on the report of Amabel G. E. Hope, principal of cooking schools, 1895.]
It is now ten years since the study of cooking was introduced into the public schools of Boston. There are 14 school kitchens in the city under 10 teachers, 3 assistants, and a principal or director. The course of study in all the kitchens is uniform, and consists of 36 lessons. The girls work in sets of 6 to 8 , a plan that lias reduced the cost of food materials to $\$ 80$ per year, as against $\$ 600$ under the former method of allowing each girl to cook a separatedish.

All the pupils are from the second class of the grammar schools, the girls going for instruction to the kitchen nearest their regular class rooms.

## COURSE IN SEWING.

Material desirable for the workbox.-One-half yard of cotton cloth; 3 spools of white cotton, Nos. 40,60, $80 ; 1$ spool of colored cotton, No. 50 ; needlebook containing needles, Nos. 7, 8, 9, or assorted, Nos 5 to 10; 2 darning needle日, Nos. 4, $6 ;$ pincushion filled with pins; thimble; emery; scissors; measure; tape needle.

First year--Instruction: Position of pupils while sewing; how to choose the needle and thread; the proper length of thread; drill in threading the needle; also in drawing the thread; how to make a knot; the ase of the thimble; how to hold the scissors, with practice in cutting paper; the use of the emery; the position of the needle, and the proper way of holding the work in the different stitches taught; how to begin, join and fasten the thread; length and regularity of stitches; how to fold a narrow hem; neatness and order in the care of work. Stitches taught: Basting, lackstitching, hemming, overcasting, running. Articles which may be made: Plain aprons without gathers, bags, toweIs, napkins, bibs, handkerchiefs. Any plain article illustrating the required stitches.

Second year--Instruction: Review of first year's work; the proper way of cutting and putting together an apron with band; the proper way of cutting or tearing bands; gathering and laying of gathers; stitching gathers into a binding, and finishing the band by hemming; measuring and basting wide hems; practice in buttonhole stitch on folded edge of cloth, and in the preparation of buttonholes lefore working them; basting of selvages and folded edges; overhandingon selvages and on folded edges; overhanding on lace trimming. New stitches taught: Gathering, lalf-backstitching, and combination of one running and one half back-stitch, overhanding, buttonhole stitch. Articles which may be made: Aprons of various kinds, pillow slips, fringed towels and napkins, any plain article illustrating the required stitches.

Third year. -Instruction: Examination and review of work of previous years; cutting simple garments from measurements; setting gathers into a band; making plackets; putting in gussets; sewing on buttons; patching and darning on cotton cloth; buttonholes on cotton fabrics tucking if practicable. New stitches taught: Patching, darning, gathering on flannel, feather and herringbone stitches, chain and cross stitching. Articles which may be made: Cotton skirts, flannel skirts, drawers, underwaists, stocking bags, shoe bags, sweeping caps, buttonholes; any garment illustrating the required stitches.

Fourth year.-Instruction : Examination and roview of work done in all previons classes; darning stockings; darning diagonal and corner tears and rents; cutting bias bands; mending and patching woolen and cotton fabrics; basting ordinary garments. New stitches taught: Stocking darning, straight and bias felling, whipping and sewing on ruffles, hemstitching, bliud stitching, tucking, if not taught previously, gathers overhanded to a band, sewing on hooks and eyes and buttons, eyelets, loops. Árticles which may be made: Children's dresses, night dresses, night shirts, skirts and drawers with tacks, sampler, articles illustrating the required stitches.

Fifth year:-A system of dress cutting by which girls are taught to take measures, draft, cut, and fit a dress waist.

Drafting and cutting garments from patterns.

Brookline, Mass.

## [Statement of S. T. Datton, superintendent of schools.]

The central thought in all our manual training is education, and not with reference to technical study or to trade. We make all branches of hand work in our gramuaf schools, including bench work, sewing, cooking, etc., obligatory-that is, it is a part of our regular course.

In regard to the course of study, we are trying to have some manual work in every grade, beginning with the kindergarten. The first three years consists of modeling in clay, cutting in paper, water color, painting, and drawing. The fourth year we have cutting upon wood of two dimensions, done at the pupil's desk. Commencint the fifth year, we have sloyd, which gradually develops in the upper gradesind simple construction and wood turning. In one grammar school we are teaching sloyd, pure and simple, after the models prepared by Gustaf Larson, of Boston. The instructor has taken a course at Naas, Sweden.

I aim unable to give you the value of our plant. My usual estimate for the fitting up of a shop for lench work is $\$ 500$; for a school kitchen, $\$ 250$; our wood-turning department costs $\$ 2,500$; our foundry, $\$ 200$, and our forge shop, $\$ 1,200$.

We are well satisfied that manual training has a good effect upon pupils with respect to other studies. Many who are slow in the more abstract subjects are very successful in the shop, and get courage and confidence which helps them in their other work. Manual training helps to develop the manly tone and pride, which is one of the best products, as I think, of school life. We have one very large grammar school where the children come from the homes of working people. Many of these pupils after leaving school are going into mechanical pursuits, and some of them are making a good record. We are offering elective studies in the way of advanced manual training, domestic economy, and needle work to all the classes in our high school. As this is the first year in which this plan has been pursued, I am unable to make any definite statements as to the results, but quite a number of our pupils who are preparing for college are taking this work.

## COURSE OF STUDY IN MANUAL TRAINING.

The following schedule provides one year of preparatory practice in wood of two dimensions, one year of work upon sloyd models, a year of joinery, a year of wood carving and construction, a year of wood turning, and a final year in pattern making and foundry work.

In all elementary manual training there should be a maximum of interest. Only neat and accurate work is accepted. All wastefulness of material is carefully avoided. While class instruction is given upon the various exercises, each pupi works independently. Those who complete their work in advance of utbers are given supplementary exercises.

Fourth grade. -The work of this year is done upon slips of basswood one-eighth of an inch thick and 4 inches square. These are shaped by the knife into simple flat forms, some being put together with glue or small nails. The work is done in the schoolroom upon the desk, a cutting board protecting the desk and holding the wood for the knife. In addition to the knife, each pupil has a pencil and rule. The oceasional tools are the hammer, nails, a brad awl, and sandpaper and glue.

There are sixteen models in the regular course, with extra ones for the more adrancerl pupils. The teacher makes a working drawing of the model upon the blackboard, then demonstrates the construction of the model and the uses of the tools required. The pupils draw the outlines upon the wood and cut to the lines.

The objects to be derived from the training of this course are to read and to make simple working drawings, to take accurate measurements, and to work to those dimensions, thereby fitting the pupil for the next year in bench work.

Fifth grade. -The work of this year is upon sloyd models. There are 20 model品in this course, with extra models for the advanced pupils.
The tools used are the essential wood-working tools. The pupil works from his own drawing, made from the model, and estimates the worth of the work done by judging each part of the model.
Sixth grade. -The work of this year is joinery. There are 14 models in this conrse. These models include the essentials of joinery, with some applications. The prpil works from his own drawings and blue prints.
Thie theory of the use and construction of the tools is taught during this year. The stock used is clear pine.
Seventh grade.-The work of this year is carving and constructive work. The carving course consists of 11 models which require the common carving tools.
The latter part of the year is spent upon case work, as a further application of the work of the preceding years.

The pupil makes one or more of the models in construction, as his time permits.
Eighth grade. -The work of this year is wood turning. There are 21 models.
Ninth grade. -The work of this year is pattern and foundry work. There are 21 models in the course, 15 of which are required.

## COURSE OF STUDY IN DOMESTIC ECONOMY.

The course extends over the last four years of the grammar school, each clase receiving two hours' instruction per week. In the first year it is intended to give the pupils an idea of the scope of cooking, to be elaborated during the succeeding years; the course of each year is, however, complete in itself. It is the aim to combine both the art and the science of cooking. At the beginning of each year the actual cooking is to be made as simple as possible, in order to avoid confusing the child and also to give time for the necessary details of housework. The sequence of the lessons is followed as closely as possible, but in many instances seasons and prices must be the guide.

## First Year.

Housekeeping.-The pupils wash their own dishes at the desks as soon as they have finished using them. There are three housekeepers appointed at each lesson, who have general oversight of the room, their duty being to see that the room is kept and left in a good condition. Thus, No. 1 attends to the fire and care of the stove; No. 2 has general charge of the room and cupboards, while No. 3 sees that the sink is left clean.

Since the important part that dust plays as a carrier of micro-organisms is becoming more and more recognized, attention is given to household bacteriology. Lessons are given on how to sweep the floor; how to get rid of the dust; to wash dishes; the care of dish towels; the care of the sink, and the use of the various cleaning agents, such as sapolio, pearline, borax, putz-pomade, electro-silicon, pumice stone, etc.

## Lessons on the chemistry of foods.

The food in order to enter the blood from the alimentary canal must be made soluble. The solution of food may be greatly aided by the preparation it receives before entering the alimentary canal. Water, playing the part of nature's great solvent, is considered first.

Water.-(1) Effect of cold water upon gelatin; (2) effect of boiling water upon gelatin; (3) difference in taste between freshly boiled water and that which has been boiled for some time; cause of difference in taste; (4) temperature of boiling water; cooking in high altitudes; (5) way in which the boiling point of water may be raised; (6) amount of water in some of the common vegetables and fruits; illustrate both by experiment and charts.

Milk.-After water, milk is studied. Milk is a natural food and contains the food materials in the perfect proportions: (7) Allow milk to stand in a glass tube; notice what happens at first; later on; (8) temperature of boiling milk; (9) study chart giving composition of milk; (10) study chart giving composition of the commercial prorlucts of milk. The food materials in milk are taken up in turn-albumen, fats, sugar, and mineral matter.

Albumen.-The white of egg is typical albumen. Eggs illustrate the form of a concentrated food. (11) Effect of heat on albumen; illustrate by dropped egg; (12) carefully separate and examine the yolk and white of an egg ; set each aside for future study; (13) examine same in the dried state; (14) make beef tea; study the albumen in meat; note the effects of different degrees of heat of the water solution; (15.) drop a piece of beef into boiling water; result.

Fats.- (16) Extract fat from the dried yolk of egg by means of naphtha; (17) extract fat from corn meal with naphtha; (18) temperature of smoking fat; correct the expression "boiling fat;" cause of bubbles when the fat is heated.

Sugar.-(19) Burn some sugar. Show that it contains carbon. The reasou that carbohydrates and fats are heating is becanse they burn as a fuel in the body.

Starch and cellulose are the forms of carbohydrates found in the vegetable world. These are considered next.

Staroh.-(20) Pop some corn; this illustrates the effect of heat on the starch grains; (21) steam rice; this illustrates the necessity of water with starchy foods; measure before and after cooking; (22) pour boiling water upon dry starch powder; result; (23) break open lump and examine interior; (24) mix starch with sugar, ponr on boiling water; (25) mix starch and cold water, pour on boiling water; induction in regard to pudding sauces, etc.; rule for making laundry starch; (26 put starch and sugar into separate tumblers, add cold water to each; give terms "solubility", "insoluble," "dissolve;". (27) masticate a piece of cracker thoroughly; effect of
saliva on starch; (28) masticate a piece of corn meal; compare with former; (29) gete starch from a potato; (30) get starch from flour; give term "glutep" to substance left after the starch is washed out of the flour.

Cellulose or woody fiber.-(31) Get cellulose from the potato; (32) get cellulose from the turnip.

## Cooking.

The experiments just given indicate the plan of the first year's work. Following are given a few of the dishes that may appropriately be given to illustrate these principles. The other side, namely the manipulation, is also to be considered, arf attention is given to the various processes of cooking, viz, steeping, boiling, steanid ing, broiling, pan broiling, sautéing, frying, and stowing.

Water.-Lemon gelatin; the beverages, e. g., tea, coffee, etc.
Fruits.-Stewed fruitś, scalloped apples.
Water and cellulose. - Vegetables-potatoes, turnips, carrots, beets, onions, spinaeld
Milk.-Rennet custard, milk toast, blanc mange.
Albumen.-Beef tea, beefsteak; stews, lamburg steak, boiled mutton, soups, fish, eggs,
Starch.-Rice, macaroni, the cereals, lemon sauce. Additional dishes-hisen! corn-meal muffins, bread pudding, bread.

## Second Year.

Housekceping. -The housekeeping is the same as in the previous year. A review is made of the various cleaning agents. Each pupil is responsible for her own desk ${ }_{\text {I }}$ and the housekeepers for the whole room.

Chemistry of foods.-A review of the previous year's work is made. Since meate aro to be studied this year, more attention is given to albumen, and how to cook it. As the foods are studied, attention is called to their value as foods and to their composition.
Tho children are to learn to recognize the different food materials and food adjuncts, both by sight and by taste.
Prices and how the different foods are purchased should be considered.
The pupils should be led to see that the laws of harmony apply to the mixing and combinations of food, as they do in masic and color.

## Cooking.

Tho practice work of this year consists in cooking meats and fish, white sauces and simple desserts.

Meats.-By means of diagram draw from class which cuts will be best for soupeg steaks, etc. With fresh meat show difference between tough and tender fiber. Coolf different parts of the animal and thus get the class familiar with the different cuts as well as with the varions methods of cooking: Beefsteak, tripe, chops, dripping meat balls, liver, stew, small roast, beef roll, bacon, fricassee, minced meat ou toase

Fish. - Fish illustrates well the cooking of albumen. Baked stuffed fish, boile fish, fish chowder, fried codfish.

White sauce--Demonstrate. Thick whito sauce may be served in various waysy Salmon in white sauce, creamed salt fish, scalloped fish, creamed vegetables. A thinner white sauce may be ased for milk toast, and egg sauce for fish; very thin white sauce for egg vermicelli. The principle of white sauce is used in one mothod of thickening soups. Illustrate by making tomato soup or potato soup. Some meat gravies aro made in same way. When possible, make gravy when cooking meat, and thus give additional practice in making a smooth sauce.

Desserts.-A few simple formulas are given and the method of work carefull demonstrated. From these fer principles many varieties may be made either by a chaugo of flavoring or by combinations. The following will suggest the work done in this line: (I) Cornstarch mold, (II) soft custard, (III) meringue, (IV) Jemon gelas tin, (V) omelet.

When once it is understood how certain effects are prodnced, an endless rariett may bo made, thus: Italian jelly, variation of IV; orange pudding, combination of I, II, and III; snow pudding, combination of III and IV; fruit tapioca, based on I; Spanish cream, combination of II, IV, and Y, and so on.

Some language work may be brought into the work, thus: The legends in regars to the introduction of tea and coffee as leverages are read to the class, from whicis abstracts are written.
Dictionary exercises aro given, and the pupils are taught the use of the following terms, with their derivatives: Digestion, maceration, to steep, infusion, decoctio percolation, simmer, garnish epicure, etc.

## Third Year.

The science of the past two years is reviewed and made luroader. In connection with doughs the chemistry of baking powder, and the various ways to obtain carkon dioxide to make the dough porous, are considered.
Foods are studied in a. Way leading to the subject of dietaries.
The cooking consists of a series of lessons on invalid cookery. Just before Christmas a lesson is given on home-made candies. Then the suljeet of doughs and batters is studied carefully. The latter part of the year the food materials are studied topjcally, leading to the combinations of food for simple meals, with the cost and quastity necessary. The whole meal is not always prepared, bnt parts are, and the cost of the whole estimated.

Invalid cookery.-Dishes suitable for sick-room diet are cooked, with a fow suggestions relative to the comfort of the patient. At the ond of the series of lessons each pupil is to prepare a paper on the care of an invalid, and also le'able to arrange an invalid's tray.
Dishes to be prepared. Cooling drinks: Lemonade, apple water. Mucilaginous drinks: Irish-mose lemonade, flaxseed lemonade. Gruels: Curn-meal and oatmeal gruels, milk porridge. Oysters: Oyster stew, parboiled, oysters. Simple desserts: Apple snow, lemon gelatin with prunes, blane mange. Additional dishes: Eggnog, steamed custard, albumonized milk, chops.

Demonstrate to class: Flaxseed poultice. How to wring a cloth from boiling water. What to do in case of a burn or a cut.
Doughs.-The subject of doughs and batters may be made very simple. By classing those of a kind together much may be done in the time allotted, A few things are considered carefully: The ways in which gas is introduced to make the mixture light. The consistency of doughs required for certain results. Manipulation in regard to rolling the doughs. From the simple biscuit formula is shown how the other doughs may be evolved.

Biscuit.-Dutch apple cake, strawberry shortcake, flour maffins, graham, rye, and corn-meal muffins, griddle cakes, cake, cookies, etc.

## Fourth Tear.

The work of the last year is a resume of what lus been given the past three yoars. Many of the children may never lave a high-school training, therefore it is intended to apply as much chemistry and physiology as is practicable. The foods are stndied topically, and attention is given to dietaries suitable for different seasons. A review is made of the dishes already studied. Attention is given to garnishing, and pupils are instructed how from simple dishes more elaborate ones may be made.

> Manual Training School, Springfikld, Mass.

## [Statement by George B. Kilbon, principal.]

The central idea in onr school is education, either fitting a boy for higher technical schools or for business, or to learn a trade more easily. The work is not obligatory.

It is a part of the public-school system and is supported by yearly appropriation. Any boy in the eighth or ninth grades of the grammar school can attend once a weelk, one and one-half hours. Any boy in the high school has hitherto been allowed to attend every day, two hours, for three years. A conrse of four years in the high school goes into effect next Jear, which is composed of two academic studies daily with drawing and manual training. This fits for technical schools or business.

Our methods are by dictation where possible, and by performing in the presence of the class such operations as are difficult or impossible to describe. Drawings are made and worked from sometimes anu blue prints worked from sometimes.
We commenced in 1886 with an appropriakion of $\$ 1,000$, which has been yearly increased. From $\$ 500$ to $\$ 1,000$ has been spent yearly in additional equipment. Wo have also in grades 4 to 7 a system of knife work which all of the 1,200 boys in those grades take, while girls in same grades take setwing. These two branches of intermediate gramnar instruction are both very successfil and highly appreciated by our citizens. The knife work has been gradually built up since 1887, when $\$ 10$ was expended for equipment and a class of 12 boys taught in one school. For several years our regular toachers took lessons in knife work at the Manual-Training School and taught them to their own pupils. For three years past, however, a special teacher has been employed.

The building occupied for high school and eighth and ninth grammar grados is 70 by 50 feet, two stories and a basement. Forging and molding are in the basement, ironwork and wood turning are on the first floor, joinery benches on the second
floor. Individual tools are provided for pupils in grades 4 to 7 and general tools in grades 8 and 9 and high school, except individual planes for high-school prpils.

The building is one formerly owned by the county of Hampden and used as a workshop in connection with the jail. It was bought by the city for about $\$ 8,000$. It with the entirejail buildings is to be torn down next fall and the site used for a new high-school building. Then the present high-school building will be devoted to manual training.

Cost of equipment in this building at present is about $\$ 7,500$; annual expense of maintaining the work in this building, about $\$ 4,000$; annual expense of maintaining knife work in grades 4 to $7, \$ 800$.

Results: A widespread interest in our community in manual training; an acquaintance on the part of all of our boys with tool work and on the part of some of them to the extent of acquiring skill and ability; the interest they take in it reacts on all other school work, promoting interest and aiding discipline; the grammar manual training is known in some cases to prolong school life. The high school is so much hampered by contracted quarters and new building plans that its manual training suffers with other branches in proper development.

Of 19 graduates since 1891, 1 is now teaching in our own manual training schoot, 6 are engaged in drafting, 4 have finished or are pursuing a technical course, 1 is a clerk in a hardware store, 4 are employed as mechanics, 1 enters college, and 2 take additional study next year in our high school.

Woodworking equipment.-This consists of 34 benches and sets of tools, costing $\$ 850$ 256 drawers for holding work in process, 200 drawers for holding prepared materia and supplies costing $\$ 484$.
The benches are each $4 \frac{1}{2}$ feet long by 2 feet wide by 34 inches high. Pupils of small stature are accommodated with movable platforms. The bench tops should be 2 or 3 inches above the wrist when the pupils stand erect. Benches are arranged in rows about 3 feet apart each way.

The following is a list of tools with which each bench is supplied: Bevel, 6-inelty bit brace; bits, auger, one-fourth, three-eighths, three-fourths inch; bits, dril five thirty-seconds, seven thirty-seconds inch brad awls in handle; chisels, firme one-eighth, one-fourth, one-half, 1 inch countersink, dividers with pencil, gange; gouge, one-half inch inside, ground; gouge, three-fourths inch outside, ground hammer, claw ; hammer, pein; hand screw, 10 inch-knife with two blades, mallet, oif stone, oil can; 1 lead pencil, medium ; plane, the Bailey iron smooth, 8-inch; planes the Bailey iron block, 6 -inch; plane, wood smooth, 8 -inch; pliers, rule, 12 -inch; soli. boxwood, saw, 18 -inch; panel, slitting, saw, 18 -inch, ; panel cutting-off, saw, 10 -inch; back; saw block; screw-driver, 3-inch; try square, 4 inch; dustpan, broom for floor, brush for bench top, whisk broom for clothing.

The school is further supplied with 822 -inch iron Bailey jointers, 12 framing squares, and 226 -inch handsaws.

Each bench is provided with a vise at the left-hand end and a shove-plane block at the right. On or about each bench a place is provided for each tool.
The drawers above mentioned are each 21 inches long by 10 inches wide by $7 \frac{1}{6}$ inches deep, inside measure, and are inclosed in cabinets, each 6 feet high by 4 feet 5 inches wide by 2 feet deep, each cabinet containing 32 drawers. Each pupil has a drawer for his exclusive use, his name being on a card attached to the front.

Wood-turning equipment.-This consists of 15 lathes, 4 feet by 10 inches, with 15 sets of tools, costing $\$ 900$. The lathes were made by F. E. Reed \& Co., of Worcester, Mass. Each lathe is provided with head and tail centers, screw face plate, 4 -inch diameter, plain face plate, 6 -inch diameter, 5 -inch rest, 10 -inch rest, oiler, oilstones slip stone, and the following tools: One-inch gouge, ground straight across the edge for roughing; three fourths-inch gouge, ronnd end; three-eighths inch gouge, round end; 1 -inch chisel, skew edge; three-fourths inch chisel, round edge; three-eighth inch chisel, skew edge ; one-half inch chisel, straight edge; one-eighth inch chisel) for parting; mallet, 10 -inch calipers, 7 -inch dividers, rule and lead pencil, dus orush and pan.

Carving equipment.-The carving equipment of 24 sets was purchased of White, Van Glahn \& Co., New York, and Goodnow \& Wightman, Boston. It compriseg seventeen tools in each set, designated in J. B. Addis's catalogue as follows: One-half inch, No. 1 ; one-fourth inch, No. 1 ; three-eighths inch, No. 2 ; three-fourths inch, No. 3; three-fourths inch, No. 4; five-eighths inch, No. 5 ; seven-sixteenthsinch, No. 5 ; onehalf inch, No. 7; one-eighth inch, No. 7; seven-sixteenths inch, No. 9; three-eighthe inch, No. 9 ; three-sixteenths inch, No. 9; one-forrth inch, No. 11; one-eighth inch No. 11; three thirty-seconds inch, No. 11; one-fourth inch, No. 11 ; one-eighth inche
No. 39 ; one-eighth inch,

Also a pencil gauge and 2 stamps, 1 one-fourth inch square, and 1 one-eightioh by three-eighthe inch, both of which were made by the pupils. Pupils also made octagonal handles for the above tools.
Each carving set is arranged in a partable tray, the trays being fitted in a cabinet built for them. Cost of carving equipment, $\$ 205$.

Pattern-making equipment.-The joinery benches and tools and wood-turning lathes are used for pattern making, a few inside ground gonges being added.

Molding equipment.-This consists of 12 troughs and sets of tools, with 12 drawers for holding work, costing $\$ 230$. Calcined plaster is used sometimes for pouring. Also lead is melted at a furnace built in part by the school.

Forging equipment. -This consists of 12 forges, 28 by 40 inches; 12 anvils, 125 pounds each, and 12 sets of tools, as follows: Hardie, set hammer, $1 \frac{1}{4}$ inches; flatter, $2 \frac{1}{4}$ inches; top and bottom fullers, each three-eighths, one-half, and three-fourths inch; top and bottom swages, each three-eighths, one-half, and three-fourths inch; tongs, each onefourth, three-eighths, one-half, and three-fourths inch; hot and cold chisels; ball-pein hammer, 1 星 pounds; 2 sledges, 8 pounds; 3 sledges, 6 pounds; 1 sledge, 5 pounds. The blower and exhauster driven by power. Cost of forging equipment, $\$ 1,200$.
The school has 4 grindstones, costing $\$ 65$, each of which is furnished with a water faucet and with a drip box and pipe connected with sewer.
Ironwork equipment.-This consists of 6 engine lathes, 6 feet by 14 inches, each fitted with a 12 by 7 inch and a three-fourths inch chuck; 1 planer, 4 feet by 20 inches; 1 drill press, 20 inches; 8 vises and 8 sets of bench tools; an assortment of drills and reamers; 1 gig saw; 1 drill lathe; 1 twist drill grinder, and 1 emery stand. The four last-mentioned machines were made by the school.

From 1887 to December, 1891, power was furnished by a 6-horsepower Shipman engine. Since the latter date it has been furuished by a 15 -horsepower electromotor, manufactured by the Elektron Manufacturing Company, of Springfield.

The drawing room, which is in the main high-school building, is supplied with 24 wooden tables of original design, 24 T squares, 24 pairs of triangles, 50 drawing boards, with a rack to hold them, and a case of trays to store drawings, also of original design. Pupils furnish their own drawing instruments. Each table is 36 inches high, the dimensions of the top being 34 by 22 inches, and is provided with four drawers, 14 by $6 \frac{1}{2}$ by $3 \frac{1}{4}$ inches, inside measure, each drawer having a metallic projection or staple on the side, corresponding when the drawer is closed to a like projection on the side of its pocket, so that the hasp of a suall padlock may be thrust through the staples, thusenabling pupils who wish to secure each his own instruments.

Lessons in mechanical drawing are given to grammar pupils in the grammar schools by regular teachers, under the direction of the supervisor of drawing.

Knife-work equipment.-In grade 4 the tools used are rule, pencil, compasses, and small pocket knife. As this work is confined to knife carving, no protection is needed for the desk but a small piece of thin wood.

In grades 5, 6, and 7 the gauge and try-square are added and a larger knife furnished. A desk cover is necessary in these three grades when the work is pursued in the ordinary schoolroom. Each boy has his own set of tools kept in a box made of one-fourth inch stock, $8 \frac{1}{2}$ by $4 \frac{1}{2}$ by $1 \frac{5}{6}$ inches, with his name and number attached. Ten of these boxes are placed at the close of every lesson in a larger box, made of one-half inch stock, 25 by 9 by $3 \frac{1}{2}$ inches, inside dimensions, or in some schools they are deposited on suitable shelves. Knives which become dull are sharpened every week by a regular workman.

## COURSES OF LESSONS.

Knife work.-Lessons principally given are described in a book entitled Knife Work in the Schoolroom, prepared in 1890 by George B. Kilbon, principal of the Manual Training School, and published by the Milton Bradley Company of Springfield. Knife carving, taught in grade 4, has been developed since the preparation of that book, and will be found better described in The Northampton System of aManual Training, arranged by F. W. Hinckley, of Northampton.

Work done in grades 6 and 7 is on wood five-sixteenths, three-eighths, and onehalf inch thick, successively. Also forms are cut from wood seven-eighths inch square and 19 inches square, with still others of miscellaneous dimensions, interspersed with problems in construction.

Eighth and ninth grammar grade courses.-A course prepared in 1886 for the ninth grammar grade has until recently been used in that grade. This course is described iu Elementary Wood Work, ${ }^{1}$ prepared by George B. Kilbon. Its contents will be found below. The admission of eighth-grade boys to the Manual Training School in 1892 has caused some changes in this course, as it is now made to cover two years.

Contents of elementary course for eighth and ninth grammar grades.- Use of hammer, use of gauge, measurement, use of try-square and bevel, explanation of saws, use of saws, surface planing, edge and end planing, use of bit and brad awls, shove planing, square prism and cylinder, use of chisel and gouge, use of hand screw and screw-driver, to make a pair of scales, to make a beveled box, grinding tools.

## HIGH-SCHOOL COURSE IN MANUAL TRAINING.

First year.-Fall term: Academic studies: Algebra, zoology, English language and grammar. Tool work: Joint making, sandpapering, staining and varnishing, grinding and honing tools, lecture on grain of wood. Mechanical drawing. Winter term: Academie studies: Algelora, zoology, followed by physiology, English language and grammar. Tool work: Wood turning. Mechanical drawing. Spring term: Academik studies: Algebra, physiology, followed by botany, English Ianguage and grammar, Tool work: Wood turning, scraping, polishing, saw filing. Mechanical drawing. Summer term : Academic studies; Algebra, botany, English language and gramme Tool work: Carving, lecture on kinds of wood and their uses. Mechanical drawind
Secondyear.-Fall term: Aeademic studies: Plane geometry, general history, botany, followed by physics. 'Tool work: Forging, welding, tempering, Mechanical drawing. Winter term: Academic studies: Plane geometry, general history, physies. Tool work: Soldering, brazing, lecture on kinds of metal and their uses. Mechan 4 ical drawing. Spring term: Acadcmic studies: Plane geometry, general history physics. Tool work: Pattern making. Mechanical drawing. Summer term: Acar demic studies: Plane geometry, general history, plyysics. Tool work: Molding, casting. Mechanical drawing.

Third year.-Fall term: Academic studies: Rhetoric, higher algebra, chemistro French or German (optional). Tool work: Chipping and filing metals. Mechanic drawing. Winter term: Academic studies: Rhetoric, followed by American literature, higher algebra, followed by solid geometry, chemistry, French or Germax (optional). Tool work: Turning, planing, and drilling metals; study of machinemy Mochanical drawing. Spring term: Academic studies: American literature, sol geometry, chemistry, and geology, French or German (optional). Tool work: Turning, planing, and drilling metals. Mechanical drawing. Summer term: Academ studies: $\Lambda$ merican literature, solid geometry, geology, French or German (optional) Tool worls: Machino construction. Mechanical drawing.

St. Cloud, Minn.

[Statement of S. S. Parr, city superintendent.]

Tho schools of this city have a system of drawing, sloyd, paper folding, clay molding, etc. The leading lines are those of crawing and sloyd. These forms of training extend through the eight grades (nine years). The drawing includes the simple laws of perspective, a study of how objects appear to the eye and how they must bo represented, tho geometrical basis of form and drawing, the stady of the simplest riew of historic design, and the application of color in the representaticil of objects.
The sloyd consists of whittling from the second to and including the sixth grades, and the use of the commoner tools in the seventh and cighth grades, for the production of some forty different models of towel holders, coat supports, brackets, rollingpins, etc.

The immediate purpose is purely an educational one. It seeks to develop skill of hand and cye and acquaintance with the simplest principles of mechanicu construction.

These courses of instruction are supported the same as other teaching, by appropriations from the public-school funds. There is no charge for tuition.

## COURSE OF STUDY.

First grade: Clay modeling, paper folding and cutting, color work, drawing.
Second grade: Same subjecte as first.
Third grade: Clay modeling, paper folding, cutting, and pasting, color work, drawings from objects, and whittling.
Fourth grade: Same suljects as third.
Fifth grade: Drawing, including shading, simplest laws of ornamentation, whittling simple models.

Sixth grade: Same subjects as fifth.
Seventh grade: Drawing, includiog shading and perspective, the use of saw, trysquare, square, jack and amoothing planes, auger and bit, eppokeshave, chisel, rasp, shaving knife, gauge, sloyd knires and cimlet, working drawings.
Eighth grade: §ame as seventh, with addition of
Eighth grade: Samo as seventh, with addition of leading forms of historio ornament.
The valne of the plant (tools) is about $\$ 250$.
Tho effect of manual training has been to give added interest to the work; parente tell of mechanical things their children do, showing increased skill iu constructive
power. The high school and eighth grade now have moro boys than girls, whereas before the opposite was true.
The effect lias been altogether helpful. The community is apparently well satisfied of the utility of what is attempted.

St. Paud, Minn.

[From tho Thirty-serenth Annual Report of the Beard of School Inspectors, 1894-95.]

## an outline of work in manual training from fourth grade to migh school.

Fourth grade.-Drawing: Use of drawing tools; extension and dimension lines; making free-hand and instrumental drawings of models constructed. Woodwork: Use of knife; cutting of straight line geometric designs, making articles useful in homo, school, or play. Tools used: Knife, T square, $45^{\circ}$ and $60^{\circ}-30^{\circ}$ triangles, $12-$ inch sicale. Some of the models are (1) oblong, (2) octagonal mat, (3) key tag, (4) Greek and Maltese crosses, (5) kite string roel, (6) match strike, (7) blotter, (8) 6 -inch rale, (9) hexagon, (10) $45^{\circ}$ and $60^{\circ}-30^{\circ}$ triangles, (11) paper knifo, (12) framo.

Fifth grade.-Drawings: Use of compasses, drawing and dimensioning an are ; freehand and instramental drawings of the problems to be executed in wood. Woodwork: Cutting convex and concave surfaces; finishing with sandpaper. Tools used : Knife, $T$ square, $45^{\circ}$ and $60^{\circ}-30^{\circ}$ triaugles, 12 -inch scale and compasses. Models made aro (1) quatrefoil, (2) fish-line reel, (3) yarn winder, (4) pencil sharpener, (5) pen wiper, (6.) calendar board, (7) keyboard, (8) match scratcher, (9) paper knife, (10) valise or key tag, (11) frame, (12) bracket.

Sixth grade.-Drawing: First principles of orthographic projection; use of two views to express the facts of a model; making working drawing of the simple geometric solids and of the assembled problems to bo constructed. Woodwork: Geometric solids; free-hand modeling with the knife; making of useful articles having more than one pieco to a problem; assembling of parts; use of hammer and brads. Tools used: Knife, hammer, try-square, gauge, T square, $45^{\circ}$ and $60^{\circ}-30^{\circ}$ triangles, 12 -inch scale and compasses. The models are (1) square prism, (2) cylinder, (3) sandpapering block, (4) pointer, (5) bracket, (6) easel, (7) pencil tray, (8) glove darner, (9) brush rack, (10 and 11) windmill.

Seventh grade.-Drawing: Free-hand working sketches and working drawings of all exercises to be made. Woodwork: Use of chisel; making models illustrating the application of the simple joints used in practical wood working. Tools used: Knife, chisels, backsaw, hammer, mallet, try-square, gauge, file, T square, $45^{\circ}$ and $60^{\circ}-30^{\circ}$. triangles, 12 -inch scale, compasses, and dividers. Models aro (1) wedge, (2) bangle board, (3) toothbrush rack, (4) cross-lap joint, (5) match box, (6) inkstand, (7) bookstall, (8) T square and triangles.

Eighth grade.-Drawing: Working drawings, full size or to scale; working sketches of pieces of apparatus to be used in school work; theory of projection. Woodwork: Use of plane; making useful articles and pieces of scientific experimental apparatus. Tools used: Knife, chisels, planes, saw, hammer, mallet, try-square, gauge, file, T square, $45^{\circ}$ and $60^{\circ}-30^{\circ}$ triangles, 12 -inch scale, compasses, and dividers. Models made: (1) Ruler, (2) bill file, (3) box, (4) footstool, (5) box. With partitions, (6) towel roller, (7) knife box.

For the schools having no chisels and planes to do the regular seventh and eighth grade work a series of exercises in chip carving has been laid out, the construction and ornamentation being of such a nature that it can be done with the regalar sixthgrade equipment.

Some of the models that have been made in this series are (1) line cutting, (2) notches based on square, (3) notch pattern based on equilateral triangle, (4) flowerpot stand, (5) paper knife, (6) frame, (7) thermometer boards, (8) box, (9) knife, (10) blotter, (11) bread boards, (12) portfolio, (13) bookstall.

In the fourth and fifth grades the drawing gives but ono view of the model.
In all grades a free-haud sketch is first made of the model, using as many views as is nocessary to express the facts. The model is then analyzed step by step, and the dimensions thus obtained put on the sketch.

From the data of the sketch the accurate working drawing is made.

# Courses of study for the mechanic arts high school. 

FIRST YEAR-First Semester.

| Boys. | Girls. | General. |
| :---: | :---: | :---: |
| Algebra....................... 5 | Algebra . . . . . . . . . . . . . . . . . . 5 | Algebra |
| Latin, German, or French..... 5 | Latin, German, or French...... 5 | Latin, German, or Fre |
| History and English........... 5 | History and English..-........ 5 | History and English: |
| Joinery ......................... ${ }^{5}$ | Mechanical drawing........... ${ }^{3}$ | Joinery or drawing. |
| Free-hand drawing.............. 2 | Free-hand drawing............ 2 | Mechanical drawing. |

SECOND SEmester.



Algebra........................... 5
Latin, German, or French..... 5
History and English:........... 5
Mechanical drawing............: 5

## SECONL YEAR-First Semester.



Algebra ............................ 4
History and English............ 6
Wood carving...................... 5
Mechanical drawing
Free-hand drawing
Algebra ..... 5 ..... 5
Latin, German, or French.
Latin, German, or French.
Turning or drawing ..... 5
5
5
Arithmetic ..... 5

## Second Semester.

| Geometry......................... 4Latin, German, or French..... 5History and English........... 6Cabinetmaking................MMechanical drawing.........Free-hand drawing............ 2 |
| :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

Geometry........................ 4
Latin, German, or French..... 5
History and English............ 6
Wood carving ................ 5
Free-hand drawing ............ 5

Algebra
Latin, German, or French.
History and English.
Wood carving or drawing
BookkeepingGeometry.
Latin, German, or Firench. History and English. Cabinetmaking, wood carving 5or drawing.Bookkeeping5

THIRD YEAR-First SEMEster.

| Geometry......................... 3 |
| :--- |
| Latin, German, or French....... 5 |
| Physics......................... 5 |
| Pattern making................ |
| Menanical drawing........... 2 |
| Mree-hand drawing.......... |
| History and English........... |

Geometry......................... 3
Latin, German, or French...... 5
Physics or botany ................ 5
Wood engraving.................... 5
Free-hand drawing ................ 4
History and English............... 3
Geometry

## Latin, German, or French.

 Physics or botany :-............55
ing, or drawing.
History and English ..... 4

## Second Semester.



Solid geometry
Latin, German, or French....
Physics.............................. 5
Modeling ................................ 5
Free-hand drawing .............. 3
History and English............. 2

Solid geometry................... 5
Solid geometry.................. 5
Latin, German, or French...... $\frac{4}{5}$
Fhysics............................
ing.
Commercial law................... 5

FOURTH YEAR-First Skmester.


| Latin, German, or French..... 5 |
| :--- |
| English literature............ 5 |
| Chemistry or zoology......... 5 |
| Modeling ................... |
| 4 |
| Free-hand drawing............ |

Latin, German, or French..... 5
ghish literature ............... 5
Modeling........................... 4
Free-hand drawing............... $\frac{4}{2}$
Trigonometry...................... 5
English literature............. 5
Chemistry or zoologyy........ 5
Mrehine shop, or drawing, or 4
modeling.
History................................. 2

Trigonometry-.....................
Ch
Machine shop, or drawing, or 4 modeling.

## Second Semiegter.

United States history........... 5
English literature............. 5
Chemistry
Mechanical drawning............... 8
Free-hand drawing............ 2
Machino shop.................. 5

## Camden, N. J.

## [Statement of Mr. Horatio Draper, supervisor of manual training.]

The central idea of this work with us is entirely an educational one as distinctive from technical or industrial, in the commercial sense.
In the eight grades of our gramnar and primary schools (four grades to each) we have a course laid down in manual training that is obligatory on teachers and pupils. The aim and basis of this course is form study-stick and tablet laying, color work, drawing with the straightedge and pen from the object, paper cutting, paper folding, cardbuard, etc., constructions, geometric desigus made of colored papers.

Through the eight grades we use White's "New Course in Art Instruction."
In addition to the above, on the girls' side we require a course in plain sewing, based chiefly on Hapgood's "Sewing in the Schoolroom."

In the high school we have both young men and young women, ranging in age from 13 up to 17 years. We have a course of twenty-nine exercises in joinery for both sexps; a courso in carving in wood with light tools, both sexes; a course in wood turning and pattern making-models and patterns of parts of steam engines, etc., anvils, tool handles, etc., for the young meu only; a course in machine work-chipping, filing, scraping etc., young men only; a course in tin work--open cylinders, telescoping, plain seam and lap seam, cones, pyramids etc., and related forms, as cups, elhows, T joints, fumels, pans, etc., for young men onvy; a course in forgingdratwing out, upsetting, welding, cte., for young meu only.

We have a full course in drawing, from the olject-orthographic, isometric, and scenie projections, free designs, in ink, clarcoal, etc., the use of colored washes; the study of color-arranging, matching, etc. We make use of the color wheel, and use colored inks and colored paper of a fine grade.

Our wood-working class room is 41 feet long and 18 feet wide. It accommodates 24 pupils at one tine, the classes rotating between the academic class rooms and the manual-training class roms. It contains 12 double benches, each bench supplied with planes of foursizes (block, smooth, jack, and fore), a set of chisels one-fourthinch up to $1 \frac{1}{2}$ inch, a claw hammer, a screw-driver, a marking gange, a 1 -foot rule, a bench dog, and 112 -inch backsaw.

In common 2 cross-cut saws, 2 ripsaws, 1 glnepot, 13 dozen wooden cabinetmakrers' clasis, $1 \frac{1}{2}$ dozen iron clamps of different sizes, 1 grindstone, run by a 5 -horse power C. \& C. notor; 2 Crown power wood lathes, and a Yictor power scroll saw.

During the first year pupils are confined to the use of hand toole; they are not allowed to use the scrollsaw, miter box, or lathe. For carving we use Addis's sets of carving tools- 12 tools to a box; cach student is supplied.

Our metal working class room is abont 41 by 18 feet. It contains 3 long, double benches for machine work, supplied with 24 Parker vises with hrass clamp. Each student is supplied with a cap chisel, flat chiscl, 12 -inch steel straightedge, 16 -inch steel scale, 14 -inch graduated steel try-square, 1 steel scribe, 1 steel scraper, 1 pair 5 -inch spring ealipers, 1 pair combination dividers, 112 -inch flat bastard file, 18 -inch hand bastard file, 1 dustbrush, 1 tool rack, 1 center punch, 1 bolt peen, ( 1 pound), hammer; general tools; 6 surface plates, 6 scribe ganges, 6 steel 12 -inch protractors, and 6 oil cans. These benches and tools accommodate 24 students.

For forging (the same room): Two 100-pound anvils, 2 Buffalo forges, 110 -pound sledge, 2 pair close tongs, 2 pair hollow-bit tongs, 2 set hammers, 1 hardie, 1 grindstone (footpower), 1 truing device for same.

Tinsmithery (in the same room): One bench, 18 by 2 feet, accommodating 6 students at a time ; 2 double iron gas furnaces, one-half dozen tinuer's malleta, 4 liand grooving tools, 3 riveting hammers, 2 pair $6 \frac{1}{2}$-inch flat-nose pliers, one-half dozen $1 \frac{1}{2}$-pound soldering irons, 3 pair plain dividers, one-half dozen scratch awls, 2 rivet sets and headers, 2 pair tinner's straight shears, 1 pair tinner's crooked shears, raising hammers, 2 beakhorn stakes, 1 creasing stake, 1 sfuare stake, 1 creasing swedge, 1 square-face swedge, 2 iron bench plates, 3 loottom stakes (1, 2, 3,) 1 hatchet blade, 1 hollow mandrel, 1 wire gauge, 2 pair round-uose pliers, 1 pair 5 -inch cutting pliers, 2 pair 6-inch flat pliers, oue-fourth dozen Chesterman's rules, 1 blow-horn stake, etc. We use box tin, solder, muriatic acid, and zinc. We find the exercise in tin work useful in bringing into play geometric developments and sections.
All exercises are constructed fiom drawings done by the students.
The drawing room acconmolates 24 students; it contains 24 adjustable drawing desks, racks for 145 drawing hoards ( 25 by 20 inches), 1 rack for clay boards ( 12 by 6 inches), clay and plaster of paris.

Manual training is kept up by the city and State-by special tax the city raises a certain amount, and the State appropriates a like amount, only in no case will the State appropriate more than $\$ 5,000$; and the money from both city and State can be used for no other purpose than manual training.

Pupils, with us, are required to furnish for themselves a box of clrawing instruments and from two to three aprons.

Mannal training.was started in Camden, February 4, 1891; from that time up to dato our plant has cost us: Drawing, $\$ 719.90$; modeling, $\$ 1,954.19$; sewing, $\$ 1,234.75$; metal work, $\$ 1,242.07$; woodwork, $\$ 1,695.92$; carving, $\$ 163.84$.

During the Jear ending June 30, 1896, 129 students were taught the higher grades of drawing in the mannal training high school; 4,898 males and 5,339 females were taught the rarions exercises in modeling (including drawing) in the cight grades of the district schools of the city, and 239 boys and 3,174 girls were taught sewing,

The cost of manual training for the city during the year, $\$ 7,603,98$.
Fifty-ono young men and 78 young women were taught joining and carving in thith manual training high school; 51 young men were taught metal work, includin forging and tinsmithing, in the manual training high school.

In serving there is 1 lesson per week, of 60 minutes; in modeling two lussons per week, of 45 minutes each. By modeling we understand all construettom work, of paper, cutting, etc., including color work; we have no clay work in the distries achools.

In the manual training high school two to four lessons per week, of 45 minute each, in shop work.
In drawing there are 4 lessons per week, of 45 minutes each.
Since the introduction of manual training I have noticed a greater intercest among parents in all school work; that we keep a certain class in school longer, and educate a certain element, at least, in accuracy, neatness, etc., that seemed beyone our reach under the old methods. By the manual exercises we awaken an interest in and get a hold on this element. Once having roused an interest in the pupil the skillful teacher can and does carry that interest over to the ordinary class-room work. The number of discipline cases is fewer, and the degree of offense less.

## Montctair, N. J.

## [Stateraent of Randall Sparlding, city superintendent.]

The object in all instruction in this department is disciplinary. It is not our aim to teach any trade, but simply to train the hand and the eye coordinately, and, through thena, the mental faculties. We have no objection to teaching useful arts, but utility, in a commercial sense, is not our chief aim. Manual training is obligatory with all pupils of both sexes and in all grades until the high school is reached.

The work is a part of our publie school course for which, of course, no trition is charged. Manual training in New Jersey is subsidized by the State, the State giva ing to the town each year a sum to be devoted to manual training, a sam equal to that which is raised for the samo purpose by the town itself. The towa in order to avail itself of the State subsidy must raise at least $\$ 500$, while $\$ 5,000$ is the maximum that-can be received from the State.

In the sixth to ninth grades inclusive, instruction is given by special teachers and in rooms suitably furnished for the purpose.

We have two buildings. One is a one-story building about 25 by 50 feet and is used for carpenter work, wood-carving, lathe-work in wood and metal, and visework. About twenty-eight sets of carpenter tools are provided and an equal number of sets of wood-carving tools. Five wood lathes are furnished and the same number of metal lathes for turning, respectively, wood and metal; also a suitable

Our other building is of two stories. The first story includes (a) room for cooking and demonstration, (b) scullery, (c) dining-room. The second floor is devoted to advanced work in clay modeling and is suitably fitted up with closets, tables, and modeling tools.

Value of plant, $\$ 8,000$; annual expense of maintenance, $\$ 5,000$.
Interest and proficiency in other studies are, so far as I can judge, secured in quite as high degree as before the introduction of manual training. Students in certain branclies, especially thoso that require the uso of apparatus, derive a marked advantage from their previous training of the hand and eye. I have no statistics concerning the effect of manual training upon the length of school life. I believe that the effect is not very marked in our town. The town is exclusively residential and a very large proportion of the pupils enter the high school. I havo no statistics to prove it, bat I hold the impression strongly that manual training has had the offect of turning many of our boys into such institutions as Stevons Institute and Columbia School of Mines; that is, into schools of enginearing.

New York, N. Y.

[Statement of Mr. John Jasper, city amperintemdentu]
The central idea in the manual training instruction is purely educational and it is applied as far as possible from the lowest primary to the highest grammar grade.
"Manual training schools" here are not schools devoted solely to manual instruction or training, but they are schools having the full course of instruction, including not only subjects in which the hand is trained, but every other branch tanght in the regular schools. They are maintained in the same way in which the ordinary schools are maintained, and no special charge is made for tuition therein. Following is the course of study in detail:

MANUAL TRALNING COURSE OF STUDY PRESCRIBED FOA PRIMARY SCHOOLS.

## Sixth Grade.

Language lessons.-Reading familiar words, phrases, and simplo sentences (from blackboard, charts, etc.); spelling familiar words from dictation; lessons on the obvious parts and common use of familiar objects; also on common colors.

Form and draving.-Form: Sphere, cube, square, oblong; position of straight lines, vertical, horizontal, oblique; angles, right, acute, obtuse; surface, face, edge. Drawing: Straight lines; vertical, horizontal, oblique; letters composed of straight lines; angles, right, acute, obtuse; representing (with straight lines) positions of striugs, sticks, and edges; square and oblong faces of solids; squares and oblongs from stick laying.

Writing.-Short words (from copies on blackboard or chart).
Number.-Counting by ones to 100 , by twos and trees to 30 ; also, counting backward by oues from 10 ; adding by ones, twos, and threes mingled, to 20 ; numbers to be read to 100 and written to 30 .

Tocal music.-Simple exercises in singing to train the pupils in the use of musical sounds.

## Fifth Grade.

Language lessons.-Reading from the blackboard, charts, and a first reader; the meaning of phrases and selected words to toe associated with their use in the sentences read; spelling words selected from the reading lessons; also, other familiar words; lessons on the obvious parts and uses of familiar objects, and on common colors, continned.

Fornt and drawing.-Form: Cylinder, square, prism, hemisphere, circle, semicircle, triangle; curved surface, curved face, curved edge, curved line, measmred lengths (inches). Drawing: Angles, right, acute, obtuse; triangles; square and oblong faces of solids; curved and straight lines combined; circles and semicircles, by free-hand movements; divide lines into equal parts; draw inch lengths.

Writiny.-Short words (from copy).
Number.-Counting by threes, fours, and fives to 50; adding by twos, threes, fours, and fiver to 30 (on the blackboard and the slate); subtractiag, by splints, etc., from numbers below 20 ; multiplying two by the nambers belows six; numbers to bo read at sight from the blackboard, and to bo written through three places; roman numbers through XII; aleo, their use on the clock face.

Vocal music. - Continzed as in sixth grade, with twe or threo simple songs, and the scale loy rote; represent steps of the scale, and give simple icieas of timo.

## Fourtif Grade.

Language lessons. - Reading through a first reader, or in an easy second reader; the meaning of phrases and selected words from the sentences which have been read; spelling words sclected from tho reading lessons, and other familiar words; lessons ou familiar objects continued, vith obvious qualities added; also, on color.

Form and drawing. - Form: Triangular prism, rhomb, rhomboid; right, acute, and obtuse-angled triangles; faces, plane, curved; circle, circumference, diameter; square, diameter, diagonal. Drawing: Square, rhomb, oblong, rhomboid; three kinds of triangles; squares drawn in group, to represent surface of a cube; oblongs and squares in group, to represent surface of a square prism; circle with diameter; squares with diameters and with diagonals; parallel lines; front and end of square and of oblong boxes; groups of circles.

Writing.-Short sentences (from copy).
Arithmetic.-Numeration and notation through six places; adding singlo columns of seven figures, including $6,7,8$, and 9 ; also orally, by sixes, sevens, eights, nines,
and tens; subtracting threes, fours, fives, and sixes from numbers below 20 ; multiplying two by numbers below 11; simple practical questions; Roman numbers to include $L$.

Vocal music.-Instruction as in fifth grade continued, with additional songs by rote.

## Third Grade.

Language lessons.-Reading in a second reader; the meaning of phrases and selected words which have been read; spelling words selected from reading lessons, and other familiar words (orally and in writing); lessons on familiar objects continued.

Form and drawing.-Form, cone, base, vertex; pyramid, square, triangulaz; equilateral triangle; squares on diameters, on diagonals; concentric squares. Drawing, cylinder, cone obloug, triangle with two equal sides; faces of a solid, in group; circles, diameters; parallel lines; squares on diameters and on diagonals, add earved lines symmetrically arranged; two adjacent faces of a solid; common objects; window, door, groups of tablets.

Writing.-Sentences continned; short words without capitals.
Sewing.-Threading of needle; use of thimble; over-handing.
Arithmetic.-Addition, three columns of ten figures (including examples with concrete numbers); simple practical questions in addition and subtraction (to be worked without slate and pencil); multiplication table through six times twelve; Roman numbers to include D.

Vocal music.-Instruction continued, with the use of staff, clef, notes of different length, time, etc.

## Second Grade.

Language lessons.-Reading through second reader; the meaning of phrases and selected words which have been read; spelling as in previous grade; lessons on familiar objects continued.

Form and drawing.-Form ellipsoid, ovoid; rase; ellipse, oval; quadrant, radius, arc; octagon, hexagon, pentagon. Drawing, ellipse, oval; vase form, reversed curve; quadrant, radius, arc; octagon, hexagon, pentagon; crosses, Latin, Greek, Maltese, St. Andrew's ; circles on half diameters and half diagonals of squares; objects $\rightarrow$ pitcher, teapot, etc.; ornameutal groups of tablets.

Writing. - Sentences contiuued, with all the capitals.
Sewing.-Hemming; seam sewing; overcasting.
Arithmetic.-Addition, subtraction, and multiplication (multipliers not to exceed 12), with practical examples; multiplication table completed; Roman numbers to number of the year; tables, Federal money, time, liquid measure, and dry measure.

Tocal music.-Instruction continued as in previous grade; singing notes in groups, pupils to beat time.

## First Grade.

Language lessons.-Reading of the grade of an easy third reader; the meaning of phrases and selected words which have been read; spelling as in the previous gradg; lessons on objects, as in the previous grades, with more complete descriptions.

Geography.-Without text-book; points of the compass; location and direction of familiar places; elementary terms; shape of the earth, and situation of the principal bodies of land and of water, on globe and on map.

Form and drawing.-Form, construction of forms of regular solids by drawing, otitting, folding, and pasting paper, etc. ; construction in clay from drawings-steps of stairs, slate frame, concentric squares, etc.; representation of islands, etc., with clay. Drawing, circular faces, seen directly and obliquely; objects, oil cart, ash can, tea canister, street lamp, kite, etc.; tablets arranged as borders and other ornaments. Draw, as maps, the clay representations of islands, etc.

Writing!-Brief description of familiar objects; words with capitals. During the latter half of this grade one lesson each week to be written from dictation.

Sewing.-Seams, backstitching, and stitching; plain fells; bias fells.
Arithmetic.-Numeration and notation through nine places; addition and subtraction continued; multiplicand not exceeding six figures, multiplier not exceeding four figures; division, divisor not exceeding 12; practical examples in the several rules; tables, long measure, avoirdupois weight, and miscellaneous table, with review of previons grade; simple, practical questions.

Vocal musiu.-Instruction continued as in second grade; teach the singing of simple tunes in the natural scale by numerals, syllables, letters, la, la, la, and by appropriate words.

## Eighth Ghade.

Language lessons.-Reading of the grade of a third reader; oral lessons on the qualities and uses of familiar objects, such as articles of clothing, food, material for building, etc.; compositions; spelling, meaning, and use of words, chiefly from the lessons of the reading book and from the oral lessons of the grade; also, selected miscellaneous words in general use, at least 100 in number, to be taught chiefly by writing them separately and in short sentences from dictation.

Geography.-The world, from globes and outline maps.
Arithmetic.-Through the simple rules and Federal money, with practical examples; selected tables of weights and measures, with simple, practical applications.

Penmanship.-Words with capitals.
Form and drawing.-Drawing (free-hand) semicircles; arrangement of simple and compound curves; simple historic borders, symmetrical arrangements of cordate leaves; simple objects from nature; maps; (mecnanıcal) use.of instruments; applications of simple, practical problems of geometry; patterns formed from intersecting parallel lines, surface patterns, hexagonal and octagonal; parallel lines as used for shading. Cutting and modeling from drawn work.

Sewing.-Review hems and bias fells; French seams; gathering.

## Seventh Grade.

Language lessons.-Reading of the grade of a third reader (a different book from that used in the eighth grade) ; oral lessons on animals; compositions; spelling, meaning, and use of words, as before-at least 100 additional words, and review of those previously tanght.

Geography.-Western Hemisphere in outline, together with review of preceding grade without text-book.

Arithmetio.-Through subtraction of common fractions, with practical examples; selected tables of weights and measures, as before.

Penmanship.-Words and phrases.
Form and drawing,-Drawing (free-hand) circles; borders, two different units to be used in each; symmetrical arrangement of hastate leaves; simple objects, fromnature; maps; (mechanical) applications of simple practical problems of geometry; straight lines, "dotted," etc.; door with panels and window with panes, from measurements made in class; running patterns from circles and arcs; trefoil in triangle. Cutting and modeling from drawn work.

Sewing.-Buttonholes; sewing on buttons; patching.
Sixth Grade.
Language lessons.-Reading of the grade of an easy fourth reader; oral lessons on plants; compositions; spelling, moaning, and use of words, as before-at least 100 additional words, and review of all previously taught; easy exercises in suffixes.

Geography.-Eastern Hemisphere in outline, together with review of preceding grade, without text-book.

Arithmetic.-Conmon fractions completed, with practical examples; selected tables of weights and measures, as before.

Penmanship.-Phrases and sentences.
Form and drawing.-Drawing (free-hand) ellipses, ovals; vases; original designs with leaf and flower; simple objects, from nature; maps; (mechanical) applications of simple practical problems of geometry; table, etc., from measurenents made in the class; arches, by arcs of circles; quatrefoil in circle; designs (ornate), circle and contents; window, pointed arch. Cutting and modeling from drawn work.

Sewing.-Herring-bone stitch and flannel patching; darning stockings, darning tears and cuts.

## Fifte Grade.

Language lessons.-Reading of the grade of a fourth reader; oral lessons on the human body; compositions; spelling, meaning, and use of words, as before-at least 100 additional words, and review of all previously taught; exercises in prefuxes and suffixes.

History of the Onited States.-A brief general outline without text-book.
Geography.-Western Hemisphere in desail, with special attention to the United States, together with a review of preceding grade.

Arithmetic.-Decimals, with practical examples in common and decimal fractions; reduction, ascending and descending, of integral denominate numbers.
Penmanship,-Phrases and sentences.

Form and drawing.-Drawing (free-hand), regular pentagon; Greek vaso with perspectivo effect; Egyptian and Greek borders; fowers and trilobate leaves in original designs; maps; elovations, plans, and other views of cubes, prisms, cylinders, and cones; (mechanical) simple graphic solutions of selected geometrical theorems, elevations, etc., already drawn free-hand; drawing required for shopwork. Modeling, relicf maps, shopwork, use of tools, knife, and jack plane; making joints, butt, butt miter, lap, ctc.

Seving.-Roview all previous work; tncking, gussots.

## Foutith Grade.

Language lessons.-Reading of the grade of a fourth reader (a different book from that of the fifth and the sixth grade) and in sapplementary reader upon the sulbjects of the oral lessons of this or previous grades; oral lessons on common minerals and metals; compositions; spelling, meaning, and use of words, as bofore-at least 100 additional words, and review of all previonsly taught; exercises in prefixes and suffixes continned; English grammar (withont text-book), the constraction of sentences, with a riew to derolop a knowledge of the parts of speech and to illastrato the terms subject, predicate, and object.

History of the United Statce.-Outline with greater detail, withont text-book.
Geography.-Eastern Hemisphere in detail, with special attention to Europe, together with review of proceding grade.

Arithmetic.-Denominate numbers completed, with practical examples.
Penmanship.-Practice in large and small writing.
Form and drawing.-Drawing (free-hand), the spiral; flowers and lobod leaves in original designs; mediæval and moresque ornaments; ornamental vases; maps; Working sketches of tools and joints; sections of solids; (zaechanical) simple graphic solutions of selected geometrical theorems coutinued; working drawings for slopwork. Modeling, relief maps.

Shopvork.-Use of tools; add crosscut saw, 五ammer and nails, and chisel; making joints, etc.

Seroing.-Measuring, cutting paper pattorns, and fitting.

## Third Gráade.

Language lessons.-Reading in supplementary reader upon subjects of the oral lewsons in this or in previons grades; oral lessons on the simple facts of natural philosophy; compositions; spelling, meaning, and use of words, as before; oxercises in the formation of derivative words; English grammar (without text-lools) eontiahed.

History of the United States.-Through the Revolationary war; class reading in text-book and in historical supplementary reader. No home lessons to be given.

Geography.-General review, with special attention to the United States and Europe. Supplementary reading in geography.

Arithmetio.-Pcrcentage, its application to ordinary business transactions which do net involve the consideration of time.

Penmanship.-Practice in different styles; letter writing.
Fosm and drawing.-Drawing (free-hand), historic vase, decorated; original pottery form, decorated; historic ornaments; original surface covering, not less than two different nnits to be used; original circular border; maps; working sketches for shop work; (mechanical) simple graphic solutions of selected geometrical theorems continued; working drawings for shop work. Modeling, relief maps; simple forms for carving. Shop work, use of tools, add gouge, ripsaw, centerluit, and hand screws; cutting moldings, ete.; makiug jointo, lap scarf, and miter.

Cooking:-Materials of the human body ; tiseues, waste of; repair of. Digestibility, cooking solid materials to prepare them for digestion. Nutritiveness, nutritive values of foods; palatability. Food elements, groups of, mineral; starch and sugar; fats; albnminoids. Related facts, physical and chemical; kinds of fuel; effects of heat on water, boiling points; temperatures of flames; physical effects of heat on albumen, on starch; on glaten, etc. ; proper temperatares for various parposes; chemical effect of overheating ; principle and áction of yeast powders; of leaven; of yeast; important function of the sugar in flour. Utensils, their selection, use, and preservation. Purchasing food, diecrimination as to wholesome and unwholesome; choice of parts. The "germ theory" applied to foods.
Practical exercises in cooking involviag simplo applications of facts and priaciples
timght.
Second Grade.
Language lesons.-Reading, supplementary, as before; oral lessons on the simple facts relating to nir, water, light, heat, and sonnd; compositions; spelling, meaning, and use of words, as before; exercises in the formation of derivative words continued, English grammar, the constraction of comation of derivative words con-
with the view of teaching propriety of expression.

History of the United States.-Completed, with very brief outline of Federal, State, and municipal government; instruetion as in third grade.

Arithmetic.--Interest and discount; simple proportion.
Pemanship.-Paragraphs; business forms, such as bills, receipts, drafts, etc.; letter writing continued.

Form and drawing.-Drawing (free-hand) original designs for industrial purposes; from the model-cube, square prism, square pyramid, cylinder, and cone; working sketches for shop work; (mochanical) working drawings for shop-work. Modeling, simple forms for earving. Shop work, joints, dovetail, mortise.

Cooking.-Assin third grade.

## First Grade-First Year.

(a) For those desiring to enter the city or the normal college.

English.-Six hours per week. Reading: Standard anthors, inclading poetry and fiction. Elocution: Selections of from 15 to 25 lines to be memorized and recited or declaimed, each pupil to deliver at least six selections during the year. Words: Meaning, use, and spelling. Compositions: Including letter writing, at leasit once each week. Grammar: Anakysis of simple, complex, and compound sentences continued, One exercise cach week to bo the criticism and correction of composition.

Arithmetie, -(Written and mentad) four hours per week. A revion of the business arithmetic of the preceding grades; also; exchange, equation of payments, averaging accounte, partnership, mensuration, and square and cube roots.

Penmanship.-One hour per week; paragraphs, business forms, letter writing, and business correspondence continued. One exerciso each week to bo the writing of compositions. Writing from dictation.

History of the United States.-One hour per week; historical supplementary readers.

Geography.-One hour per week; geographical supplementary readers.
Form and draving. -One hour per week; (drawing free-hand) original designs for industrial purposes; historic ornaments; from the model-prism (hexagonal and octagonal) ; gronps of solids; working sketches for shop work. Mechanical: W.orking drawings for shop work.
The remaining time per week to be distribnted at the discretion of the principal.
(b) For those not lesiring to enter either of the colleges.

English. -Eight hours per week. Reading: Tho later American and English standard authors in prose and verse, with short biographieal sketehes of the more important ones. Elocution: As in subdivision (a). Words: As in subdivision (a); synonyms, the discrimination of 40 sets whose meanings are frequently confused. Compositions: As in subdivision (a), with basiness correspondence. Grammar: Analysis and synthesis of sentences; the laws of syntax in connection with the criticism and correction of compositions.

Arithmetic.-Twa hours per week; as in snbdivision (a).
Bookleeping.-One hour per week; details as preseribed by the committoo on course of study. Commercial terms, business forms, and statements derived from trial balances.
Geometry.-Three hours per week; Hill's, two books.
Civics.-One hour per week; Dole's (by reading and talks).
Commercial geography.-One hour per week; Tilden's Commercial Geography, complete, excepting footnotes.

Histery af the United States.-One hour per week; by use of supplementary historical readers.
lraving.-Two hours per week, as in subdivision (a); also, mechanical-elements of architeeteral drawing.

## Fiest Grade-Second Frab-Sceplementary Coursre

For thoso not desiring to onter either of tho colleges.
English.-Eight hours per iveek. Reading: Earlier English anthors (seventeenth century) in prose and verse, with short loiographical sketches of the more important ones. 'Elocution: As in subdivision (a). Compositions: As before, and including critical essays on books read at home. Words: As before. Grammar: In connectiou with the reading and compositions, with study of style.

Bookkeeping.-Two hours per week; details as prescribed by committee on course of study.
Geometry.-Three hours per week; Hill's Plane Geometry compIeted.
Physics.-Two hours per week; Shaw's.
History, general. -One hour per week (text-books).
Phonography.-Two hours per week; details as prescribed by committee on course of study.
Drawing. -Two hours per.weok. Free-hand and mechanical, continued.

German or French.-Two hours per week. Begun or continued.
To show more readily the extent to which this course of study is pursued in our system, and also the distribution of the pupils through the several grades, I submit the following statement: The course is now pursued in 43 different schools or departments, namely, 7 grammar departments for males, 8 for females, and 3 for both sexes; also in 25 primary schools and departments. One primary department gives instruction to girls alone; in the remaining 24 primary schools and departments instruction is given to both sexes.

The following table shows the number of pupils in the several grades:

| Grades. | Grammar grades. |  |  |  | Primary grades. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Males. |  | Females. |  |  |  |  |
|  | Number. | Average age. | Number. | Average age. | Males. | Females. | Age.a |
|  |  | Trs.mos. |  | Ir's. mos. |  |  |  |
| First grade. | 475 | $\begin{array}{ll}14 & 8 \\ 14 & 0\end{array}$ | 532 | 15 ${ }^{15}$ |  |  |  |
| Second grade | 377 | 140 | 424 | $\begin{array}{ll}14 & 1 \\ 13 & 8\end{array}$ | 1,175 | 1,159 |  |
| Third grade. | 548 | $\begin{array}{ll}13 & 6 \\ 13 & 1\end{array}$ | 498 613 | $\begin{array}{ll}13 & 8 \\ 13 & 2\end{array}$ | 1, 181 | 1,169 | 9 8 8 |
| Fifth grade. | 704 | 128 | 685 | 128 | 1,360 | 1, 314. | 8 7 |
| Sixth grade | 834 | $12 \quad 3$ | 884 | $12 \quad 3$ | 2,295 | 2,347 | 68 |
| Seventh grade | 952 | 120 | 963 | 119 | b 44 | 662 | $5 \quad 7$ |
| Eighth grade. | 1,230 | 11.2 | 1,332 | $11 \quad 2$ |  |  |  |
| Total. | 5,545 |  | 5,931 | .......... | 8,324 | 8, 531 |  |

a The ages of the males and females are averaged together.
$b$ The seventh is a kindergarten grade.
On December 31, 1895, the number engaged in the several subjects more particularly relating to a manual training course were as follows: Free-hand drawing, taught in all the primary grades (7) and grammar grades (8), 28,331 ; mechanical drawing, taught in all the grammar grades, 11,476 ; cutting from drawn work, taught in the highest primary and the lowest three grammar grades, 8,120 ; clay modeling, taught in the highest primary grades and in all the grammar grades except the highest, 12,394 ; sewing, taught to all female pupils in the highest three primary grades and the lowest five grammar grades, 7,695 ; shopwork (ia wood), taught to all male pupils in the highest five grammar grades, 2,529 ; cooking, taught to all female pupils in the second and third grammar grades, 922; carving (wood), taught to all male pupils in the second and third grammar grades, 825.

It should be stated, for the clearer understanding of the course, that clay is used in form study by all the primary children excepting those in the first and seventh grades; that is, by 14,920 children. Also, the folding and cutting of paper are emplored in the study of form and design.

In noting the grades, please to keep in mind the fact that, with the exception of the highest grammar grade, the terms are half-yearly. The highest grade in each class of schools is called the first.

The school buildings are similar to those in which the regular course of study is pursued, excepting only provision is made for a shop or kitchen, or both, and, in some few cases, for a room specially fitted up for clay work.

The manner of keeping the accounts will not permit us to give definite information as to cost and annual expense. The purpose of the board is not to separate the manual-training element from but to make it an integral part of the educational plan.

We have no means of knowing the occupations of former pupils after leaving school.

Cleveland, Ohio.
[Statement of W. K. Roberts, supervisor of manual training.]
The fundamental idea in our manual training work is that it is a part of general education and not special training, and that its value in public-school work lies in its contribution to mental development as a result of hand and eye training. That our manual training high schools give excellent preparation for higher technical school courses is simply incidental, as is also the industrial side of the question.

Maunal training is obligatory in the first six years of school and optional in the two highest grammar grades and the high schools.

The work is entirely under the direction of the board of education, as a part of regular school work, and a special tax levy is provided by State law for its support.

No charges are made for tuition. Below the high school all supplies are provided.
for pupils free of chargo. In the high school a charge of $\$ 5$ per year is made for materials used.

The course of study covers eleven years, beginning with the first year in school and ending with the third year of the high school.

In the first four or primary years the manual training work is based upon the study of form by means of clay modeling; paper folding, stick laying, outlining with needle, paper and cardboard construction work, and drawing, color and arrangement being taught incidentally.

In these four grades about 32,000 children receive manual instruction, boys and girls working together. The average ages of children in these four grades are 6.6, $8,9.2$, and 10.5 years, respectively.
In the fifth, sixth, and seventh years different lines of work are provided for boys and girls. A course in knife work, requiring the use of the simplest tools-the knife, rule, try-square, compass, and pencil-is provided for boys, and a course in sewing for girls. In the eighth year bench work is given to boys and cooking to girls. The work of the seventh year is not yet fully developed and in most cases seventh-year pupils have had bench work and cooking.
At present, means are insufficient to extend manual training privileges to all pupils of the four grammar grades. About 2,400 now receive instruction in the fifth and sixth years and about 1,200 in the seventh and eighth years. The average ages of these grades are 11.5, 12.5, 13.2, and 14 years, respectively.

We have two high manual training schools. In one of these the work is taken by high-school pupils in addition to the work of a high-school course, and in the other as a part of a high-school course, in which the manual work counts as a study, or may also be taken as additional work by pupils in any course.

The work for boys consists of wood joinery, wood turning, and pattern making the first year, forging and chipping and filing the second year, and machine-tool work the third year, with free-hand and mechanical drawing throughont the course. For the girls, wood joinery the first year, wood turning and clay modeling and plaster casting the second year, and wood carving and a final project involving the ideas of the entire course the third year, with drawing each year.

The high-school work is taught to about 300 pupils of from 14 to 18 years of age. All of the work is under the general direction of a supervisor, and an assistant who has charge of the work in the four primary grades and the sewing in the fifth, sixth, and seventh years. All of the instruction below the seventh grade, or seventh year, is given by the regular room teachers, under the direction of the supervisors.

For the seventh and eighth grades two special teachers of woodwork and two teachers of cooking are employed, and for the high schools a principal and six assistants, the supervisor acting as principal of one of the schools. The time devoted to manual training varies from one-half hour per week in the first grade to one and one-half hours per week in the eighth grade and seven and one-half hours per week in the high school.

For the seventh and eighth grades four special rooms are provided, two for woodwork aud two for cooking, to which pupils go from adjacent school buildings. The woolworking rooms are each arranged with small benches, sets of simple woodworking tools, cupboards, etc., for 20 pupils to work at one time, and the cooking rooms each with tables, dishes, ranges, cupboards, etc., for the same number of pupils.
The Central Manual Training School for high-school pupils, erected in 1893-94, is a two-story building with basement, of neat and appropriate design, built especially for manual training work. The basement is occupied by the loiler and engine and forge shop, arranged for 20 pupils to work together. On the first floor are the offices, wood-turning rooms, with benches and lathes for 24 pupils, and the machine shop, which is not yet complete in all its details, but which is to have an equipment in proportion to that of the other departments. The second floor is occupied by the wood-joinery room, with benches and tools for 24 pupils, and two drawing-rooms.

The West Manual Training School occupies the building formerly used for the West high school, remodeled to meet, as far as possible, tho needs of a manual training school. The equipment is very similar to that of the Central school, though less expensive, and is arranged on a lasis of 16 pupils working in a department at one time.
In all of the manual training work all tools and materials are provided for the pupils, except that high-school pupils are required to furnish their own drawing instruments.
It is at present impossible to give very accurate estimates of the value of equipments and buildings. For the four primary grades the permanent equipment is small, not exceeding an average value of $\$ 10$ per building or $\$ 450$ in all. This would include the scissors used in the sewing work of the grammar grades. The knifework equipments of the fifth, sixth, and seventh grades cost about $\$ 40$ per building, or about $\$ 320$ for the work now in operation. The present equipment of the two eighth grade wood-working rooms cost $\$ 300$ each, and of each of the cooking rooms
$\$ 240$, making a total of $\$ 1,400$ for equipment of grammar grade work. The Contral Manual Training building cost about $\$ 27,000$. An estimate of the cost of equipment can not be given. The equipment of the West Manual Training School cost abont \& $8,000$.

The annual cost of supplies-clay, paper, paste, otc.-for the work of the four primary grades, as at present conducted, is about 2 cents per pupil. For the kniferrork and sowing of tho grammar grades, supplies cost about $5 \frac{1}{4}$ cents per pupil per jear, and for the grammar grade bench work and cooking about 30 cents per pupil. No estimate of high-school supplies that wonld be of value can be giren.

Our manual training work is so new in the lower grades that but little systematic information has been collected as to its effect upon other school studies. Teachers are finding it a means of gaining the attention of classes not in this work alone, but that its infuence in this direction is extended to other school work. Many instances are noted of pupils whose interest in school has begun with manual training and has bcen extender through its means to other lines of work. A point of partieular interest noted is the power of pupils in advanced work who have had a year's training to think and act clearly and decisively for themselves and to anticipate and describe the steps in a process.

In connection with the high-school work there have been better opportunities for observation, and more definite statements can be made. It is certainly safe to assert that in general the inflnence of manual training upon other sehool work is good, and in a large number of particular cases that have been observed the final and successítul completion of school work was due to manual training. Many have continued in high school until the manual training work was completed who would otherwise have stopped with or before the completion of the first year, and some have been led by its means to complete the high-school course and go on to higher elucation.

As yet it is difficult to judge much of the influence upon the occupations of former graduates. Of those that it has been possible to follow, a very large per cent are now in classical or technical colleges. Of those remaining all, so far as is at present known, are filling positions principally in mechanical work.

## COURSE IN MANUAL TRAINING.

## Fipst Grade.

FIRSt terms.
Stick laying-(1) Outlino parallelogram, horizontal, sizo of desk, length of desk, half the width; rertical, width of desk, for lieght; 1 inch, 2 iuches, ctc., wide, oblique; upper left-hand corner to lower right, 1 inch, 2 inches, ete., wide; vary sizes; make outline of cloors, windows, etc. ; (2) to lay lines of different lengths, as dirceted.
Note.-Keep in harmony with arithnetic assignment.
Follow first three points of assigmment in drawing; outlining with needle.
Modeling.-(1) Use wonden model of spliere. Each child may have a smaller sphere, as a marble; discover its properties; give its name; give name of surface, rownd surface. (2) Each child model a sphere of clay; (3) change model as direrted, so as to mako apple, melon, etc.; (1) model small spheres to harmonize vith lessons tauglit on fruits.
Tablets.-(1) Pupils solert circular tablets; give name, circle; (2) arrango on desks or pasto on paper, as directed.
Souing.- (1) Ontline circle; (2) Outline spherical objects, as pattern directs, as bunch of clerries, apple, etc.
Áote.-In a similar way work with a hemisphere.

> EECOND TERM.

Staly of the cube. Tse solirl form as in first trem.
Modriing.-(1) Children morlel cube from sphrre; (2) observe that each face of rube is a square ; (3) model cubical forms, as a lump of sugar, etc.

Ntick laying.-(1) Lay squares of given dimensinns, as directed.
Tablets-Lay sinare tablets as directed, spacing équally, corner to corner, etc.; (2) combine sjuare with circular tablets, as directed.

P'tper folding.-(1) Fold one scuare into halves; into fourths; (2) horizontal, vertical.

Sering.-(1; Ontline one square; lisect it; divide into fuarters, etc., as directed.
Note.-Fieep in line with number work.

## TEIRD TERM

Modeling:-(1) Outline forms of roots, leaxes, and simple flowers in the flat.
Stick laying. - (2) Outline forms of leaves, using leaves from nature as patterns.
Sewing:- (1) Outzine form of roots, leaves, and flowers, as directed.
Note.-Teachers will use their discretion about pupils modeling stories in language work in flat reliff, as story from Hiawatha, Little People of the Snow.

## Second Grade.

FLRST TERM.
Paper folding. - (1) The square. Fold once: fold each of thee parts once. Horizontal; rertical; observe results, horizontal or rertical lines, parallel, parallelograms. Compare size. (2) Fold in several folds as direeted vertically, then horizontally. Observe results. (3) Fold lower left corner to meet upper right: Result. Fold in opposito direction. Observe result, etc.

Paper cutting. - Pupils may cut through the lines made by folding.
Pasting. -These forms may be pasted to make patterns as directed.

## SECOED TERES.

The eirele treated as the square. (See first term.)
Folding and eatting. -Triangles, cut fram folding square, name, angles.
Pastivg.-(1) ATramge triangles as directed to make pattern. (2) Combine squares and triangles to form patterns as direeted. (3) Combine circles and triangles.

## THIKD TSE䍚M.

Drawing and cutting.-Front view of objects, as tables, etc., may be drawn and cut. Pasting.-Theso front views when cut may be pasted at discretion of teacher.
Building cubical bax,-Squares cut for faces: zarrow rectangles cut for binding; sewed to form box.

## Third Grade.

FIRST TERM.
The cylinder: Use the olid, as sphere and cuno were used. (See first year.) Discover properties; learn name.
Folding.-(1) Maike paper cylinder, fold ғquare as circeted, pasto. (2) Make half cylinder.
Construction.-Make shallow box, cylindrical form.
Square prism.-Use the solid. Give name. Compare with cube.
Folding.-Pupils may make square prism by folding, cuttíng, and pasting as directed.

Construction. - Build bores of pasteboand, cylindrical or form of square prism by folding, eatting,

Equitateral triangular prism.-Use methods preceding, folding; cotting; sewing; or pasting. Construction.

The cone. Give the form. Give name.
Folding, -Fold square and cut as directed.
Construction. - Mase papar cone.
The truncated cone. Fold, cut, sesv or pasto. Many pretty and useful objects may be constructed from this form.
Ellipse.-Use the form. Fold, draw, cut. Result, ellipse.
Tcublet laying.-Pupils may cut their own tablets; arrange as directed; combine with circle, otc. Many pleasing patterns may be made; pasted at discretion of teacher.

Vase form.-Folding and entting. Fold square as directed. Cut as directed. This form may be varied in many ways to giwe pleasing results.

THIRD TERM.
The cross.-By folding and cutting as directed, various forms of crosses may be made. These may be cut from bright colored papers and pasted on neutral tint, at discretion of teacher.

Varieties of forms.-Tescher may use discretion in choice of forms cut, and of objects constructed.

Sewing. -Instruction in threading peedle, making knot in thread. Give a few exercises in sewing on buttons; spacing evenly.

Fourth Grade.
FIRST TERM.
The square pyramid.-Use type solid. (See previous assignment.) Discover form of sides; of base.

Folding.-As directerl fold and cut all the triaugles at once.
Sewing or pasting.-Complete form of pyramid. Vary dimensions: fold, cut, construct.

Trancated pyramid.-(Seo truncated cone, third year. Teacher should use opportunities for constructing as many articles as possible from this form.

Equilateral triangular pyramid.-Follow directions preceding.
Thblet laying.--Pupils may now cut their own tablets, using triangle principally. But other forms previously learned may be combined to give pleasing variety. Paste on neutral ground.

SECOND AND THIRD TERMS.
Construction work in cardboard. (Boys.)-(1) Objects made by means of laps based on type forms as directed.

Note.-If the work of the previous years has been well done, the work of these terms will afford much satisfaction to the pupils.

Sewing. (Girls,)-(1) Instrustion in the use of thimble and scissors, manner of preparing work, of holding work. (2) Stitehes tanght: Basting, overcasting, oversewing, running, hemming, outlining, buttoubole stitch. (Buttonholes at discretion of teacher.) (3) Preliminary work. Use colored paper with white thread, or colored thread with white paper, to teach stitches, when necessary. (4) Fold paper for hemming. (5) Sewing on cloth. Material to be brought from home; only such work attempted as requires kind of stitches mentioned above.

Each girl may make herself a sewing bag in this year; time at discretion of teacher.

Nоте.-Teacher should from the first iusist on neatness of work.

## Fifth Grade.

Woodwork.-Surface forms involving two dimensions only. Tools: Rule, square, ga:ige, compass, pencil, and kuife. Material: Pine, one-eighth and three-sixteenths inch thick.

Exercises: Laying out work; use of rule, square, gange, compass, and pencil. Cutting: Use of knife; straight, end, ollistue, convex, and concave cutting.

Drawing: Construction of geometrical figures upon which the models are based atil working drawings of the models.

Models: (1) Ruler, cutting rectangle. (2) Garden label, ratting point. (3) Pızzle, cutting square, right trianglo, and rhombs. (4) Whirligig, cutting circle. (5) Table mat, cutting hexagon. (6) Calendar, cutting pentagon. (7) Yarn winder, cutting convex and concave. (8) Vase, cutting symmetrical forms. (9, 10, and 11) Fish-line winder, star, and arrow, cuiting recessed edges. (12) l'icture frame, cutting square hole. (13) l'icture frame, cutting round or elliptical hole.
'The remainder of the year is to be devoted to constructions based upon the exercises and principles already given.

Models: (14) Triangle. (15) T square. (16) Penrack. (17) Easel. (18) Wall bracket. (19) Corner hracket. (20) Box.

Note.-In the woodwork of the fifth, sixth, seventh, and eighth grades give partisular attention to correct position, corrert use of tools, and to accurary of work.

Newing. (Girls.)-Attention giveu to use of thread, needle, and scissors, aurl mamer of holding work.

Sitches: Stitching, back stitching, felling, gathering, sewing gathers, buttonhol. s (in addition to work of fourth grade).

Preliminary work: I'se paper to teach folding, as in a fell.
Material: See fourth year.
Cutting: In this year practice should be given in cutting in given directions as dictated; this, however, only to iuvolve preparation of seams. Striped paper may be used to commence practice on.

Note.-Careful attention should constantly be given to neatness of work.

## Sixth Grade.

Woodwork:-Solid forms involving three dinensions. Tools, material, and exercises (see fifth year).

Urawing: Working drawings of models, full size.
Models: Geometrical solids. (1) Square flomer stick. (Prism and pyramid.) (2) Round flower stick. (Cylinder and cone.) Joints: (3) Flowerpot stand. (4) Wind-
mill. (5) Book rack. (6) Picture frame. Symmetrical form work: (7) Dough spade. (8) Hammer. (9) Vase. Irregular form work: (10) Knife. (11) Hatchet. Sewing. (Givls.)-Careful attention should be given to correct use of utensils, as well as to neatness of work.

Stitches: All the stitches of the previous grades shoald be practiced; herringbone or catstitch taught; particular attention should be given to making buttonholes, gathering and sewing gathers, sewing on buttous. In addition, patching (involving the use of plaid, striped, and figured cloth) should be taught.

Cutting: Particular attention should be given to cutting patches and preparation of cloth for patch.

Material: See fourth year.
Seventh Grade.
Woodwork.-Bench work, involving use of bench and a complete set of the principal hand wood-working tools.
Exercises: Laying out work, measuring, squaring, ganging. Sawing, rip, crosscut, oblique, and back sawing. Planing, edge, surface, smooth, oblique, block, joint, convex, jack board, rabbet, and groove planing. Chiseling, vertical, horizontal, oblique, convex, concave, groove, rabbet, and gange chiseling. Boring, vertical, horizontal, brad awl, and countersink boring. Securing work, nailing, screwing, and gluing. Finishing, scraping, filing, and sandpapering.
Drawing: Working drawings to scale.
Models: (1) Tool rack. (2) Cutting board. (3) Flowerpot stand. (4) Flowerpot stool. (5) Coat hanger. (6) Bench hook. (7) Keyboard. (8) Towel roller. (9) Frame. (10) Box.

Sewing. (Girls.)-Particular attention should be given to neatness of work.
Stitches: All the stitches of previous grades to be practiced; most attention to be given to the stitch in which pupils are least proficient; teach darning.

Note.-This will only be pleasing when pupils are able to do it well. Teach feather stitch; hemstitching, at discretion of teacher.

## Eighth Grade.

Woodwork.-Work of the seventh year continued.
Drawing: Working drawings from description. Principles upon which working drawings are lased.

Morlels: (11) Pen tray. (12) Pieture frame. (13) Drawing board. (14) Knife box. (15) Spoon. (16) Book rack. (17) Tool chest.

Conking.-(Thirtv-four lessons.) (1) Fire building, definitions, measuring. (2) Broiling-steak, cliops, neat cakes. (3) Baking-croutons, potatoes, bread crumbs. (4) Boiling-potatoes, eggs, mashed potatoes, potato cakes. (5) Toasting-dip toast, milk toast, egg vermicelli. (6) Baking-apples, crackers, cheese, cracker brewis. (7) Boiling-meats, beef tea, gravy. (8) Warming over meats-minced meat on toast, scalloped mutton, tomato sauce, rissoles. (9) Steaming-oatmeal, apples, potatoes, hasty purding. (10) Bread and biscuit. (11) Griddlecakes, corn-meal cakes, breakfast puffs. (12) Muffius, brown bread, baking powder. (13) Graham gems, baking-powder biscuit, corn cake. (14) Beef stew, dumplings, apple pudding, plain sauce. (15) Gingerbread, plain cookies, soft-molasses cookies. (16) Soup stock, tomato soup, potato soup, crontons. (17) Soups-mixed, vegetable, tomato, rice. (1\%) Warming over potatoes-lyonnaise, creamed, princes, in white sauce. (19) Pastry-apple pie, custard pie. (20) lerying-croutons, fishballs, doughnuts. (21) Frying-croquettes, fresh fish, fritters. (22) Sauteing veal, French toast, potato turnovers. (23) Stewing-cranberries, prunes, apricots, apples. (24) Beveragescocoa, chocolate, coffee, tea. (25) Salt meats-frizzled beef, creamed codtish, corned beef. (26) Hasl, mead souffle, cottage pie. (27) Baked fish, stuffing, drawn butter sauce, trying out fat. (28) Simple puddings-cornstarch, chocolate, bread, hard sauce. (29) Cheese souffle, macaroni and cheese, cheese puffs. (30) Omelets and various ways of cooking eggs. (\$1) Steamed puddings-plain suet, ginger suet, fruit suet, lemon sauce. (32) Invalid cooking. (33) Salads. (34) Cake.

## MANUAL TRAINING SCHOOLS.

## First Year.

Shop practice.-Wood working: Bench work, sawing, planing, mortise, tenon, dovetailing, doweling, joining, cabinetwork, simple carving, plain and ornamental turning, chuck, and face plate work, scroll sawing, pattern making, molding and casting in a light form.

Draving.-Geometrical drawing, priuciples of projection, simple developments of surfaces, mechanical and free hand working drawings, sketching, free-hand perspective design, lettering-25 plates.

Shop practice.-Metal working: Forge work, forming, bending, drawing, upsetting, puncliing, cutting and welding iron; ornamental ironwork-forging welding, tempering, and annealing stecl. Machine work, vise work, chipping, fing, scraping, and work on speed lathe.

Draring.-Geometrieal drawing, intersections of solids, isometrical drawing, details of machines from measurement, mechanical perspective, liue shadiug, lesign, architectural drawing, ornament, water color in flat washes, lettering-20 plates.

## Third Iear.

Shop practice.-Metal working: Machine work, turning, looring, arilling, planing, serew-entting, tool makiag. Study of mechanics: Design, construction, steamengino and boiler.

Drawing.-Geometricaldrawing, projection of shadows, machine drawing, including the laying out of belt motions, screws, gears, cams, ete., tracings and blue prints, pen sketching, lettcring-12 plates.

Toledo, OHio.

## TOLEDO MANUAL TRAINING SCHOOL.

## [From the Tenth Annual Report of the Directors, 1894-95.]

The organization of this school was mado possible through the berquest of a citizen of Toledo, the late Jesup H. Scott. Mr. Scott had, during his life, an intense appreciation of the value of trained intelligence in industrial affairs. It was also his desire to elevate labor and the laboring men to a higher plane, and clothe both with more dignity and respect. For these reasons he had cherished tho idea of fonnting, at somo time, a nniyersity of arts and trades. A short timo liefore his death Mr. Scott matured his plan of the Toledo Uuiversity of Arts and Trates, and convered to trustees of the same, as an endowment fund, valuable lands lying adjacent to tho city of Toledo. This fund was afterwards greatly increased by gifts by tho sons of Mr. Scott. Mr. William H. Raymond also geacrously contributed to tho fund a sum of $\$ 15,000$. But in 1884, owing to some adverse circumstances, the trustees found they would be unable to realizo the purposes of the donors on the projected scale, and so made a tender of the entire university property to the city of Toledo on condition tbat the city would assume the trust under the powers and obligations imposed by the statutes of Ohio.
In March, 1884, the common council of Tolerlo accepted tho trust in behalf of the city, a new board of trustees ryas appointed, and the department of mannal training was organized as a part of the public school system, to he manager jointly by the university trnstees and the board of elncation. In Oetober, 188t, the mannal training work began in an experimental way in the rooms of the high school building. The work began with a class of of bors and girls, umider the instructions of but ono teacher. For the first year the only studies pursued were carpentry or light woodwork, and free-hand and mechanical drawing. Bit so popular and useful seened the work, and so eager were others to enter pon it, that it becamo nocessary greatly to enlarge the facilities for these studies.
The sehool is now eompleting its tentle fear of work. It has proved itself useful and popular, and may be regarded as having passed beyond the experimental stago of its history and become a fisture in the eflucational system of Toledo.

## EXPENSES.

For the residents of Toledo instruction in the mannal training school is free like the other public schools, a small charge for material only being made as follows: The first rear, 46 ; the secon! $\$ 7.50$; tho third and fourth vears, $\$ 9$ eacli; payable in three installuents at the heginning of the fall. winter, and springe terms.

Eor nonresidents of Toledo, tnition, including ligh school fee and regular material fee, is charged as follows, payable in the same manner as aboye: For the boys, first year, \$t5; second rear, 出60; third and fourth rears, $\$ 75$ each. For the girls, first and second years, \$15 each; third and fourth rears, $\$ 00$ earch.

The work of the student is the property of the school, but may bo given to the pupil at the discretion of the superintendent.

THE BUILINNG AND ERTIPMENTS FOR MANTAL INSTILCTION.
The building for manual instruction is 60 hy 120, and four full stories in lieight. The drafting rooms ocerpy the fourth floor of the east half of the building and onelalf of the west wing on the ground floor. These roons are atmirably lighted and
fitted with blackboards, drawing tables, and closet racks, so that the pupils have each a place to put away their work, as elass after class successively occupy the rooms. As drawing is the foandation for almost every species of correct mechanical work, stadents of the manaal school continae to work in these rooms from the beginning to the end of their school course.

The woodworking department occupies two rooms, one ou the third and one below it on the second story, each 40 by 55 feet. The former contains 1 jig saw, 12 heavy doable work benches, with full sets of tools for each pupil, and is equipped to accommodate four classes of 24 students each per day. The second-floor room contains the same equipment as the third-floor room, and in addition 24 improved woodturning lathes and 1 emery grinder. The former room receives the boys of the firstyear course, and the latter the boys of the second-year corrse. A complete equipment of belting and gearing moves all the saws and lathes in the woodworkiṇg rooms.

The wood-carving and clay-modeling room is 40 by 27 feet, has plenty of light, and is equipped with 12 suitable benches, with racks and cases designed especially for wood carving and clay modeling. As in all other departments, each pupil has his own tools and drawer.
The forging room occupies the whole of the ground floor on the east side, and is a room $40 \mathrm{ly} 55,12$ feet high. The room is well lighted and is oquipped with 18 forges and anvils, with all needed tools for each, and benches, vises, grindstones, emery stones, etc. A system of galvanized-iron pipes is over all the forges, and a large exhaust fan ventilates into large chimneys. The forge blast is obtained by means of a power blower.

The machine shop is a room 40 by 55,12 feet in height. It has an equipment of 8 Patnam engine lathes, $Z$ speed lathes, 2 drill presses, a good-sized planer, a shaper, an excellent universal milling machine, 1 power hack saw, an emery grinder, and a grindstone. Vises of the most improved pattern are fixed upon benches placed under the windows of the room.

In the domestic economy departmont, opposite the drawing rooms on the fourth floor, and occupying the whole of the west half of the building, are the cooking and textile-fabric rooms, lighted by side and skylight, warmed by steam, and perfectly. ventilated.

The cooking room is equipped with f wo large ranges and 2 gas cooking stoves, 5 double tables, each made to accommodate 4 pupits; each pupil has her own table space fer work, and a small gas stove on the table between each two, tho accommodations being for classes of 20 . Each table has 4 drawers, and cupboards below for all essential utensils. At the end of the room are pantry closets and a commodious Wash room, with all confeniences for girls, including individual closets for each to keep aprons, clothes, etc.
The textile-fabric room is equipper with furniture and appliances for teaching domestic handiwork in the cutting and making of garments, house furnishing, hand and machine sewing, etc.

The boiler and coal room is under the sidewalk of Tenth street, in a vaulted room especially adapted to the purpose. The boiler is a 70 -horse power steel tubular, and farnishes power to run the engine and steam to heat the entire building. A 50 -horsepower Ball engine, the source of power for all the shops, occupies a place in the main hall on the gronnd floor, and instruction is given the pupils in tho use and care of the boiler and engine in all their details; and these, as well as the force pump, feed water, heater, hot-water receiver, and steam apparatus, are all used to illustrate the generation and application of steam.

## COURSE OF INSTRUCTION.

First year.-Langaage: Composition; English classics, Latin, French, or German. History: Aneient. Mathematics: Geometry, algobra. Science: Physical geography, commercial geography, and bookkeeping. Drawing: Free-hand and instrumental working drawings, free-hand perspective, cast drawing, illustrative drawing. Manual work: For boys, bench work in wood, clay modeling; for girls, se wing and cooking, clay modeling.

Second year.-Rhetorical analysis; English classics, Latin, French, or German. History: English and general. Mathematics: Solid geometry, algebra. Science: Physiology, botany, and physics. Drawing: Instrumental drawing, cast drawing, historic ornament; sketches in pencil, free-hand and pen and inls; illustrative drawing. Manual work: For boys, wood turning, pattern making, foundry molding; for girls, dressmaking, hygiene, home nursing, cooking.

Third year.-Language: English literature; essays, Latin, French or German. History: American. Science: Physics, with laboratory practice. Mathematics: Trigonometry and higher algebra, or business arithmetic and accounts. Drawing: Free-hand and instrumental drawing, charcoal drawing, design; water color,
sketching. Manual work: For loys, forging, chipping, filing, machine construction; for girls, purchasing household supplies, couking, chemistry of cooking, garment cutting and making.
Fourth year.-Language: English literature, debating, public speaking, Latin, French, or German. History: Political. Civics: Political economy. Mathematics: Mechanism, steam, strength of materials. Science: Chemistry, with laboratory practice; home sanitation. Drawing: Free-hand and instrumental drawing, charcoal drawing from the antique; design, water color, sketching. Manual work: For boys, machine shop, steam and electrical ongineering; for girls, entting, making, and fitting of garments, millinery, household decorations, typewriting, stenography.

## INSTRUCTION IN DETAIL.

## Drawing and Art.

First year.-Free-hand perspective; peucil sketching from still life; charcoal drawing from still life and ornament; history of design, with practical work in color; Listoric ornament ip color and pen and ink; clay modeling from ornament.

Second year.-Perspective sketching of interiors and exteriors; pencil sketching from still life and nature; pen-and-ink rendering; elementary water color from still life; interior decoration; charcoal drawing from masks; clay modeling-heads.

Third year.-Sketching from life and costumed figure; pencil sketching from nature; charcoal drawing from heads and full-length figure; advauced water color; clay modeling from full-length figure; history of art.

Fout th year,-Charcoal drawing from life-head; water color from nature; charcoal drawing from full-length fignre; sketching from life and costumed figure; pen-and-ink sketching; clay modeling from life; antatomy-history of art.

Drawing and Shop Work for Boys.
WOODWORK.
Drawing.-Free-hand work on blackboard, such as sketches from objects, studies of geometrical surfaces and solids; lettering; free-hand pencil work, drawing from objects, parts of machines; homemade sketches once a week of simple, familiar ol,jects; working drawings in peucil for shop use, consisting of simple projections and figures; pen liuing and use of ink; geometrical tigures; geometrical problems; mechanical lettering; igured sketch of a simple machine or piece of joinery; tracing and blue print.

Carpenter shopwork.-Care and proper use of tools; exercise in sawing and planing; making mortise and tenon, square and oblique dovetails, scarf and keyed joints and braces-in all about 30 exercises; turning, "ronghing down" straight, concave and convex surfaces; ornamental hard-wood turning, tool handles, rosettes, dumbbells, pattern making, etc.; cabinetwerk, ornamental picture frames, models, fancy workhoxes, tables, bookcases, etc. Each pupil works from drawings made by himself in drafting exercises.
forging.
Drawing.-Shop drawings in ink, figured; problems in oblique projection; isometric projection; shade and shadow; mechanical perspective; development of surfices; pencil sketch, figured, of machine or architectural work; tracing and blue print: homemade sketches once a week in pencil.

Blacksmith shopwork.-Care of fire; exereises in drawing out, upsetting, bending, twisting, punching, welding iron; tempering steel, staples, nails, hooks, rings, 7's, hatchets, fire sliovels, punches, chisels, bolts, lathe tools, blacksmith tongs, wrenches, lathe dogs. flatters, swages, hammers, screw drivers, etc.-all from drawings made by pupil himself in drafting exercises.

## MACHINE WORK.

Draving.-Shop detail drawing; sketches and working drawings from measurement of machine or architectural work; general plan, elevation, etc., worked up from details; tracings and blue printing.

Machine shopwork.-Use and care of machinery; exercise in chipping, filing, and finishing east and wrought iron; boring, turning, planing, drilling, milling, and grinding; making reamers, taps, drills; work on triple-expansion steam engine. Drawings made by pupils whenever possible.

During the year trips of iuspectiou are made to various foundries, forge shops, and rolling mills.

## DOMESTIC ECONOMY.

SEWING.
The educational value of sewing, training the eye and hand, developing ingenuity, precision, patience, and industry, cultivating good taste, love of beauty, and appropriateness of dress make it an approved means of all-around culture, while the ease with which it is introduced as an exercise into the regular class room, and the small cost of material and instruction, give it some advantage over other forms of mannal training. The following outline indicates the course of instruction:

Hand work.-Basting, running, backstitching, overcasting, Lemming, damask hem, reversible seam, fell, overseaming, flannel seam, ruffle, patch, darning, buttonholes, glove mending.

Machine work.-Use and care of the machine, hemming, tucking, gathering; patterns made from actual measurements; cutting and making of drawers, skirts, and nightgowns; instructions concerning manufacture of pins, thread, cotton, linen, etc.

## Dressmaking.

Dressmaking is taken by pupils of the seuior high-school class. To enter this grade the pupils are required to have taken the work in sewing of the junior year.

The time given to dressmaking is one hour and a half each day during the school year. When a pupil finishes her work before the rest of the class, she is allowed to do extra work. No work is required to be done at home. Practice material and the appliances with which to work are supplied by the school, and the garments are selected and furnished by the pupils. Two girls work together and each one is respousible for the measuring and fitting of the other's dress.

First term.-Making buttonholes with twist; sewing on buttons, hooks and eyes, and loops; talks on choice of material, color and designs for dresses; taking measures for skirt; drafting a skirt; making a dress skirt of plain material; taking measures for a basque; drafting a basque; making a basque of plain material; taking measures for a sleeve; drafting a sleeve; making sleeves for the basque; examination; sketching objects in outline and in light and shade; sketching from life.

Second term.-Talks on the nature and manufacture of woolen textiles; cutting from patterns; making stripes and figures; making a dressing jacket or basque to apply matching; drafting a waist with two nuder arm pieces; planning a princess dress; talks on the growth and mauufacture of silk; sketches, in water color and pencil, of gowns.

Third term.-Make a dress; talks on the manufacture of cloth; examination ; making a wash dress and shirt waist; examination; designing of costumes.

## Cooking.

The design of this course is to furnish thorough instruction in applied housekeeping and the sciences relating thereto, and students will receive practical drill in all branches of housework; in the purchase and care of family supplies, and in general household management; but will not be expected to perform more labor than is actually necessary for the desired instruction.

The social, hygienic, and economic questions involved in such instruction are of the greatest practical concern, and it is believed that the careful and systematic teaching needed in this branch of study will yield the best possible educational results.

In the high-school classes four practice lessons and one in the theory and chemistry of cooking are given each week. The practice lessons include all the operations of a kitchen, and cover the following instruction and practice: (1) Boiling, (2) baking, (3) broiling, (4) frying, (5) mixing.

1. Boiling.-Boiling and simmering water and its action on starch and albumen. Practical application of facts thus learned to boiling of meats for soups, for stews, and ta be served whole, to vegetables, eggs, and beverages.
2. Baking.-Bread raised with yeast. Bread raised with baking powder. Meats, pies, puddings, cakes, vegetables, and fish.
3. Broiling.-Steaks, chops, fish, oysters, etc.
4. Frying.-Chemical and mechanical principles involved and illustrated in the frying of vegetables, fritters, croquettes, tish, etc.
5. Mixing.-The art of making combinations, as in soups, salads, sauces, dressings, ice cream, ices, etc.
Pupils prepare and serve a complete breakfast, lunch, and dinner.
Household Science, Including Chemistry and Theory of Cooking.
(1) Definition and illustration of physical and chemical changes. Study of elements and compounds. (2) Carbon, nitrogen, hydrogen, oxygen, and sulphur;
their properties and uses. (3) Heat. Combustion. (4) Composition of fuels. Building and care of a fire. Construction of a stove, damper, etc. (5) Composition of the human body. (6) Classification of food. (a) Nitrogen or flesh forming. (b) Carbonaceous or heat producing. (c) Water. (d) Mineral matter. (7) Nitrogenous foods. Uses in the human borly; daily amount necessary for health. (8) Nitrogenous foods. Relative food value illustrated by charts. (9) Carbonaceous foods. Fats and carbohydrates; their fool value; daily amount necessary for health. (10) Study of digestion. (11) Daily income aud outgo of foods illustrated by blocks and charts. (12) Fermentation, lactic, alcoholic, and acetic. (13) Study of yeast plant. Properties of carbonic acid gas. (14) Alcoholic fermentation as applied to bread making. (15) Chemical composition of wheat, rye, etc.-their food value; manufacture into flour; cost. (16) Baking powler. (a) Cream of tartar. (b) phosphate. (c) Alum, (17) Tests of baking powder for adulteration. (18) Water. Germ theory; filtration; hard and soft water. (19) Rain water, river water, surface water, deep wells. (20) Food adjuncts: alcohol and natural acids. (21) Alkaloids, such as caffeine in coffee and tea. Preparation of tea and coffee. Adtulteration. (22) Spices. Culture, preparation, and adulteration. (23) Canned fruits aud meats. (24) Manufacture of soap. (25) Ventilation, heating, and lighting. (26) Situation of the house. Removal of waste. Plumling and care of fixtures. (27) Disinfectants and antiseptics. (28 to 36 ) Include general plan of honsehold work, care of every portion of a house, invalid cooking, and the preparation by each pupil of a dietary for six persons for one week, total cost not to exceed $\$ 5$.

## COURSE IN SHORTIIAN゙D.

The work is civided into three grades: Elementary, intermediate, and advanced. The first grado covers a term of three months, the second three, and the third four. Five lessons per week are given. Forty-five minutes a day is devoted to each lesson.

The work is divided as follows :
Elementary grade: Derivation and classification of characters. Learning the alphabet. Combination of characters. Position alphabet. Coalescents. Shading to express letters. Diphthongs. Modifications of characters. Abbreviation by suffixes and affixes.

Intermediate grade consists in plurase writing, reading exercises, dictation of simple matter, transcription of notes.
Advanced grade consists in dictation and transcription of letters pertaining to advertising, banking, brokerage, insurance, manufacturing, railroading, mercantile, and grain business. Dictation and transcription of law forms and court work, ombracing depositions, affidavits, chattel mortgares, form of deeds, wills, notes, drafts, etc. Dictation and transcription of general matter, literary selections, nowspaper articles, etc.

## COURSE IN TYPEWRITING.

Forty-five minutes a day is devoted to trpewriting for six months. Instruction is given on the Remington, Yost, and Smith Premier.

Course of study.-Location of letters. Special dity of each finger. Word practice. Sentenres. Touch writing. Business correspondence. Legal forms and testimony. Dictatiou. Architectural specifications. Manifolding and mimeographing. Transcribing shorthand notes. Tabular work. Omamental writing. Letterpress copring. Mechanism, adjustment and care of machine.

## SENIOR GRAMMAR PUPILS.

Pupils of this grade receire instruction as follows:
Draving.-Free-hand and mechanical.
Mannal work:-For boys: Beuch work in wood. For girls: Serring and elementary courso in cooking.

## mancal instrection in ward-school classes.

## Sewing.

In October, 1894 , there were 88 classes organized in 20 warl-school buildings, with an enrollment of 2,318 . The arerage attendanco during the year was 1,871 . Nineteen special teachers were cmployed, with Miss Olive Parmeleo as supervisor. In adili1ion to 1,766 pieces of work completed in school, 2,948 were completed at hone, and 12,528 stockings trere darned, and 0,126 garments mended.
On every side is seen a growing appreciation of the great importance of this brauch of edncation. Those most interested desire to see this work made compulsory.
This work in the warl schools comsists of four difierent courses: Tho beginners, sccond, third, and boys' course.

## Begrnares' Course.

(1) Drill.-(a) Holding needle; (b) threading; (c) using thimble; (d) making knots. (2) Stitches.- (a) Basting; (b) running; (c) backstitehing; (d) overcasting. (3) Hemming. (4) Seams.- (a) Common seam; (b) fell; (c) bias; (d) French seam; ( $e$ ) flannel; ( $f$ ) overseam, French hem on sides. Application of work done: towels, dusters, wash rags, bags, holders, etc. (5) Gathering; shirring; ruffle. (6) Sewing on buttons, hooks and eyes. (7) Hemstitching; etching; marking. Work on towels, dolls' clothes, sheets, pillowcases, handkerchiefs, napkins, bibs, ete.

Second Year's Courss.
(1) Bag. (2) Darning, card, scrim. (3) Bias piećing, cut and make. (4) Patching. (5) Darning cashmere. (6) Piping in plaiting. (7) Buttonholes and loops on cotton cloth. (8) Aprons, cut and make. (9) Pocket, cut and maker (10) Bibs, cut and make. Articles to make, aprons, bibs, oversleeves, etc.

## Third Year's Course.

(1) Tucking. (2) Whipping ruffle, mitered corners. (3) Gussets. (4) Plackets, (5) Skirt, cut and make. (6) Drawers, cut and make. (7) Nightgowns, cut and make. (8) Buttonholes in cashmere. Articles to make, undergarments, etc.

## Boys' Course.

(1) Drills.-Holding needle; using thimble; threading needle; making knots. (2) (a) Basting; (b) running; (c) backstitching; (d) machine stitch. (3) Overseaming. (4) Carpet stitch-cover ball. (5) Hemming. (6) Darning on cardboard, (7) Darning on scrim. (8) Darning on stocking. (9) Darning on cashmere. (10) Sewing on buttons and tape. (11) Buttonholes. Articles of simple make brought from liomo if desired. Instruction in the history and manufactnre of needles, pins, thimbles, shears, buttons, hooks and eyes, silk, wool, flax, cotton, thread, etc., is given to all pupils.

## Cooking.

In December, 1893, classes in cooking were first organized. The course comprises one lesson each weel for a period of thirty-six weeks, each lesson being an hour and a Jalf in duration.

Practical instruction is given in boiling, broiling, baking, frying, and mixing; as illustrated in the preparation of soups, cereals, vegetables, meats, pastry, cakes, breads, desserts, etc.
A stady is made of the nutritive properties of the commonest foods, the effect of heat npon different substances, the action of yeast or its substitutes upon breads, and the approximate money value of materials used.
During the lesson some branch of domestic work other than cooking is considered, as care of the kitchen, cellar, and sink, washing and wiping dishes, sweeping, dusting, scrubbing, washing windows, setting and cleaning off the table, serving at table, waiting at door, etc.

At the close of a term a breakfast, lumeheon, or dinner is cooked and served by the girls of each class.

The following is the course of lessons:

## Lessons.

(1) Construction of a stove, forms of fuel, heat, measuring. (2) Rules for mashing dishes. Boiled and mashed potatoes. Potato cakes. (3) Care of sink. Oatmeal and corn meal mush. Creamel and fried potátoes. (4) Scouring. Carrots in white sance, corn bread, tarnips, and fried parsnips. (5) Sweeping. Macaroni and cheese, boiled and escaloped cabbage, tea. (6) Dusting. Coffee, cocoa, cranberry and apple sauce. (7) Blacking stove. Potato soup, mock bis of scraps. Oyster and celery soup: (9) Stock, tomato and mixed vegetable soup; (10) Irish stew, beef stew, and dumplings. Cuts of beef, matton, and veal illustrated by charts. (1i) Scrubbing, Broifed beefsteak and lamb chops, hash and minced mutton. (12) Serving and setting table. (13) Care of cellar. Broiled ham and mackerel, minced ham on toast. (14) Washing windows. Roast beef, gravy, cottage pie, escaloped oysters. (15) Adulteration of baking powder. Biscuit, creamed codfish, codfish balls, corn-meal muffins. (16) Fermentation. Yeast and bread. (17) Bread and milk. (18) Care of dish towels. Graham bread, rye, and muffins. (19) Steamed brown bread, corn-meal and sour-milk griddle cakes. (20) Waiting on door. Creamed dried beef, scrambled eggs, omelet. (21) Apple, pumpkin, and rhubarb pie. (22) Cottage pudding, plain sance, corn-starch pudding, boiled custard.
(23) Brown betty, apple tapioca, lemon jelly, (24) Fried potatoes, doughnuts, gingerbread. (25) Serving a breakfast. Table manners. (26) One-egg cake, sponge cake, frosting. (27) Poached eggs, cookies. (28) Potato and cabbage salad. (29) Invalid cooking. (30) Bread pudding, hard sauce, French rarebit. (31) Pease, asparagus. (32) Prepare and serve a dinner.

EVENING CLASSES.
Evening classes are maintained for six months, from November 1 to May 1, each year, in free-hand and mechanical drawing, cooking, sewing and dressmaking, chemistry and physics. To the foregoing will be added next season classes in English, shorthand and typewriting, etc.

## Philadelphia, Pa.

[From a report on woodwork in grammar schools, by Edward Brooks, city superintendent, 1893.]
In the development of the manual training idea Philadelphia has not been behind her sister cities. In 1880 the board of education introduced sewing as a regular branch of study into the girls' high and normal school. This experiment was found so satisfactory that in 1885 sewing was added to the course of study of the elementary schools of the city. In the same line of progress, cooking was introduced into the grammar grades for girls in 1887-a novement that has been productive of most excellent results. In 1880 a course in woodwork, devised by Mr. Charles G. Leland, was adopted by the board, representer to-day by the carving exercises at the Industrial Art School, the earliest institution of its kind in America. In 1885 the bors' manuar training school was established, the phenomeual success of which has occasioned the organization of a second similar school and given a wide reputation to our city in that line of work. An experiment was also made last year in sloyd work in the James Forten Elementary Manual Training School.
the philadelphia manual training school.
[From the tenth annual catalogue, 1895-96.]
The Philadelphia Manual Training School is an institntion of high-school grade, forming an integral part of the public school ssstem of Philadelphia. It was organized in September, 1885 , with a class of 130 pupils. So rapid was its growth that at the end of three vears there were no accommodations for many candidates properly qualified for admission. In order to meet the demands of those desirous of availing themselves of the "new education," a second school was organized September, 1889, in the northeastern part of the city. These two schools have separate principals and faculty, and thus constitute independent establishments. They are under the direction ot different committees of the board of public education, but they pursue, as far as possible, parallel courses of study.
They are open to loys who have completed the course in the twelfth grade of the grammar schools. Boys from private schools who successfully pass the annmal examination in June for admission may also be admitted.
This school affords an opportunity to pursie the nsual high-school course in literatule, science, and mathematics, and at the same time to receive a thorough course in drawing aud in the use and application of tools.
The object of a maual training school is the education of all the faculties, and not the training of auy special gronp. The hoy is trained æstlietically, mentally, and physically. It is meant that the school shall help each pupil to enter upon his advanced or special training with the best economy of time and with some conception of his fitting occupation.
It should be borne in mind that a manual training school is not a trade school. The name, unfortunately, is misleading. In the school there are five departmentsliterature, mathematics, science, drawing, and mannal training. The name of ono department has heen made to cover all, and this misnomer is responsible for much of the current misapprehension concerning the work aud parpose of the school. It is, howerer, a name so firmly rooted in our school nomenclature that it would, perhaps, he uuwise to attempt to eradicate it. It only remains for us to give the name a broader meaning and to associate with it in the public mind the full scheme of high school culture of which it forms a part.
It is not the purpose of this school, therefore, to produce mechanics any more than it i.s to proluce any other class of specialists. What it aims to do is to surround hoys with the realities of life in both thoughts and things, and to fit them more closely to their environment. It is a system of education which is perfectly general in its charactry, and which is recomminded with the same confidence to the future student of the humanitics as to the prospective worker in force and matter.

## COURSE OF STUDY.

The course of stady covers three years. The school time of the pupils is about equally divided between literary and manual work. One hour per day is given to drawing, two hours to shop work, and three hours to the usual academic studies.

The course of study embraces five parallel lines, as follows:
First.-A course in language and literature, including the structure and use of English, composition, literature, history, economics, German, and French.

Second.-A course in mathematics, including arithmetic, algebra, geometry, trigonometry, bookkeeping, and surveying.

Third.-A course in science, inchuding geologyं, physies, chemistry, physiology, mechanics, steam engineering, and applied electricity.

Fourth.-A course in freehand, constructive, and agricultural drawing, designing, and modeling.

Fifth.-A course of tool instruction, including joinery, parquetry, pattern making, wood turning, wood carving, forging, soldering, ornamental ironwork, molding and casting, vise work, and mechanical instruction.

Post-graduate course (fourth year).-A posi-graduate course has been added to the curriculum of the school. This course is elective, and is intended for those graduates who wish to pursue an extended course in literature, historr, mathematics, and the sciences, thus giving them a full and rounded literary course equal to that of any high school.

It will enable those who satisfactorily complete the course to enter the more advanced classes of a sollegiate course, and it also provides adequate training for those graduates who wish to pursue a special course as a preparation for the teaching profession.

## COURSE IN DRAWING.

The importance of drawing in its application to manual training can not be overestimated. It is, in fact, the tirst step in manual training. Without drawing, the use of tools becomes à mere mechanical imitation and has little value as an eilucational factor. From the conception of the idea to its expression in the concrete material, the drawing is the description by which the mechanical processes are logically developed and brought tooa definite and practical form.

From the beginning, therefore, the pupil is taught to make and interpret working drawings and to reproduce from them the indicated forms. He must understand this universal language in which they are described, and acquire by education and experience the ability to use it.
Parallel with this work, the pupil's powers of observation and expression and his artistic sense are cultivated by the stady and representation of the appearance of objects, and by designing on paper and in clay and wood for their ornamentation.

While drawing underlies all industrial work, its application is not limited to material purposes. Throughout all the departments drawing is the common language used in explaining facts, ideas; and principles. By means of historical, botauical, and topographical maps, literary and economic charts, physical and mechanical riagrams, anatomical and geological sketches, the pupil graphically expresses the lessons taught in the class room.

The course in drawing has three general divisions:
First. Constructive drawing, as the basis of all industrial pursuits.
Second. Representative drawing, designed to educate the sense of form and proportion, to train the eye to observe accurately and the hand to delineate rapidly the appearance of objects.
Third. Decorative drawing, used as a means of cultivating the taste and developing an appreciation and love of the beautiful.

## COURSE IN TOOL INSTRUCTION.

In this department, which is a distinctive feature of the school, each exercise involves a mechanical principle, and the chief object of the instruction is the development of this principle rather than a finished piece of work. The exercise has value only as it has rendered educational service during its construction. In the changing conditions of the thing in hand during its construction there is a constant necessity for creating new means to meet new requirements, and the directive skill and logical processes thus evolved make manual training rise to the level of scientific or mathematical studies as a means of intellectual development.

Other values of a specific nature-accuracy of measurement, precision of adjustment, delicacy of manipulation, exactness in every particular-must be taken into account in estimating the educational value of manual work.

The shop instruction is simply a part of the laboratory methods of education. The term "shop" in this connection is as much of a misnomer as is the term" "manual
training" when applied to the whole school. It would seem more fitting, therefore, in speakinf; of this department to call it a laboratory, a term which carries with it the educational significance of its work.

All the articles made in the shops are required to be of precise forms and dimensious given in a drawing made by the prpil himself previous to taking up the exercise. The aim is to teach the pupil to express his thought in a concrete form with the least waste of material, in the most workmanliko manner, and in accordance with the most approved methods.

A feature of the work in the manual training departnents is a weekly lecture bearing either upon tho principles involved in the work of tho week or the nature of the material used in construction.

Curriculum of the Philadelphia Manual Training School. JUNIOR CLASS (C)-FIRST YEAR.


INTERMEDIATE CLASS (B)-SECOND YEAR.


## Curricalum of the Philadelphia Marual Training School-Continued.

## INTERMEDIATE CLASS (B)-SECOND YEAR-Continued.




## EqUIPMENTS OF THE MANUAL DEPAKTMENTS.

Woodwork (first year).-Twenty-five cabinetmaker's benches, with set of tools for each bench; 8 wood lathes; 1 grindstone, 1 gluepot.

Woodwork (second year). Twenty cabinetmaker's benches, each with its full set of tools; 6 wood lathes; 1 grindstone; 1 gluepot.

Metal work (first year). -Twenty-five vises, with set of tools for each vise; 1 grindstone; 1 surface plate.

Metal work (second year).-Twenty-four forges, 24 anvils, each supplied with a set of tools; troughs for molding; furnaces, trowels, sieves, flasks, etc., for foundry work; 2 light drill presses.

Mechanical construction (third year).-Six engine lathes; 2 hand lathes; 1 planer; 1 shaper; 1 drill press; 6 vises; 1 emery-grinding machine; 3 large surface plates; 1 grindstone; 1 cabinetmaker's bench, with full set of tools; 1 punch; 1 shearing machine; 1 screw press; 1 wood lathe (the last four made by the pupils).

Power is furvished by a 60 -horsepower Corliss engine, with a 70 -horsepower boiler; one Thomson-Houston dynamo, 13 kilowatts, and 1 multipolar dynamo, 17 kilowatts.

## OCCUPATIONS OF GRADUATES.

An examination of the records of the 520 graduates reveals the fact that the claims made by the school as to its practical value in gaining a livelihood are fully substantiaterl, about 70 per cent being engaged in those pursuits in which a high order of intelligence, as well as skill of hand, is required. Already a large number occupy positions of trust and responsibility, as superintendents, managers, foremen, etc. That the school fosters a desire for higher education is shown in the fact that about 25 per cent of the graduates are students in colleges, universities, or technical schools.

The occupatious are classified as follows: Teachers, 17 ; physicians, 5 ; law students, 8 ; dentists, 2 ; surgen (veterinary), 1 ; civil engineers, 6 ; electrical engineers, 13; mechanical engincers, 7; architects, 10 ; machinists, 7 ; engravers, 5 ; desiguers, 7 ; opticians, 3 ; chemists, 5 ; druggists, 2; draftsmen, 63 ; electrical work, 47; carpenters, 2: plumbers, 2; business pursuits, 33 ; clerks, 34 ; bookkeepers, 10 ; agents, 2 ; reporters, 3 ; stenographers, 3 ; bookl)inders, 2 ; collectors, 3 ; artist, 1 ; sculptor, 1 ; salesmen, 18; miscellaneous, 9 ; unemployed, 10 ; deceased, 5 ; students in colleres, universities, and technical schools, 125 ; positions of responsibility, as superinteudeuts, managers, foremen, etc., 37.

## INDUSTRIAL ART SCHOOL.

[From the report of J. Liberty Tadd, principal, for 1890.]
The school was first started in 1880, permission having been obtained of the board of public education by Mr. Charles G. Leland for the use of certain rooms in the Hollingsworth Building for the purpose of demonstrating the feasibility and practicability of training the mind and hand of our youth at one and the same time. The school was but an experiment, and there being no appropriation for its maintenance the board had nothing to offer but the use of the rooms.
Through the enterprise of Mr. Leland, however, these obstacles were easily overcome, and the school was opened with 120 children, who came every Tuesday and Thursday afternoons for two hours, permission first having been obtained to absent themselves from their regular schools.
The results of the first year were more gratifying than was even hoped for, and it was not long before the school had passed its experimental stage.
The following year the educational board took charge of this new departure in education; regular teachers were appointed and the school placed upon a permanent basis, with more than double the number of pupils in attendance.

Sinte then it has grown in numbers and enlarged facilities provided, until now the number receiving instruction each week has reached almost 1,700 , embracing pupils from the lowest primary grades to the highest grades in the grammar school, as well as the teachers' classes. The annual cost per pupil is but $\$ 3.50$. Of course, with the experience attained since the opening of the school, there have been material changes in the methods employed, a regular graded course of instruction has been adopted, new graded series of plaster casts have been provided, and in many minor details has the equipment of the school been improved.
The four fundamental principles now employed in the school are:
First. Free-hand drawing in its simplest form, or, as it might be called, delineation on a flat surface. For instance, we make on the blackboard a ciscle, one of the elementary forms in use. In making this circle the pupils are taught to swing their hands around withont support, to get the motion and to make a clear-drawn circular line. When any simple form can be put down at a stroke, we have acquired a certain amount of manual training of a most desirable kind. Pupils are taught to make all elementary forms in this manner.

Second. To make those elementary forms in soft clay.
Third. To make those same forms in the opposite of soft clay, i. e., tough wood.
Fourth. Designing, creating forms on flat surfaces, in soft clay, and in tough wood.
By these four processes the pupils are taught to draw simple forms, to memorize them sufficiently to put them in any direction, thus creating original designs and then to carry out the idea in clay or wood.
There are to-day nearly two hundred and fifty trades, and there is not one of them that does not have one of these four principles as a fundamental element; for if the eye, the hand, and judgment-all tools-are well trained, the tools of any trade will be freely handled, and with reason.
[From the report of 1895.]
Number of pupils attending from grammar schools, fall term.


The number of pupils (teachers) enrolled in teachers' manual training classes for the fall term of 1895 was as follows: Elementary drawing, 45; advanced drawing, 31 ; elementary modeling, 22; advanced modeling, 10; wood carving, 22; post-graduate classes, 41; total, 171.

I have addressed a circular letter to our graduates for the years 1890, 1891, 1892 , and 1893, in order that we might obtain some permanent record of the results of the public industrial art training.

From the answers already received I find that the pupils still pursuing their studies at the public schools are distributed as follows:

At the high schools, 40; Central Manual Training School, 13; Northeast Manual Training School, 7. At the more advanced institutions of learning, I find at the School of Design, 9; Sehool of Industrial Art, 5; Drexel Institute, 7; Spring Garden Institute, 3; Temple College, 2; University of Pennsylvania, 3.

These figures do not include the pupils provided for by the city scholarships at these different schools.

The total number of answers received to our letters was 130, and among all these graduates of the Public Industrial Art Schóol 14 are now earning their living at some artistic pursuit, either as engravers, designers, interior decorators, or lithographers.

COURSE OF STUDY FOR THE CHILDREN'S CLASSES.
Elementary Diafing and Designing.
First period.-Nonimitative elements and line work. Second.-Conventional forms. Third.-Plant forms. Fourth.-Combination of preceding. Fifth.-Greek elements and style. Sixth.-Roman elements and style. Seventh.-Moresque elements and style. Eighth.-Gothic elements and style.

All work to be free-hand.
Designs in the various grades in every case to be original and for the purpose of being used in wood, clay, metal, fabrics, etc. Pupils must indorse on each piece of work its eharacter aud purpose.

The importance of designing for some purpose and in some materials to be kept constantly in view.

Making designs to obtain proficiency in linear drawing and simple washes.
Working designs in monochrome and training the pupils in handling the brush.

## Blackboakd Work.

Free-hand drawing with left and right hands on the blackboard by each pupil every session, in the designing room, in the modeling room, and in the carving room. Each pupil to work at least five minutes.

Papils will invariably begin with the first period, units and elements, upon entering the school.
Lectures and blackboard demonstrations on the structure and meaning of ornament and design in material.

## Model and Object Drawing.

All work must be free-hand in this department; no rules or compasses.
First period.-Simple geometric forms in linear. Second.-Simple geometric forms. Third.-Elementary forms from models. Fourth.-Elementary forms from models. Fifth.-Geometric forms in perspective. Sixth.-Geometric forms in perspective. Seventh.-Drawing from models. Eighth.-Drawing from models.

Clay Modeling.
First period.-Nonimitative and elementary forms. Second.-Conventional and plant forms. Third.-Elements used in drawing for preceding month. Fourth.Elements used in drawing for preceding mouth.

How to temper the clay, keeping moist, wedging, etc.
Training in the use of tools.
Modeling in low and high relief from original designs.
Modeling in low and high relief from casts.

## Wood Carting.

First period.-Linear, straight, square, and angle cutting. Second. -Simple low relief. Third.-High or low relief in style. Fourth,-OrigiDal panel.

Instruction in the use and care of tools.
Low and high relief carving in hard wood, bosses, scrolls, mold sinking.
Carving enrichments for cabinetwork, panels, etc.

Synoptical table of the course of instruction.
FIRST XEAR.
Olass $D_{1}$ first term.

|  | Firat month. | Second month. | Third month. | Fourth month: |
| :---: | :---: | :---: | :---: | :---: |
| Elementary drawing and designing. | Nonimitative and elementary lino work. |  | Conventioual forms. |  |
| Blackboard drawing- | Units of above.... |  | Units of above.... |  |
| Model and object drawing. | Simple geometric forms in linear. |  | Simple geometric forms. |  |
| Clay modeling -...... |  | Nonimitative and olemontary forms. |  |  |
| Wood carving ....... |  |  |  | Lineax, square, straight, and angle cutting. |

Class $O$, sccond term.


SECOND YEAR.
Olass B, third term.


Olass A, fourth term.

[From the report of Hannah A. Fox, principal, for 1895.]
The majority of the pupils of the school are of Russian parentage, and many upon entering have no knowledge of the English language. Twenty-two per cent of the whole number enrolled were colored.

Our aim has been to blend the work of the kindergarten into the higher grades. In the kindergarten, elementary knowledge in many branches is begun, and an attempt has been made to carry on progressively these beginnings in the grades that follow. For instance, card sewing with worsteds is one of the occupations of the kindergarten. A systematic arrangement of advanced card sewing with worsteds is therefore tanght in the first grade. It las been found that this drill prepares the pupils to begin with ease the regular course of sewing in the second grade, consequently there is no break in pursuing this branch from the kindergarten till the pupils leave school. The same plan is carried out in a sequential order in paper folding, paper cutting, parquetry, form making, and drawing.

Simple science lessons in physiology, geology, zoology, botany, and chemistry are tanght in each grade.

The lessons in vocal music are continued, and are a pleasant and helpful feature.

In the cookery department 61 girls from this school have received training and 383 girls from neighboring grammar schools. The attendance is gool ; the girls seem to beglad to arail themselves of the opportunity for drill in order, cleanliness, and the simplo, wholesome preparation of food.

In the sloyd department 70 boys and 27 girls from this school have received training and 90 boys from neighboring grammar schools. The pupils appear to consider this work a recreation. They are always willing to remain after school hours to complete unfinished work. While the manipulation of the tools is regrarded as the more interesting by the jounger children, the working drawing, which in the alvancedstage requires thoughtful consilleration and nicety of execution, is preferred by the older ones.
In the early days of the school, before all the rooms were needed for classes, one was reserved for sowing. Here all the necessary materials were kept, and the girls met for their lossons in this branch as in an ordinary sitting room. Now the materials aro placed in closets in different parts of the building, and the sewing is tanght in the class rooms. If a room for sewing purposes could be adderl to the building, the former more convenient and pleasant plan would be restumed.

SEWING.
[From the course of instruction in sewing, 1893.]
Instruction in sewing was introduced into the girls' high and normal school in 1880. The experiment was so satisfactory that in 1885 arrangements were made for a general introrluction of the subject into the elementary schools of the city.

Instruction is given to the girls in all the grades abovo the primary-that is, beginning with thie third year of the selhool system.
special teachers are employed. These are assigned to districts comprising adjacent schools, and they perform their duties in accordance with programmes which are arranged by the principals of the several girls' schools and the sewing teachers.
There are at preseut over 1,800 girls in the high and normal school, and about 58,000 girls in the elementary schools, who receive regular instruction in sewing. There are 41 special sewing teachers employed in the public schools of the cits:
The city of Philadelphia provides each pupil with needles, pins, thimble, scissors, button-hole scissors, cotton (both for sewing and darning), dressmaker's seales, emery hags, and paper for drafting patterns. Muslin, bleached and unhlearhed, is also fiuruished. A syuare foot of this is given at first to each pupil, and the ruantity is repeaterl as soon as the amount given is used. The city allows 6 cents per anvum for each child engaged in sewing.

Garments to be made or mended are also brought fiom their homes by the pupils.

## COURSE OF INSTRUCTION FOR THE ELEMENTARY SCIIOOLS.

Thirll schont year-first half.-Position: The proper position of the borly duriner sewing. The rorrect method of using the thimble finger, the first fingur and the thumb of the right hand. The proper position of the left handfor holding the work. 1)rill: Daill in the method of threading the needle. Drill in the proper method of taking a stitrh and of drawing the threal through the material. Teach correct way of holling the scissors for cutfing. l'aper must loo supplied for this purpose. Sew-
ing: Hemming: (a) turuing the hem; (b) basting the hem;-(c) sewing the hem. Paper may first be used instead of muslin, to give the pupils practice in turning the hem with accuracy. Teach the pupils how to begin basting, how to fasten the thread when beginning a hem, the slant of the stitch and the direction of the needle in hemming. Teach the method of fastening a new thread in the progress of the hem. Overseaming: Overseaming on turned edges. Teach how to fasten the thread in beginning this seam, and how to fasten a new or a broken thread. Cutting: Teach pupils to cut to a straight line. Yupils who sew reasonably well may bring towels ${ }_{3}$ wash rags, and similar articles to be hemmed.
Note.-Papils should be required in all the grades to express in correct English all that has been taught.
Third school year-second half.-Review work of preceding grade. Special attention to be given to the proper use of thimble and scissors, to threading the needle, and to the direction of the needle in basting, hemming, and overseaning. Sewing:Running seam (unequal basting to be used for this seam); backstitch seam; backstitch and running seam; half-backstitch seam; the raw edges of all seams to be overcast; towels, napkins, and desk covers may be hemmed; sewing bags, pillow slips, oversleeves, iron holders, and bibs, to be made. Drafting: Bibs and simple straight waists with strap over the armholes.

Fourth school year-first half.-Review work of preceding grades. Special attention to be given to the proper use of thimble and scissors, to the threading of the needle, and to the direction of the needle in basting, hemming and overseaming. Sewing: Reversible seam. Plain fell sewed with running stitch, strengthened by occasional backstitch, finished with hemming; square patches; sheets and tablecloths to be hemmed; pillow slips, dust caps, penwipers, underwaists, with seam over arm, to lue made; books to be covered; four-holed buttons sewed on. Drafting: Yokes; underwaists with seam over the arm; underwaists with seam under the arm; covers to fit books.

Fourth school year-second half.-Review the work of the preceding grades. Special attention to be given to the plain fell. Sewing: Gathering, (a.) placing or stroking the gathers; (b) sewing the gathers on a band, using half-backstitching, the band to be finished with hemming. Darning: (a) Stocking darning; (b) dress darning (straight line). Making: Plain aprons; children's dresses with yokes; children's aprons with waist and skirt, and underwaists with seam over and under the arm. Books to be covered; shoe buttons sewed on; worn garments to be mended, Drafting: Underwaists with under-arm and shoulder seams; drawers; children's aprons with waists and skirts; children's dresses with yokes; infant's nightdress:
Fifth school year.-Review work of preceding grades. Sewing: Making narrow hems and fells. Tucks (threads should not be drawn to secure straight tucking). Stocking darning, patching, and angular dress darning. French fells. Angular patch made. Fine gathering, with band hemmed to the gather. Buttonholes: (a) cutting; (b) overcasting cut edges; (c) barring; (d) buttonhole stitch; (e) mending the thread. Drawers, combing capes, shoe bags, stocking bags, aprons, underwaists and plain skirts-to be made. Drafting: Drawers; underwaists with one dart and with spring to fit the hip.

Sixth school year.-Review work of preceding grades. Sewing: Special attention to le paid to buttonholes. Bias seams of all kinds. Gussets. Stockings re-soled. Herring-bone stitch and feather stitch for flannel garments. Buttons without eyes or shanks to be sewed on. Circular patch made. Gored skirts, chemises, blouse waists, nightshirts, and flannel skirts-to be made. Drafting: Chemise; gored skirt; dress sleeve; nightshirt; blouse warst.
Serenth school year.-Review work of preceding grades. Sewing: French gathering; gathers to be overseamed to a band. Buttonholes with tailor finish. Cutting, titting, and making plain garments. Special attention given to nightdresses, corset covers, and men's shirts. Drafting: Corset covers; nightdresses; men's shirts, and nightshirts.

Eighth school year.-Review work of preceding grades. Sewing: Cutting, fitting, and making garments of all kinds. Special attention to men's shirts and to dresses to fit pupils. Drafting: Dress waists; skirts; and sleeves.

> II.-MANUAL TRAINING SCHOOLS.

## Throop Polytechnic Institute, Pasadeña, Cal.

## [Statement of Charles H. Keyes, president.]

The Throop Polytechnic Institute, of Pasadena, Cal., was founded by Hon. Amos G. Throop in 1891. The institute comprises three distinct departments-a sloyd school, a manual training academy, and a college department. Manual training is one of the leading characteristics of the institute.

The primary idea in the work is educational rather than preparatory for higher techuical study. It chances, however, that a large number of students come to us and after taking our work for two or three years go out to labor successfully as tradesmen and mechanics. To that extent the school is incidentally a successful teacher of some trades. None of our manual training work is obligatory, although more than 280 of the 313 students take some manual training.
The institution is independent of all other schools or institutions beyond keeping up its relationship for admission of students from public schools and the transfer of students to Berkeley and Stanford. It has a prospective endowment of about $\$ 60,000$ when the final decree of distribution of the Throop estate shall be received. Beyond this it depends for its support upon the tuition, which for the ensuing year is $\$ 105$, and upon the gifts and donations solicited for its support. During the last two years we have secured ${ }^{4} 49,630$ in the shape of gifts.
The total plant is valued at about $\$ 110,000$. The annual expense of maintenance varies from $\$ 25,000$ to $\$ 30,000$.

The very large election of subject-matter under the advice of teachers and parents is characteristic of our work from the secondary school age upward. Attention to the peculiar wants and demands of progress of the individual made possible by keeping the number of pupils in a class below 25 is also a peculiar feature of our work.

## SHOPWORK.

Woodwork.-The work is given to the student by means of a blue print taken from a working drawing. From these he constructs his model. These drawings are made with the greatest care and accuracy. Helpful notes in reference to the work accom pany each drawing. This method acquaints the student with the reading of accurate working drawings and the working therefrom. After the model has been made, he then makes his own working drawing from it.
The course in joinery is composed of eighteen progressive exercises, involving the construction of sixteen different joints, the drawing of analytical and free-hand curves, and the use of fifty different tools and machines.
The student is allowed to exercise his individuality $\mathrm{ir}_{\text {. }}$ the exercises in inlaring and caloinetwork. These exercises are made from his own drawings and after his own designs, which are sulmitted to the instructor before the work is begun.

The course in turning consists of fifteen progressive exercises given in the following order: Center work, face-plate work, chucked work, and long work.

The problems in woodwork are taken in the order of joinery, inlaying, turning, and cabinetwork. This work is calculated to be finished by the average student in one school year, working one and one-half hours daily.

At the cud of the year there will be held a written examination upon the methots employed and the technical terms used in the work.
lorging.-Mechanism of and care of forge; preparation of forge for fire; building and managing fire.

Instruction in the care and use of tools.
The processes involved in the year's work are: Drawing, bending, upsetting, different kinds of welding, punching, drilling, fullering, swaging, cutting cold, chipping, cutting hot, splitting, twisting, filing, brazing, hardening, tempering, and ornamental ironwork.

Hardening in water and oil, tempering or drawing, temperatures and colors used, aud processes in tempering tools for wood and iron work.

At the close of the year each student will be required to design some special piece involving the various elements of forging mastered.

Pattern making and machine vork.-The work in pattern making alternates with that in the marhine shop. The course commences with the simpler forms of pattern miking embodying the fundamental principles of the subject, such as allowance for slırinkage, finish, etc. Later, more difficult work is taken up, invol ving core making.

Each student is expecterl to mako for himself or assist in making patterns for a finished piece of work. For example, cluring the past year ono student has manle patterns for a brecelh-loading brass camon, 20 inches iu length; another, a full set of patterns for an 8 -inch swing wool lathe; another, a sot of patterns for a 2 -horsepower waterwheel-Pelton style; another, a set of patterns for a gas engine of new design; the halance of the class have made a full set of patterns for a 4 -horsopower antomatic steann engine with valve of new design.

One molding bench is provided where the students test their patterns.
Work in marchine shop comprises chipping and filing, use of taps and dies, reamers, etc., hand-tool work in speed lathes, work on engine lathes, turning, boring, screw-cutting-outside and in.

Juring the course each student will work on the following machinos, besides the lathes: Planer, shaper, drill press, aud milling machine. All special tools are made by the students and tested with micrometer calipers.

Special attention is given to accuracy in measurement, finish of work, care of tools and machines.

Example of work done during the past year: Making planer bolts, face plates for wood lathes, mounting ehucks, finishing of castings mado from patterns in above list. Three ongines are being mado.from the steam-engine patterns, one of which has been finished as class work; the other two are being nade by two students, each one doing the entire work on the engine alone.
Plain sewing five days a week, two periods a day. The fundamental principles of hand sowing, -basting, running, hemming, homstitching, tucking, felling, sewing on lace, darning, ete. Machine sewing. Plain stitching, hemming, tucking, and gathering. Contintation of plain sewing. Practical experience in shopping ly each pupil. Neatness and accuracy demanded in the work.
During the year a complete suit of underwear must bo made by each pupil; also a shirt waist, a cotton dress, and a wrapper or dressing sacque. Same preliminary study in designing for the dressmaking course will bo done.

Modeling and carving. -Modeling of simple leaf forms, followed by the various styles of historic ornament from the cast and from the flat, including original designs, masks busts, and bas relief. Instruction in the principles of decorative designs as applied to wood, metal, and-stone, the principles of form and proportion involved in designs of várious kinds, and the adaptation of modeled ornament to different surfaces.
Instruction in the care of tools; their use by practico in cutting to a lino and to a given depth; Egyptian and Greek ornamentstudied and expressed by lining and incising; the Moorish,- Byzantino, Romanesque, Gothic-Roman, and Renaissance styles in succession, advancing from simplest to more complicated forms.
Special work on busts andfull-length figures from the antique, the successful completion of one of the latter being required of each pupil who receives the regular credits for this course.
The principles of design studied loy taking the scroll framework as a basis for developing surface patterns, continuous scrolls, and the various form of radiating designs; practical application of these principles to designing and ornamenting furniture, such as easels, stools, chairs, jardinieres, bedsteads, desks, etc. The successful completion of a piece in Italian Renaissance is required of all students bèforethey receivo the regular credit for this course. The growth of woods and their adaptability for various uses is studied, and pupils are taught to select matorial and have it cat and dressed. They are also instructed in working drawings, light carpentry, and in finishing work in various styles of polish.

Carving in tho round is- begun with work on heads, and followed by full-length figures.
Cooking. - The fundamental principles of cookery and practice in the proparation of vegetables, soups, meats, cereals, biscuits, eggs, cost of materials; care of a kitchen; serving a simple dinner.
Instruction in preparation of more complicated dishes; bread, fish, oysters, pastry, croquettes, game, etc.; care of silver and glass; setting and serving a table; table etiquette.

Entrees, salads, lesserts, cake, jellies, and creams; giving of entire breakfasts, luncheons, and dinners; ordering; proportions of food needed; garnishing; shortcourse in invalid cookery; carving.

Presentation of the physiology of natrition by special lecturer.
In connection with cookery, the following topics will be taken up: Classification of foods; water, boiling, simm3ring, its action on starch and albumen; practical application in cooking meats and vegetables; composition of foods; the cheapest and most wholesome foods; the greatest amount of nutriment obtained for 25 cents; digestion, assimilation; study of yeast plant; properties of carbonic-acid gas; fermentation, lactic, vinous, acetic; baking powders; soda, cream of tartar; flour, composition, food value; adulteration of foods; tea, coffee, alcohol, their effects on. tho system; disinfectants; spices; general plan of household work; house cloaning; care of every portion of a honse; preparation of a dietary for six persons for ono week, not to excecd $\$ 10$; invalid cookery, dietary; tablo etiquette; duties of a cook; duties of waitress; special lectures on chomistry of cookery, bacteriology.
Throughont the year dietaries and nutrition will be kept constantly in mind, the olject being as much, or more, to stndy the scientific principles of foods as to propare palatablo viands.
Dressmaking. -The course in dressmaking is devoted to the principles of drafting a basque and sleeves fromactual measurements; cutting, fitting, and finishing a basque; catting and making a skirt; choice of material, price, quantity and amount ueeded; cutting of fancy fronts to basques; pupils are required to plan an entire dress with written description of it before beginning, including collar, trimming sleeves, ctc.; making of dress.
In connection with the dressmaking the cultivation of tasto will bo studied. The proportion of the human figure. Dress as appropriate to individuals; sketches for dresses mado in pencil and color. Harmony of color in fabrics.

With the foregoing special attention to bearings of dress on liealth; how to dress to preserve healti and strength; rational dress reform studied; presentatiou of physiology of dress by special lectures.

During the year three gowns and a house jacket or waist will be required from each pupil.

SLOYD SCHOOL.

The urgent need of sducational manual training in connection with the work ordinarily done in public schools inspired the establishment of a sloyd department in the institute. Pupils will be admitted to this department who have completed the usual third year of the public school. The work, as arranged for this department, consists of two lines: (1) The ordinary bookwork and (2) that of sloyd proper.
The sloyd department consists of (1) teachers' training classes; (2) students' classes; (3) children's classes.
Admission wo the teachers' training classes can be gained only ly persons who are graduates of high schools, normal schools, or colleges, or by persons passing the special examinations required.

The studies and manaal work in this course are classified as follows:
Manual work.-Mechanical drawing; completion of 36 sloyd models; the completion of 12 wood-turning models; sharpening and care of tools.

Theoretical work.-The psychology of sloyd; pedagogy of sloyd; history of sloyd; mechanics of sloyd; study of materials, botanical structure and properties of wool, etc.
Sloyd and drawing are correlated. They are in fact inseparable, for there is an inner organic connection between those subjects.

As no methodical work in material, especially wood, can be done except after the performance of some ontline drawing, the drawing must precede the woodwork; and one of our capital aims is to combine manual instruction organically with drawing instruction, for without this organic connection the sloyd, as well as auy other form of manual training, will not effect mind training.
The course in draving includes the following subjects: (1) Geometrical constructions; (2) principles of representation; (3) representation in reduced size by the use of scales; (4) projections, orthographic and isometric; (5) inking and tracing; (6) perspective, linear; (7) blue printing.
The drawing involves not only inventional and descriptive geometry, but also an appropriate amount of free-hand drawing, and teacher's who complete the sloyd course will also be able and prepared to teach what is termerl industrial drawing.

The students' elasses, distinguished from the childreu's classes by the advauced work and the age of pupils, are formed for young hoys and girls, who take up, this branch of study with a view to obtain that broad and important culture which comes from the education of the eye and hand in conuection with the training of the mind.
Armission to these classes may bo gained by boys and girls of 14 years of age.
The course for these classes consists of the making of 24 sloyd models; the making of 15 wood-turning models; mechanical and free-hand drawing.
The aim and end of the instruction in these classes is not chiefly to prepare for any other specific department of the institution, but to cooperate to the mutual and general end the harmonious development of mind and body.
The drawing in these classes is a complete course in industrial drawing per se, inasunch as special importance will be given it, and that it involves, in addition to free-hand drawing, such intellectual problems as will make it not merely an eye-andhand training, but ideally a mind education.
The students will receire one lesson a day of an hour and a half', and the course will extend throngh the entire school year. The wood turning will begin at some suitable time in the secourl term of the year. Carving as well as wood turning are introluced for the sake of broadening and cultivating the wsthetic ideas of the students, and also becanse this refreshing extension of the work has been found to gain for the students a large fund of distinct ideas from which they otherwise would be cut off.

The children's classes are by far the most important functions of the sloyd department. 'The course hegins with elementary work. The first year's conrse is characterized by the geometric motives in the ontlines of the oljects. It proceeds from the simple, straight, obligue, and round forms, and advancess step by step to higher aul more complicated forms. No abstract, meaningless exercises are performed, but each oxercise results in some finished article, as labels, key tags, tahle mats, vase stands, cutting boards, keyboards, triangles, pencil sharpeners, shelves, brackets, picture frames, cte. These are methodically arranged in a progressive order, which is followed, so that each child receives a successive training of the thinking powers in connection with the training of the physical powers.

The drating, free-haud and constructive, is a conspicnons part of the work in
these classes, and precedes the woodwork. This conrse, including both woodwork and drawing, leads up to and through the advanced course taken up by the students' classes.

In this connection it may be profitable to present an analysis of the exercises embodied in the models, and also an analysis showing the interwoven application and recurrence of some exercises. The analysis illustrates the well-regulated repetition of the exercises, and that this repetition is performed under varied circumstances and on advanced work.

Each model represents a certain number of exercises. The models thus are the expressions of said set of exercises, and from the analysis is found that each model with its set of exercises is but a sequence of the preceding ones. It further shows the fact that every model exists only for the purpose of introducing new cognitions, new tools, new exercises in drawing and wordwook, in an organic, progressive growth, keeping pace with the growth of mind and body of the student.

## EQUIPMENT FOR MANUAL TRAINING.

Most of the shops and laboratories of the manual training department are located in the Polytechnic Hall, which is a two-story brick structure with a frontage of 140 feet on Fair Oaks avenue and 80 feet on Chestnut street.

The wood shop, which is located on the second floor, has been provided with 20 workbenches, at each of which 4 students can work daily. Every bench is provided with a drawer for each student who has occasion to use it, in which, under Yale lock, are placed the planes, chisels, and turning tools used by the student to whom that drawer is assigned. These tools are left to his care; for to sharpen and keep tools in proper condition for use involves probably as much skill as does their actual use. Accordingly, no two students are permitted to handle the same edged tools.

Each bench has a set of tools which are used in common by four students during the day, and comprise the following: One try-square, 1 T bevel square, 1 foot square, 1 marking gange, 1 pair of inside calipers, 1 pair of outside calipers, 1 pair of compasses, 1 block plane, 1 hammer, 1 mallet, 1 oil can, 1 oil stone, 1 backśaw, 1 handsaw, 1 rip-saw, 1 screw-driver, and 16 -inch Coe's wrench. At the student's right hand on the bench is a 14 -inch lathe while at the opposite end of the bench is placed his bench-stop and lightning-grip wood-worker's vise. The shop is supplied with a large band saw for cutting up stock, and also a fine fret saw. Besides these, the following, which are less often used, are at his disposal when needed: One combined rabbet, beading, and slitting plane, 1 plow plane, braces and bits, cabinet scrapers and files, carving chisels and veniers. He is thus equipped with all the appliances and tools necessary to do thorough work in joinery, turning, inlaying, and scroll sawing. A special pattern-makers lathe and well-equipped bench are provided for the use of the instructor.
The forging room, situated on the first floor in the east wing of the Polytechnic Hall, is equipped for 23 pupils.
The furnishing consists of 5 nests of Buffalo quadruple forges and 3 single forges, Each forge has a telescopic hood. The fires are urged by a No. 9 pressure blower, and the room is kept reasonably free from smoke by a 60 -inch exhaust fain.
The anvils are furnished with àll necessary tools, such as hammers, hardies, s wages, fullers, flatters, tongs, and squares. In addition to these tools for individual use, special sets of sledges, heading tools, set hammers, hot and cold cutting chisels, punches, calipers, taps and dies, drills, etc., are provided for general use. A hand blower, doable emery grinder, combined hand and power drill, and 4 blacksmith vises complete the furnishing of the room.

The equipment in the pattern shop is similar to that of the wood shop, but more extensive. In addition, it is provided with a well-equipped molding bench, where the students may test their patterns and gain some knowledge of the principles of molding; The adjoining lumber room contains a band saw and a scroll saw.

The machines in the machine shop, including a 55-horsepower engine, are of the latest style, having all the modern improvements.

The shop contains the following machines: A 24-inch by 6-foot "Powell" planer; a "Hendy" shaper, 15-inch stroke; a 24-inch "Prentiss Bros." drill; a Sigourney sensitive drill; "Brown \& Sharp's" No. 1 Universal milling machine, with overhanging arm and universal milling head; a two-wheel emery grinder; a grindstone; a 24 -inch by 10 -foot "Reed" lathe, with compound rest; a 16-inch by 8 -foot "Reed" lathe; four 14-inch by 6 -foot "Reed" lathes, one of which has a taper attachment; two 14 -inch by 6 -foot "Prentiss Bros." lathes; a 14 -inch by 6 -foot "Putnam \& Sons" lathe; a 14 -inch by 6 -foot "Hendey-Norton" lathe, which has the latest improvements for screw cutting, also a compound rest, and two 12 -inch by 4 -foot speed lathes. It contains a bench provided with six machinists' vises. In the tool room is an 8 -inch by 32 -inch Mosely \& Company bench lathe.
The following is a partial list of tools in the tool room: One 24 -inch, one 16 -inch,
and threo 12 -inoh four-jawed independent chucks; threo 12-inch, two 9-inch, and one 6 -inch three-jawed universal chucks; cutters, and mills, and attachments for the milling machine; a set of twist drills, front one-fourth inch to $1 \frac{1}{4}$ inches by thirty seconds; from $1 \frac{1}{4}$ to 2 inches by sixteenths, a set of hand reamers from one-fourth inch to $1_{4}^{\frac{1}{4}}$ inches by thirty-seconds; a set of "Roso" reamers one-fourth inch to $1 \frac{1}{4}$ inches by sixteenths; a set of taps and dies from seven-sixty-fourths to one-fourth inch by sixty-fourths and taps from one-fourth to 1 inch by sixteenths; a fall set of dogs and two sots of arbors. Revolving frame contains calipers, squares, etc. Other tools aro in the drawers and hung about the room.

The check system is used in giving out tools and the students in turn cariag for the tool room.
The sewing and garment-making room is located on the first floor. It has been equipped with 4 large tables, furnished with a sufficient number of drawors to accommodate 3 classes of 16 mombers each in garment making. Seven Standard sewing machincs, a patentgas iron heater, pressing boards, together with necessary needles, scissors, thimbles, scales, tapolines, etc., for the use of individual stutents, constitute the equipment of this department. Adjoining the main serving roon a retiring room for fitting purposes is provided.

Tho cooking room is located on the second floor, and is supplied with tables, upon which are gas stoves. Along either side of each table are the drawers, containing the caps, aprons, sleeve protectors, notebooks, etc., of the two young ladies assigned to work at that side of the table. A drawer contains cooking utensils, mixiug and measuring dishes, stirring spoons, kitchen knives and forks, etc., while in the cup)boarl bencath is a full assortment of stove and kitchen furnishings. At either end of the table towels, lid lifters, etc., are lhung. Tro girls work at each stove, each student participating in every process called for in the instruction. A large dustproof cupboard, containing meal and flour bins, dish closets, ctc., a large water heater and Lowe patent gas range, and a largo refrigerator and cupboard for furnishings are also provided.

The sloyd department, located in the basement of the east hall, is equippet with 20 sloyd working benches, each of which is provided with a set of high-grade cabinetmaker's tools; clarts, models, hlackhoards, and cases divided in compartments, where students keep their worls, material, drawing instruments, otc., aro also provided.

Tho work in clay modeling is carried on in a light, well-ventilated room on the main floor of east hall. The department is equipped. with a fine selection of casts of ornament, 118 having been added this year. It is also furnished with a complete set of anatomical charts, besites tho usual lockers, stands, etc., for clay work.

Tho department of wood carving occupies two rooms in east hall, ono of which is fitted with worktables, lockers with tools for stuklents' use and cases for exhilitimn of work. The instructor's private room adjoins this, and is used for speciallines of arlvanced work. These rooms are fitted with a good selection of casts and charts, showing the various styles of historic ornament.

## Chicago (Ill.) Mancil Thinning School.

## [Statement of H. II. Belficld, director.]

This school, the first independent manual training school in the United States, is now in its thirteenth year. While its peculiar feature is manual training, it also furnishes thorough instruction in the essential studies of a high-school course, thens fitting its graduates for immediato entrance into active life, or for admissiou to higher institutions of learniug.

Tho central idea in our instruction is educational. It is true, however, that the mannal work has an industrial value, and that many of our pupils enter the seliool in order to fit themselves to earn a living, notwithstanding that we have, on every proper occasion, distinctly staterl that tho school does not teach a trade or trades. About 50 per cent of our graduates (and many pupils who do not graduate) enter upon life withont further school instruction, many finding remuncrativo employment as draftsmen, designers, machinists' apprentices, and in other callings in which mannal skill is necessary. About 50 per cent of our graduates continue their studies in ligher schonls, principally technological.

Onr mannal training work is obligatory upon all pupils.
This sphool is not connected with the public school system of the city or State, and does not receive funds from cither. It is under the control of a hoard of nine trustees, who are elected by the Chicago Manual Training School Association, which association is composed exclusively of members of the Commercial Club of Chicago. The boarl of trustees is organized under a general law of the state. Our means of support are priucipally two: First, tuition, which averages $\$ 100$ a year; secourl, income from an endowment of $\$ 50,00 n$, a bequest to the scliool by the late Mr. John ('rerar, a nember of the Commercial Club aud of the board of trustees until bis death.

The average age of pupils entering is about 15 years of age; the average age of those graduating is about 18 years.

We aim to adopt the most approved methods of instruction, including laboratories for physics and chemistry. Drawings are made from models, casts, machinery, otc. The shop work passes from exercises to constructive work as soon as possible; the interest of pupils being better sustained in this way than by mere exereises. Among the latest material products of the school are a large gap lathe (1,500 pounds weight) and a tower clock with Westminster chime of steel bars. Manufacture, however, is subordinato to education.
The cost of the plant is about $\$ 125,000$. The expense of maintenanco about \$25,000 a year.

We believe that manval training has its effect upon other studies, both ckirectly and indirectly. For instance, the drawing and shopwork assist to a better understanding of geometry, plysics, and chemistry. They assist also, we believe, in the development of clearer habits of thinking, and contribute to the development of the judgment and will power to an extent not reached by the study of mere booka. We have found that the influence of manual training is to retain pupils in school longer than they would otherwise stay.

The experience of more than twelve jears confirms my belief that manual training is an important part of clucation; -thatit has a purely pedagogie value. An examination of the curriculum of this school will show that it makes as great demands upon its pupils as does the usual high-school course, in academic work, in addition to shopwork and drewing. That this academic work is as welldone as similar work is done in nonmanual training schools can be proved by the testimony of college officers. It is true, however, that the daily school hours of this school are about ninety minutes longer than the nsual high-school hours; and it is believed that manual training school pupils devote more time to their school duties than do pupils in nonmanual traiuing high schools.

Occupations of graduates.-In schools of technology; 105; of litcrature, 35; of law, 11; of medicine, 5-156. In manufacturing establishments, as designers, 7; as foromen, 12; as draftsmen, 27; as machinists, 12; as electricians, 8-66. Engineers, mechamical, civil or clectrical, 38; superintendents and managers, 53; teachers, 14 ; lawyers, 7; architects, and in architects' offices, 10; clerks, bookkeepers, salesmen, etc., 115; miscellaneous, 14 ; unknown, 27; dceeased 11; total, 511.

Courses of study:-I. Business. IT. Teclinological:
JONIOR TEAR.


## MIDALE XEAR.



Orthographic and isomotric projection, including intersection and development of solids, shades, and shadows; macline details; design, especially in wrought iron. (Five hours per week.)

Molding and casting....... Forging, welding, tempering, including the making of smifths and lathe tools, chisels, etc

30
Soldering and brazing. (Seven and one-halt honrs per week.)

SENIOR YEAR.

a Elective.

## III.-C'ollege preparatory course.

First year.-Arithmetic, Latin, United States history, English language.
Second year.-Algebra: Geometry. Cesar: Latin prose. Greek or history. English classics.
Third year.-Geometry: Plysics. Virgil: Latin prose. Greek or French. English classics.

Fourth year.-Algebra, Cicero, Greek or French, Euglish classics, Greek and Roman history.

The drawing and shopwork of the second, third, and fourth years will be the same as in the junior, middle, and senior years, respectively. The drawing and shopwork of the tirst preparatory year will be less in amount. The exact amount will be governed by ciremmstances.

In the senior year the pupils have choice of either machine or architectural drawing.
Throughout the conrse one hour eacli day is given to Irawing, and from one and a half to two honrs each day to shopwork. The remainder of each school day is devoted to study and recitation.

Efnipment.- The erpipment of the mechanical department of the school is mainly as follows:

Whod roms: $4 \times$ carpenters' henches; 7 cabinetmakers' benches; 24 speed lathes; 1 pattern-makers's lathe, 42 -inch swing, 8-foot hed ; 2 circular saws; 1 band saw; 1 planer; 2 grindstones; bench, lathe, and general tools.

Fonndry: 2 brass furnaces; crucibles, troughs, flasks, trowels, rammers, sieves and other apparatns.

Forge roon: 30 forges; 30 anvils; 1 drill press; 1 emery wheel; 1 shears; 3 vises; tonge, hammers, fullers, flatters, swages, etc.

Machine shop: 17 engine lathes, from 11 -inch swing, 6 -font berl, to 20 -inch 8 wing, 8 -foot bed; 2 speed lathes; 1 planer, 6 -foot bed; 1 shaper; 1 drif press; 1 sensitive ditl; 1 universal milling luarhine; 1 cutter grinder; 1 upright \&-horsepower steam engine, for tests; 1 , mimlstone; 1 emery grinder; 24 benches; 24 vises; lathe and vise tools, surh th chucks, horing hars, taps, dies, hammers, chisels, files, etc.; also 1 forer., 1 amsil.

Power is supplifel by a ('orliss engine of 52 -horsepower and by two steei boilers.

Manual Training School of Washington University, St. Louis, Mo.
[Statement of C. M. Woodward, director.]
The St. Louis Manual Training School is a subdepartment of Washington University. Besides the usual college or literary department, the university contains six professional schools, all of high grade. There are three subdepartments: An academy for girls, a classical school for boys, and the manual training school.

The manual training school is a secondary or preparatory school between the district or grammar school on the one hand and the high-grade engineering school on the other. It was organized to effect several ends:
(1) To furnish a broader and more appropriate foundation for higher technical education.
(2) To serve as a developing school where pupils could discover their inborn capacities and aptitudes, whether in the direction of literature, science, engineering, or the practical arts, while securing a liberal elementary training.
(3) To furnish to those who looked forward to industrial life opportunity to become familiar with tools, materiais, drafting; and the methods of construction, as. well as with ordinary English branches.

The central idea is intelectual growth and development-the more healthy such growth and the more complete such development the better is the student prepared for whatever he may undertake after leaving the school. This is especially obvious if he enter upon higher technical study, or if he enter industrial life. Of late I have noticed that many graduates of several years' standing have taken up the study of law and medicine. This result has been somewhat of a surprise.

No student is allowed to enter the manual training school except upon the understanding that he takes all the manual training (shopwork and drawing) in regular order, and that last catalogue states that "Under no circumstances will a student be permitted to enter upon the shopwork of a higher grade while he is deficient in the academic work of the lower."

The St. Lonis Manual Training School has an invested endowment of about $\$ 115,000$, the income of which enables the school to offer annually between fifty and sixty free scholarships. The full tuition fees for the three years are as follows: $\$ 75$, $\$ 100, \$ 120$.

The average age of pupils entering the school.is about 15 years. I do not regard any of our work as unique unless it is this: The instruction in tool work is systematic and regnlar; our teachers do not hesitate to teach the best methods and the proper appliances in manual training any more than they do the best methods and proper appliances in drawing, physics, Latin, algebra, history, and English composition. I have noticed in many schools a disposition on the part of the shop teachers to encourage pupils to find out for themselves what tools to use and how to use them. I regard the practice as unscientific, unphilosophical, and wasteful in the extreme. This unscientific style of conducting manual training is sometimes defended on the ground that it is desirable to encourage originality and free development. I do not find that careful teaching destroys opportunity for such desirable results. On the micontrary, I find that judicious instruction stimulates and expands the intellectual powers far more than the inevitable failures and waste of time which result from attempts to rediscover and reconstruct all the principles and appliances for manuar work.

The course of instruction covers three years, and embraces five parallel lines, as follows:

First. A course of pure mathematies, including arithmetic, algebra, geometry, and some trigonometry.

Second. A course in science and applied mathematics, including zoology, botany, chemistry, physics, and mensuration.

Third. A course in language and literature, including English grammar, spelling, rhetoric, composition, literature, history, and the elements of civic and political economy. Latin, French, and German are introduced as electives with a part of the English and science.

Fourth. A course in free-hand and instrumental drawing.
Fifth. A course of tool instruction, including joinery, wood carving, wood turning, molding, pattern making, brazing, soldering, forging, and bench and machine work in metals.

During the second and third years of the course an average of two hours per week is devoteil to systematic instruction and practice in military drill.

## Eirst Year.

Algebra (four hours a week for the year): Fundamental processes, factoring, fractions, equations of one and of two unknown quantities, and problems involving the same. Text-book: Well's Academic Algebra.

Mental arithmetic (one hour a week for the jear): Special attention to the use of fractions. Text-book: Stoddard's Intellectual Arithmetic.

Themes (five hours a week for one term) : A one-page theme four times a meek, and a long theme, with "brief" for the same once a week, on subjects chosen principally by the pupils from observation or from experience.

Euglish history (five hours a week for one term): From the beginnings throngh the Georges. Text-book: "Leading Facts of English History."

Literature (one hour a week for the year): A study of a fow typical early English ballads, same of Wordsworth's lyrics, Shakespeare's Macbeth, and George Eliot's Silas Marner with a view to cultivate an ability to appreciateliteratare. (The boys taking Latin, Frencl, or German write and revise one themo is week in connection with this study.)

Biology (four hours a week for sixteen weeks): The study of typical animal forms, their structure, and habits. Reference book: Burnet's "School Zoology." All instruction is given in the biological laboratory, and the pupils study actual specimens of insects, fishes, or animals, with the aid of glass and instruments. Drawings and written descriptions are required of all pupils.

Kinds and uses of wood (fiftecu excrcises).
Botany (four hours a week for fifteen weeks): A study of the growth and structure of plants. Text-book: Bergen's "Elements of Botany."

Frec-hand drawing (five hours a week for fourteen weeks): Projection of points, lines, and solids in space; lettoring in many different alphabets, and elements of surface decoration.

Instrumental drawing (five hours a woek for twenty-four weoks): One sheet of straight lines and cirenlar ares in an interlaced clesigu, one of line shading, and two sheets of machinery details from free-hand sketches. The proparation of drawings for the exercises in woodwork.

Joinery (ten hours a week for fomrteen wecks): The use of the different hand tools and the making of simple joints.

Wood carving (ten hours a week for five weeks) : The use of earving tools in ornamental line mork and the shaping of simple designs in low relief.

Wood turning (ten hours a week for nineteen wecks) : Face plate and center turning. Polishing and simple designing.

Electires.-Those who show a satisfactory proficiency in the use of the English langnage will be allowed to choose Latin or German or Frencli in the place of themes and history, provided there be a sufficient number to form a division in any one of those studies.

Latin (five hours a week for the jear): Grammar and reader. Latin composition.
French (five times per week): Grammar, Whitney's Practical French, La Langue Française (Bercy).

German (five times per week): Grammar, Joynes-Meissner; conversation, Fischer's Practical Lessons; reading, Der zerbrochene Krng (Zschokke).

Second Iear.
Algebra (five hours per week for twenty weeks): The nse of fractional exponents, refluction and combination of radicals, the solntion of quadratic equations and equations containing radicals. The graphical interpretation of equations of first and ecenml degrees is considered, and simultaneous values are illustraterl. Textbook, Wells's Acarlemic Algebra.

Geometry (five hours perweek for twenty weeks) : Five books of Wells's geometry are thoroughly mastered. The ability to reason correctly is cultivated not only by standard demonstrations, but by mumerons independent theorens and problems.

English (five hours per week for twenty weeks): Standard hooks in prose and poetry (Dickens, Gollsmith, Scott, or Holmes) are carefully read and used as the basis of frequent themes.

Ilistory (fonr hours per weck for twenty weekz): English history for those who did not have it during the first year; otherwise, ancient history, especially Iersian and (irecian.
('mposition (one hour a week for twenty weeks): Themes written from field motes and observations among the industries of St. Louis.

Chemistry (four hours per week for twenty or forty weeks, as per electires) : First term, sixty experiments are made and recorded by each sturlent. Additional and more difticult erperiments are made by the teaclier and recorded ly pupils. Second term, hemsen's Mannal is completed by the class.

Drawing (fivo hours per week for forty weeks) : Orthographic projections of interserting solids and the development of their surfaces; tinting with lirush; free-hamd detail sketches, and instrumental drawings from the sketehes; isometric drawings and graining; geometrical drawing; ornamental lettering and border fesign.

Jattern making and molding (ten hours per week for ten weeks): Patterns mate,
molded, and cast in plaster; cores mado and baked. The principles of soldering are acquired and sheet inetal forms are produced.

Forging (ten hours per week for thirty weeks) : All elementary processes of the forge are learned, including welding iron, and forging and temperiug as set of steel tools for each pupil. Projects of ornamental wrought iron or steel work.

Military drill (two hours a week for thirty weeks) : The school of the soldier and the company.

Electives.-Latin may be continued through threo books of Cæsar; or German or French nay be continued or taken up in the place of one term of history and one term of chemistry by those who desire it and whose standing in English work will admit.

Latin (five hours per week through the year): Grammar and composition continued and three books of Cæsar.

French (five times per week): Whitney's Practical French continued: Selected readings, sight-reading, and written exercises.

German (five times per week): Grammar continued; conversation; Der Einsiedler (Wildermuth); sight-reading, selected.

Third Year.
Geometry (five hours per week for thirty weeks) : Wells's solid geometry is completed.
Trigonometry (five hours per week for about ten weeks): The functions of angles and their relations studied. The formulæ for plane triangles derived and applied. The nature and use of logarithms.

Physics and laboratory practice (forr hours per week for forty weeks): Elemen= tary principles illustrated and fundamental laws tested and interpreted by the nse of apparatus especially constracted for this laboratory. On the basis of this work, general theories are developed and complex operations are discussed.

Civics and political economy (five hours per week for forty weeks) : The functions of municipal, State, and national governments; the duties of the citizen and the officer; the structare of society; the nature and relations of industrial, commercial, and educational institutions. Frequent themes and reports.

Literature (one hour a week for forty weeks): The roading of one of Shakespeare's plays, and the study of classic authors.

Drawing (five hours per week for forty weeks): Higher geometrical drawing, conics, cycloids, and helices; shades and shadows; house plans; lorush shading and conventional drawing; orders of architectural ornament; sketching and project drawing.
Tool work (ten hours per week for forty weeks): Metal work by machine and hand tools; the nature and uses of all the tools in the shop, in connection with exercises devised to bring out those uses. Each student takes part in the construction of a "project" or finished machine intended to embody a great range of tool practice and constructive skill.
Military drill (two hoars per week for thirty weeks): The school of the soldier and the company.

Electives.-Five hours per weok for forty weeks may be devoted to the continuation of the study of German or French, if the interest of the student requires it. This will take the place of civics and political economy. Students are expected to 1naster the details of grammar and be able to read easy prose at sight.

## Details of Shop Listetection.

Shop instruetion is given similarly to laboratory lectures. The instructor at the bench, machine, or anvil fully explains the principles to be used or illustrated, and in all elementary work he executes in the presence of the whole class the day's lessons, giving all needed information, using drawings and the blackboard freely, After every step has been explained the class proceeds to tho execation of the task, leaving the instructor to give additionpl help to such as need it. At a specified timo the lesson ceases and the work is brought in, commented on, and marked. It is not always necessary that the work assigned should be finished; the essential thing is that it should be well begun and carried on with reasonable speed and accuracy.
Precision and system are taught at every step. The particular shapes are given with the intent to familiarize the papil with the customary styles and methods of construction, to teach the meaning and fitness of common tools, and the exact force of names and descriptive words.
During the first half year previous to the execution of a lesson in wood each pupil is required to make a working drawing of the same, inserting all necessary dimensions in figures.
By the end of a half year the pupil has become so familiar with the execution of shop drawings, and so expert in their use, that it is no longer of educational value
for him to make the drawings from which he works; accordingly he is then furnished with blue prints.

With the introduction of each tool the pupils are taught how to keep the same in order. They are taught that good tools are absolutely necessary to good work.
The taste of the papils is cultivated by the introduction of forms of grace and the practice of design.

A series of lessons is given in wood carving.- The lessons are purely elementary, and calculated rather to suggest elaborate and delicate forms than to give opportunity for their production.
The object of the forging shop is to enable every pupil in the school to master the fundamental principles of forging iron and steel. This work is, in one essential feature, different from any other kind. Wood or cold iron will wait any desired length of time while the pupil considers what he is to do and how he is to do it: but here comes in temperature, subject to continual change. The injunction is imperative to "strike while the iron is hot," and hence quick work is demanded-a hard thing for new hands. To obviate this difficulty bars of lead are first used, with which the lesson is executed, while all the particulars of form and the methods of holding and striking are studied. The lead acts under the hammer very much like hot iron, and permits every operation on the anvil except welding. After the lead come iron and steel.
The various operations of drawing, bending, upsetting, punching, welding, and tempering are learned in connection with simple exercises, which generally have no end other than the progress of the student. Occasionally such pieces as hooks, stirrups, chains, tongs, hammers, etc., are made for use in the shop.
The final exercises consist of the construction of a set of tempered steel tools, which the pupil will himself use in the machine shop during his third year.
Forging "projects" are generally in the form of ornamental wrought-iron work. These "projects" are designed and executed entirely by the pupils. The interest they take in them may be inferred from the care and skill their pieces show.
The course in pattern making and molding, with some exercises in soldering, occupies ten weeks; i. e., less than eighty hours.
Castings are made of plaster or lead. Though comparatively little molding or casting is done, enough practice is given to illustrate the principles, to test the accuracy of molds, and explain the use of technical terms. In some instances ornamental or art forms are molded and cast.
In the machine shop it is obviously out of the question to furnish a class of 20 pupils with a lathe, planer, drill, etc., each. The cost of such tools puts the matter beyond discussion. Hence, it is not possible to have all the pupils in a class of 24 performing the same exercise at the same time, as is the case in all the shops just described. Nevertheless, this fact does not interfere with the use of systematic lessons and uniform practice. By exercises suited to the uses of each machine, and so bench work, and by regular rotation of the class, each pupil does the same work. The verbal instruction and illustration at the machine for any lesson is given to the whole division at once, though several days may intervene between the giving of the instruction and the pupil's performance. Thus it is practicable to secure, iu a large degree, the benefits of the class system.
This course includes work at the (a) bench: Use of hammer and chisel, file, scraper, hand dies, taps, and reamers. (b) Hand lathe: Use of hand tools, drilling, countersinking, filing, and polishing. (c) Engine lathe: Turning, boring, with bar and lathe tool, screw cutting, external and internal chucking and machine fitting. (d) Drill press: Drilling and boring. (e) Planer and shaper: Producing flat or curved surfaces and fittings. $(f)$ Care of tool room; the preparation of shop drawings; study of the engine and boilers. (g) Construction of a machine, tool, or device invented or selected by the student.
Opportanity for the mastery of these processes determines the nature of the practice pieces. The cutting tools the pupil uses are those made, tempered, ground, and adjusted by himself.
Each wood-working shop is upward of 40 feet square, and has uniform accommodations for a class of 25 or 26 pupils.
Each pupil has one of the uniform sets of hand edge tools for his exclusive use, kept in a locked drawer. For the care and safety of those tools he is held responsible.

The school has 51 speed lathes ${ }^{1}$ for wood turning, 51 benches, 51 iron vises, 51 sets of common tools, 51 sets of wood-carring tools, and 150 individual sets of edge tools in as many drawers.
Each slop has 2 grindstones, which run continuously during shop hours.
The molding and casting room contains 24 benches and sets of tools, flaske, etc., for molding. A small gas furnace is used for melting alloys and for heating the core oven. Separate benches and furnaces are provided for soldering.

[^20]In this shop is the haud saw, which is used for cutting lunber into sizes suited to class exercises.
The first floor of the shop wing is devoted to metal work, and comprises the machine shop and the forging shop. The forging shop is 40 feet square, and has its complete equipment of 25 forges, anvils, tubs, and sets of ordinary hand tools. The blast is supplied by a power blower, and a large exhaust fan keeps the shop reasonably free from smoke and gas, even when all the forges are in use. Brazing is taught in this shop after general forging.

The machine shop is 40 by 50 feet. It possesses an equipment of 16 engine screwcutting lathes, 6 speed lathes, ${ }^{1} 2$ planers, 2 drills, a shaper of 15 inches stroke, a large and a suall emery grinder, a gas forge, ${ }^{2}$ an auvil and tools, and a tool room. Ten vises and benches afford opportunity for bench work. The shop is furnished for a class of 24 pupils at once.

The engine room is below this shop. The engine is capable of about 40 -horsepower. It has a 12 -inch cylinder and 12-inch stroke, and runs at the rate of 200 revolutions per minute. The steam-generating apparatus of the university consists of a battery of three large steel boilers, set aud furnished in the most approved manner. These hoilers furnish heat for the entire group of university buildings, as woll as stean for the engine in the shop. The equipment of steam power furnishes to pupils of the third-year class the means of becoming familiar with machinery on a practical scale.

The plans of our building are not given, inasmuch as I do not regard our prescnt quarters as models for other schools to copy. Elsewhere (seo the paper I recently contribnted to the Burean on the "Rise and progress of manual training") I lave discussed plans and given illustrations of some of the best.

I have given estimates of the cost of tools and shop furniture in the two books which I have written (see the Manual Training School: Its Aims, Methorls, and Results, D. C. Heath \& Co.; also Manual Training, Scribner \& Co.). I lave also discussed the question of cost and annual expenses in the article already referred to contributed to the Bureau of Education.

I do not hesitate to say that all experience justifies the claim originally made for manual training that it ( $a$ ) stimulates an interest in other studies; $(b)$ it arouses tho ambition of boys who have poor memory for literary aud historical studies, but who are strong in executive matters; (c) that it leugt hens the school life for many boys, not only extending it through the manal-training school, but carrying it into ligher erlacation to a very unexpected degree; (d) the moral influence is rery great (this point I have discussed quite fully in the two hooks referred to) ; (e) for the occrpations of the graduates of the St. Louis Manual Training Srhool, I refer to the record of the alumni in the Report of the Commissioner of Education for 1894-95. The high, manly character of our alumni is so fully recognized in this community that the board of directors of Washington University have recently authorized the alumni association to elect annually from their number one of the members of the board of control of the school.

## Hebrew 'Technical Institute, New York, N. Y.

[Statement of Edgar S. Barnoy, principal.]
The Hebrew Technical Institute is an institution having a three-years' course for Helrew hoys between $12 \frac{1}{2}$ and 16 jears of age. The "central idea" is to give its pupils a general education in the mechanic arts combined with a good Englisla education.

During the last year special attention is given to one of four courses, depending upon the aptitude of the pupils-woodwork, metal work, electrical work, and mechanical drawing.

It is not a preparatory school for higher institutions, but educates boys for actual mechanical work.

Mantal training is obligatory, about one-third of the time being devoted to it.
The institute was orranized in $188: 3$ and has no connection with the public schools or any other institution.
It is supported by the members and patrons of the society, the members paying $\$ 10$ per year and the patrons $\$ 25$ per year.

Hoorlwork and drawing are taught throughout the course. Metal work is introduced in the second year. Laboratory work in physics is tanght during the first and second years, leading to electricity in the third year.

We are about to erect new buildings and our plans are not yet completed.

[^21]Record of graduates.

|  |  |  |  |  | umber | follo | win | mech | anic | al pur | suits. |  | 的 ${ }^{\text {c }}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Class. |  |  |  |  |  |  |  |  | Manufacturers. |  |  |  |  | 号 |
| 1886. | 19 | 2 | 1 |  |  | 1 |  |  |  | 3 | 1 |  |  |  |
| 1888. | 11 |  |  | 2 |  |  |  | 1 | 1 |  | 2 | 1 | 2 | 2 |
| 1889 | 17 |  | 1 | 2 |  | 3 | 1 |  |  |  |  |  | 3 | 4 |
| 1890. | 16 | 1 | 1 | 2 | 3 | 1 | 1 | 1 | ... |  |  | 1 | 3 | 2 |
| 1891. | 18 |  |  |  | 2 | 8 | 1 |  |  |  |  | 2 | 5 |  |
| 1892. | 34 | 1 |  | 2 | 5 | 5 | 3 | 1 |  |  |  |  | 12 | 5 |
| 1893 | 26 | 1 | 3 | 3 | 4 | 3 |  |  |  |  |  | 1 | 5 | 6 |
| 1894 | 81 |  | 4 | 5 | 7 | 2 | 7 |  |  |  |  | 1 | 2 | 3 |
| 1895. | 34 |  | 5 | 4 | 7 | 8 | 3 |  |  |  |  | 2 |  | 1 |
| Total | 205 | 5 | 15 | 20 | 31 | 31 | 16 | 5 | 2 | 3 | 3 | 8 | 38 | 29 |

The number of graduates whose parsuits are known is 173 ; of this number, 139, or 80 per cent, are following mechanical work; of all the graduates, 69 per cont are known to be following mechanical worls.

Earnings of graduates.

|  | Year. | Number graduated. | Average age at graduation | Average age at present. | Average weekly earnings. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1886. |  | 19 | $16 \frac{1}{3}$ | 25 | \$20.00 |
| 1888. |  | 11 | $15 \frac{3}{3}$ | 23 | 19.00 |
| 1889. |  | 17 | 16 | 22 | 20.00 |
| 1890. |  | 16 | 16 | 21 | 13.00 |
| 1891. |  | 18 | 16 | 20 | 14.00 |
| 1892. |  | 34 | 16 | 19 | 11.00 |
| 1893. |  | 26 | $15 \frac{3}{6}$ | $17 \frac{3}{4}$ | 9.05 |
| 1891. |  | 31 | 16 | 17. | 7.00 |
| 1895. |  | 34 | 16 |  | 5.00 |

The average weekly earning is based upon the known earnings of 133 ont of 201 graduates. Several are proprietors and do not have a fixed weekly income.

Relative number of pupils that have remained throughout the course.

|  | Year of entrance. |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1884. | 1885. | 1886. | 1887. | 1888. | 1889. | 1890. | 1891. | 1898. | 1893. | 1834. | 1895. | $\begin{gathered} 1884 \\ \text { to } \\ 1894 . \end{gathered}$ |
| Number of pupils that have remained longer than six weeks. | 45 | 37 | 82 | 68 | 60 | 85 | 92 | 78 | -7t | 110 | 125 | 128 | 687 |
| Pursued the second year's course. | 28 | 16 | 28 | 30 | 30 | 52 | 54, | 43 | 84 | 66 | 53 |  | 375 |
| Pursued the third year's comrse. | 19 | 10 | 10. |  | 17 | 30 | 33 | 32 | 81 | 47 | , |  | 250 |

Of the total admissions, 55 per cent have remained dyring the first and second years and 36 per cent have completed the course.

The Technical School of Cincinnati, Ohio.
[Statement of J. B. Stanwood, director.]
As stated in the articles of incorporation, tho object of this sehool is to furnish pupils instruction and practice in the use of tools, mechanical and free-hand drawring, mathematics, English language, and the natural sciences; to develop skill in handicraft, and to impart such a knowledge of essential mechanical principles as will facilitate their progress in the acquirement of manual trades.

Our work is principally educational. When our pupils leave they are prepared to either enter business or to take a course in some higher college. Manual training is obligatory on all pupils.

We have no connection with the public schools, and the school gets its support from the tuition of pupils and from private subscription of citizens. The tuition is as follows: For the high-school department: First-year class, per term, $\$ 37.50$; per year, $\$ 75$; second-year class, per term, $\$ 50$; per year, $\$ 100$; third-year class, per term, $\$ 62.50$; per year, $\$ 125$. Intermediate department: Per term, $\$ 25$; per ycar, $\$ 50$.

Pupils furnish their own books, drawing instruments, and materials, scales, rules, calipers, oilstones, etc., and their own aprons and overalls. The school furnishes all shop tools and materials.

Drawing instruments and materials cost from $\$ 10$ to $\$ 12$ for the first year and from $\$ 2$ to $\$ 3$ thereafter.

A laboratory fee of not more than $\$ 2$ per year is required of each pupil. This is paid to the teacher in assessments as needed.

Our pupils generally enter the intermediate department at about 12 years of age or the ligh-school department at about 14 . Our graduates are generally about 16 to 18 jcars of age.

The cost of the plant is $\$ 13,286.66$. The annual cost of maintaining is about $\$ 300$, not including teachers' salaries.

We find manual training very helpful to our school. Our pupils, having taken a three years' conrse, enter college one year in adrance of the city high-school pupils, whose course is four years.

COURSE OF STUDY.
High-School Department.
First year.-Mathematics: Algebra; arithmetic. Science: Botany; forestry; nhysiology. Literature and history: English; American literature; English history. Language: German. Drawing: Free-hand, outline, and model; shop details; simple projection and geometrical construction; color studies. Carpenter shopwork: Proper care and use of tools; carpentry; joinery; wood turning.
Second year.-Mathematics: Geometry. Science: Chemistry. Literature and history: English; general history; English literature. Language: German. Drawing: Shop cletails; orthographic projection; isometric projection; principles of perspective; development of surfaces; machines from measurement; free-hand; coloring. Blacksmith shopwork: Forging, welding, tempering, and tool making.

Thirl year.-Mathematics: Higher algebra; planetrigonometry. Science: Physics. Literature and history: English; civil government; political cconomy. Language: German. Drawing: Machine drawing; general plans; detailed working drawing; shop details, or architectural drawing; interior decoration; buildings from measurement; architectural perspective; frec-hand. Machine shopwork: Chipping; filing; fitting; turning; drilling; planing; milling; construction of some machino or machines.

## Intermediate Departarat.

Mathematics: Arithmetic, including necessary reviers, followed by compound numbers, mensuration, concrete geometry, applications of percentage, and the principle of algebraic equations. Science: Geography, with which are associaterl elementary botany, meteorology, geology, and zoology. English and history: Reading, speaking before the class, composition, United States history; American literature. German: Conversation, rearling, writing, and principles of grammar. Jrafting and writing: Industrial and free-hand drawing; colors; penuanship. Shopwork: A course in woodwork closely allied to the Swedish "sloyd."

SHOI LASTRUCTION IN TIEE HIGH-SCHOOL DEPARTMENT.
Carpenter shop for first-year pupils.- Two series of construction exercises constitute the general work of the carpenter shop. Tho first scries is made at the bench, the second at the turning lathe. These exercises are so arranged as to bring into use different tools, to familiarize the pupils with the forms of construction, to develop a
reasouable amount of skill, to bring into action the muscles of the arms, trunk, and legs, to develop judgment, and to train the mind to get control of and maintain supremacy over tho body.

Heretofore, with fow exceptions, these exercises have had no intrinsic value. Many of them are now so designed as to be, when completed, either useful or beantiful, and at the end of the year the articles may become the pupil's property. We find that pupils show greater interest and care if their finished products can be put to use or kept as souvenirs. In addition to this series of exercises, which each boy completes, there is carried on some larger or more important work, upon which groups of boys are employed.

Blacksmith shop for second-year pupils. - The course in the blacksmith shop consists of a series of exercises in iron and steel. This embodies the most important principles of welding iron, welding iron and steel, tempering, hardening, and annealing steel, and the construction of tools. It is in this work that pupils learn to "strike while the iron is hot," and to know what it is "to have many irons in the fire;" all of which develop quick judgment.

The articles comprising the series of exercises and the order in which they are made are as follows: 1, paper weight; 2, cold chisel; 3, center punch; 4, picture frame; 5 , plain weld; 6 , ring for a flower stand; 7, butcher kniife; 8, L weld; 9, bracket; 10, forging hammer; 11, tongs; 12, wrench; 13, wood chisel; 14, pick; 15, easel; 16, flower stand.

In addition to these exercises special work is done, consisting of ornamental pieces of hammered iron, for which original designs are drawn by the pupils in the drafting room. This gives practical training in designing and construction.

Only the simplest measuring instruments are used, the idea being to train the ere to estimate dimensions.

Machine shop for third-year pupils.-The methods of instruction in a machine shop must be different from those in a shop where all pupils work simultaneously at the bench or forge; for with a variety of machines there must be a variety of work. As all pupils of a class must be at work at the same time, some are put at lathes, others at planers, others at vises, etc.

It is, consequently, impossible to instruct by means of a systematic series of exercises, but we have found that excellent results can be'effected by constructing some one machine. In building a machine, the special treatment that each detail requires and the knowledge of machine anatomy that is obtained gives a variety and breadth of experience that a series of exercises does not.

In the machine shop of the technical school attention has been given chiefly to the construction of the steam engine, the great tool of modern times. Three have been built in the past four years; the first was a simple slide-valve engine of 10 horsepower; the next, a noncondensing compound engine of 15 horsepower, is now driving all the machinery of the school; the last, a triple-expansion engine of about 30 horsepower, was put in place last year. The pupils prepared the working drawings for all of these engines. It is the purpose of the school to construct from time to time engines of different types, thereby creating an interesting and valuable collection.

Fifteen turning lathes for the carpenter shop have been constructed.
The equipment of the workshops is as follows:

## EQUIPMENT.

Carpenter shop.-Fifty-two cabinetmaker's benches; 30 speed lathes, 15 of which have been made by the pupils; 1 rip and cross-cut circular saw; 1 grindstone; 2 emery wheels; bench tools for 100 boys; turning tools for 50 boys.

Blacksmith shop. Thirty forges; 30 anvils; 2 vises; 1 blower; 1 exhaust fan; 1 bellows; 1 grindstone; 1 drill press; 2 workbenches, with the necessary tools; tongs, hammers, flatters, fallers, and swages, etc., for 90 boys.

Machine shop.-One engine lathe, 20 -inch swing, 10 -foot bed; 1 engine lathe, 17 -inch swing, 8 foot bed; 5 engine lathes, 14 -inch swing, 5 -foot bed; 1 Brown \& Sharpe speed lathe; 1 Brainard milling machine; 1 Cincinnati Milling Machine Company cutter and reamer grinder; 126 -inch by 7 -foot Gray planer; 114-inch shaper; 126 -inch Lodge-Davis drill press; 1 Slate sensitive drill; 1 Diamond wet emery grinder; 1 Washburn twist drill grinder; 152 -foot bench, with 10 vises; lathe and vise tools for 24 boys; also necessary chacks, boring bars, taps, dies, and reamers necessary for same. The power is derived from a 5 by 8 by 12 inch compound steam engine, built by the pupils of the class of 1891, taking steam from two tubular boilers in the basement. There are also 2 other steam engines built by the pubils.

## oCCUPATIONS OF GRADUATES.

Students in schools of technology, 8; in universities, 6; in business colleges, 4; in medical school, 1 ; in law school, 1; teachers, 4; draftemen, 10; civil enginerr8, 4; mechanical engineers, 2; electricians, 3; machinists, 3; architect, 1; artists, 2;
jeweler, 1 ; superintendent manufacturing establishment, 1 ; telegraph operator, 1 ; merchants, 3 ; farmers, 2 ; clerks and bookkeepers, 7 ; reporter, 1 ; at home, 6 ; indefinitely stated, 5.

> III.-TRADE SCHOOLS.

California School of Mechanical Arts, San Frāncisco, Cal.
[From the catalogue of 1896-97.]
The California School of Mechanical Arts is the outcome of the public spirit of James Lick, a citizen of California. Having been brought up in narrow circumstances, earning his living in early manhood as a mechanic, he sympathized with the struggles of the young for a place in life, and resolved to found a school where those who were dependent upon themselves could receive such an education as would give them a foothold in the world.

On September 21, 1875, Mr. Lick executed a deed of trust, by which he conveyed to certain trustees a large amount of property for various purposes of public benefit, of which this school was one.

The execution of this particular portion of the trust was delayed by prolonged litigation, and it was not until January 3,1895 , that the buildings were completed and the school formally established.

On Monday, January 14, 1895, instraction was commenced.
PLAN OF INSTRUCTION.
A complete course covers a period of four years, of which the first half is devoted to a preliminary course and the last two years to a formal apprenticeship in some one department.

The prime object of the school is to teach trades. It aims to give each student a thorough knowledge of the technique of some one industrial pursuit from which he may earn his living. It offers, however, something more than the mere equivalent of a workshop apprenticeship.
(1) Before commencing work exclusively at his trade each student must first complete a graded course of woodwork and ironwork, involving the elements of carpentry, pattern making, forging, molding, and iron fitting, and covering the first two years of attendance.
(2) A systematic course of instruction in English, mathematics, science, and drawing precedes and parallels the purely apprenticeship instruction of the last two years.
By meaus of these lines of preliminary instruction the student's acquaintance with tools and materials and with science and art is made, broad enough to allow the fullest expansion in any trade that he may select, and to permit of his ready adjustment to the new and varying conditions that are constantly taking place in all the mechanical and industrial arts.
(3) There is the additional advantage that the shop instruction throughout is based upon work that is selected, as far as possible, for the benefit of the student, and not for the profit of his employer. This does not imply that his time of labor is frittered away, or that he is not made to realize the conditions he will have to face in after life. On the contrary, a large proportion of his time is devoted to the manufacture of marketable goods, and his success in the school is measured by his ultimate ability to execute his work in such a manner and at such a rate that the product of his labor, if placed upon the market, will stand the test of competition.

The school has facilities for teaching the following trades and technical courses: (1) Carpentry, (2) pattern making, (3) forging, (4) molding, (5) machine-shop practice, (6) machine drawing, (7) archictectural drawing, (8) technical design, (9) modeling, (10) wood carving, (11) cookery, (12) dressmaking, (13) millinery, (14) preparatory for technical college course.

## PRELIMINARY COURSE.

The two years' preliminary course serves as a foundation for the different trades and technical courses. This part of the curriculum is essentially the same as the course given in the so-called mannal training schools. It is different for boys and girls as regards tool work and domestic branches, but otherwise it is the same for all students, and is required of all. It divides its time equally between academic and industrial branches.
The academic branches include English, mathematics, science, and history. One period of fifty minutes per day, for two years, is devoted to each of these subjects, with the exception of history, which is given on alternate days.
The instruction in English includes word study, grammar, and rhetoric, practice in written and oral expression, and a study of literature through English classics.

Tho mathematical instruction includes elementary algebra, and plane, solid, and silherical geometry, carried on side by side throughout both years.

The s ience work consists of physics during the first year, and chemistry during the second year.

The preliminary instruction inclndes, also, a general course of ancient, mediaval, and modern history.

The industrial branches are made up of the three elements: Tool work, industrial art, and houseliold art and scienco.

The industrial art instruction begins the same for boys and girls. Free-hand representativo and decorative drawing, mechanical drawing, modeling, and carving are substantially the same for both up to the middle of the second year, from which point of divergence the boys continue along the mechanical and architectural lines, while tho girls do more of the free-hand work, such as designing.

The tool work (for boys only) consists of a graded course of carpentry, molding, and pattern making during the first year; forging, molding, and iron fitting during the second year; and during the first term of the third year machine-shop practice.

The work in household art and science begins in the first year with a course of plaiusewing and the preliminary parts of cutting and fitting. Drafting and dressmaking proper are completed during the first term of the second year. The rest of the second year is used for millinery. The third-year work of this department comprises cooking and a comprehensive courso in the direct application of seience and art in the household, including interior decorations and furnishings, heating, lighting, ventilating, and other sanitary conditions, and liygiene.

TRADES AND TECHNICAL COURSES.
At the beginning of the third year each student must clect one of the courses enumerated and most serve in it an apprenticeship of two years.

All apprentices aro required to mect ono hour per week, either in a body or in sections, for the purpose of discussing papers and reports to be submitted by individual members, somewhat after the seminary plan. The subjects of these reports are selected or assigned by the pupils themselves, as far as possible, and relate to manufacturing processes and devices, to topics from the history of art and industry, and to scientific subjects. Each report must be exhaustive, and will bo placed before the class as clearly as possible by means of printed abstracts and the stereopticon, the presentation to be followed by a thorough discussion.

All apprentices are given a brief course in political economy, commercial geography, phrsical geography, and Enited States history and government.

The mathematical instruction for apprentices is different for different courses, as indicated under each course. Nearly all apprentices tako ono or more of the following: (1) Heat calculations, including a general study of transformations of energy; (2) thcoretical mechanics and elcmentary kincmatics; (3) strength of matcrials, graphical determinations, construction of trusses and beams, and problems of tensile strength and elasticity; (4) bookkeeping and business forms; (5) logarithms, and the use of tables in general ; (6) plane and spherical trigonometry; (7) those who elect technical courso No. 14 are required to review the entire subjects of algelra, geometry, and trigonomotry, and to add such parts as are required for admission to the universities.

Science work for apprentices is selceted from the following: (1) Tests upon the school boiler and engine; (2) metallurgy of iron; (3) experimental mechanics; (t) use of microscope; (5) phenomena of combustion; (6) physical and chemical properties of foods; (7) adlulterations; (8) sanitary chemistry; (9) chemistry of dyestuffs; (10) physics, sound, and light.

The following is an outline of the shoprork and other instruction for apprentices in earh department:

1. C'ripentry.-Actual construction of calinets, stairs, etc., and of a large model of frame lionse, in all its details; sperifications, contracts, and estimates; ventilation, heating, plumbing, fommdations, painting, and plastering; methods of mannfacturing, scasoning, and preservint lumber; woolworking maulhery and null methorls; building materials, their propertics, prices, sources, etc.; mathematics, subjects unmbered $\stackrel{2}{2}, 3,4,6$, abore; science, subjects numbered $: 3,8,10, \cdots$, $\because ;$ Saturday excursions to mills and to buildings in course of construetion. Fach stndent enrolled in this courso may bo required to work as a helper onsome building during the summer vacatioms, and at such other times as may secm advisable.
2. J'attern mathing. Continuou:, work upon patterns from drawings exocuted by students in conrse 6, for machine parts to be moded bis students in courso 4 , and upon similar work to l:e asimed he the instractor in charge ; methods of mantacturing, preserving, and geasomng lamber; wodworking mah hincry; mathematics,
$2,4,5,6$, above; seience, 2,10 , above.
3. Forging.-Continuous practice in forging difficult machine parts and structural ironwork; desiguing and execution, ing conjunction with students in courses 4, 7, 8, and 9 , of extensive architectural ornamental ironwork; estimates, contracts, specifications, etc. ; properties, sources, and prices of material, etc.; mathematics, 1, 3, 4; 6, page 1078; science, 2, 3, 5, 10, page 1078; Saturdxy excursions to ironworking establishments.
4. Molding.-Casting from patterns made by students in courso 2 of machino parts, to be finished by stadents in course 5; designing and execution in conjunction with students in courses $3,7,8$, and 9 of architectural ornamental ironwork; practice in piece molding, molding in gelatin, wax, and sulphur, and by the lost-wax process for undercnt work; mathematies, 1, 4, 6, page 1078; science, 2, 3, 5, 10, page 1078; Saturday excursions to ironworking establishments.
5. Machinist² course. - Finishing work on eastings made by students in courso 4; marchine-shop practice in all its details; estimates, contracts, specifications, etc.; properties, sources, and prices of materials used ; mathematics, 1, 2, 3, 4, 5, 6, page 1078; science, 1, 2, 3, 10, page 1078.
6. Machine drawing.-Execution of drawings for actual use in the pattern shop and elsewhere. Specifications and contracts; mathematics, 1, 2, 3, 4, 5, 6, page 1078; scienco, 1, 2, 3, 10, page 1078 .
7. Architectural drawing.-A continuation of the execution of plans, elevations, details, and perspectives. Landscape drawing; history of architectare; designs for architectural ornament to be executed at the school in wood, iron, terra cotta, and cement; specifications, contracts, estimates; ventilation, heating, plumbing, foundations, painting, and plastering; methods of manufacturing, seasoning, and preserving lumber; woodwarking machinery and mill methods; building materials, their sonrces, properties, prices, etc. ; mathematics, 2, 3, 4, 5, 6, page 1078; science, 3, 10. Saturday excursions to buildings of recognizerl excellence of architecture.
8. Teehnical design.-This course will be necessarily restricted by the lack of facilities at the school for executing designs for oilcloths, fabrics, stained glass, wall paper, mural decorations, otc., but this defect will be corrected, as far as possible, by frequent visits to factories and by inquiries among manufacturers. Sinco the school itself will have means for executing designs in wood, clay, terra cotta, and irou, the fundamental laws of design will be deduced from work done in these materials. Excursions to museums, art exhibitions, etc.; chemistry of materials used, their properties, preparation, otc.; science, 10, pago 1078.
9. Modeling. -In this course the student may choose between a course of sculpture or one of industrial modeling.
The former will include anatomy; copying of ornaments from caste, photographs, and natural objects; laws of composition and their application; figuro modeling from casts, antique and life; low relief, high relief, and the round.
The latter will include the different methods of molding, such as piece molding; molding in wax, sulphur, and gelatin, and by the lost-wax process; the reproduction of modeled objects in preservable materials, such as iron, bronze, terra cotta, cement, marble, etc.; designing and execution of more or less exténsive projects of architectural ornament, in conjunction with students of courses $3,4,7$, and 8. Chemistry of materials used; mathematics, 6, page 1078; science, 10.
10. Wood carving.--Designing and manufacture of chairs, tables, framos, cabinets, and other pieces of furniture, and the execution of architectural ornaments designed by students in courses 7 and 8. Methods of maunfacturing, seasoning, and preserving lumber; oiling, varnishing, etc.; history of art and architecture; excursions to museums, art oxhibitions, etc.; mathematies, 4, 5, 6, page 1078; science, 10 .
11. Cookery.-A continuation of the third jears course of cooking from a more scientific standpoint. More advanced processes, as canning, preserving, pickling, desserts, ice creams, etc.; cooking for invalids; physiological considerations and nutritive ralues; preparation of menus; table decorations; nathematics, 1, 4, page 1078; всіепсе, 4, 5, 6, 7,8.
12. Dressmaking.-Designing and manufacture of tea gowns, princess dresses, tailor-finishied snits, jackets, children's garments, etc.; history of costume; study of drapery; sketching; liygienic principles; mothods of manufacturing threads, cloths, and other materials used; excursions to manufactories; mathematics, 4, page 1078; science, 9, 10.
13. Millinery.-Covered hats and bounet, crepe bonuets, shirred and velvet hats, etc.; manufacture of frames and braids; trimming with choice materials; history of costame; sketching; methods of manufacturing materials used; mathematics, 4, pago 1078; science, 9, 10.
14. Preparatory for technical college course.-A thorough review of English, mathematics, and science, to comply with the requirements for admission to the universities in the courses of civil, mechanical, electrical, and mining engineering.

## EXPENSES.

There is no charge for tuition, but students are required to furnish their own books, drawing instruments, overalls, aprons, and edge tools, and to pay the actual cost of working materials. The total expense averages about $\$ 20$ a year.

Working materials, such as lumber, iron, clay, chemicals, sewing materials, drawing materials, etc., ari purchased in quantities for each department, and at the opening of each terin payments are required in advance for the estimated cost of materials for the ensuing half-year. For the year 1896-97, this charge has been fixed at $\% 5$ a term.
Drawing instruments can be purchased from the school at cost, if desired. It is important that these iustruments should be of good quality, and well selected. The sets handled by the school are sold at prices from $\$ 5$ to $\$ 10$. These are to be purchaserl at the beginning of the first year, and they last throughout the course.

A set of chisels and plane-blades for carpentry and pattern making can be purchased from the school, if desired, at a cost of $\$ 2.50$. They are required of all boys at the beginning of the first year.

A set of carving tools is required during the second year. These may be purchased from the school at a cost of $\$ 3$ per set of ten tools.

Each boy entering the machine shop nust provide himself with the following tools: 5 -inch try-square; 8 -inch outside calipers; 4 -inch outside calipers; 6 -incli inside calipers; 6 -inch dividers; 12-inch steol straightedge; three-fourths-pound hammer. These are sold by the school for $\$ 5$ per set.
All other tools and appliances are furuished by the school, and loss or breakage, resulting from carelessness, is charged to the pupil responsible for such damage.

Beginning with the year 1896-97, a new plan for furnishing overalls, aprons, and towels will be put into practice. For the sake of uniformity, and to avoid confusion, these garments must be of a prescribed pattern for each line of shop-work, must be washed at intervals to be designated by the instructor in charge, and each suit must be marked with the name of the owner.

## Springfield (Mass.) Industrial Instituth.

[Statement of L. P. Strong, director.]
Our several departments cover almost all lines of practical work, the central idea in the trade school being the trade. In the high school department is the manual training course for the first year and a half, at the completion of which, the student chooses a trade to which he devotes the remaining year and a half.
Our engineering department, being a prepration to higher technical study, the practical work being compulsory eveu in this course.

This is a private institution; our shops are thoroughly equipped to do business, and do work for outside firms which goes a long way toward our support. The amount charged for tuition varies from $\$ 50$ for the trade school to $\$ 90$ in the engineering department.
The high school boys must be 15 years of age; the trade school boys must be at least 17 years of age and most of them are older.
Our building is a four-story brick structure 160 feet long and 50 feet wide. The machine shop has 29 engine lathes, 1 planer, 3 drills, 1 shaper, 1 universal miller, 1 tool grinder, emery wheels, hark saws, cutting off saws, etc., and a well stocked tool room in charge of a machinist where students can get any tools for their immediate use.
Our carpenter shop equipment cousists of 8 wood-turning lathes, 1 pattern-makers' lathe, 1 jig-saw, 1 pattern makers' saw, aul 1 jointer. We have a tool room here also where the extra tools are kept; each student has a drawer with lock and key containing the rust common sizes of chisels, bits, planers, etc.
The cost of the plant including erfuipment is about $\$ 50,000$.

## haron de Herscif Trade Schools, New York City.

[sitatement furnished by J. Ernest G. Yalden. superintendent.]
This school, organized five years ago by the trusters of the Baron de Hirsch fund in order to assist Russian and Roumanian Jews to gain a knowledge of some trade, is as set little known to the general public.
Its object is to remder it possible for a young man to gain, during his stay at the school, a sufticient knowledge of the English language and the principles of some trade to enable him on leaving school to obtain work as a helper or "junior" at that trade.

The trade school is not intended to turn out skilled mechanics, but to give a young man such a training in the principles of a trade and the proper ways of doing work that he is better fitted quickly to acquire, upon active practice at the trade, that necessary skill and quickness which is required of the irst-class mechanic.

The school offers free course of instruction in six grades: Plumbing, carpentry, wood turning, machinist, house painting, and sign painting.

Each course is five and one-half months in length, and the pupil is required to complete the same satisfactorily in order to obtain a certificate.
A kit of tools is given to each graduate and efforts made to obtain work for them at the completion of their course.

The first class to graduate was composed of 23 young men, distributed among the departments as follows: 5 carpenters, 8 machinists, 6 plumbers, and 4 sign painters. Eighty-seven per cent of these graduates came from Russia, tho remainder from Roumania, and the average age was 19.1 years. Within three weeks after leaving the school 91 per cent were working at their chosen trade.

All exercises, whenever possible, are made directly from drawings and exactly to size. Shop methods are followed as closely as possible, and during the course frequent visits to large shops are made by the pupils, under the guidance of an instructor, who points out the significance of the work viewerl.

The machine shop is 25 by 50 feet and accommodates about 20 pupils. It is equipped with 512 -inch and 218 -inch lathes or shapes, 2 drill presses, 2 planers, and all necessary hand tools, besides ample bench room for vise work.

The pupil is required to first complete some thirty exercises, in most part the completion of some finished article, involving as far as possible all the fundamental principles of the machinist trade, i. e., bench work, drill press, planes, and lathe practice.

Toward the end of the course the class is divided into squads and put at construction work, such as the completion of a copy press or similar article. Lectures are given throughout this course on the tools, material, and operations of the trade.

The carpentry and wood turning shop has a floor space of 1,250 square feet and can accommodate 12 carpenters and 8 turners. It is equipped with 10 turning lathes, circular saw, band saw, and all necessary benches for the carpenters. Each pupil first completes some twenty-four exercises, embracing the use of nearly all the carpenter's tools and showing the fundamental operations of woodwork.

These exercises include a complete set of joints, the application of mitering, dadoing, rabbetting, chamfering, etc. The pupils then construct a number of articles, such as boxes, cupboards, arch centers, houso trimmings, etc., and, finally, the class builds a small cottage complete from plans.

In the wood-turning course the pupil is taught the names, uses, and care of the turner's tools; the use of the lathe, circular and band saws; finishing, staining, and polishing, and the construction of finished articles.

The plumbing shop accommodates about 20 pupils and is equipped with 20 solder pots, benches, and all necessary tools of the trade. The course in plumbing and gas-fitting is very complete. Each pupil completes a set of exercises in lead work, such as joint wiping and sheet-lead work. The use of cast-iron pipe, wrought and galvanized iron pipe in plumbing work is fully explained, and each pupil has practice in handling such material.

In the house-painting course the pupil is taught plain painting, preparation of surface for painting, and how to remove old paint; kalsomining; painting in two and three shades; flatting, stippling, gilding, graining, etc.; paper hanging and. the preparation of stencils.

The sign-painting course includes the drawing, with chalk and triangle, the different alphabets used by sign painters; preparation of colors and boards for painting; lettering on wood and metal; glass sign lainting in plain colors and gold; drawing of ornaments, scrolls, and borders, and the preparation of stencils.

Instruction in drawing is given to the members of the machinist and carpentry departments, and consists of exercises in practical geometry; then the drawing of plans, elevations, and sections of various objects; and, finally, the making of simple working drawings from objects or written descriptions.

This is decidedly a practical course, its object being to enable the grarluate to read drawings and to work understandingly from them, though in nearly overy instance the pupil becomes skilled enough to make a very creditable working drawing.

A course of instruction in English is offered to such pupils as are not familiar with the language, and also some instruction in arithmetic.
Evening lectures are given at intervals throughout the course on general, scientific, and ethical subjects.

Netiv Yore Trade School, New Yom City.

[Statement of II. V. Brill, general manager.]
Our school is exclnsively a trade sehool, and instruction is given in trades only. By our system of instruction we fit our graduates to earn their livelihood at the trado they come to the school to learn. The manaal training school does not have this particular purpose in view, the instruction in the handicrafts leeing supplementary and an aid to literary work.

The New York Trade Sckool is an incorporated institution and has a charter from the University of the State of New York. It is managed hy a board of trustees and is mot comected with the public schools or any other institution. The school is supported by tuition fees from students and tho income from a permanent endowment fund. The rates of tuition vary from $\$ 12$ to $\$ 16$ for an erening course, and from $\$ 25$ to $\$ 40$ for a day conrse. The charges for instruction include the use of tools and materials.

The school is restricted to young men between 17 and 23 years of age, and the instruction furnished is of the samo practical character as will be met with in actual practice at the trade. A course of instruction is arranged for each trade for the student to follow. The courso commences with simple work, and step by step advances on work more complicated. Skilled mechanics are employed as instructors, and the student receives individual instruction. The scientific principles which underlio the practical work is also taught by moans of lectures, so that the student acquires not only manual skill but learns why work should be done in a certain way.

The workrooms of the school are equipped the same as first-class workshops. The school furnishos ali tools and material.

The value of the school plant is $\$ 275,000$. The annual cost of maintenance is $\$ 30,000$.

The jearly attendance is 500 . In the erening classes the members are residents of the city. Those who come to the day classes attend from all parts of the United States and Canada.

> [From the catalogue for 1896-97.]

Evening instruction is giveu in bricklaying, plastering, plumbing, electrical work, carpentry, house painting, stonecutting, fresco painting, blacksmith's work, printing, sign painting, and cornice work.

There are day classes in plumbing, house and fresco painting, sign painting, bricklaying, carpentry, steam and hot-water fitting, and printing.

The evening classes are intended to give joung men already in the trades an opportunity to improre themselves, and to give young men who are earning their living at other occupations during the day a chance to learn a trade.

The day elasses, which aro also open to beginners as well as to those who have some knowledgo of the trade, graduate young men who are possessed of the skill of the average journeyman and have a wider knowledge of the trade in all its branches. The past few years much work of an arlyancerl character has been introdnced in the various day courses, and the constant practice gained by continuous application, such as the lours of the day classes aftord, onables a pupil to rapidly acguire both skill and proficiency.

## Master Butlders' Mechanical 'Trade School, Piiliadelpiia, Pa.

## [Statement of William A. II. Allen, superintendent.]

The echool was established for the instruction of boys desiring to enter the building trades ass apprentiers, or those already cngaged in those trades, but whose term is not jet completed. The punils make their own choice of the trade, and iustruction is giveu in artual work, both prartical and theoretical, the former taking prererlence. With the prent accommolations thero aro no advanced classos, but pupils often attend a second term, and not a few have taken a third term.

The school was fomided by the Master Builders' Exchange, and thongh now incorporated, still beary its mane. The income is derired from instruction fees, from a small but increasing endownent fund, and an appropriation from the State of lenn-sylrania-any deficit lering made good by the Master Builders' Exelange. The instruction fee paid by earle pupil is 527 for the term.

The schonls at present are divided into seven departments, in which instruction is given in the following trades, viz: Carpentry, bricklaying, plastering, stonecutting, blarksmithing, painting, and plumbing.

Earh department is furnished with competent instructors and is under the direct supervision of thre members of the committer of that particular trade, and the sehools as a whole are in charge of a superintendent.

For the present, evoning classes only hare been formed, but shonld a sufficient number of applications bo received to warrant the management in so doing, day classes will be established.
Three everrings per week are occupied in the instruction of each class, two being devoted to shopwork and one to theoretical instruction, calculation, and drawing. The pupils begin work at onco in the trades they havo chosen.
The present (sixth) term has 90 admissions in all, of an average age of about 18 усаrs.
In mechanical instruction the instructors follow printed forms, the lesser details being left to their discretion. The theoretical instruction is given in the form of questions and answers, the pupils writing tho latter from dietation, and any required explanation is given on the following evening. These questions form the basis of the examination at the end of the term. Working drawings only are made, the object being rather to teach the understanding of plans than to malso draftsmen.
Tho pupils are expected to have the elements of a common school education, and, if deficient, assistanco is given. All the instruction is arrangerl to meet the practical needs of those intending to become workmen at the several trades.
The basement of the exchange building is used as a workshop and an upper floor for the drafting room. The shop is equipped with the usual hand tools of the differout trades, and both tools and materials are furnished in both tho shop and the drafting room.

The cost of the plant is about $\$ 4,500$ and the usual expenses of maintenance about $\$ 6,000$ per anum, varying somewhat with the number of pupils. The majority of the pupils have been taken as apprentices by members of the exchange, who speak in very finvorable terms of their acquirements, and are willing to reduce their term of apprenticeship where a certificate is obtained. Of those who complete their time with tho same emploser a record can bo lopt, but it is of necessity incomplete in the case of many.

It has but seldom come to our knowledge that pupils have taken up some occupation other than the trade learned at the school, and several who attended the earlier terms are now in business for themselves. The later admissions have been greatly due to the recommendations of former pupils, and when these hare been visitors, it has been with a satisfaction which they wero very willing to express.

It has been coutemplated to add other mechanical trades in connection with building when circumstances allow removal to quarters affording increased accommodation. The present space is fnlly occupied, and in some trades the number of applicants has exceeded the capacity of the school.

Willinison Free School of Mechanical Trades, Williamion Sciool, Pa.

## [Statement of Joln M. Shrigley; president.]

Our support is entirely from the income of the endowment fund given us by Mr. Isaiah V. Williamson. Our machine and carpenter shops are provided with hand and power tools and our bricklaying shop with all the appliances rerguired in that trade. Our plant, including 200 acres of ground, has cost $\$ 426,757.36$. The cost of maintenance in 1895, average number of pupils having been 163, total population 205, Was $\$ 60,695.56$. Our first class was graduated in the spring of 1894 , and meny of its members are now receiving full journeymen's wages at their trades. A very large proportion of our graduates follow the trades taught them lere. We bave not the exact figures at this moment, but 90 per cent of the entire number will closely approximate the percentage so doing.

> [From a circular of the school, 1896.]

This school rras founded by Isaiah V. Williamson for tho purpose of giving poor and deserving hoys a good English education, for training them in habits of morality, ecomomy, and industry, and for teaching them mechanical trades.

Only natires of tho United States are eligible for admission, and no one will bo accepted who is not able-hodied, intelligent, liealthy, and possessed of natural aptitude and liking for mechanical work. Candidates to be successful must also be of good moral character and be sufficiently educated to readily enter on the school work.
The school is only for pupils who intend to follow mechanical pursuits for a living.
The scholastic examination is held four to five months prior to the date of admission, and covers reading, writing, spelling, arithmetic, including fractions, and weights and measures, geography, United States history, composition, and langriago. All scholars aro bound as indentured apprentices to the trustees for the term of three years, with the provision that tho indenture may bo canceled at any time by the tristees for tho scholar's incompetency or barl condret, or if for any other reasons the trustees think him unworthy of future and continued support aud education.

By the indenture the scholar will be obligated to conform to all regulations and restrictions prescribed by the trustees or their representatives, and all right or claim to control them during the period they remain at the school will be vested in the trustees.

Each scholar is given a preparatory course in woodworking and mechanical drawing, in connection with sturlies in tho schoolroom and extending throngh six montlis. At the end of that period he is placed at one of the following free trades, the selection of which is made by the trustees, lue regard being given to the inclination and adaptaliility of the boys to the trades to which they are assigned:

Woodworking in its various branches, such as carpentering, pattern making, cabinetmaking, etc.

Building, including bricklaying, range, furnace and boiler setting, plastering, ete.
Machino trade in all its usual details, including practical training in steam and electrical engineering, steam fitting, ete.

Each seholar takes but one of the trades named, and his instruction in mechanical and free hand drawing, which continues during the entire three years, tends in the general direction of his trade. The courses are systematic and thorongh, and based on instructional methods.

Tho branches tanght in the academic department are rearling, writing, arithmetic, algebra, geometry, physical and political geography, history, elocution, physical science, English literature, physiology and hygiene, civil government, chemistry, vocal music, theory of the steam engine, strength of materials, and building construction.
The school and shops are in session eight homrs daily on five days of the week and four hours on Saturday, each scholar spending about four hours in the class rooms and four hours in the shops daily the first year, the proportiou speut in the shops gradually increasing toward the close of the apprenticeship.

The school term continues the entire year, hut those pupils who merit it are given about two weoks racation in summer and a few days at Christmas.

Ample facilities are provided for in and out of door games, and each scholar, in turn, performs a morlerate amount of open-air work.
Scholars are required to bring with them a morlest outfit of plain clothing, but while at the school no charge is made for boarding, clothing, or instruction, the benefits of the institntion being free.
The romestic life of the school conforms, as far as is practicable, to goorl family governmeut. To that end the scholars are divided into families of twenty-four, each having its matron and its own distinct homo or cottage, cared for loy its occupants. The lomes contain no kitchens, dining rooms, or laundries, these being located in other buildings.
The trusters deem it to be ruite as essential to have the pupils become good men as good mechanics, and sperial :ttention is given to their moral training.

> IV. - NORMAL SCHOOLS.

Georiia Normal and Inje'stral College, Milledeievidef, Ga.
[From the Third Ammal Annonncement and Catalogue, 1894.]
The object of the State in establishing this school iss to provile for the romer women of (ienrgia an institution in whirh they may get such special instruction and training as will propare them to carn their own living by the rocation of tearhing or l,y those industrial arts that are suitablo for women to pursuc. Subsidiary to these two main objects the institution also teaches those branches of learning that constituto a good seneral education. It furthermore instructa and trains its pupils in those honscholif arts that are essential to the complete education of every woman, whatever her calling in life may he or in whatever sphere of society slo maty move.
In ather words, the purpose of the collere is to prepare Georgia girls: (1) To do intelligent work as teachers, according to the best methods linown to morlern pedagrogirs. (2) To earn their own livelilinod by the practice of some one or other of those industrial arts suitahle for women to follow. (3) To exert an uplifting and refining influence o: family and soricts by means of a cultured intellect, which can only bo attained by a systematir elncation in tho higher branches of learning. It To he skillful and expert in those domestic arts that lie at the foundation of all successfulhonsekreping and home making. (5) To accomplish this fourfoh edncational purpose. the conres of study to lio pursum in the school are dividerd, in a general way, into four principal departments, namely: The normal department; the industrial department: the collegiate department; the domentie department.

It must not be supposed that earh of these departments constitutes a distinet and separate school. On the contrary, they are coordinate and coergual parts of one
complete system, and are so united as to form one harmonious whole. Many of the studies pursued in the college belong in common to all of the departments, but in certain lines of study the departments differentiate, giving rise to the above fourfold classification.

## INDUSTRIAL DEPARTMENT.

The object of this department is to give thorough instruction in those indrastrial arts that are suitable for women to follow as a means of livelihood. The department will confine itself for the present to the following branches: (1) Stenograpliy and typewriting, (2) telegraphy, (3) bookkeeping, (4) dressmaking, (5) free-hand and industrial drawing, (6) cooking.

In selecting these from all the available industries, the authorities of the college had regard primarily to their business value and secondarily to their culture value. Carefully compiled statistics show that the first four arts mentioned have a greater business value for women than any other employment whatever. The fifth in the list, namely, free-hand and industrial drawing, was selected mainly for its culture value, though if pursued as a specialty for two or more years liy persons who have a natural aptitude for drawing, it will afford the most pleasant and lucrative means of livelihood of any of the industrial arts taught in this school. Cooking, the sixth and last art in the list, was selected almost eutirely for its domestic or household value.

## SCHOOL OF DRESSMAKING.

The whole practical work of dressmaking is taught in this department, including cutting, fitting, draping, hand sewing and machine sewing. Careful instruction is also given in the principal branches of sewing in white goods.

The S. T. Taylor systern of dressmaking, generally acknowledged to be the best in the world, is used. It is based on strictly mathematical principles, which insures accurate results, and, where it is well learned, guarantees a perfect and artistic fit in every case. Although thoroughly scientific, it is simple and not very difficnlt to learn.

The department is furnished with an abundance of the very best and finest makes of sewing machines, ant with all other furniture, implements, and devices that go to make up a perfect ecfuipment.

There aro two classes of pupils who study this art in our college: (1) Thoso who wish to learn it merely for home or domestic uses. (2) Those who wish to learn it as a trade. For the first class, one hour a day devoted to the work throughont the session is usually sufficient, but for those who wish to become professional, artistic dressmakers, from three to five hours a day for at least one year are necessary.

All pupils studying dressmaking are required, by way of practice, to make their own college uniform dresses, or to do any other work that may be required of them ly the principal.
In order to afford those pupils who intend to make dressmaking a profession the practice alsolutely necessary to acquiring a high degree of proticiency in this art, there has been organized ic connection with the department a regular dressmaking establishment, which carries on the trade of dressmaking under strictly business regulations. The estahlishment is in direct charge of Mrs. Fannie Shealy, under whose careful supervision all work will be done. A number of licensed assistauts from among the most skilled pupils in the department will be appointed for this establishment, and they will receive reasonable compensation for any work they may dn. All contracts for work to be done must be made directly with Mrs. Shealy, and all money paid for work must pass through her hands. No work shall to done for lay in the dressmaking department except in this trade school and under these regulations.

It is hoped that this will in time become one of the best and most artistic dressmaking establishments in Georgia. The charges will be reasonable and all work will he strictly guaranteed.
Those pupils who wish to learn cutting and fitting must provide themselves with the S. T. Taylor text-look and accompanying drafting and measuring instruments. The whole outfit cosis $\$ 7$, and can be purchased at the college. Pupils whe wish to take only sewing or any branch of needle work will not require this outfit.
All students of dressmaking, muless specially excused, are required to take the industrial-Euglish course of study.

## SCHOOL OF COOKING.

This is the pioneer institution of the sort in the Southern States. Neither expense nor pains have heen spared in fitting it up. During the three years of its existence it has accomplished much good, but in several important particulars it will do better
work next session than ever before. The conrse of stndy will be better adapted to the particular needs of tho Southern kitchen and to the dietary of Southern households than heretofore, and the methods of instruction will ho more thoroughly practical. To the gas stoves and oil stoves with which the school is already abundantly supplied the common wood cooking stove vill bo adderl, so as to familiarize the pupile with its use. Tho aim of the courso of stury will he to acruaint the girls with all tho fundamental principles of cooking and to givo then a practical training in the most healthful and ceonomical methods of preparing such artieles of food as aro usually found on a well-appointed Southern family table. Special stress will be laid upon the making of plain bread and biscuit, the cooking of ordinary meats and vegetables, and the preparation of simple desserts; suffrient attention will also be paid to fancy dishes. Several special lessons are given on cooking for invalids.

Each cooking class consists of twelve pripils and cach class receives ono lesson of two liours' duration every week, and at each of theso lessons every pupil in the class does actual cooking directly under tho eyo of the teacher. In connection with every lesson instruction is given in hygiene as related to foods, in the nutritive properties and values of the materials used, and in the chemical changes cansed by cooking.

Dining-room training.-As an adjunct to the cooking school there will he estabiished next session a well-equipped, nicely appointed dining room, in connection with which girls will be tanght to make out bills of fare, to set the talle, to serve meals, and to do everything in this branch of housekeeping in tho best and most approved manner. They will also be carefnlly instructed in the eticuette of tho table and in everything that constitutes good dining-room manners. Both in tho litehen and in tho dining room great pains will be taken to train the girls into habits of absolute cleanliness and neatness.

The cooking school occupies a very large, conveniently arranged room in the top story of the college building. It is equipped with the most inproved implements and appliances.

The cooking lessons are obligatory upon all memhers of the senior class. No stndent shall he awarded a diploma from this collego until she has taken the courso in cooking and has stoorl a satisfactory cxamination in the s.ame. Ordinarily only seniors aro allowed in this department, but girls over 16 years of ago who expect to be in the college only ono jear will also be permitted to take the lessons if they wish to do :o.

An incidental fee of $\$ 2$ is charged in this department, and must be paid when the student's name is enrolled in the class. No other charge is made.

## Teachers College, New York City.

## [Statement of Charles A. Bemett, professor of manual training.]

Tho manual-training work of Tearhers College is dividerl into five parts:
(1) Collego work: Training teachers.
(2) High-school work: Macy Manual Training High School, four years' course, iuchding science, langrage, mathematics, history, drawing, and mannal training. Fits for Columbia School of Mines in three years. Mannal-training work in this school is obligatory
(3) Horace Mamn School: An elementary school, consisting of cight grades betricen lindergarten and high school. Manual training work obligatory in each grade.
(d) Extension work: (a) Saturday morning classes for teachers; (b) afternoon classes for boys and girls; (c) evening trade classes for young men.
(弓) Sunmer School of Manual Training.
'Teachers' College is an independent institution silpported loy roluntary contributions and tuition fees. Tuition in college, sit; in Macy Manual Training High Schonl, ©150; in IIorace Mann School, 475 and $\$ 100$; in extension classes, (a) Saturday rlasses for tearhers, 20 weeks, $\$ \mathbf{\alpha}$; (b) afternoon classes for hors and girls, 15

Conrso of instruction in Horaco Mann School: Grade 1, rlay morleling, paper working, swing. (irado 2, clay modeling, paper working, sowing. Gratlo 3, clay modeling, paper working, sewing. Grado 4, clay modeling, paper working, inetal working. (rrado b, clay modeling, paper working, sewing' for girls, wond working for boys. Grade G, paper working, sewing for girls, wood working for hoss. Grade 7, clay modeling. Grade 8 , clay modeling, cooking for sirls, wood working for boys
Mary Manual Training Itigh trhool: First ypar, for boys, wood joinery, Wood carring; for girls, sewing, clay modeling, wood (arving. Second year, for hors, wool turning, pattwrn making, foundry work, sheet-mefal worling; for wirls, sowing, cooking, clay mondeling, and wood carving. Third year, for boys, forging, chipping, filing, fitting, and machine tool work; for girls, cooking and sewing (ehments of dressmakin"゙? Fourth year, a pupil may elect sperial conrses in tho fleprotment of manual fraining and art education to fill up the time allotied to mannal training.

The number of pupils in the Horace Mann School below high-school grade aro as follows:

| Grade. | Boys. | Girls. | Grade. | Boys. | Girls. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| First. | 12 |  | Fifth. | 10 | 12 |
| Second | 11 | 12 | Sixth. | 11 | 15 |
| Third | 16 | 4 | Seventh | ${ }^{6}$ | $19-$ |
| Foarth | 13 | 12 | Eighth. | 13 | 18 |

Tho number of pupils at present in the Macy Manual Training High Schoot are as follows:


The eqnipment for the wood-joinery room is as follows: 30 benches for pupils, 1 bench for teacher, 31 sets of tools, 31 tablet chairs arranged in front of blackboaicd and teacher's bench, 1 grindstono mounted on irion frame, 1 teacher's desk, 1 case for drawings, 1 case of pigeonholes for unfinished work, 1 table for glue-pot outitit, 1 museum case containing models of course of stady, specimens of wood products, etc. (Connected with this room is a locker and wash room, a storeroom, and a dumb raiter leading to the stock room in the basement.) Each bench is equippert with the following tools: 1 back saw, Disston's No. 4, 10 -inch, 13 points to the inch; 1 Hansmond adze-eyo bell-face hammer, No. 0, 7-ounce; 1 Bailey's patent adjustablo iron jack plane, No. 5; 1 round hickory mallet, Bliss Manufacturing Company, No. 4, 2 ginch face, with handlo screwed into head; 1 tang tirmer chisel, Buck Bros., No. 2 ; 1-inch, handled and sharpened; 1 ditto, one-fourth inch; 1 Russell Jerningś dowel bit, five-sixteenth inch; 1 ditto, one-half inch; 1 Barber's bit lorace, No. 14, 6 -inch sweep, 1 sliding T bevel, Eagle, 9 -inch; 1 iron handle try-square, No. 12 , 6-inch, Stanley Rule and Lever Company; 1 marking gapge, No. 64 $\frac{1}{2}$, Stanley Rule and Lever Company; 1 octagon-handled screw-driver, No. 77,4 -inch, Hammacher, Schlemmer \& Co.; 1 nail set, "round points," No. 77, oue-fourth inch, Buck Bros., one-sixteenth inch point) ; 1 foot rule (special pattern, mado by Patterson Bros.); 1 knifo (mado by Patterson Bros.) ; 1 bench brusilh (Patterson Bros.) ; 1 pencil, Dixon's M; 1 bench hook, special patfern; 1 sharpening outfit, consisting of 1 lily-white Washita oilstone 6 by 17 inches, in mahogany case with leather strap on top of the case; 1 No. 0 steel oiler, 1 waste holder, and a board to whick theso are attached.

Macy Manual Arts Building fully equipped cost about $\$ 250,000$.
The work in manual training reenforces work in other branches, especially in drawing, mathematics, and science.
[Extract from course of study of the Horace Mann School.]

## ART AND MANUAL TRAINING.

First Grade (Five Periods Each Week).
Color.-Colors of the spectrum observed. Lessons given in relations of color and harmony of color. Typical colors taught-red, yellow, blue. Scales of theso colurs.

Draiving. -Free cstression of the simplest typical forms-sphere, cube, and cylinder; and of naturat taims-frnit, leaves, and flowers. Occasionally a story is illustrated by the children.

Clay modeling.-Modeling in clay of simple forms-objects, fruit, vegetables.
Paper working.-Tablet laying, cutting and pasting of colored paper to make borders and radiating arrangements. Geometric fignres used-cirele, square, and oblong.
Sewing.-Drill lessons given to gain muscular control. Colored wool on burlap used for first sewing. Free choice of colors allowed. Work with coarse needle on unbleached muslingiven in the latter part of the year. For practical application of the stitches little useful articles are given near the end of the year.

## Second Grade (five Preiods Eack Wrez).

Color-Relations of color; harmony of color. Typical colori-blue, and green. Scales of these colors.

Drawing. -The drawing is the free expression in light and shade of simple typical forms, such as cube, square prism, triangular prism, pyramid. There is also drawing of good, simple objects and of natural forms-vegetables, fruit, and plants.

Clay modeling.-Modeling of simple objects-fruit, vegetables, leaves.
Paper working.-Application of color lessons in cutting and pasting paper to form borders and radiating arrangements. Geometric figures used-right triangle and equilateral triangle.

Sewing.-Quick review of the stitches given in the first grade. Sewing on buttons. Application of all exercises previously given in making such articles as bags, needlebooks, and aprons.

Thlrd Grade (Five Periods Each Weez).
Color.-Relations of color; harmony of color. Typical colors taught-violet, red orange, yellow orange. Scales of theso colors.
Drawing.-Shaded drawings of simple typical forms; also drawing of objects, natural forms, vegetables, fruits, and plants.
Clay modeling.-Modeling simple objects-fruit, vegetables, leaves.
Paper working.-Cutting and pasting colored paper to form borders and radiating arrangements. Geometric figures used-ellipse, oval, and Greek cross.
Secing. - The work legins with a study of the principles of sewing. The children are shown how to make little looms of sticks and strings. Tho stitches given in previons years are renewed on new models. This is followed by new principles, which are developed in later work. The girls' work is coarse darning and making dolls' clothes; the boys', a national flag, sails for a toy ship, and baseball covers.

## Fourth Grade (Five Periuds Each Week).

Color.-Typical colors, yellow green, blue green. Study of colors as applicd in every day art.
Drawing.-Shaded drawings of geometric solids given singly and in groups. Development of principle of foreshortening of planes in free-hand perspective. Free drawing of natural forms.
Clay modeling.- Modeling geometric forms, such as quatrefoil and trefoil and natural forms suggested by nature lessons.
Paper ccorking.-Drawing, with instruments, for paper cutting and pasting. The quatrefoil and trefoil used for borders and surfaco coverings. Photographs and prints used to illnstrate the quatrefoil in Gothic architecture.
Metal working.-Bent iron Work, involving the use of suips and pliers. The course consists of exercises in cutting, bending, and binding, aud of making a raricty of useful and ormamental articles.

Flfth Grade (Five Pemons Each Week).
Drawing.-Free drawing of geometric models (sbaded) of objects and natural forms. Drawing, with instruments, in connection with wood working and paper working.

Clay modeling.-Modeling exact forms, such as half sphere, half cylinder, and rase forms in the half round. Designing and modeling in the half round of simple useful objects, such as a cup and howl. Modeling of historic forms, such as the Eiryptian pyramid, lotus, and winged sphere; of natural forms-fruits, vegetables, and leaves.
l'aper working.-Development of surface of solids; construction of cubes, prisms, pyramids, cylinders, cones; and objerts similar in form.

Newing.-For girls only. A scries of exercises in making stitches used in outer and under clothing. Planning and cutting a petticoat and a doll's dross. Making up and trimming a gingham dress of small size.

Whoduroring.-For boys only. Work in thin wood, involving the use of a saw, a chisel knife, and drawing instruments.

## Sixth Glide (Four Periods Eaci Week).

Color.-Study of relations of color and harmony of color. Typical colors usedred violet and blue violet.

Irawing.-Study of (ireek ornament, illustrated by casts, photographs, and prints. Drawing of Greek rosette and Greek scroll in color. Drawing of geometric forms, olyjerts, and natural forms in groups. Drawing, with instruments, in connertion with wood working and paper working.
l'aper urorking.-Cutting and pasting simplo forms of ornament, such as fireek lily and (ireek rosette.

Newing.-For sirls only. (ourso in phain sewing comploted. Tarning and patchiny ou various materials. Fancy stitches and plain cmbroidery on linen and tlanel.

Woodworking.-For boys only. Chip carving and construction work in thin wood. Outfit of tools the same as used in fifth grade. Course of instruction includes joints, frames, boxes, brackets, and carving exercises.

## Seyenth Grade (Two Periods Each Whei).

Drawing.-Development of principles of free-hand perspective, foreshortening of planes, and convergence of edges. Drawing of geometrical models and objects placed in various positions above and below the eye, parallel with the observer, and turned. Study of shade and shadow.

Clay modeling.-Modeling natural forms-leaves and plants.

## Eighth Grade (Six Periods Each Weeis).

Drawing.-Free-hand-Development of principles of foreshortening of planes and convergence of edges in geometric solids which are in angular perspective. The same principles are illustrated by objects, presented at first singly, then in groups. Study of shade and shadow on objects and groups.

Mechanical.-Simple geometrical work involved in drawing diaper patterns and interlaced designs; easy lettering; projections of simple objects; working drawings; sections, drawing to scale; developments. All work done in pencil.

Clay modeling.-Modeling geometric solids and good vase forms in the half round. Modeling simple forms of historic ornament, such as lotus oapital. Modeling of natural forms-fruit, vegetables, and plants.

Cooking. - Forgirls only. An elementary course in which the principles of cookery are illustrated in the making of simple dishes. The sequence of practical work is in general as follows: Starch, cereals, and fruits, vegetables, batters, and doughs, eggs, shellish, fish, meats, salads, desserts.

Woodworking.-For boys only. Wood joinery taught in a room equipped with benches and sets of woodworking tools. The course consists of exercises, joints, and their applications in a few useful articles. In connection with the work much instruction is given about the tools and materials used.

MANUAL TRAINING IN THE COLLEGE DEPARTMENT.
[From circular of information for 1895-96.]

## AIm AND Soore.

The aim of the department is (1) to train teachers and supervisors of manual training and art education, and (2) to give instruction in manual training and art work to stucients pursuing major courses in other departments of the college, to special students, to pupils of the Horace Mann School and of the Macy Mannal Training High School. Aided by the other departments of the college, this department gives not only the principles of teaching special branches and practice in such teaching, added to a thorough drill in subject-matter, but also a broad professional training, enabling graduates to view their specialty not merely as an isolated sulject, but in its true relation to the other branches of education. As an experiment station, this department aims to assist in the solution of many problems connected with the introduction of manual training and drawing into the public schools.

## Equipment.

The home of the new department is the Macy Manual Arts Building. This building, completely equipped, was given by Mrs. Josiah Macy as a memorial to her husband. It is 147 feetlong, 71 feet wide, and is fivestories high, including a well-lighted basement. It occupies a commanding position, overlooking Morningside Park, the Harlem River, and Long Islavd Sound on the northeast, and Riverside Park, the Hudson River, and the Palisades on the northwest. The view from the apper winJows can hardly bs sarpassed in New York City. It contains three large rooms for wood working-joinery, carving, turning, and pattern making; four for metal work-ing-chipping and filing and soldering, molding and casting, forging and machino tool work; two for clay modeling; one for mechanical drawing; one for architectural drawing; one for elementary manual training; two for elementary free-hand drawing, and two large studios for advanced drawing and painting. In adrlition to these is a lecture room, provided with a stereopticon, many smaller rooms, such as offices, store rooms, a library, museum, conference room, photography room, engine room, and stock room.

The machinery, tools, cases, and furniture constituting the equipment of the various departments have been selected with special reference to the requirements of the work to be done in these departments. Whenever it has been impossible to find such furnishings in stock, special pieces have been made.

Tho departmental library contains many books and pamphlets on manual training aul art celucation. In the corridors and on the walls of various rooms are many photographs illustrating the history of art. In the museum and scattered through the work rooms are vases, reliefs, models, carvings, and casts. The purpose has been to make the building and its equipment complete and in every way adapted to its use.

## Courses of Stldy.

FIRST INTRODECTORY YEAR.

1. Free-hand drawing.-Ten periods weekly. A course desigued for students who are making a specialty of art work.
2. Free-hand drawing.-Four periods weekly. An abridgment of course 1, intended students who are not making a speciaity of art work.
3. Mechanical drawing.-Four periods weekly. A course desigued for those tho are taking mp the subject of mechanical drawing for the first time. It includes geometrical problems, lettering, drawing to scale, parallel and angular projection, sections, intersections, and developments.

## SECOND INTRODUCTORY IEAR.

4. Tood joinery.-Six periods week]y. A comprelensire course in bench work, inteuded to prepare stulents for course 14 given in the junior year. It includes excreises intended to teach the use of the fundamental woodworking tools, the use of many of the principal joints in construction, and the application of these joints in making useful artieles. From time to time during the course special illustrated lessons or talks are given on such subjects as staudard moasurements, cutting edges, structure and growth of trees, lumbering and the preparation of timber, warping and shrinking of timber, and consequent allowances in constrnction.
5. Trod carring. - Four periods weekly. A course covering the findamental priuciples of tho art. In the first part of the course attention is given to the landing aud sharpening of tools anit to the carving of typical pieces of ornament involving the rarions uses of tho tools. Later the student takes up the work from the stamlpoint of tho decorator and learns to work in the following styles: Moresfuc, Norse, Byzantine, Roman, and Renaissance. Throughout the course careful attention is given to morleling and design:
6. Metal irorhiny.-Fonr perionds weekls. A course of hand tool work in three parts: (a) Chipping, filing, and polishing cast iron, wronght iron, malleable cast iron, steel, and hrass; (b) sheet-metal working, including many of the processes of tinsmithing and klicet-iron working, and (c) forging, including ormamental iron work and hardening and tempering stecl, in addition to numerous exercises in drawing, bending, upsetting, aud welding.
7. Fre-hand drawing.-Ten periods weekly. This course is a contimution of course 1 and consists of drawing in charcoal and water color monochrome from grouns of molef objects and casts of ornament and the hmman figure. It is desigued to give the student an appreciation of the perspective appearance of all simple oljects and the ahility to give artistic expression to what he sees by means of light and shade and coler.
8. Free-kanid drauing-Four perionls weekly. A continuation of course 2, intended to give a studentsufficient training in free-hand irawing to enable him to enter the maior year in any major conse in the college excenting Major Conse B in the department of mannal training and art education.
9. Clay modeling.-Funr periods weekly. A technical course, consisting of mork from onament and the antique. Each student is given practice in making plaster (asts from his own clay motels.
10. History of all, -Three perions weekly. A course of reading, eonferences, and lectures illustrated by lantern photographs. The subjects will be taken up in chronological order, and will corer mellieval, Renaissance, and modern architecture, senlpthre, and painting.
11. Mechanical dracing.-Four periods weekly. This course follows course 3, and ronsists of adranced work in intersections and developments, including conic sections, a stuly of mathematical curves as applied in cams and gearing, the principles of shates and shadows and linear perspective. Special attention is given to the makins of working drawings from free-hand sketcles.

## jucion year.

12. Flementary manual training.-Four periods werkly. In this conrse are taken up eewral lines of manual training, which are adapted to children in the elementary sehools. Each of these is of such a nature that it may lee carried on in the ordinary behool rom at any school desk to which an appropriate desk cover has been added. The course includes: (a) Knifework in thin wood for children in the fifth grade,
involving much geometry and drawing; (b) more advanced work in thin wood for the sixth or seventh grade, involving problems in construction and chip carving; (c) free whittling for children in the sixth or seventh grade; (d) construction work in paper and çardboard for grades four, five, six, and seven; and (e) bent ironwork which may be correlated with free-hand drawing in several of the grades of the elementary school.
Students pursuing this course are expected to take completo and accurate notes of all lectures, but are not required to make all the models.
13. Etementary manual training.-Two periods weekly, second half year. An abridgment of course 12, intended for major students in the department of elementary teaching.
14. Wood joinery.-Four periods weekly. In this course the subject is taken up from the standpoint of methoa. Course 4 or its equivalent is required on admission. The conrse consists of: (a) Lectures on methods of working, methods of teaching, and subjects connected with the tools and materials used; (b) discussions, recitations, and the writing-of papers on topics requiring the consultation of books in the library; (c) working out a course of models for grammar schools, also a course for high schools; (d) advanced work in hard wood, involving many of the principles of cabinetmaking.
15. Wood joinery. -Two periods weekly. An abridgment of courso 4, intended to give students the ability to construct simple apparatus for scientific experiments.
16. Wood turning, pattern making, and foundry practice.-Six periods weekly. A course in two parts, suitable for manual training high schools. (a) Spindle turning, face-plate turning, chack and templet tarning, in which much attention is given to beauty of ontline and proportion; (b) pattern making, in connection with which practice is given in the foundry. The course contains patterns which may be used to illustrate draft, use of split patterns, "making a joint," use of green-sand core, use of dry core, use of shaplets, "stop-over molding," three-part molding, and hanging a core.
17. Metal working.-Six periods weekly. A courso combining hand tool and machine tool work, involving standard processes of modern machine shop practice. At the end of the course each class constructs a lathe, a grinder, a motor, or some other small machine. The equipment for this work consists of 10 engine lathes, a universal milling machine, a grinding machine, planer, upright drill, sensitive drill, and the necessary smaller tools, all of which have been carefully selected from the latest patterns of the best tool manufacturers.
18. Free-hand drawing and elay modeling. - Four periods weekly. A course from the standpoint of the teacher. The subject for the first part of the year will bo the worls of the primary school; that for the last part of the year the work of the secondary school.
19. Drawing and painting. -Eight periods weekly. This course is arranged so that the student first makes a light and shade study from the object or groun of objects, and afterward makes a color subject from the same object. This plan affords an opportunity for the stady of black and white values in connection with color values, and emphasizes the importance of the light and shade work as applied to painting. The course includes studies from frait, flowers, still life, and the human figure, and in the latter part of the jear out-of-door sketching.
20. Frce-hand drawing. -Two periods weekly. A special courso for major students in domestic art.
21. Mechanical drawing.-Four periods wreekly. The work of this course is taken up from the standpoint of method; hence a knowledge of the suloject-matter is necessary on entering the course. During the course a comparative study is made of the mechanical drawing courses of elementary and secondary schools of recognized standing, with a viow of arriving at conclusions as to what should be included in a course of mechanical draving, and what method shonld be employed in teaching. The notelook work is an important part of this course.

## SESIOR YRAR.

22. History and principles of mamual training.-Two periods weekly, first half year. This course meludes a study of the development of the manual training idea in education; the Russian system; SWedish sloyd; Danish sloyd; mannal training in England, France, and Germany; American manual training; pedagogic principles underlying manual training; methods of teaching manual training; planning courses of instraction for elementary and secondary schools; the manual training high school-its distinguishing characteristics and its place in American education.
23. Plans änd equipments.-Two periods weekly, second half jear. The teacher of manual training is called apon not only to lay out his courses of instruction, but often to plan and equip rooms for manual training work. With this requirement in mind, a course has been designed covering the essential principles involved in planning and equipping for manual training work in elementary and secendary schools.

In this course the following points are considered: Planning with reference to number, size, and location of rooms needed; their light, accessibility, and conrenience one to another; tools and appliances necessary for a given range of work; how to purchase tools and machinery; arrangement of these with reference to use, convenience, and safety of operation; location of line shafting; selection of motive power, haugers, belting, and other material required.

Classes usnally work from assumed data, although in some cases data is supplied by schools desiring the assistance of Teachers College in planning new buildings. In such cases the school furnishing the data receives a copy of the completed plans free of charge.
24. Tood carving.-Four periods weekly. A course in two parts. The first part is a continuation of course 5, students being expected to work from their own designs. The second part is a course from the standpoint of method, which is adapted to secondary schools. In the second part students are expected to take accurate notes of all lectures, but are not required to make all the models.
25. Draring and painting.-Eight periods weekly. A continuation of course 19 consisting off studies in black and white and in color from casts, still life and from lite, and out-of-door sketching in color. Talks on perspective, light and shade, composition, color, anatomy, etc., are given from time to time as the work progresses. In this class much individual instruction is given, thus enabling a student to do advanced work in any branch he desires especially to teach.
26. Designing.-Four periods weekly. A course in principles of design, including a study of the historic strles of ornament. Working designs are made for: (a) Wood carving, (b) wood turning, (c) pyrography, (d) bent iron work, and (e) stained glass. The course is closely related to courses involving construction.
27. Planning courses in draucing.-Two periods weekly. A course for supervisors and special teachers of drawing. This course will include the study of conditious existing in schools; courses of instruction in drawing, modeling, and decoration; the adaptation of work to the ability of classes, to the season of the year, and to the erguipment. Attention will be given to the correlation of drawing with other suljects. The relation between supervision and special teaching, the holding of teachers' meetings, the giving of typical lessons, and the making of programmes will be considered. Equipments will be planned, material for the different grades in publie and private schools selected, and the expense estimated.
28. Free-hand drawiny.-Two periods weekly. A course from the standpoint of method, beginning with primary work. It includes drawing from models and objects from nature, illustrative drawing, and modeling from typical and natural forms. This course is designed for major students in the departments of the kindergarten and elementary teaching.
29. Machine design.-Four periods weekly. The course involves the consideration of the strength of material and the form and proper proportion of such machine elements as the following, which are employed to a greater or less extent in all forms of machincry: Rivets, keys, bolts and screws, journals and their hearings, shafting, couplings, cams, and gears. Later the sulject of machine design is taken up with reference to simplicity, proportion, beauty of outline, cored and ribbed sections, harmony of parts, etc. Finally, some machine is designed and a set of working drawings made.
30. Archilectural drauing.-This course in the elements of architecture will not be opened until Soptember, 1896.
31. Clay modeling. - A continuation of course 9, consisting of advanced work from the antirue and from life. The course will not be opened until September, 1896.
32. Methods, observation, and practice teaching.-Two to six periods weekly. The first half year is devoted to lectures on methods of tearhing manual training and drawing and to the systematic observation of classes in the Iforace Manu School and the M:ary Manal Training High School. The second half year is devoted to practice tearhing aurl critirism.

The following is a brief outline of the work: (1) Observing expert teaching and assisting in givine inlividal instruction; (2) written report of observations: (3) class discussion of lesson ohserved or conference with eritic teacher; (1) written plan of ( 1 ) a series of lessons ani (b) of a single lesson with reference to purpose, sul,jpct-matter, and method of teaching; (5) criticism of written plan; (6) practice teaching; (7) criticism of practice tearhing; (8) written plan of typural lesson; (9 criticism of plan of typical leshon; (10) giving typical lesson in the presence of clasumates and the faculty; (11) class criticism of typical lesson.

Earh ranlidate for the collego diploma must oliserve and teach in at least two subjecty during the year, and no student will be recommended for a diploma whose work in this conrse is unsatisfactory.

Department conference.-Ono hour weekly. A meoting of professors, instructors, asvistmits, ind major student to report on corrent literature and discuss questions relating tomanal training and art education. This hour has proved to be one of great value to all who attend the conference.

MAJOR COURSES.
These extend over two introductory and two callege years and lead to the college diploma. In general the work of the two introductory years is intended to give technical skill, while the work of the two college years is taken up from the standpoint of method. Three major courses are offered :
Course A, designed to equip teachers and supervisors for all grades of manual training work in elementary and secondary schools.
Course B, designed to equip teachers and supervisors of art education for all grades of elementary and secondary schools.
Course C, designed to equip teachers and supervisors of both manual training and art education for elementary schools only.

## MINOR COURSES.

Any course offered by the department may be pursued by qualified students as a minor in connection with courses offered in other departments of the college and will be counted as a part of the work leading to a college diploma.

## DEGREES

Candidates for the degrees of A. M. and Ph. D. may elect to do a part of their work in this department.
bpectal students.
The directors of the department are at liberty to admit as special students at any time such persons as in their judgment are qualified to work profitably in the department. No diploma is given to special students.

SATURDAF CLASSES.
On Saturdays, from March to October, a number of special courses are open to teachers and others who can not attend classes earlier in the week. During the year 1895-96 such courses are offered in the following subjects with the provision that no class be formed with less than six students: (1) Wood joinery, (2) wood carving, (3) wood turning, (4) metal working, (5) elementary manual training, (6) free-hand outline drawing, (7) light and shade, and (8) mechanical drawing. Registration fee for each course, $\$ 5$.

## EVENING CLASSES.

Under the joint management of the Harlem branch of the Young Men's Christian Association and the department of manual training and art education of Teachers College evening classes will be opened in October, 1895, in the Macy Manual Arts Building. The following courses will be offered: (a)Mechanical drawing, (b) forging, (c) wood joinery and drawing, (d) sheet-metal working and drawing. Other courses in mechanical and art work may be opened during the year.
sUMmer school.
On account of the large number of applications for instruction during the summer months, it has been decided to open a summer school of manual training and art education at Teachers College in 1896. The entire equipment of the Macy Manual Arts Building will be utilized, including library, photographs, casts, nodels, and exhibits.

It will be possible to offer courses in (a) psychology as applied to manual training and art education, history and principles of manual training, methods of teaching manual training, methods of teaching drawing, planning and equipping manual training schools; and (b) in wood joinery, wood carving, wood turning, pattern making, foundry practice, forge work, chipping and filing, machine tool work, elementary manual training, claymodeling, designing, outline drawing, light and shade, water-color painting, architectural drawing, mechanical drawing, and machine design. The work will consist of lectures, conferences, recitations, and practice. The number of courses opened will depend upon the demand. The school-will be open six weeks.
mact manual training hige school.
In order to provide better opportunities for observation and practice teaching in manual training and art work the Macy Manual Training High School for boys and girls was established in May, 1895.
The general plan of the school requires the pupils to divide their time in school
about cqually between English, mathematics, and other academic studies, amd manual trainiug and art work. Thronglout the entire course of four jears each regular strdent pursues six lines of study-language, mathematics, science, sociology, drawing, and manual trainiug.

The course is so arranged as to fit a grammar-school graduate for the School of Mines, Columbia College, in three years.

## DEPARTMENT OF DOMESTIC SCIENCE AND ART.

## MAJOR COURSE.

This course is desimed for those who wish to propare themselves to become teachers of cooking and sewing in accordance with educational principles.

Candidates for admission to this comrse will feel the need of a broad and liberal edncation. A good high-school course, with two years' adderl experience as teacher or student, is the least that should be considered adequate; much nore is desirable. All candidates for admission will be required to pass the examinatious for entrance to the college.

Tho course continues two years, and ineludes instruction in plain cooking and plaiu sewing, cutting and fitting; drawing ; the application of chemistry, physics, physiology, and hygiene to matters of the household; psychology and general method, history of education, methods of teaching and practice teaching.

From two to four periods weekly are assigned for observation and practice in the Horaco Manu School. The assignments aro changed as often as tho best interests of the judividual require.

The laboratory work in cooking includes practice in all branches of cookery. More attontion, however, is given to such economical and wholesome cookiug as can bo properly tanght in public schools and in industrial classes than to the preparation of olaborate dishes. Careful study is made of the difierent methouls of applying heat to fool materials, and in these experiments tho student learns to operato coal, gas, (rasoline, aud kerosene stoves and tho Atkinson cooker. It is the purpose of the course to reluce cooking to a science by the exact methorls of the chemical lahoratory. In all the processes the aim is to study the conditions and learn to control them until uniform results are obtained.

The course in sowing includes all brancles that are required by public and industrial schools; plain seiving; plain ombroidery, the drafting, fitting, and cutting of simple garments. A course of lectures is given on methods of teaching sewing; the materials and tools in use and their development and mannfacture; color in conmection with dress and lome furnishing; healthfnl dress; hyoriene, etc. Thero is also a conrso of lessons in drawing and color for tho study of tho homma form and deapery.

A collection of raw materials, textiles, and tools for demonstration lessons has been procures, and is of great valuo to the student.

Training is given in such details of clopartmental management as the pur hasing of supplies and tho plaminer of courses of lessons and oyuipinants for cooking and serfing classes. A special feature is made of economical cooking anfl seving ontits, and tho student is riven such practical problems as the planming of an inoxpensire ontfit for a rliss of twenty and the making of the best selection of utensils to be obtained for a given sim.

Oreasional visits are made to the sehools of New York and vicinity to sturly the comblitions of tho work, and many of tho stadonts achuire excellent expericnce hy teachine classes in some ot the mission schools in New York when the honrs do not interfere with college work.
minor (rocrses.
Tho following minor enurses are offerel to those who do not intend to become teuchors of cooking and sewing, but who desire a practical lnowledge of the suljects:

Conkin!- - V ive periorls weekly.
Secing.-Two periorls weekly.
Art of coshume.-Fivo poriorls weekly.
Cosking.-One and onc-half hours weekly, October 5 to March 11.
sewing.-One hour weekly, Octuber 5 to March 14.
Any prerson, with the consent of the teacher in charge, way elect any one or more of the above conrses.

Fieftune state Normal School, Kutztown, Pa.

## [statement of W. W. Deatrick, director.]

Our mannal training is educational, with especial reference to later work of the pupil teachers in the construction of apparatus, charts, cte.

The plant was established hy the State Normal School and tution is included in general charges. Materials are paid for by pupils.

Instruction is given in the senior year only. Average ago of pupils about 19 years. In cardboard sloyd and wood sioyd pupils work from bluo prints, which each one is required to make. The required course in eardboard and wood includes the making of geometrical forms, surfaces, and solids, which may later be used as apparatus. Turning, scroll sawing, metal working, are optional. Fifteen charts, covering a course in color, are required; also two large wall color charts. Ten large wall charts, astronomicaI, anatomical, physiological, or psychological are required. In making these, some must be drawn by the method of squares, some by pantograph, and some by the use of the optical lantern. Several charts of geographical projections are required. Five pieces of apparatus are expected from each pupil. Photograply is taught to pupils electing the same. The chart making appears to be the most valuable featnre of our work. Clay modeling occupies several weeks of the year.

Equipment.-Sixteen sets of wood-working tools; a full line of extra tools, not in sets; lathes, wood and metal; gasoline furnace, photographic outfit, drills, vises, scroll saws, and optical lantern and slides.
Four large work benches, each accommodating four pupils at a time; a long filing bench, running the entire length of the room; all in a largo, airy, well-lighted room, in the lasement of the "central" building of the school. The windows are all aboye ground and the floor is cemented.
The value of tools, etc., is $\$ 1,000$ to $\$ 1,200$. No cost of maintenance, except as salary of instructor, is included in general current expenses. Instructors have other work. Pupils pay for materials used.

The training in construction of apparatus and chart making has matprially influonced the public schools. One superintondent says: "I can see an improveraent in the schools of the connty with reference to schoolroom apparatus since the introduction of manual trainiug into the normal school at Katztown."

The metric system is used in all measurements and overy graduato must thus acquire a practical acquaintance with that system.

The department is under the direction of the professor of psychology and pedagogy.

## State Normal School, West Chester, Pa.

## [Statement of George Morris Philips, principal.]

We have a workshop well located in our recitation hall, about 70 by 30 feet, with an adjoining room about 30 by 25 feet. We have benches for 40 stadents, each fitted up with all the ordinary tools. Students in the last two years of the normal course are required to spend three quarters of an hour per day every other day in the shop. During the first of those Jears they take substantially the graded course in woodwork of the Philadelphia Manual-Training School. The second year they spend in making school apparatus of various sorts, espeéially philosophical apparatus, which they are privileged to take with them to their schools when they leave. Working drawings are made by the students in all cases, and the work done from these drawings. All other students in the school are privileged to take this work and many do. In our model school the children, both boys and girls as young as 8 or 9 , take it regularly with much pleasure and with satisfactory results. The course in woodwork is taken by the young women in the school just the samo as by tho young men, and their work is practically as good. We confine our work at present wholly to woodwork and the necessary drawing.

## V.-SCHOOLS FOR DEFECTIVE CLASSES.

The American School for the Deaf, Hartford, Conn.

## [Statement of Job Williams, principal]

Briefly, the object of our manual training is to teach with a direct view to actual work. Every boy old enough to do so is expected and required to spend about three hours a day in one of our shops.
We have a cabinet shop and a shoenaker's shop. The expenses of the shops are a part of the general expenses of the school.
About 25 pupils are taught in each shop.
Cabinetmaking tools and shoemaking tools are provided. We use no machinery.
Colorado School for the Deaf and Blind, Colorado Sprifgs, Colo.
[Statement of D. C. Dudley, superintendent.]
The central idea in teacbing industries is to form industrious habits. Few of our prpils follow the trades learned here, but they are willing to work at what they can get to do.

Two and one-half hours a day are required in industrial work, though such pupils as have any talent devote one hour a day out of this two and one-half hours to art.
No charge is made for tuition. It is part of this school's regnlar work.
Branches taught: Printing, carpentry, and baking to deaf boys; mattress making, broom making, cane seating, piano tuning to hlind boys; sewing, crocheting, knitting, dressmaking to deaf girls; sewing, crocheting, knitting, bead work, hammock weaving, and basket work to blind girls. Pupils range in age in each shop from 8 to 20 years.

We hare a beautiful building for the industrial departments and the shops have a reasonable amount of suitable machinery for hand work.

The principal expense of maintenance is salaries of foremen.
The results are good in improving discipline of pupils while in school and forming an industrious habit, and the work is no hindrance to other studies.

## Columbla Institution for the Deaf and Dumb, Washington, D. C.

## [Statement of E. M. Gallaudet, president.]

We give instruction to the boys of our Kendall school in carpentering and cabinetmaking. We expect to give instruction in printing next year. 'I'o the girls we give instruction in sewing (including machine work), tressmaking, and housework. We do this mainly because of its acknowledged elucational value.

Institution for the Education of the Blind, Jacksonville, Ill.
[Statement of W. F. Short, superintendent.]
The central idea in our instruction is erlucational and with direct view to actual work or trade. Some form of manual training is ohligatory upon all our pupils
This institution is supported ly appropriations from the legislature, and there is no charge for hoard or tuition.
All the hranches of inannal instruction are carried on throughont the school year and are arranged according to the age and capability of the pupil.
The workshop is equipped with suitable tools and machinery.
The cost of the workshop was $\$ 15,000$. The annual expense of maintaining it and other branches of manual instrnction is about $\$ 1,500$.
The effects of manual training upon other studies we regard as very salutary.
The average length of the school life of the pupils is about twelve years. The pupils usually follow the occupation of the trades learned in school.

## Maryland School for tile Deaf, Frederick, Md.

## [Statement of Charles W. Ely, principal.]

The central idea in our iudustrial instruction is the cultivation of habits of industry, training in the use of tools, with a view chiefly to acquiring such a degree of skill as to enable the pupil to turn his hand to any kind of mannal work. We teach shoemaking, cabinetmaking, and carpentery, chair caning, turning, wood carving, and finishing. We also teach dressmaking and finer needlework.

This mannal training is carrierl on as a department of our school, which is supported by the State. There is no charge for tuition except for persons from other States.

The course in manual training is not commenced in ally particulan year, but is determined rather by the age of pupils. They are placed in the industrial classes at 10 to 12 years of age. It is our purpose to give each pupil training in the use of all the toons used in the shop to which he is attarherl. In the shoe shop, for example, every boy learns to perform every part of the making of a shoe, in the different grades of work, up to the cutting. The same rule applies in the other shops.

We have a buildins recently erecten, two stories in height with a basement, 65 by 30 feet. The first floor is occiphed hy the cabinet shop, the other is divided between the shor shop and printing office, while the basement is us d for storare. An engine, 15 horepower, runs the machinery. The cabinet shop is supplied with a planer, jointer, circular saws, uroll saw, mortiser, tenom machine, turning lathe, all rim hy steam, and there is also a good equipment of tools for caljinetmaking and joiner worl. The printing office has a Moe Enterprise C'rlinder of the latent make, a small Gordon prest and a goorl supply of type of cousiderable variety. In the shoo shop stean fower is not uscrl. We have several sewing machines and the usual tools found in a well erguipped shop.

Valne of the plant, ahout $\$ 6,800$. Cost of maintenance, $\$ 642.08$.
As a rule it think the imlustrial training has tended directly to ward making better scholars. Cumbubtedly parents are hetter satisfied to have their children remain in school longer than they would if instruction looking toward employment were not furnished.

Michigan School for the Deaf, Flint, Mich.

[Statement of F, D. Clarke, superintendent.]
Our manual instruction is with a view to actual work and a trade. It is obligatory. This school is supported by the State, and no charge is made for tnition.
Pupils or parents select a trade at the beginning of the sixth year, and are expected to continue at it at least a year. At the end of that year, for reason, are allowed to change. After the first year they continue till they know all of the trades we can teach. Our pupils in shops average from 12 to 21 years old, except art, drawing, etc., where they begin at 8. Number taught shoemaking, 38; cabinetmaking, 25; tailoring, 20 ; baking, 3 ; printing, 23 ; sewing, 57 ; art, 33 .

Our shops are fairly well equipped with tools and machinery.
Cost, exclusive of buildings, $\$ 9,645.71$. Annual-salary of instructors, $\$ 3,700$.
Effect on other studies is goed, and it lengthens the time we are able to keep our pupils. Many pupils follow the trade they learn at school, while almost all of them acquire "the habit of industry" and work regularly and steadily after leaving school. I attribute the good habits of the deaf largely to this regular work at school.

Iowa Institution for Feeble-Minded Children, Glenwood, Iowa.
[Statement of F. M. Powell, superintendent.]
While we consider industrial training an essential and important part of the system of training, we have not yet a very systematic course on account of lack of facilities. There is provided a wood-working room with machinery and tools at cost of $\$ 2,000$. In this division twelve to eighteen boys work at intervals during the day. The benefits derived are expected to be educational as well as preparatory to actual labor later on in life. Wood carving constitutes a part of the labor. In this the boys are benefited especially in hand and eye training. Wood turning, planing, and a variety of work are accomplished in this department. The majority of boys at work here also attend the regular school exercises; in this way it becomes a part of their educational training.

On the same floor four to eight boys work at intervals during the day in leather work, for the same reason involved in other industrial work. In this quite a number have become proficient in handwork, even where the mentality rates low.
The expenses connected with this department are nearly counteracted by the sale of manufactured goods. There is a brickyard on the premises in which are made all the brick that enter into the construction of new buildings. Its sales also yield considerable profit. A number of the boys participate in this labor of production.
Farming and gardening are especial sources for remunerative, as well as educational labor. Forty to fifty boys work in this department during the spring and summer.

The industrial departments are carried on in connection with other branches of the institution so closely that we have not made any effort to itemize expenses separately. Each year we learn to appreciate more fully the value of industrial training.

Ohio Institution for Feeble-Minded Youth, Columbus, Ohio.

> [Statement of G. A. Doren, superintendent.]

In connection with school work almost all the children are engaged in some kind of work about the house and grounds dependent upon their needs and those of the institution. They are instructed in farming and gardening, carpenter work, painting, shoemaking, tailoring, sewing, and other kinds of work, with reference to the requirements of the institution. The industrial training is made useful in the economical working of the household. The children are happier to be occupied in this way when not engaged in schoolroom work, and are made self-supporting to a greater or less degree. The exercise, too, is very often very beneficial. Their education is with reference to life in the institution, the object being to brighten their lives in every way possible and to make them self-supporting.

> VI.-SCHOOLS FOR COLORED PUPILS.

Storrs School, atlanta, Ga.

## [Statement of Ellen E. Roper, principal.]

We teach only sewing to girls. All take the course except those in the highest grade. The object of our teaching in this branch is primarily to rerder them competent to make their own clothing, also to teach them tidiness and a horror of rags,

Soveral, having natural taste for sewing, have been ablo, after finishing our course, to get positions with dressmakers. We also teach dressmaking when it is desired.

The industrial work is in connection with Storrs School, founded and supported by the American Missionary Society.

Sprlman Seminary for Women and Girls, Atlanta, Ga.
[From the catalogue for 1895-96.]

## INDUSTRIAL DEPARTMENT.

The industrial department is made a prominent feature in this institution. The results accomplished through the aid of the Slater Fund prove beyond a doubt the desirableness and practicability of industrial training in connection with our course of study. Every year increases our firm conviction that labor of the hands for a part of the day, directed by skilled instructors, promotes good discipline, good morals, and good mental energy as nothing else can. Every woman shonld be a good housekeeper, for her own lronor and the progress of ciyilization. For all, especially for those who aro to be teachers and mothers; wo believe industrial training to be essential to give self-reliance and self-support. Our great aim is to make education practical. Hence all the boarders are required to learn the art of housekeeping in all its branches: The time of eight teachers is mainly devoted to this department.

Regular courses of instruction are pursued, and certificates are awarded accordingly. Each student receiving a certificate in this course has attended the school at least two years, is of good moral character, and has served creditably in the following branches taught in the industrial department: Chamber work, table work, dish washing, cooking, washing, ironing, and plain sewing.

Printing is an elective study. Sewing, dressmaking, and printing may be taken by day scholars as well as boarders.

## HOLSEKEEPING.

The daily routine of life in the institation gives practical instruction in housekeeping. Boarders take care of their own rooms, and of the schoolrooms, halls, and dining rooms. Every pupil is expected to give at least one hour daily to housework. Each one has her duty to perform daily, and tho assignments aro changed once a month. By this means table work, dish washing, berlmaking, sweeping, and dusting, and all the other arts that make home neat and pleasant are taught to all.

## cooking.

The daily cooking for our family of boarders is done under the oye of the matrons by students. In addition to this, there is a class in cooking, consisting of the candidates for the industrial certificates, who study cooking as a science, with a regular course of instruction which includes both plain and fine cooking. Bread making is considered of great importance.

## WASEING AND IRONTNG.

A large, airy, firoproof laundry gives ample provision for fine laundry work. Each boarder is expected to do her own washing and ironing under the supervision of a competent teacher.

## SEWING AND DRESSMAKING.

Every boarding pupil is required to learn the art of plain sewing. There are four classes in sewing, and promotions aro made from the lower to the higher as fast as the pupil's proficiency will allow. Mending, the cutting and making of undergarments, and buttonhole making are taught. Fancy needlework is taken up after skill in plaiu sewing is acquired. Those desiring to learn the aressmaker's trade thoronghly have an opportunity to do so. The inost approved methods of fitting are used.
Day scholars who wish to make a specialty of dressmaking can enter for that branch alone.

PRINTING.
One of the pleasantest trades open to women is that of compositor in a printing office. We call the attention of parents to our facilities for teaching this trade. Our printing office issues monthly an eight-page school paper, the Spelman Messenger; it also prints our annual catalogue, besides the letter and bill heads, envelopes, programmes, cards, and labels required for school use. This variety of work insures instruction in a variety of typesetting.

The profession of nursing the sick is to-day attracting women of all ranks. Every young woman should be familiar with the fundamental principles of good nursing, so that she may care for her own health and that of her family. Many a valuable life has been lost for the lack of skillful nursing. All who contemplate míssionary work should be prepared to nurse the sick. In no way cau one bo more sitre of following in the footsteps of Christ than in entering a sick room with a trained hand and a sympathetic heart.
We offer tro courses, nonprofessional and professional. The former is for those who wish merely such instruction as will enable them to care intelligently for the sick in their orrn homes. The latter requires three years' study. During the first two years physiology and the theory of nussing are studied in connection with English studies; during the last year the ontire time must be given to practical work. All the sick of the school are cared for in the Everts ward by the senior nurses, and they do district nursing among the poor and private nursing in the families of the rich. Certificates are given on the completion of the course. Every graduate must possess a good moral character, must pass satisfactorily the required examination, and must have acquired skill in practical work. It would be possible for a person of grod education to complete the course in two years by giving to it her ontire time. Atlanta physicians constantly employ and recommerid our graduates, who receive very high wages. Students under 17 years of age can not enter this course.

Tougaloo University, Tougaloo, Miss.
[Statement of Rev. Frant G. Woodworth, presidćnt.]
The central idea of the instruction is edncational-the development of manual skill as part of the education of the whole person. Incidentally there is the impartation of such skill as will enable the student readily to use tools in actual work and give fitness for further technical instruction. The manual work is obligatory, forming a part of the regular curriculum as much as does arithmetic or grammar.

The chief support of its teachers is from the Slater fund. The tuition charge is $\$ 1$ per month for tho full school work. No special charge is made for the industries.
There havo been in the past year 110 pupils in woodworking and forging, 30 in mechanical drawing, 100 in needlework and cookery. The ages average about 18. So far as it is possible, the methods used are those of the better manual-training schools, liko the Rindge School in Cambridge, St. Louis schools, and the Pratt Institate. The time spent in the industrial period is ninety minutes per day. In all branches the endeavor is made so to teach that the pupils shall have ability to teach others.
In addition to the strictly manual training class work there is opportunity given for practice on finished work, and very creditable cabinet and iron work liave been produced. A somerwhat uniquo feature in the girls' industries is the practical housekeeping in the girls' industrial cottage, a most admarably arranged and equipped building, in which eight girlsat a time can keep house for two months, Jearning all the practical details of household economy under the direction of a competent teacher. As a preparation for that home making which is so essential a part of the training of the colored people, if they are to rise at all, this cottago work is of incalculable value.
The material equipment includes a building 40 by 26 feet for the woodwork and drawing, with an addition 26 by 20 for the ironwork. There are full sets of admirably made benches and carpentry tools for 24 pupile, 4 forges, and full drawing outfits for 20 . The girls' industries are tanght in a specially constructed "induetrial cottage," of three stories, 30 feet square, having sewing and cooking class rooms thoroughly furnished, and the rooms for the housekeeping above mentioned. This building has been pronounced the most complete of its kind in the South.

The value of the industrial plant ased for purely educational purposes is $\$ 7,000$. Wo have also painting, steam sawing, farming, market gardening, nurse training, which I do not include in this estimate. The annual expense of maintenance is $\$ 4,000$.

The effort to coordinate the manual training with other studics has been attended with no small difficulty, but our observation has been that the hand work helps the bookwork. The habits which mnst be developed in successful manual work have ab directly helpful effect on studies in gencral. It is found that industrial education becomes an inducement to lengthened school life. Wo have knowledge of many students who are making use of the industrial training received here as carpenters, blacksmithe, mill hands, mechanics. Some of them have been able to receive large wages through the acquired skill. Not a fow of the girls are seamstresses and dressmakers, and many are making good homes as the result of the impetus and training given.

After nine years of observation and practical experiment, it is my opinion that the most valuable form of industrial education for the colored people is a combination of strictly manual training with the trade school. In each of the large schools all should have the opportunity for the best manual training and this should be obligatory, so that all may have the discipline of it and also the gain that comes from familiarity with tool manipulation. Then those who have special aptitude should have the opportunity for development through thorough technical training. In this way the largest material lift can be given to the race.

Claflin University, Orangeburg, S. C.
[From catalogue of 1893-94.]

## DEPARTMENT OF MANUAL TRAINING.

The advantages arising from the systematic training of the hand and the teaching of trades and industries, in connection with courses of literary culture, are so patent, that no excuse or argument is needed to convince the thoughtful mind of the wisdom of the undertaking.

Over $\$ 80,000$ have been spent in supplying outfits for the varions industrial departments of Claflin University, and it is the purpose of the management to make it a first-class mannal training school.

The object of the industrial feature is to give instruction in manual training and to teach trades in connection with literary studies.
In order to provide for manual training, there is no effort to lower the literary standard of the university, to consume time that properly belongs to that department, or to detract in any way from the broadest and most thorough literary culture. * * *
Experience has demonstrated that the subjects taught in the literary departments receive a new inspiration from the practical applications which are made of them in the manual training departments. For instance, there is scarcely a principle of mathematics that is not found usoful and helpful in the mechanical departments. Students soon learn that mathematics is as essential to them as the tools in their hands, and, consequently, a subject that has seemed abstract and uninteresting suddenly becomes one of the most entertaining in the curriculum.

Claflin University has in successful operation the following manual training departments:

Students.
Agriculture.......................................................................................... 55

Mechanical drawing ............................................................................. 170


Iron working ....................................................................................... . . . 37
House painting, etc................................................................................... 89

Dressmaking ...................................................................................... 33
Sewing ................................................................................................. . . . . . 118

Laundering ...... .................................................................................... . . . . 33
Millinery ...... ..... .... . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . ................. . 21

Domestic economy ................................................................................................... 12
Typesetting and printing ............................................................................ 4

## ARCHITECTURAL AND MECHANICAL DRAWING.

Students are tanght to work out their lessons on paper, and when the object they desire to make is clearly defined in their minds, the tools and material are placed at their command for an actual verification of the principles they have learned.

COERBE OF BTUDY.
Selection and uses of drawing instruments. The use of the scale as applied to drawing. Simple geometric ronstructions involving the use of instruments, detinitions, etr. Lertures on the history and development of architecture. Free-hand drawing of scrolls, irregular objects, etc. Drawing from models to a srale. Sections and interserting drawings. Drawing plans and elevations for wood, brick, or stone construction and foundations. Principles of designing. Original designing,
plans, elevations, etc. Detail or working drawings. Exercises in writing specifications, contracts, etc. Lectures on buildings and superintendence. Lectures on historic styles of architecture and ornamentation. Lectures on ventilation. Practice in determining the strength of materials.

SCHOOL OF WOOD WORKING.

This department is furnished with benches, tools, etc., for classes of 20. Lessons are given in mechanical drawing. Students are taught the names and use of tools and how to keep them in order.
A variety of actual work is performed, such as building cottages, shops, repairing buildings, making and repairing furniture, ornamenting buildings and campus, building and repairing fences, making and repairing agricultural implements, etc.
The following is the course of study pursued: (1) Exercises in methods of holding and using try-square, gauge, dividers, bevel, saw, mallet, chisel, and plane. (2) Elementary framework: Cross lap joint, tenon and mortise joint, end T. and M. frame, and blind T. and M. brace frame. (3) Lathework: Cylinders, spindles, handles, rosettes, ełc. (4) Advanced framework: Miter lap joint, dovetail joint, lap dovetail joint, methods of scarfing, keyed joints, double dovetail puzzle, etc. (5) Small articles, embracing framework, nail driving, turning, scroll sawing, and miscellaneous work. (6) Cabinetwork: Sawing, tarning, framing, wood carving, paneling, brackets, plain bedsteads, washstands, tables, ete.

## WOOD WORKING EY MACHINERY.

This department is supplied with 280 -horsepower boilers, an engine, 2 planers, ripsaw, jig saw, cut-off saw, variety machine, 3 turning lathes, boring and mortising machine, tenoning machine, band saw, carving machine, shaping machine, paneling machine, sash machine, etc. Students are taught how to operate the machines and how to keep them in order. With these facilities the university has been enabled to do its own building, repairing, and to manufacture its own furniture.
During the past year the industrial departments have put up a 4 -story brick annex to the main building, 63 by 80 feet.

## SCHOOL OF IRON WORKING.

This department is fitted up with 8 forges, driven by a steam fan, and with the necessary outfit of tools, vises, drills, etc. The course of instruction includes the care and management of the fire and lessons in heating, holding, and striking iron; drawing, upsetting, shaping, bending, punching, cutting, breaking, welding, hardening, and tempering steel.

Considerable attention is given to repairing. Many shoptools have been made, such as tongs̄, hammers, swedges, fullers, punches, chisels, flatters, cleavers, hardies, headers, bending forks, tire sets, drawjacks, traverse wheels, wrenches, bevel squares, try-squares, screw-drivers, pincers, clinch knives, toe knives, shoe hammers, masons' hammers, calipers, ete. Special attention is given to filing and finishing, and there are many specimens of work on exhibition that do credit to the department.
Thic department is supplied with a planer, power drill, turning lathe, and a 20 -horsepower engine.

SCHOOL OF MILLING.
A first-class mill has been furnished, and students are taught ho: r to grind corn into meal, grits, and hominy. Feed is also ground for the stock.

## RRICKLAYING.

Students are first taught the names and uses of the tools; then follow lessons in the kinds of materials and their uses, mixing mortar, cement, etc.
Practice is given in laying walls, corners, window and door caps, arches, flues, chimneys, cornices, etc.

Daring the early part of the course good work only is sought, but later good work and speed are insisted upon.

Instruction is also given in reading plans and specifications. Students who wish to stand at the head of their business will join a class in architectural drawing.
Two large boilers were set, several foundations for buildings put down, forges and flues built, and a 4 -story brick building, 60 by 83 feet, was put up last jear.

## PLASTERING.

Special instruction is given in lathing, plastering, whiterwashing, and frescoing. Samples of this work are upon exhibition at the university.

This department is attractive, and many students have learned enough in ono year to command good wages during their vacation.

## STEAM LAUNDRY.

A commodious 2 -story building has been furnished with the most improved laundry machinery, the entire outfit costing $\$ 4,000$. The object of this enterprise is to give instruction in all that pertains to good laundering, so that young ladies may lave the advantage of their training in their comes or may follow it as a business. The work of the university is done here, and girls of moderate means may carn a part of their necessary oxpenses by doing extra work.

## SCHOOL OF PRINTING.

This department has been under the management of an experienced printer. The office is furnished with two good presses, paper cutter, and a good supply of type and other necessary furniture. During the session of the school a small paper is published four days in the week, known as The Clatlin Daily.

## hoUse painting.

Lessons are given in colors and materials, and in mixing and applying the same. Instruction is given also in graining and staining woods; in lettering and sign painting; in glazing, and in frescoing. Students become quite accomplished in this department in two years.

## MILLINERY.

This is oue of the most attractive and successful departments. Advanced stndents only are received. They are taught to bleach and sew straw, and shape and trim bats and bonnets. The department is under the direction of a lady of large experience in the business.

## SCHOOL OF COOKLXG.

Classes in cooking are taught both at the university and at the Simpson Home. Tho departments are furnished with the necessary implements and materials to do most kinds of plain cooking. We have adopted in part the methods used in the public schools of Washington and in part the methods taught at Chautauqua.

Course of study.-Cooking: Definition, purposes, processes, and incidental and general information respecting materials, sources, processes of preparing and combination, care and selection of materials, care of ranges, fires, and cooking utensils. Processes: Boiling, stewing, broiling, baking, frying, and preserving. Boiling: Meats, vegetables, cereals, doughs, and liquids. Stewing: Meats, re, eetables, and fruits. Broiling: Steaks, chops, fish, and oysters. Baking: Breacl, meats, cake, pies, puddings, and vegetables. Frying: Fish, oysters, batters, and cakes. Preserving: By sugar, vinegar, and salt.

Cooking for the sick.-Meat soups and broths, cooling beverages, cereal soups and broths, dainty dishes and relishes.

## NURSE TRAINING.

This department undertakes to give such instruction as shall enable students to take intelligent care of themselves and the sick.

## Nerse-Trainina Courges.

## MONPZORESSIONAL.

First year.-Study as to care of sick room: Ventilation, temperature, furnishings, disinfectants in infectious and contagious diseases. Philosophy of hot and coldwater baths and how to alminister them in all diseases. Study of applications: Cnpping, enemata, sippositories, ponltices, counterirritants, lotions to telieve paiv. Hassage and Swedish movements. Instriction in fever nursing: Typhoil, walarial, scarlet, etc. ; smallpox, measles, mumps, diphtheria.

Sccond year--Method of ascertaining and noting pulse, tempo ature, and respiration. Administrations of anesthetics. Surgical nursing. Application of bandages
and splints. Preparation and method of serving food. Preventing and dressing of bed sores, and arranging positions. Method of stopping hemorrhage. What to do in omergencies: Drowning, sunstroke, struck by lightning, burns, bites, bleedings.

## PROFESSIONAL.

Third year.-To complete a course preparatory to professional nursing the following additional year of study is required. Special anatomy and a thorough courso in midwifery, chemistry, materia medica, therapeutics, toxicology, theory of poisons.

## PLAIN SEWING.

All of the girls not members of the dressmaking classes are required to take plain sewing. So far as we are able we provide them with material for the making of useful articles, but many are kept upon sample or practice work.

## SIMPSON INDUSTRTAL HOME.

Another important industrial feature is the Simpson Memorial Home, established by the ladies of Philadelphia, in memory of the late Bishop Matthew Simpson, oue of the bishops of the Methodist Episcopal Church. A neat two-and-a-half story building, containing twelve rooms, has been erected and furnished throughout. The home is under the care of a matron, who gives daily instruction in the art of domestic economy. Several girls reside permanently in the home, and have the constant benefits of the same; others are sent by classes from the university for instruction in cutting, sewing, and ornamental work.

COUSSS OF STUDY in the simpson industrial home.
First term: Plain cooking, plain needlework, laundry work, general housekeeping, good manners.
Second term: Bread making, cutting and sewing, laundry work, care of tho sick; hygiene-lectures. Pastry cooking, dressmaking, fine laundering, hygiene, and sanitary regulations. Care of rooms, general housework, and work in the dining halls required every day.

## DEPARTMENT OF AGRIEULTURE,

The School of Agriculture was established in 1872, and is sustained by a portion of the interest accruing from the land-scrip fund, the Morrill fund, and a small appropriation trom the State of South Carolina. The farm consists of about 120 acres of arable land and about 30 acres of pasture land. The farm maintains 7 head of horses and mnles, 7 head of Holstein-Friesian and 7 head half Jersey cattle, 20 head logs, and some coops of choice fowls. The farm is under excellent cultivation, as its products will indicate.

The crop last year was as follows: 1,000 bushels of corn, 1,200 bushels of sweet potatees, 300 bushels of oats, 50 bushels of clay pease, 3 bales cotton, 1,003 gallons of milk, and vegetables and eggs.

## HORTICULTURE.

This is a new department. Twelve acres have been planted in Irish potafoes, sweet corn, turnips, collards, cabbage, tomatoes, squash, melons, beans, okra, asparagus, eggplant, cucumbers, etc.

These departments furnish employment and experience to students, and supply, at the market prices, provisions fresh and crisp for the boarding department. We hope to place these departinents among the most attractive in the institution.

Bishop College, Marshall, Tex.
[Statement of F. N. Goble, superintendent of the industrial depariment.]
Our idea in such instruction is educational, but with a direct view to actual work. We keep these as distinct as possible. The regular manual-training work is divided up as in most such schools, and is olligatory on all students, as all other classes are. The trade work is for those who wish to learn a trade, and they put extra time on the special trade they may select.
The work is in direct connection with the regular school work, and no special or extra charge is made for it.
The principal.work is in the academy, but begins in the grammar school and runs on up into the college work, though of a different character in each. The work is modeled after the best schools of the North, and is quite similar in many respects. The age of the pupils will probably be older in the same grades than in the North.

We all feel that the effects of the industrial work show themselves in all the other school work in increasing exactness, dexterity of hand, neatness, and general good work. The department has not been in operation long enough to give any definite answer as to the occupation of pupils. One effect of the printing-office aud the training the students have received there is that the standard of printing in the colored oftices of the State has been raised.

## VII.-MISCELLANEOUS INSTITUTIONS.

Pratt Institute, Brooklyn, N. Y.

[From the catalogue of 1895-96.]
Pratt Institute was established after many years of investigation on the part of its founder, Mr. Charles Pratt, of Brooklyn. Its object is to promote manual and industrial education, as well as cultivation in literature, science, and art; to inculcate liabits of industry and thrift, and to foster all that makes for right living and good citizenship.
It is now generally recognized that manual training is an important and necessary adjunct to the education of the schools, and that mind and eye and hand must together be trained in order to secure symmetrical development. Manual training aims at the broadest, most liberal education. While developing and strengthening the physical powers, it also renders more active and acute the intellectual faculties, thus enabling the pupil to acquire with greater readiness and thoroughness and to use more advantageously the academic education that here goes hand in hand with the manual.

But the need of manual training as a developing power is not greater than that of industrial education,-such education and training in the application of knowledge as will give a more complete mastery of life, whether in domestic, business, or professional pursuits.

Accordingly, the institute seeks to provide facilities by which persons wishing to engage in educational, artistic, scientific, domestic, commercial, mechanical, or allied pursuits may lay the foundation of a thorough knowledge, theoretical and practical, or may perfect themselves in those occupations in which they are already engaged.

The institute is based upon an appreciation of the dignity as well as the value of intelligent handicraft and skilled manual labor. It endeavors to give opportunities for symmetrical and harmonious education; to establish a system of instruction whereby habits of thrift may be inculcated; to develop those qualities which produce a spirit of self-reliance, and to teach that personal character is of greater consequence than material productions. Its purpose is to aid those who are willing to aid themselves. Its classes, workshop, library, reading room, and musemn are for this purpose, and while tuition fees are required, yet it is the endeavor to make possible, by some means consistent with self-helpfulness and self-respect, the admission of every worthy applicant.

In accordance with these principles, the work of the institute is prosecuted upon several lines, with four distinct aims in view :
(1) Educational, pure and simple; the purpose being the harmonious development of the facnlties, as in the work of the high school.
(2) Normal, the ultimate aim being the preparation of the stndent to become a teacher. Normal training is at present given in the department of fine arts; in the department of domestic art; in the department of domestic science; in the department of science and technology, and in the department of kindergartens.
(3) Technical, or special training to secure practical skill in the various branches of industrial and domestic art, the handicrafts, the applied sciences, and the mechanical trades.
(4) Supplementary and special, intended for the benefit of those who wish to supplement the training of school or college by attention to special subjects conducing to more intelligent direction of domestic, financial, social, or philanthropical interests.

The institute is provided with a liberal endowment, which enables it to make merely nominal charges for tuition, and, at the same time, to secure the best talent and facilities for the accomplishment of its aim and purpose. All receipts from tuition and other sources are used for the maintenance and advancement of its work.

## HIGH SCHOOL.

The high school of Pratt Institute aims, as far as is possible in the time given, to fit boys and girls for an industrious and nsefal life, whether the graduate begin life work immediately or after more advanced study. In the words of its foander, Charles Pratt, "the idea of the school is not to teach any trade, but to educate the prpils to work patiently, systematically, and constantly with the hand, eye, and

It is not expected that only pupils of peculiar mechanieal or artistic tastes will undertake the work of the school; the course is planned to develop that culture, information, and character distinguishing the best citizenship. To this end, a thorough course in the usual academic subjects is supplemented by art studies and manual training. The technical studies of the course are given for their educative power.

Such students as may be able to continue systematic instruction beyond the course of the high school are encouraged to enter other departments of the institute or to enter college.

Subject to the approval of the principal, pupils intending to enter college may select such work as is required for admission to the college they desire to enter.

The equipment to carry out the designs of the course is thoroughly complete, as permitted by the organization of the high school as an integral part of Pratt Institute. A brick building with three stories and basement, sonth of and adjoining the main brilding on Ryerson street, has been erected for the especial use of the school. The academic slasses recite here, and in the basement are a gymnasium, lockers, and bathrooms. The experimental and theoretical work of the liatural sciences and the manual work for boys are carried on in the laboratories and workshops of the department of science and technology; the manual work for girls, in the departments of domestic art and of domestic science; and the drawing, in the department of fine arts.

The institute library is directly across the street from the high-school building, and supplies the high-school reading room with special collections of books for reference as needed by various classes. The museum of the institute maintains permanent art and industrial collections in the school, besides lending material for classroom use.

The cultivation of an appreciation of good art is sought throughout the whole course of study. Contributing to this result, a collection of over four hundred framed pictures is hung upon the walls of the high-school building. It comprises a permanent loan of the Century Company and photographic reproductions of art works, besides paintings lent by friends of the school.
The expenses of the school for tuition are $\$ 45$, payable $\$ 15$ each term. The tuition for special classes, open only to members of Pratt Institute, is $\$ 3$ per term for each class. In addition to tuition fees, students are required to provide their own books, drawing instruments and materials, clothing for use in shops, and, in the case of girls, most of the materials used in the work in sewing, millinery, and dressmaking. All tools and materials required for work in the shops are furnished by the school.

## Course of Instruction.

First year.-Language: Composition; English classics; Latin, French, or German. History: Ancient. Mathematics: Algebra. Science: Physical geography. Drawing: Free-hand and instrumental working drawings; free-hand perspective; cast drawing; illustrative drawing. Manual work: For boys, bench work in wood; for girls, sewing. Music and voice culture. Physical culture.

Second year.-Language: Rhetorical analysis; English classics; Latin, French, or German. History: English and general. Mathematics: Plane and solid geometry. Science: Physiology and botany. Drawing: Instrumental drawing, cast drawing, historic ornament, sketching in pencil, free-hand, and pen and ink; illustrative drawing. Manual work: For boys, wood turning, pattern making, foundry molding; for girls, dressmaking, hygiene and home nursing. Music and vocal culture. Physical culture.

Third year.-Language: English literature; essays; Latin, French, or German. History: American. Science: Physics, with laboratory practice. Mathematics: Trigonometry and higher algebra, or business arithmetic and accounts. Drawing: Free-hand and instrumental drawing; charcoal drawing design; water color; sketching. Manual work: For boys, forging; for girls, millinery. Music: Chorus singing. Physical culture.

Fourth year.-Langnage: English literature, debating, public speaking; Latin, French, or German. History: Political. Civics: Political economy. Mathematics: Mechanism, steam, strength of materials. Science: Chemistry, with laboratory practice, home sanitation. Drawing: Free-hand and instramental drawing; charcoal drawing from the antique; design; water color; sketching. Manual work: For boys, machine shop; for girls, cookery, dressmaking. Music: Chorus singing. Physical culture.

Drawing and Art.
The drawing of the high school is threefold in character-constructive, representative, and decorative. The work is both free-hand and instrumental, the two being carried forward in parallel lines throughont the entire course. The course includes-
Constructive dravoings. - Work relating to the facts of form, namely, free-hand work-
ing drawings, instrumental working drawings, geometric problems, surface developments, intersection of solids, and all drawing relating to machine construction.

Representative drawing.-Work relating to the appearance of form, namely, freehand perspective drawing, outline and light and shade from cast, pencil and pen-and-ink sketching, and perspective drawing in color.

Decorative drawing.-Work relating to the decoration of form, namely, elementary design, historic ornament, decorative design in color, and clay modeling of ornament.

Illustrated art lectures are given regularly cach year and an effort made to familiarize the student with the best in architecture, sculpture, and painting, as well as to surround him with influences likely to develop the love for the beautiful.

Manual Work for Boys.
In the educational work of the high school, the manual exercises stand in equal regard with the regular academic studies. Their office is not to turn the stadent asido from intellectual studies, but to reenforce them; to prepare not for any particular mechanical pursuit, but for the common activities of life. The discipline of care, patience, judgment, promptness, celerity, and skill is sought for in this work.

Tho work for boys, which is under the direction of the department of science and technology, is given below.

To carry out this work, the department is equipped with a series of shops and laboratories, which are supplied with every appliance that can in any way enlarge the scope or promote the efficiency of the instruction.

The exercises of the bench-work course are designed to give practice in the use of tho principal woodworking tools-the saws, the plane, the chisel. By use of the measuring tools, the pupil is led to see the necessity of laying out work with care in order to secure accurate results. After this, practice in joinery is taken up; at first with simple examples, and then, as the pupil becomes more skillful, leading on to more complicated forms and more difficult constructions.

After the work at the bench, operations in wood turning are pursued. No line of shopwork affords so great an opportunity to develop the appreciation of form in design as does wrood turning. The free outline of its projects offers constant illustration of the subtile qualitics of curves, and overy oxercise affords an opportunity of presenting a model of good proportions and grace of form.

Work in pattern making follows the practice in turning; the making of patterns requires operations both with the bench tools and in turning, and involves very exacting requirements of care and forethought. With his pattorns already prepared, tho prupil is introduced to the fonndry, and there practices the operations of molding in sand.

The metiods and applications of plaster casting in the arts are also explained at this time, and duplicates of clay and other originals are obtained by the students.
Next comes forging. Of all the shopwork in the school course, none is more beneficial in its effect upon the character of the pupil than this practice at the forgo. In other kinds of work there is time for deliberation, but leere one must "strike while tho iron is hot," must think quickly and act quickly.
The exercises embrace a comprehensive course in drawing, bending, and welding different forms in iron. They end with the forging and tempering of a set of steel lathe tools, to be used in the shopwork of the later classes. The coarse is generally finished by the construction of some simple ornamental pieces, which serve to indicate tho possibilities of wrought iron in this direction and to emphasize right principles of design.
The last shop entered is the machine shop.
Tho bench-work course comprises chipping, surface filing, straight, angalar, and round fitting, and the making of calipers, try-squares, and inside and ontside gauges, in sheet steel.
The first portion of the machine-tool course gives practice in plain and taper turning and fitting, serew cutting, etc. After this come exercises introdacing varions operations on the different machines, and finally a set of taps, twist drills, and reamers is made and finished.
Practice in these, the most exacting of all mechanical operations, enforces methouls of patient accuracy, and does mnch to develop the power of persistent, carefal application. In addition to this, the work with the power tools affords an insight into the principles governing the action of machines, and an acquaintance with numerous examples of mechanical device in accomplishing varions onds.

## Maxtal Wome for Gibls.

The subjects aro cho en to afford the girls of the high school a training in the expression of thought and an exercise of the executive faculties similar to that obtained by the boys in wood and metal working, as well as to prepare for more
intelligent administration of tho home. They compriso cooking, sewing, dressmaking, and millinery.
These last three branches, which are closely related to each other and also to the course in instrumental and free-hand drawing, are under the direction of the department of domestic arts. A room, has been especially equipped for tho classes, with everything which can inspire the student to do good work. The courses are based upon the same lines as those parsued by the special classes of the department, but are somewhat modified in order to increase their educational value and to bring them within the limited time allowed.

The courses in sewing, dressmaking, and millinery are arranged to wake clear the fundamental principles of these arts, and to lead the students to appreciate the necessity of forethought, design, accuracy, and thoroughness in all good work.

The course in sewing occupies about four hours each weok. Practice is given in all important varieties of hand sewing upon small pieces of cloth, muslin, cashmere, etc., until a reasonable degree of proficiency is attained. During this time the student applies the knowledge gained to measuring, cutting, and folding squares, oblongs, triangles, hems, square corners, mitered corners, etc. Tho nature and manufacture of materials used in the work are studied and are illustrated by specimens from the museum; and the management of different kinds of seming machines is taught. Attention is also given to the position of the body and the care of the eyes while sewing. Considerable time is devoted to teaching mending and darning, with practice upon articles of clothing brought from home by the papils.

The pupils take measurements of each other, in order to learn cutting and fittiag of skirts, and mako simple garments, using both machine and hand sewing.
Throughout the last term of tho first year nearly two hours each week are dovoted to making free-liand drawings and sketches of hats and dresses, in preparation for the courses in dressmaking and millinery which are taken up in the following two jears. This study, in connection with the general course in drawing parsued in the art department, leads the pupil to appreciate good form and proportion, and educates the tasto in dress.
In the course of dressmaking the students are first tauglit to take measurements of the figure and to draft ekirts and waists. Here, again, they apply their knowledge of mathematics and instrumental drawing. When the student can make correct drafts for all figures, she makes for herself a simple dress of cotton finbric, To assist her in a proper selection of material, the teacher shows to the ciass samples of dress materials, explaining their-suitability for different uses. A talk upon color and form, and their relations to dress, is also gîven.
Four hours each week during the first and second terms of the third jear are devoted to a stady of the principles of making and trimming hats. Hero the laws of form, proportion, and color must be observed. The pupils practice trimming upon straw and felt hats, using colored cotton flannel, sateen, and cheeso cloth, in place of velvet, ribbon, crape, etc. These matcrials they purchase themselves, with as much care in regard to the color as if they were to be worn. When the elementary principles of millinery are understood, each pupil selects materials and makes for herself a finished hat. A house dress from an original design by the pupil is made, a thorongh preparation for this final projecthaving been gained by the previors training in sewing, dressmaking, millinery, instrumental and free-hand drawing, and olementary design.

The instruetion in cookery is based upon laboratory methods, and is both theoretical and practical. The chemical, physiological, and economic consideration of foods leading to the science of nutrition forms a coarse parallel with instruction and individual practice in culinary treatment. The calculation of dietaries affording a sufficiency of nutriment to meet the body's needs, as estimated by standard authorities, is one form of written work required. The practical work includes simplo iuvalid cookery, and the preparation of cereals, vegetalles, ments, soups, salads, fancy desserts, cakes, frozen creams, a breakfast, a lanoheon, and a diuuer.

DEPARTMENT OF SCIENCE AND TECHNOLOGY.
This department affords instruction in various scientific and technical subjects, as well as a practical training for the principal mechanical trades.

The instrnction in manual training included in the high-school course is also nuder the direction of this department. To carry out this woris the department is equipped with a series of shops and laboratories, which are supplied with every appliance that can in any way further the purpose and increase the efficiency of the instruction.

Although the chief aim of the various courses is to afford instruction of clirect value in industrial and technical pursuits, certain of the courses also serve to continne the education of those whose school trainiag has been necessarily limited.

## Normal Class in Manual Training.

This course has been organized in response to the large number of applications received for trained teachers of manual training in the upper grammar and highschool grades.

The work of the course occupies the entire school session from $9 \mathrm{a} . \mathrm{m}$. to $5 \mathrm{p} . \mathrm{m}$. upon five days of each week, and requires in addition a considerable amount of time devoted to study.

A tlinrough study of the practical details of manual training is obtained by a large amount of practice in each of the shops, and by special instruction in regard to methods of presentation. The problem of equipment is considered at some length.

The cost of tools and fixtures is carefully compiled, and plans for different conditions of school work embodying all details of construction and expense are prepared by the class.

The courses of the most prominent manual training schools of the country are illustrated by drawings and models, and the character and sequence of the exercises are analyzed. The history and present condition of manual training work in the United States and European countries is studied, and considerable reference reading is required.

Among the other subjects considered are: A history of tool development from the rude implements of the Stone age to the highly specialized forms of to-day; principles of teaching as applied to manual training instruction; coordination of studies; mechanical and free-hand drawing. Systematic instruction in physcology and the history of education is afforded throughout the course.

For students who have had considerable experience in practical work and who wish to give special attention to one particular branch a course of one year is arranged.

Drawing and Machine Design.
The course aims primarily to furnish a thorough training in mechanical drafting, but is also designed to afford a sound equipment to all desiring a knowledge of machine construction. The work occupies the entire school day, the mornings being devoted to drawing and the afternoons to mathematics, technical studies, and shopwork.

The course in drawing covers working drawings, projection, development and intersection of surfaces, machine and engine details, problems in mechanism, assembly and shop drawings, and finishes with problemsin construction and machine design. Besides the above, students are required to take a considerable amount of work in free-hand drawing.

The instruction in mechanism, theory of steam engine, and strength of materials is planned to give a sound knowledge of the principles underlying machine construction.

The class room instruction in the last two subjects is supplemented by a large amount of practical experiment in the steam and testing laboratories. In order to deal most efficiently with the above subjects, instruction in algebra and geometry is given throughout the two years, and a course in elementary physice, including the subjects of mechanics and heat, is given in the first year.

Practice in shopwork occupies the latter part of the afternoons, and comprises a progressive course in joinery, turning, pattern making, molding, forging, and machine work.

A study of the processes of iron and steel production, which serves to prepare the student for the work in strength of materials, is taken during the conrse, and the various branches of the subject are illustrated by visits to the iron and steel plants in the vicinity.

## Trade Classes.

The day courses in carpentry and machine work prepare beginners for practical work at the trades.
These courses are a modern silbstitute for the old apprenticeship system. During the school training the entire attention is given to the development of the learner, and the large waste of time inevitable under the old system is avoided. The school does not aim to tarn out journeymen mechanics, but to afford a training that further practice in active work will perfect.
The hours of session are from $9 \mathrm{a} . \mathrm{m}$. to 5 p . m. for five days each week, giving practice for 35 hours per week.
The evening courses of the department afford to the students in these classes valuable opportunities to study the mathematical and theoretical subjects bearing apon the trades.

The course is oue year in length. Practice is first given in the use of saws, planes, chisels, and laying out tools, and is followed by a thorough course in joint work.

After this practice a model of a frame house is made, and the different methods of framing are illustrated. Partitions are set and bridged, and floors laid. Door aud window frames are made and placed in position, and the house is sheathed, clapboarded, shingled, and corniced. Finally, inside trimming is taken up; doors, sashes, and shutters are made and hung; wainscoting, baseboards, and stairs built, etc.
Systematic instruction in drawing is given during the course, and constant practice in laying out work from plans is obtained.

## MACHINE WORK.

This course is one year in length. Bevel, surface, and keyway chipping are first practiced, after which the class is put upon straight surface filing until ability to file straight and true is obtained. This is followed by straight, corner, round, and dovetail fitting, free-hand filing, filing to templet, making calipers, square, bevel, and gauge in sheet steel, use of taps and dies, and practice in scraping.
The tool work gives practice on the engine lathe in plane and taper turning, chucking, and boring, outside and inside screw cutting and fitting; after this, exercises are introduced in hand turning, followed by varied operations on the planing machine, shaper, drill, drilling machine, and grinding machine. The theory of cutting tools is analyzed and the construction of the different machines explained. After the above course is completed, constructive pieces are gradually introdueed, and throughout the remainder of the course the student is constantly employed upon examples of practical work.

Systematio practice in forging, ending with making and tempering of steel tools, as well as instruction in making working drawings, is given in this course.

PLUMBING AND FRESCO PAINTING.
With the completion of the new trades school building for the ensuing year, it is proposed to open day classes in plumbing and fresco painting, provided a sufficient number of applications are received.

## Evening Trade Classes.

The evening classes aim, principally, to broaden and extend the training of those already engaged at the trades.

Carefully arranged courses of practical work are provided, in which the reason of each step is clearly explained. Frequent talks on methods and materials are given throughout the courses. Under such a system time is economized to the utmost extent and progress is necessarily rapid.

Applicants must be between 16 and 25 years of age. All courses are at least six months in length, and no applicants will be admitted later than two weeks after the beginning of the term. All tools and materials are furnished without extra charge.

The hours of session for evening classes are from 7.30 to 9.30 on Monday, Wednesday, and Friday of each week.

CARPENTRY.
The plan of work is similar to that described under the day class, but is greatly abridged in amount and variety. About one-half of the course is devoted to practice in the use of tools and to joinery, and the remainder to house construction.

## MACEINE WORK.

The course follows the same general lines as those laid down for the day classes, but is necessarily limited to practice work. Construction is not attempted. The conrse requires two years for its completion. One term is spent upon bench work and three terms upon the machine tools.

## PLUMERNG.

The Journeyman Plumbers' Association of Brooklyn cooperates in the direction of these classes. At the end of a two-years' conrse a committee of the association examines the members in regard to both manual skill and knowledge of trade methods, and awards certificates to those showing satisfactory proficiency, which certificates, in case of the holder afterwards applying for admission to the association, are accepted in place of the examination of like character otherwise required.

The plumbing shop is equipped for about 50 pupils, each member having a gas furnace for melting solder, and a drawer holding a set of tools. Instruction is both practical and theoretical, lectures being given from 8.30 to 9.30 every Wednesday evening.

The manual work includes the use of tools; preparing wiping cloths; making soil; tinning soldering iron, brass, iron, load, and tin; making solder; soldering seams;
making cup joint, overcast joint, straight-wiped joint, flange joint, and branch joint; working sheet lead into bends, traps, service boxes, and safes; lining tanks; calking iron pipe joints, and bending with sand and kinking irons.

The lectures deal with the material used in the trade; the proper arrangement of drain, soil, and waste pipes; trapping and ventilating the same; supply pipes; boilers; tanks; fixtures, and pumps. Charts and diagrams are freely used in tho instruction, and the examples of defective plambing illustrated in the trade journals are frequently studied. Special pains are taken to make clear the principles underlying the plumbing rules of the city of Brooklyn.

The Master Painters' Association of Brooklyn cooperates in the direction of the painting classes. At the end of the courss a committee of the association examines the work of the students and awards certificates to those showing satisfactory proficiency.

The equipment for the house-painting class consists of screens containing doors, windows, and wainscoting; and for the fresco workers, of booths, plastered on sides and ceiling, with varied forms of cove and cornice. In addition to these, two largo rooms containing facilities for drawing from the cast aro provided for the advanced work in fresco painting.

House painting. -The house-painting course includes both elementary and advanced classes, the former having practice in the preparation of surfaces, mixing paints, and plain painting on wood, brick, and plaster surfáces; and the latter in varnishing and hard-wood polishing, polish white, gilding, lining, graining, and paper hanging.

Lectures are given on the harmony of colors, mixing colors, proportion of oils and driers, and the various materials used in painting.

Sign painling.-The instruction includes proparation of surfaces, spacing, and plain lettering, followed by ornamental lettering in gold and colors, and pajnting on glass and metal.

Fresco painting. -This course extends over three years. Its purpose is not only to afford training in tho technical practice of the trade, but also to provide for the thorough study of fresco design.
In the first yoar instruction is given in preparing walls and ceilings in kalsomine, in lining, laying out work, making and applying pounce and stencil, and putting on flat and shaded ornaments.
The next two jears are devoted to the study of design, and include practice in freehand drawing, drawing and painting relief ornament, study of historic ornament, and composition of ornament for wall and ceiling decoration.

Candidates for the advanced work who have not taken the elementary conrse are admitted only on approval of some member of the Master Painters' Association, or aftor giving satisfactory proof of proficiency in plain fresco painting.

## DEPARTMENT OF DOMESTEC SCIENCE.

The purpose in the domestic science courses is to afford training and instruction in these special subjects which must bo considered in the daily administration of every home.

To meet the varied needs of students in these lines, conrses affording both theoretical and practical instruction are offered. Large, well-appointed chemical and physical laboratories, attractive kitchens, valuable charts and models, an extensire library, and a rich museum, here constitute an cfficient equipment for theoretical and practical work.

## Lectures.

The work of the normal course is supplemented by a series of loctures, open to the public, given by special investigators in their different fields.

## Normal Cobrse (five days fach week two years).

This course, which requires two years for its completion, aims to meet the increased demand from the secondary schools for teachers thoroughly trained in domestic science.
Iustruction will be given by means of lectares and recitations, supplemented by as much laboratory work as the best methods demand.
Iisst year.-Drawing, German, physics (energy and heat), chemistry (general and qualitative), liology (bactoriology and physiologỳ).
Second year.-Chemistry (quantitative), chemistry of cooking, chemistry of foods nud ealecalation of dietaries, lousehold, science; emergencies, home nursing, and hygieno; public hygiene; origiual work (thesis).

The applied work includes courses in cookery, laundry work, and sewing.
The field-work involves a study of manufacturing processes, Through this real knowledge of commercial methods is acquired a valuable fund of information of practical use.
Psychology and the history of education; together with instruction in normal methods, observation of class work, and practice in teaching, receive due attention throughout the twio years.

In the last term of the second year, a thesis is required of each diploma caudidate, which tests her ability to do original work.
A brief consideration of some of the more conspicnous branches of the normal work will reveal something of its philosophy:
Chemistry and physies.-A trained intelligence being the aim, sulojects contributing alike to training and to teehnical acquirement are fundamental. Following the steps that all properly conducted laboratory work involves, the study of physics and chemistry will develop the daily demanded power to observe, to compare, to conclude. Among the desirable habits formed will be those of system, accuracy, and economy. Aside from this inestimable training of mind and hand, any serious consideration of physiology and of foods requires the technical acquirement that these subjects confer.

The chemistry of cookery and of foods, the stiudy of ferments, of food adulterations and their tests, naturally follow as the resultant of the previous studies.

Bacteriology.-The bearing of bacteriology npon sanitary science renders desirable a scientiticand practical study of this side of biology. Primarily the purpose is to show that cleanliness is a first condition of sanitation.

Gernan.-A reading knowledge of German is necessary for bacteriology, as well as for physiological chemistry, which is an essential feature of a seientific study of food problems;

Householdacience. -The essential principles of house sanitation, household art, and household economy are taught by means of lectures, recitations, laboratory and field work.
The principal laboratery work includes tests for impurities in water, the study of antisepties and disinfectants, the determination of the "flashing point" of oils, and other invextigations bearing directly upon the topics.
The field work comprises the study of sanitary cenditions and appliances and their application in private and other houses.

Emergencies, home nursing, andthygiene.-The aim of these courses is to give a sound, if limited, knowledge of the laws of health, to enable women to care intelligently for sudden illness or accident, and to perform the duties of nurse whero trained service is not employed.

Publio hygiene.-The courses devoted to the consideration of house sanitation and to individual hygiene culminate naturally in the study of problemts concerning the public health or the care of the body politic.
For detailed outlines of these subjects, see Special Courses.
Cookery. -The aim of the work in this direction is to illustrate applied science, physics, ehemistry, aud physiology.

The instruction based apon laboratory methods is bóth theoretical and practical. The chemical, plysiological, and economic consideration of foods forms a courso parallel with the instruction in the culinary treatment.

Occasional papers are required treating of various food ingredients and foods, The composition, sourees, chemical and phjsical tests, microscopic features, food value, and cost are some of the topics discussed. A nntritive, attractive, and varied vill of fare, at a minimum cost, is another form of written work occasionally required.

The elementary practical work includes a course in invalid cookery, the preparation of cereals, vegetables, batters and breads, meats, soups, salads, fancy desserts and cakes, frozen creams, a breakfast, a luncheon, and a dinner. Advanced conrses follow the elementary courses.

Laundry work.-Theoretical and practical instruction is given in the twelre lessons forming the course in laundry work. A study of the principles underlying tho various processes is followed immediately by individual practice in these processes. Soaps, starch, washing flaids, bleaching powders, and bluings are chemically and practically considered. Visits to the manofactories of these articles form a feature of the work. In the practical work every variety of article, from bed linen to the most delicate colored embroidery, is lanndered.
Seving.-The requirements include hand and machine work, the catting and making of several pieces of underwear, and theory and practice in drafting in gown.
While the normal course thas briefly ontlined is designed especially for strdents preparing to teach domestic science, its classes are open to all romen qualified to enter, who desire the preparation thus afforded for the serions duties and the fine art of home keeping.

## Srecial Courses

A fert of the courses already referred to under the normal curriculum are repeated as special courses, some of which offer both day and evening classes.

The evening classes are in all cases reserved for those who are occupied during the day.

HOUSEHOLD SCTENCE.
A course of thirty-six lectures, considering the evolution of the house as well as the essential principles of household art, house sanitation, and household economy, is offered in the terms beginning in September and in January. Following is a brief outline of the course:

Houseiold art.-Architecture, interior decoration, furnishing.
Home sanitation.-Situation of the honse, surroundings, and cellar; removal of wastes; plumhing and care of fixtures; substitutes for water carriage; water supply; ventilation, heating, lighting; sanitary furnishing and general care of the house.

Household economy.-The arrangement of work and furnishings; the care, in detail, of every part of the house; house cleaning; household accounts; mistress and maid; household amenities.

EMERGENCIES, HOME NURSING, AND HYGIENE.
The following course of thirty-six lectures is offered in the terms beginning in September and in January.

The work of bandaging, producing artificial respiration, application of splints, lifting helpless patients, and preparing and applying poultices, is done by the pupil under the personal supervision of the instructor until a reasonable degree of proficiency is attained.
(a) Heart and circulation of the blood. General direction of main arteries. Varions bleedings and ways of arresting them. Immediato treatment of persons fainting, apparently drowned, or otherwise suffocated, or suffering collapse from injury. Immerliate treatment of burns, scalds, wounds, and bruises. Observing and recording pulse, respiration, and temperature. Furnishing, warming, and ventilating the sick room. Bathing, dressing, and administering food and medicines to patients. Practical bandaging, bedmaking, and lifting and propping helpless patients.
(b) Prevention and management of bedsores. Treatment of fevers; bathing, sponging, diet, use of disinfectants. Nursing special diseases and children; immediate treatment of fractures, sprains, unconscionsness, epilepsy, hysteria, poisonous bites, sunstroke, frostbites; poisons and their antidotes. Practical preparation and application of poultices, blisters, and stupes; packs and vapor baths. Carrying the sick and injured.
(c) Hygiene of infancy and childhood; growth, food, and artificial feeding, teething, clothing, exercise, etc. Outlines of physiology and hygiene for adults; care of eyes, ears, skin, digestion, and lungs, illustrated by rough dissection of animal heart, lungs, and eye.
public hygiene.
Tho following course is offerod only in the April term. The principal suljects considered are: The care of streets, sewers, water supply, etc.; precaution against the spread of contagious diseases; quarantine disinfection; the laws, and the reasons for the same, concerning the inspection of milk, butter, meat, etc.; school hygiene.

## COOKERY (DAY AND EVENING CLASSES).

The varied needs of normal, high school, Saturday morning schoolgirls', phrsicians', or nurses', honsekeepers', and maids' classes are met by respertive courses of sturly.

With all these students the economic and other advantages of the Aladdin oven and other modern appliances are denonstrated.
The classes of the regular course (housekeepers') receive two lessons per week.
The certificate of the institute will be awarded to those students who complete to the entire satisfaction of the department the full course of instruction in cookery.
Suturday morniny schoolgirls' class.-The schoolgirls' class, meeting only on Saturday mornings, is designerl for girls from 12 to 16 years of age. The course of study is a graded one, and consists of forty-eight lessons, twelve of which form a course in invalid cookery.
1'hysicians' or nurses' class.-In the physicians' or nurses' class, where the study of nutrition is of first importance, special emphasis is directed to the results of laboratory and lospital investigations bearing upon the natritive value and the digestibility of foods as affected by seemingly unimportant conditions in their preparation.

Housekeepers' olass. - The housekeepers' class is designed for mothers and hous:keepers, many of whom, though without scientific training, nevertheless desire : somewhat deeper study of foods and their preparation than a merely technical ons affords. An outline of the practical work follows:
First course-twenty-four lessons.-Making and care of fire, measuring, dish washin; and care of kitchen, table laying, cereals and vegetables, eggs, soups, marketin:, meats and warmed-over dishes, broiling, roasting, batters, breads, pastry, cake, pucidings, and sauces.
Second course-twenty-four lessons.-Canning, preserving, pickling, souffles anit croquettes, salads and mayonnaise dressing, entrées and sauces, roast game, fanc desserts, frozen creams, a breakfast, a luncheon, a spring dinner, a winter dinner.
Fancy course.-Pupils qualified for advanced work are offered a course in fanccookery. In this class the materials are furnished by the pupils, and the class is limited to eight members.
Chafing-dish course.-A series of demonstration lessons upon the use of the chafin: dish, illustrating the convenience and attractiveness of this method of cookery, is given on consecutive Tuesday afternoons.
Maids' course (Wednesday evenings, one lesson per week).-A condensed coursc, embracing the essential principles of the first and second courses, with instruction.s in table laying and serving, is offered maids who are unable to give the time requircd by the separate courses.
Course of study.-Making and care of fire; measuring; dish washing and caro of kitchen; vegetables, soups, meats, fish, breads (plain and fancy), salads, pudding*, sauces, cake, pastry, desserts.
Camping course.-In this series of ten lessons the limitations as to both food an 1 utensils imposed by camp life are observed as far as possible.

Private lessons.-Private lessons are given to those desiring special instruction. T'o all pupils, except those taking the fancy course or private lesisons, materials are furnished free of charge.

Canning, preserving, and pickling. The essential principles and the best methods $\subset f$ preserving and pickling are taught in a course of six lessons offered twice during tlic fall term.

Marketing lectures.-A series of lectures of value to all housekeepers is given eac? term. How to buy and how to keep meats, fish, green and dry groceries, are tlu topics considered in the course of twenty-four lectures.

FOOD ECONOMICS.
A demand for persons trained as purveyors for public institutions, hospitals, ant schools led to the announcement of a course in food economics, embracing the follo: ing topics:

1. The selection of food material as to quality, food value, and cost. Market… ${ }^{\text {r }}$ and buying by samples.
2. (a) Methods of preparation in the large way and by appropriate apparatit This will include New England kitchen dishes and the use of the Aladdin ov cin an: 1 other modern appliances. (b) The care of food-cold storage, etc.
3. (a) Serving-embodying general dining-room economy, labor-saving appliancca, etc. (b) Field work-visits to public kitchens, manufactories of kitchen and hoti 1 furnishings.

The institate kitchen and lunch room, serving daily between 200 and 300 guests, will provide the lahoratory facilities necessary for the course.
This course is intended for men and women already qualified for responsible po: itions by character and practical experience.

Applicants deficient in a knowledge of the practical details of cookery may fit the selves for this course by entering the regular cookery classes of the department.
The course will cover only three months, and will be repeated each term, beginnil. ${ }^{3}$ in September, January, and April.

## LAUNDEY WORK (DAY ANDEEVENLYG CLASSES).

The articles washed in one lesson are ironed in the following lessons. The cor:\% covers three months, offering one lesson each week, and includes the followinj lessons:

- (1) Some historical notes regarding lanndry work, location of the lanndry, appois' 'ments, care of appointments. Classification of articles to be laundered: White-tal.? linen, bed linen, body linen; colored-flannels. (2) Talks upon water, washing soc'., soaps, bleaching powders, blaings, with tests. Methods of removing stains. Pri.' tice work: Scalding, rinsing, and blaing bed linen and towels. (3) Sprinklin : stretching, folding, and ironing. Starch-history and preparation. Practice wor : Starch making; table linen. - (4 and 5) Body linen and handkerchiefs. (6 and 5 ) Shirts, collars, and cuffs; cold and boiled starch. (8) Underwear-silk, meriuv,
flannel. (9) Prints and hosiery. (10) Clear starching: Infants' dresses, fancy hand kerchiefs. (11) Laces and embroidery. (12) Crewel embroidery; colored sill: embroidery.


## DEPARTMENT OF DOMESTIC AIRT.

This department provides comprehensive and systematic courses of study in those branches which aro related to healthful and appropriate clothing of the body.
The laws of nature as interpreted by science and art are studied in their bearing upon the physical development and clothing of the human body. Such study leade to more healthful living, and to the cultivation of good taste and wise economy, anc supplements the education usually gained in school life. The courses now given are:

Seroing.-Hand and machine, drafting and making garments, study of materials.
Dressmalking.-Drafting, cutting, fitting, and making dresses aud jackets. Form, color, design, study of textiles.
Millinery.-Drafting, making and trimming hats, bonnets, and caps. Form, color, design, study of materials.

Drawing.-Sketching dresses and hats in peneil and in water color; ontline and proportion of the human form; historic costume.
Physical oulture.-Free exercises and exercises with light apparatus to stimnlate and develop all parts and organs of the body. Special exercises to strengthen weaker members.
Normal course.-Sewing, dressmaking, miliners, drawing, physical culture, and normal methods.
General course.-Domestic art and domestic science.
The courses of iustruction are carefully graded, not only to insure a thorough knowledge of the subject, but also to impress upon the pupil the value of order. accuracy, economy, and logical sequènco. The methods of instruction are such as lead pupils to grasp the artistic and scientific principles underlying all good work, and oncourage them to observe and judge for themselves, thereby gaining selfreliance.
The roems devoted to the work of the department, situated on the third floor of the main building, are large, sunny, well lighted and ventilated, and fully equipped with the apparatus essential for good work. The electrie lights are so arranged as to allow work to be carried on with as much comfort in the evening as in the day. The rooms are also provided with casts of the best sculpture and photographs and colored plates of costume. The museum contains many specimens of textile fabrics, both ancient and modern, and affords pupils ample opportunity for study. The library is also an important factor in the usefulness of this department. The best and latest books treating of domestic art and science are constantly added, and material on the topic in hand is collected for the pupils.

## LECTURES.

Public lectures on subjects closely related to the work are given during the jear by well-known specialists. Attendance is expected from the pupils.

## Noryal Cotise (fivi dats each week-rwo fears).

This courso is organized to fit women to fill the increasing demand for trained teachers of domestic art in public and industrial schools.

Applicants are admitted only in September, and must be at least 20 years of age. In additiou to tho general institate examination for normal courses, a special preliminary examination in technical ability is required to prove the applicant's knowledge of the cutting and making of garments.

The course of study will require the entire time of the student for fire days each week, and will cover the full regular courses in sewing, dressmaking, millinery, and physical culture. Instruction in normal methods, the history of education, observation of class work, and practice teaching form a part of the course.

For students who have had considerable experience in practical work and who wish to specialize upon one particular loranch, opportunity will be afforded to tinish the course in one year.

## Sewing.

Tho full course is divided into four parts, each of which is arranged to cover one term of the school jear. Applicants are required to pass an examination in simple fractions, and must bo at least 15 years of ago.
The first term comprises instruction in all the different stitches used in hand serving, including patching and darning. Practice is given in all the varions stitches upon small pieces of suitable materials, which aro furnished loy the school; other miterials are furnished by the pupil. In the second term sewing loy machine is introduced, and the pnpil is taught the use and care of various machines; also drafting, fitting, and making drawers and skirt.

In the third term the student is taught to draft, cut, fit, and finisli a dress of washable material, without a lining, and to cut and make from pattern either a dressing sacque or shirt waist. This part of the course, satisfactorily completed, fits the pupil to enter the dressmaking and millinery classes.
The fourth term-is devoted to fine hand and machine sewing, and the making of a child's dress, dainty undergarments, and baloy linen completes the couree.
In connection with the course, talks are given upon the various materials used, with special reference to judicious purchasing. A collection of specimens of the different kinds and qualities of materials used is arranged in the class room for the inspection of the papils.
Pupils are required to record in notebooks, which are submitted for correction, the instruction received at each lesson, and written examinations are given during the course. A certain amount of sewing is required to be done at home between the lessons. The following is the course of study:

Varieties of stitches used in hand sewing; patching, darning, and making of buttonboles and eyelets; talks on the nature and manufacture of the materials used; machine stitching; practice in taking measures; drafting, cuiting, and making drawers and skirt; advanced machine work; cutting, fitting, and making dressing sack or shirt waist; drafting, fitting, and making a dress without lining; drafting, cutting, and making nightdress; drafting and making baby's dress by hand; child's dress made from pattern by hand and machine.
Special course-- (Four mornings each week-six months.) The class is organized in September, and campletes in six montirs the full course as described above. It has been arranged for those who can devote their entire time to the study. The students meet on Monday, Tuesday, Thursday, and Friday from 9 to 1 o'clock. Sufficient home work is required to occupy the rest of the day. This class is a satisfactory one for those who wish to become seamstresses or desire to complete the coarse in as short a time as possible. Upon the completion of the seconcl grade, orders received for undergarments and wash dresses are executed by the pupils, who in this way are able to pay their tuition in part. Once a week the studeuts attend the lectures on the history and development of art, given by the director of the department of fine arts.
Applicants must be at least 16 years of age, and are required to bring for inspection a garment, made by themselves, which shows some knowledge of hand and machine sewing. They must also pass an examination, including land sewing and simpie fractions, which proves their ability to take up the work,
Children's classes.-These classes meet from 9.30 to 11.30 o'clock on Saturday mornings, and are for children between the ages of 6 and 15 years. The course of study has been arranged to suit their capacity and to arouse their interest. Children learn to sow easily and with pleasure, thus laying a foundation for becoming good workers in later years. Throughout the course the pupil writes in a notebook the important points of each lessou, illustrating as fully as possible by diagrams. The following is the course of study:

Method of threadirg needle, making knot, and using thimble; position of body. Thile sewing; running; basting and overhanding; method of weaving explained; turning hems by measure and hemming; making workbag; stitching, backstitching, and overcasting; felling; talk on tho manufacture and history of the ncedle and thimble; gathering, stroking gathers, and putting on bauds; making an apron for doll; making buttonholes and eyelets; sewing on buttons; putting in gussets; herringbone stiteh on flannel; talks on tho nature of emery and of wool; chainstitching, featherstitching, and mitering cornors; making flannel skirt for doll; hemmed and orerhanded patehing; talk on the growth and manufacture of cotton; hemstitching, hemming, and whipping rnffle; darning; darning on cashmere; French hem ou damask; machine stitching; drafting and making drawers; drafting, entting, and making skirt; cutting and making underwaist.

## Drrgsmakisa.

The complete conrse is systematically graded, and is divided into four parts, each of which covers a term of the school yeat. Two lessons a week, of three hours and a half each, are given, two hours being devoted to practical work and one hour and a half to free-hand drawing and design.

Applicants must be at least 18 years of age, and must have successfully completed the first, second, and third grades of the sewing course, or must submit samples of their work which prove their knowledge of hand and machine sewing and their ability to make simple garments and cambric dresses. An examination, including simple fractions, is also given.

Materials used are selected and furnished by the papils. Large talles for drafting, tracing, and cutting; sewing machines, dress forms, mirrors, books of models, samples of drees materials, and lockers for storing work are supplied ly the school.

In order that the pupil may gain a knowledge of design and the alility to originate and make tasteful garments, talks are given throughont the course on lyggiene, on the selection of fabrics, and on form and harmony of color in dress.
During the first term the principles of cutting skirts from measure, and of neatly finishing and hanging them, are tanght. Close-fitting waists are cut from a pattern made for each pupil arcording to the system used throughout the course. Pupils are shown a rariety of materials, and are instructed in regard to the texture, color, and suitability of each for various uses and for different types of wearers. The talks on form treat of the most becoming manner of making a dress by adapting the lines of the material to those of the figure, and in selecting trimmings suited to the material and to the character of the figure. Dresses are planned to carry ont these principles. Each pupil is required to complete one dress for herself, and to do as much practice work at home as is possible.
The pupils are required to record in notebooks, which are submitted for correction and criticism, the instruction received at each lesson. Throughout the course the work cut-and planned in the class must be finished at home. Pupils are also required to show a satisfactory knowledge of the elementary work betore andertaking the more advancerl, and examinations are held at intervals during the course.
In the secoud term the drafting and fitting of waists are taught. Much time is given to practice in taking accurate measurements as the basis of success in fitting garments. Home practice in drafting is required. One waist of plain material is completed, and one of striped or plaid material is cut and fitted.
The making of house and evening dresses which embody artistic lines and harmony in coloring is taught in the third term. A princess dress and an evening dress are completer by each student.
Instruction in drafting a child's dress, and in the drafting, fitting, and making of jackets, affording a knowledge of tailor finish as applied to ladies' coats and gown, completes the dressmaking course, and covers the fourth term.
Drawing. - A parallel course in drawing, under the direction of the art department, forms a part of the dressmaking courso. All students in day classes are rectured to complete the course in drawing as well as that in practical dressmakiug.

No previous training in drawing is required, and thongh the student may not berome technically skillful, the course cultivates the taste, and is found most helpful and suggestive in homo decoration, as well as in the selection of wearing apparel.

The course is designed to train the eye and hand, and to give to the student the alility to see objects in their true proportions, and to express them in simple light and shade, in pencil, and in water color. All work is done, except in specified cases, from the object. Some time is given to the sturly of the human form in outline, to the character of different textures, to historic costume, and to designing hats and gowns. Practice at home is required wetween the lessons.

Tho classes are held in a room especially equipped for the purposo with models, casts of ornament and of the figure, photographs of fanous statnes and paintiuss, aurl colored plates of historic costume.
The course covers four terms, and includes pencil sketching, the appoarance of objects, simple ornament in ontline, the sturly of drapery in pencil and in color, the drawing of gowns, study of the human form in outline, sketches in water color, and the designing of gowns.

The course in drawing and costume design may be undertaken apart from the courses in dressmaking and millinery, provided the applicant can give evidence of a practical knowledge of either subject. The following is the course of study:

Instruction in the choice of materials; study of color and textiles applied to dress; cutting sl:its from measure; finishing slirt and trimming or draping; study of form, line, and proportion in relation to draphing and trimming; cuttiug waists and sleeses fiom pattern; basting, fitting, trimming, finishing; practice in taking waist measures; study of form, including artistic and hygienic principles of dress; instruction in drafting close-fitting waists; cutting and fitting waist linings; cutting and fitting. trimming and finishing plain cloth waists; cutting and matelhing striped or plaill waists; instruction in chonce of materials for honse and evening wear; color and texture; the growth and manufacture of silk explained; taking measures and dratin in princess dacss; shuly of the contour and poiso of the borly as essential in artiotic olr.ss; cutting ind making princess drens; practice in drapping, illustrating the prinsples of var ety, mity, and repose; cutting and maling house or erening dress fion original design by pupil; the manufarture of woolen textiles explained; drafting jarkits of various styles; cutting, basting, fitting, and pressing: making varions styles of pockets and collars; lining and finishing jacket; drafting child's dress and coat. Drawing: l'encil practice, appearance of ohjeets; ornament from cats: drapery, bows, gowus; ontline and propertion of the luman form; prartice in the use of water color; sketrhes in water color of drapery and gowns; study of historic costume; resigning gowns and dresses.

Special on rrse.-(Firf days each werk-one year). This clans is organized in Sup-
tember, and completes in nine months the full course in dressmaking. It has been arranged for those who can devote their whole time to the study. The class meets daily, except Saturday, from 9 to 1 o'clock, and from 2 to 5 in the afternoon.
Two afternoons each week are given to the course in drawing, and all students attend the lectures given once a week by the director of the department of fine arts upon the history of art. These lectures are fully illustrated by lantern slides. Lectures upon hygienic, artistic, and historic dress are given by the best authorities. Instraction in physical culture and in the methods of keeping accounts and making out bills is given by trained specialists. The literature of hygienic and artistic costume is brought to the notice of the pupils, and it is expected that they will make use of the valuable books contained in the library of the institute.
This class is a satisfactory one for those who wish to become dressmakers, since they have an opportunity to make dresses for others in order to gain experience, and are thereby able to defray part of their expenses.
Applicants must be at least 18 years of age, must have a knowledge of making dresses from pattern, must bring for inspection a dress which in its finish proves their ability to do good work, and must pass a written examination on the making of $a$ simple dress.

## Mulinery.

The object of this course is to give a thorough training in the practical, scientific, and artistic principles of millinery in order to prepare the student to make head coverings according to the best methods, and to cultivate the taste of the student in color and design, as related to costume. The first part of the course is valuable in developing lightness of touch in the making of bows and trimmings which are used in dressmaking as well as in millinery.
In this branch of the department the full course comprises four terms of three months each with two lessons a week.
The sessions are three hours and a half in length, two hours being devoted to practical work, and one hour and a half to free-hand drawing and design. Applicants must be oper 18 years of age, and able to do neat hand sewing. They must also pass an examination in simple fractions.
Pupils are required to record in notebooks the instructions received at each lesson. These are submitted for correction and criticism.
Instruction is given during the course on the suitability of materials, combination of colors, and character of lines and form as essential to artistic millinery. In the class rooms there are cases containing hats of choice materials, selected with care, and used as models to edrcate the eye of the pupil; also a collection of examples of the various materials used in millinery, and photographs and colored plates illustrating the history of costume.
The first term of the course consists of instruction in the methods of making the various facings and edges used on hats, and in trimming with suitable bows. This forms the basis of all subsequent work, and is therefore most important.
Materials used for this practice work are colored cotton flannel to represent velvet, and harmonizing shades of sateen cut and used as ribbon. In order to apply the priuciples learned in practice work, time is given to making and trimming a hat of choice materials selected by the pupil.
In the second term the method of making plain covered hats and various kinds of bonnets is taught, and also the making of mourning hats and bonnets of silk and crape.

During the third and fourth terms the pupils work in choice materials to gain confilence and experience, each pupil making three or more hats for herself and friends, suited in style and materials to the season. The work of the two seasons differs so materially that it is absolutely necessary that the student have experience iu both before a certificate can be granted.

As a help toward original work, papils are required throughont the course to make hats and bonnets at home, and to submit them for criticism. Pupils are also reqnired to record in notebooks the instruction received at each lesson. These are submitted for correction.

Drawing.-The parallel course in drawing, under the direction of the art department, is an essential part of the course in millinery, and all students in day classes are required to complete the course in drawing as well as that in millinery. Its aim is to train the eye and hand, thus enabling pupils to apply the laws of design to millinery, and to sketch their own designs.

The course includes pencil practice, the appearance of cylindrical objects, simple ornamentin outline, and the study of bows and drapery; drawing of trimmed hats and bonnets, and practice in the use of water color, sketches in water color, study of the head in outline, and designs for hats. Practice at home is required between the lessons. The following is the course of study: Study of form, line, color, and texture as applied to millinery; talks on the growth and manufacture of materials
usscl; lessons upon tho care and removation of materials; instruction upon the different facings and finishes used upon brims of hats and bonnets; practice in mahiug rarietics of hows, and in trimming hats of various shapes; designing, drafting, and making lat and bonnet frames for heads of different proportions; some of the principles applied in trimming a hat of choico materials; making and trimming coved hats and bonnets, also mourning bonnets of crape and of silk. Winter season: Making draped toque, evening bonnet, street bonnct, and velvet lat. Spring season: Making hat of fancy straw braid over frame, also lace bonnet and shirred hat. Drawing: Pencil practice, appearance of objects. Ornament from casts : Drajery, bows, hats; outline and proportion of the head; practice in the use of water color; sketehes in water color of drapery and luats; study of historic costume; desioning hats and bonnets.

Special course.-(Five days each week-six months.) This class, completing in sis months the full courso described above, is organized in September, and has been arranged for these who can devote their whole time to the study, as well as for those who wish to become milliners.

The class meets daily, except Saturday, from 9 to 1 o'clock and from 2 to 5 oclock. Troo afternoons each weok are devoted to the course in drawing, and all students attem the lectures given by the director of the department of fino arts upon the history of art. These lectures are fully illustrated by lantern slides.

Lectures upon hygienic, artistic, and historic dress are given by tho best authorities.

Instruction in physical culture and in tho methods of keeping accounts and making out bills is giren by trained specialists. The literaturo of hygienic and artistic costume is bronght to the notice of the pupils, and they aro expected to inform thenselves upon these subjects, making use of tho library of the institute.

Applicants minst pass an exmmination in hand sewing and in simple fractions, and must also submit for inspection a hat which has beon made by themselves, and which shows their ability to undertake the course.

General Course in Donestic drt and Domestic Science (fiye dats each week-two icirs).
To enable foung women to mect more intelligently tho demands of home and society, tho following course offers training in some of those arts and sciences more closely related to daily life.
The certificate of the institute will ho amarded to those students who complete the work of these courses to the cutire satisfartion of the departnents concerned. The following is the curriculum:

First year--Domestic art: Drawing, form and color study; history of art; seming; millinery; dressmaking, hygienic clothing; plysical culture. Domestic science: Chomistry; bacteriology; emergencies; markoting, quality, food valuc, cost of fond materials; cookery, housekeepers' course; invalid cookery; lanndry work.
frrond year.-Domestic art: Drawing, outlino and proportion of the human form; listory of costume; dressmaking, with study of textiles; millinery, with study of textiles; physical culture. Domestic science: Chemistry of foosls, with calenlation of rlietarics; honsehold scjence, with working drawings; honschold art; home sanitation; honsehold economy; public lywione.

These sunjects will he pursied by the student of this course in the rerular classes of the departments.

Instruction will be given by means of lectures and recitations, supplemented liy as mmeh laboratory work as the lest methods demand.
'i he conrse will rernire the entire time and atrention of the student during the school year, the work occupring the greater part of each day.

## Tuition.

Ther school year is divided into three terms for day classes and two terms for evening chasses.

Inition is payable in advance, and no part of the tuition feo will bo refunded to pupils who withiraw or who are dismissed from the institute before the close of the term for which the fee is paid.

The tuition as given below, unless otherwise stated, is for a single term of three months:


## Drexel Institute of Art, Scuence, and Industry, Philadelphia; Pa.

## [From circulars of the institute for 1896-97.]

The Drexel Institute was founded by the late Anthony J. Drexel, in 1891, for the promotion of education in art, science, and industry. The chief object of the institute is the extension and improvement of scientific, industrial, artistic, and commercial education, as a means of opening better and wider avenues of employment to foung men and young women.
The institute, as at present constituted; comprises eleven departments. While each department is organized with reference to its special objects and courses of instruction, it sustains important relations to the other departments, and the various lines of work are carried on in so broad a spirit as to give a certain unity of purpose
to the scope and ends of the institution as a whole. The organization of the several departments is as follows: (1) Department of fine and applied art; (2) department of mechanic arts; (3) department of science and technology; (4) department of commerce and finance; (5) department of domestic science and arts; (6) department of physical training; (7) normal department for the training of special teachers; (8) department of evening classes; (9) department of free public lectures and concerts; (10) library department; (11) museum department.

## Department of mechanic arts.

The department of mechanic arts provides a thorongh course of instruction and training in mathematics, science, drawing, and shopwork, in connection with the essential English branches of a secondary education.

While the education given is intended to prepare for business or industrial pursuits, it seeks to develop and cultivate those qualities of mind and character that are of most value in the conduct of life. The object at every stage is to give the student the power to think and act for himself-the practical ability that is the best result of school training.

The whole course of instruction is so broad and yet so practical that the graduate can not fail to find some occupation for which his taste and aptitude fit him; and at the same time he will be prepared for such an advanced scientific or technical courso as he may desire to pursue.

The department of mechanic arts prepares students for admission to the technical courses in electrical engineering and machine construction, and to the course in architecture, in the institute.

Course of Instruotion.
FIRST YEAR.
First term.-Language: Common figures of speech, punctuation, letter writing; reading of American classics. Mathematics: Algebra-Metric system, review of simple equations, quadratics, ratio and proportion, variation, the progressions, use of logarithms, computation rules, plotting of simple equations. Geometry-Solid geometry, including the geometrical properties of the conic sections. Drawing: Mechanical, free-hand; descriptive geometry. Science: Elementary chemistrylectures, recitations, and laboratory work. General history: Ancient history. Shopwork: Woodwork; joinery; ironwork; chipping and filing.

Second term. -Language: Composition; biographical studies of American classics. Mathematics: Higher algebra-Binomial theorem, partial fractions, convergency and divergency of series, summation of series, reversion of series, variables and limits. Plane trigonometry: Solution of triangles, practical problems in heights and distances and in triangulation, trigonometrical equations, the circular functions, plotting of the trigonometric curves. Drawing: Mechanical, free-hand ; descriptive geometry. Science: Elementary chenistry-lectures, recitations, and laboratory work. General history: Medieval and modern European history. Shopwork: Woodwork; joinery ; ironwork; chipping and filug. Physical training in the gymnasium, twice a week, throughout the year.

> gECOND YEAR.

First term.-Language: Sentences, diction, composition; selected plays of Shakeepeare. Mathematics: Algebra, theory of equations, development of series. The elements of theoretical mechanics: Statics, dynamice, hydrostatice, treated withont the aids of the Cailculus. Drawing: Mechanical, free-hand; descriptive geometry finished. Science: Physics-Introductory laboratory work, consisting of manipulation and measurements. Chemistry of metals-one lecture per week and recitations. American history and civics. Shopwork: Woodwork, turning; pattern making began; ironwork; forging begun.
Second term.-Langaage: Grammatical principles, composition. English classics. Mathematics: Plane analytic geometry; straight line, circle, parabola, ellipee, hyperbola, some higher plane curves, the general conic ; both rectangular and polar coordinates are used. Drawing: Mechanical, free-hand. Science: Physics-Introductory laboratory work, consisting of manipulation aud measurements. Chemistry of metals-one lecture per week and recitations. A merican history and civics. Shopwork: Woodwork, pattern making finished; metal work; forging, molding, and founding. Physical training in the gymasium, twice a week, throughout the year.

THIRD YRAR.
First term.-Language: Rhetorical principles, structure of the English language, esssy writing; English classics. Mathematics: Solid analytic geometry; spherical
trigonometry. Drawing: Mechanical, -architectural; historie ornament. Science: Physics, mechanics of solids, liquids, and gases-lectures, recitations, and laboratory work. Theory and practice of the steam engine. Economics: General principles and their practical applications. Shopwork: Machine work.
Second term.-Language: Essay writing. Historical outlines of English and American literature; English classics. Mathematics.: Practical mathematics; recitation and field work; use of tramsit and theodolite for practical problems in plane surveying and navigation. Drawing: Mechanical; architectural styles. Science: Physics, heat, sound, light, electricity-lectures, recitations, and laboratory work; some practical work in the electrical engineering laboratory, in connection with the instruction in physics; lectures on practical geology and metallurgy. Theory and practice of the steam engine. Human physiology and hygiene: Lectures. Economies: General principles and their practical applications. Shópwork: Machine work. Physical training in the gymnasium, twice a week, throughout the year.
Stadents attend five days a week, from 9 a. m. to 4 p . m.
The time of the student is about equally divided between the class-room and laboratory studies and the shopwork.
The scientific instruction is given chiefly by lectures and laboratory work, the text-book being used only for reference and review.
The English instruction, which is carried throughout the entire course, is thorough and comprehensive, and furnishes a basis of sound, liberal culture for all the other studies.
The practical instruction given in the shops affords a valuable aid to the scientific studies. It bringe the student into direct and intimate relation with natural forces, where a practical application of these studies is required. While no attempt is made to teach the student a trade, yet a good knowledge is imparted of the technical apparatus involved in the mechanic arts, this knowledge being indispensable in the work of the mechanical or electrical engineer, in order that his designs may be practicable and of economical construction.
Visits are thade by the students, accompanied by the professors, from time to time to the chief industrial establishments of the city and neighborhood.
A diploma is granted to students:who complete the course and pass all the required examinations.
Special courses can be arranged to suit the individual needs of students who are fitted to pursue them advantageously.

## LABORATORIES AND WORKSHOPS.

The chemical and physical laboratories are large, well lighted, well ventilated rooms, and are supplied with extensive collections of apparatus and with every appliance for the work done by the students.
The technical shops for woodwork, bench work, machine work, and forging are ansurpassed in the completeness and perfection of their appointments. A small Corliss engine, which is placed in the machine shops, supplies the power to all the shops and is used also for the instruction in steam engineering.

There are two electrical laboratories, besides smaller rooms devoted to electrical work. The engineering laboratory is a finely appointed room and is provided with a 40-horsepower Porter-Allen engine, a 40-horsepower Armington-Sims marine engine, dynamos of the most recent design, storage batteries, and all the necessary apparatus and appliances for practical instruction in electrical science and its applications. The smaller laboratories are situated in the annex and are well equipped with apparatus and conveniences for the study of theoretícal electricity.

The extensive mechanical and electrical plant of the institute building is also made available in the technical instruction.

## BERS AND TERMB.

First and second years, $\$ 25$ per term; third year, $\$ 30$ per term.
A rental of 50 cents per term is charged for the use of a coat locker, with individual combination key, which gives to each student absolute control of his own property.
These fees include all materials and tools nsed in the chemical, physical, aud electrical laboratories and the workshops. Students are responsible, however, for their own breakage in the laboratories and workshops. A deposit of from $\$ 5$ to $\$ 10$ is required at the beginning of the year, which is returned, less the cost of the apparatus destroyed.

Students supply their own text-books and drawing instruments.
There are two terms in the year, beginning in September and February, respectively.

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The following courses in cookery and other subjects connected with the honsehold are offered:
I. General cookery. II. Invalid eookery. III. Housekeeper's course. IV. Talks on food materials and other matters relating to the household. V. Course for waitresses. VI. Course in laundry work. VII. Children's Saturday morning class. VIII. Normat course for the training of teachers of domestic science. IX. Evening classes in general cookery.

## I. General cookery.

There are three courses in general cookery. Each course occupies ono term, and is complete in itself. The three courses are consecutive, and mast be taken up in regular order.

First course. -This course includos instruction in the composition and dietetic valne of food materials. The lessons are arranged in logical order, and each principle is illustrated loy the preparation of simple dishes. The instruction is largely individual, each student preparing an entire dish. The object of the course is the preparation of food in the most digestible and appetizing forms.
Second course. -This course includes instruction and practice of an advanced ciaracter in the preparation of more complicated dishes and menus than are included in the first course.

Third course. -This course includes the preparation of still more elaborate and expensire dishes; lessons in marketing and carving; practical demonstration in the cutting of meat.

In each course ane lesson of three hours is given weekly.

> II. Invalid cookery.

This course is intended for professional nurses and other persons desirous of acquiring a practical knowledge of cookery suitable for the sick room. The course extends throughout one term, with one lesson of two and one-half hours each week. A earefully prepared syllabus is made the basis of the instruction.
Classes of medical students desiroms of taking this course can receive instruction in the afternoon or evening.

## III. Housekeepor's course.

This course is offered in the belief that greater skill and intelligence are needed in the management of the home, and for the purpose of providing thoroagh training for women possessing the requisite qualifications to fit themselves for positions as housekeepers or as matrons of public institutions. The course occupies one year. It embraces the following subjeets: The general courses in cookery; the course in invalid cookery; marketing; lectares on physiology and hygiene; familiar talks on food materials and other matters relating to the honsehold; the course in landry work; business forms and accounts.
IV. Talks on food materials and other matters relating to the household.

This course is intended to present the scientifie, hygienic, and sanitary features of the household in such a manner as will prove of practical benefit to women who manage their own homes. It supplies the kind of information needed by young women preparing themselves for household duties and responsibilities. The course occupies one term. The instruction embraces the following subjects: Composition and nutritive value of foods; comparative value of animal and vegetable foods; home kitchens and public kitchens; use of coal stoves and ranges, oil and gas stoves, Aladdin oren; buying of supplies; cold storage; marketing; national and State laws regarding the inspection of meat; canned goods; food adulterations; water filters; tea, coffee, cocos, and other beverages; cereals, vegetables, fruits; breads, flour, yeast; dairy products-milk, cheese; butter.

## V. Cowrse for zcaitresses.

This course consists of six lessons, and includes the following subjects in which every well-trained waitress should be expert: Care of dining room and pantry; care of silver and cntlery; serving of breakfast, luncheon, and dinner; washing dishes; washing and ironing table linen; removal of stains.

The classes meet in the afternoon or evening. Each lesson occupies two hours.

## VI. Laundry work.

This course includes practice in washing and ironing fabrics and articles of various kinds. - Instruction is given in the scientifte principles of laundry work, as well as practical training in the laundry. It is intended for staderts taking the normal course, and as a special course when classes of suffieient size aro formed.

## VII. Chitdren's Setwriday morning ctass.

This class is for young girls unable to attend on the other days of the week. The instruction is speciaII adapted to girls between 12 and 18 years of age. The class meets on Saturday, at 10 a. m. Each lesson oectrpies two hours.

## VIIL. Normal caurse in domestio science.

This course, which oecapies two years, includes, besides the theoretical and practical training in cookery, household economics, observation and practice in teaching, chemistry, physics, physiology, and hygiene, bacteriology, oconemics, history and institutes of education, physical training, English language andliterature (optional). The laboratories, equipment, and appliances which are used in connection with this course are in accerdance with the most advanced demands of scientific instruction.

## EQUTPMEAT:

There are two large school kitehens, the oquipment and appointments of which are unsurpassed. Everything necessary for the scientific instructios, as well as for the practieal training of the studentis, is providen.

## LEBPARY AND KEFADNG RCOMG

The library of the institute, which contains 18,000 volumes, is supplied with an extensive collection of books relating to the subjects embraced in the several courses of instruction. The leading home and foreign periodicals, are supplied in the reading room.

ADMESGION.
Applianty for acimission to the houselkepers" course nust have a good gencral education and be at least 25 years of age.

## FEES AND TEEMS.

The fees for the several courses, per term, inctuding all materials, are as follows: First course in general cookery, $\$ 10$; second course in general cookery, $\$ 15$; third course in general enokery, $\$ 18$; invalid ceokery, $\$ 10$; classes of murses from hospitals and of medical students, $\$ 6$; housekeepers' course, $\$ 25$; talks on food materials and other matters relating to the household, $\$ 5^{\circ}$; course for waitresses $\$ 3$; laundry work, $\$ 3$; chitdren's Saturday morning class, $\$ 8$; normal course, $\$ 40$. There are two term in the year, beginnirig in September and Febreary, respectively.

## EVENING CLASSEE.

In the evening classes instruction is given in the first two courses of general cookery, and is similar to that of the day classes. The session oxtends threugh six months, from the leginning of October to the end of March. One lesson of two hours is given weekly. Fee for the entire session, which includes all the materials used in the instraction, $\$ 5$.

COURAES IN DRESSMAKING.
The following courses in dressmaking are offered: I. Regnlar course. II. Special course. III. Normal course. IV. Evening classes.

## I. Regutar course.

The regular course of instruction consists of four grades, each occupying one term, or half the school year. Each grade is complete in itself, but the four consecutive grades are essential to thorough training in the practice of the art.

First grade. -This grade is devoted to the fundamental principles of dressmaking. One plain dress is completed. Two lessons of two hours each are given weekly.
Subjects of instruction.-1. Implements and appliances used in dressmaking. II. Cotton staple, its various uses; choice of materials; textiles, as to color and application to dress. III. Taking measurements; drafting foundation skirt; drafting draperies
and principles of same; finishing skirt for trimming or draping; making lined skirt. IV. Form, proportion, and line relating to ornament in dress. F . Plans for completing skirts; cutting waists with seams from patterns drafted by students of the advanced grades from measurements taken from different members of the class; basting; fitting; planning trimming; general finish.

Second grade.-In this grade attention is paid to taking measurements of different figures and to drafting patterns from the same. The tirst dress made is of plain material; the second is a waist or entire garment of striped or plaid material; the third, a garment on the princess form, may be a tea gown or a dress. Two lessons of two hours each are given weekly.

Subjects of instruction.-I. Color and textiles; their various uses and relations to personal adornment; growth of wool and silk; manufacture of fabrics. II. Taking measurements; drafting plain waist from different measurements; drafting waist with extra seams for large figure; custing and matching striped, plaid, or figured material for waist; making and trimming the same; drafting and making dresses on the gown form; artistic dress in its relations to the body; design in drapery; making dress on gown form from the student's own design.

Third grade. TThe work of this grade is chiefly an extension of that of the two preceding grades, with the additional subjects of instruction named below. For further practice students may receive and execute orders. Two lessons of two hours each are given weekly.

Subjects of instruction.-I. Advanced drafting. II. Drafting of children's garments. III. Making child's dress. IV. Seamless waists. V. Making evening dresses.

Fourth grade.-This grade completes the regular course. It includes instruction in tailor finish, as applied to dresses, jackets, and coats. Orders may be received and executed by students. One lesson, of four hours, is given weekly.

Subjects of instruction.-I. Material used in making coats, as staple and manufactured. II. Drafting jackets and coats of various styles; cutting, basting, fitting, pressing; practice in making pockets, applying same to garment; making buttonholes, sewing on buttons; lining and finish of coat; making collars. III. Principles applied to tailor-made dresses.

All materials, except those supplied in the third and fourth grades for ordered work, must be furnished by the students.
All wor'k cut and planned in the class room must be finished at home.
Each student is required to keep a record of the demonstration lessons in a notebook, and to submit the same for inspection at stated intervals during the term.
In addition to the lessons in dressmaking, instruction is provided in drawing and water color, for the purpose of giving the students a knowledge of line and form and the ability to execute designs for the various kinds of dresses, coats, etc. The instruction includes outline drawing, light and shade, proportions of the human. figure; draperies, dresses, gowns, and coats, in monochrome and color. One lesson, of one hour, is given each week.

In the second term of each year instruction is also provided in accounts, business forms, and correspondence. One lesson, of one hour, each week.

Courses of lectures in the chemistry of dyeing and cleansing and in physiology and hygiene with reference to dress are given during the second term of each year. These lectures are made as nontechnical as possible, with a view to interesting the students and furnishing them with knowledge that can be made practically available.

## II. Special course.

This conrse is arranged to meet the needs of those who wish to accomplish the work of the regular course in one year, and who desire additional practice in executing orders which they may take on their own account during the second half of the year.

Attendance is required every day, except Saturday, from $9 \mathrm{a} . \mathrm{m}$. to $1 \mathrm{p} . \mathrm{m}$. Students have the use of the dressmaking rooms until 4 p. m.

Students receive the full course of instruction in drawing and water color, and in the keeping of accounts, busiess forms, and correspondence, given in the regular course. Students taking this course are expected to attend the courses of lectures in the chemistry of dyeing and cleansing and in physiology and hygiene with

Every applicant for admission to the special course must have a good knowledge of hand and machine sewing, and present for examination a dress made by herself from patterns.

Applicants are admitted to this course only in September of each year, and for the entire course.

Certificates are granted to students who satisfactorily finish all the grades and meet all the requiremente, either of the regular or of the special course.

## III. Normal course in domestic arts.

The normal course is intended for those who desire to fit themselves to be teachers of dressmaking, millinery, and allied brauches. No one is admaitted to this course who has not a good English education and spent at least one probationary term in either the regular or the special course in dressmaking.

Besides all the studies of the regular courses in dressmaking and millinery, the normal course includes such additional branches as are essential to the teacher's work. Opportunity is afforded for practical training in teaching in connection with the evening classes of the institute.

The normal course occupies two years, including the probationary period. An average attendance of at least four hours daily, except Saturday, is required.

Students who finish the full course of instruction and training and meet all its requirements receive a normal diploma.

## ADMISSION.

For admission to any of the courses applicants must be at least 18 years of age and must be able to do hand and machine sewing. An examination in sewing is held at the beginning of each term.

FEES AND TERMS.
Regular course.-First grade, $\$ 15$ per term; second grade, $\$ 20$ per term, including the drafting chart; third grade, $\$ 20$ per term; fourth grade, $\$ 20$ per term.
Special course.-Thirty-five dollars per term.

## EVENING CLASSES.

In the evening classes instruction is given in the first, secend, and third grades of the regular course. Each grade occupies one session.
The session extends through six months, from the beginning of October to the end of March. Two lessous a week of two hours each are given.

Fees for evening classes.-First grade, $\$ 3$; second grade, $\$ 8$, including the drafting chart; third grade, $\$ 7$. The fee is for the entire session. Certificates are granted only to students who finish the three grades.

## COURSES IN MILLINERY.

The following courses in millinery are offered: I. Regular course. II. Special course. III. Normal course in domestic arts. IV. Evening classes.

## I. The regular course.

The regular course in millinery consists of three systematic grades, each occupying one term. Each grade is complete in itself, but the three grades are essential to thorough training in the practice of the art. In each grade two lessons in millinery, of two hours each, are given weekly.
First grade. - In this grade the work is begun with the study of the hat in detail. The methods of preparing the variops fittivgs for the brim are tanght upon a straw and a felt hat, cotton flannel and cheese cloth being used, which represent, respectively, velvet and crape. The hat is then trimmed with suitable bows of sateen to represent ribbon. Harmony of color is carefully studied in all this preliminary work. One hat is made of choice materials.

Second grade. -The study of the bonnet and the toque, using for practice the materials appropriate to the same. The latter part of the grade work is devoted to the making of bonnets and toques of choice materials.

Third grade. -Throughout this grade students work in choice materials to gain confidence and experience; they are allowed to receive and execute orders.

## GRADUATR WORK.

Students who have finished the three grades of the regular course may remain an additional term for the purpose of doing more original work and gaining additional practice in dealing with the deeigns and materials appropriate to the two millinery seasons. The work may consist largely of orders taken by the students.

## II. Special course.

The special course differs from the regular course only in completing the work of the three grades in oue year. It is intended especially for those intending to become practical milliners, and who desire additional practice in executing orders, which may be taken by students on their own account during the second term.

## CERTIFICATES.

Certificates are granted to students who satisfactorily complete all the grades of the regular course, or finish the speciał course, and pass all the required examinations.

All materials are selected and furnished by the students.
In addition to the technical traiaing in millinery, instruction is provided in the regular and the special course in drawing and water color, for the purpose of giving the students a knowledge of line and form and the ability to execute designs for the various kinds of hats, bennets, toques, etc., in mouochreme and color.

During the second term of each year instruction is given in the keeping of accounts and in business forms, customs, and correspondence. A course of lectures in the cliemistry of dyeing and cleansing is also given during the same term.

Constant use is made of the extensive collection of books in the library and of the important collection of textiles in the museum. The leading American and foreign fashion periodicals are supplied in the millinery rooms.

## III. Normal course in domestic arts.

The normal course is intended for those who desire to fit themselves to be teachers of millinery, dressmaking, and allied branches.

No one is admitted to this course who has not a good English education, and has spent at least one probationary term in either the regular or the special course in millinery.

Besides all the studies of the regular courses in millinery and dresemaking, the normal course includes such additional branches as are essential to the teachers' work.

The normal course occupies two years, including the probationary period. An average attendance of at least four hours daily, except Saturday, is required.

Students who finish the full course of instruction and training and meet all its requirements reeeive a normal findomas.

## ADMISGRON.

For admission to any of the courses, students must be at least 18 years of age and have a good knowledge of hand sewing. For admission to the special course, applicants are required to submit a specimen piece of millinery for the approval of the director.

FEES AND TERMS.
Regular course, \$12 per term; speeial course, \$20 per term; normal course, first year, same as in regular course; second year, $\$ 35$ per term.

There are two terms in the year, beginning inSeptember and February, respectively.

> EVEAINO CLASSES.

In the evering elasses inetruetion is given in all the grades of the regular course. The session extends through six months, from the beginning of Oetober to the end of March. Two lessons a week, of twe hours each, are given. The fee fer thesession is $\$ 3$.

JUNIOR AND ELECTIVE COURSES IN DOMESTIC SCIENCE AND ARTS.

## Courses of Inetruction.

The following courses are offered: 1. Junior course. II. Elective courses.
I. Junior course. The janior course is a nonprofessional course of prescribed studies and is designed: (i) To supply that training for the dnties and responsibilities of home life which the ordinary academic education fails to give; (2) to lay a broad and solid formdation for the technical work involved in the direct preparation for a profossion or trade. The course of instruction covers tivo years.

This course is based apon the recognition of the fact that the training for the practical business of life should have its due place in the education of the individusl luring the plastic period of life. Experience is coustantly showing the soundness of this position.

Of the classes that have thus far been graduated, more than three-fonrths of the pupils have developed aptitudes for one or another of the arts and sciences, and are now taking advanced conrses in chemistry, biology, domestic science, millinery, or dressmakiug, with a view, in each case, to following the pursuit as a profession.

As a result of this preparatory training in a well-arranged and soundly correlated conrse of study, these pupils have the alvantago of entering upon the pursuit of their technical courses with good habits of thought and stady, avd with the ability to take an intelligent delight $\mathrm{jn}^{2}$ their work.

The course is divided broadly into scientifie work, academic work, and industrial work-abont one-third of the time being given to each.
The list of studies is as follows:

## FIRST YEAR.

Firgt ternen-Sewing, millinery, cookery, household econemies, mathematics, drawing, history, current topics, English and Aneriean literabure, rhetoric and composition, physical training.

Seeond term.-Sewing, millinery, cookery, household economies, mathematics, drawing, history, carrent topics, English and American literature, rhetoric and composition, physical training.

SECOND YEAE.
First tem,-Dressmaking, household éeonomics, elementary physics, general chemistry, biology, drawing applied to dress and ornament, Englioh líteratare, rhetoric and composition, current topice, business principles, physieal training.

Second ferm.-Dressmaking, housetiofd economies, elementary physies, general chemistry, physiology and hygiene, laundry work, drawing applied to dress and ornament, English literature, rhetoric and composition, current topics, business forms and accounts, physical training.
II. Elective courses. -The elective courses are intended only for advanced students who are qualified to inake a choice of stadies for sperialization. These courses are designed for youngewomen who desire a course of training in the sciences or arts; combining with such training, when necessary, conrses in the aeademic branches.

Students may elect a single study or a "group course" from the several courses offered below.
The institute affords superior advantages for students who wish to specialize. The following courses are offéred: (1) Mathematics, physics, chemistry, biology, physical training; (2) cookery, millinery, dressmaking, household economy, chemistry of foods, laumdry work; (3) free-hand, drawiag, drawing from the antique, mechanical drawing, painting in oil and water color; (4) rhetoric and composition, English and American literature, history of art, civies and economies.

## ATMTENDANCE

In the regular prescribed courses, attendance five days a week, and, upon an average, five hours a day is required. Work begins at $9 \mathrm{a} . \mathrm{m}$. and continues to suclr hours (up to $4 \sigma^{\prime}$ clock) as the programme of studies demands.

## FEES.

Regnlar course, $\$ 30$ per term. Advanced elective courses, according to the group of subjects chosen. The cost of the materials used in the science and the cookery classes is included in the fee.

All the materials nsod in the dressmaking and millinery classes and all text-books and stationery are eupplied by the student.

## SEBJECTS OF INSTRUCTIOX:

The following outlinos furnish more detailed information concerning some of the subjects of instruction embraced in the junior course and the elective courses:
Gookery.-A thorough course in all the ordinary processes of cookery, with individual practice during each lesson. Each pupil performs the whole of the process treated in the lesson and produces a complete dish from a given recipe. Of the four hours per weels, three are given to practice and one to theory. The theoretical part considers, in an elementary way, the chemical properties and constituents of foorls and their nutritive value.

Millinery.-The fundamental principles of trimming and making hats, with thorough practice in wiring, binding, puffing, facing (plain and shirred), covering of buckram frames, trimming hats in choice materials, making of shirred hats. The course fits the pupil to do thoroughly all her home millinery and forms a solid basis for a professional course.

Sewing and dressmaking.-Practice in sewing various materials used in making a dress.

Cutting, drafting, fitting, and making plain dresses, waiste, etc. The course fits the pupil to do all her liome dressmaking and forms a solid basis for a professional course.
The incidental instruction in millinery and dressmaking includes the principles of bygienic dressing and the consideration of form and color as applied to dress.
Laundry work.-During the last term of the senior year practical instruction is given in washing and ironing in the scientific laundry of the institute. The students here make important applications of the facts of chemistry in regard to the
removal of stains, the preservation of texture and color, and the use and constituents of soaps, washing fluids, bleaching powders, and starches.
Household and social eeonomy.-This term covers broadly the instruction in the various subjects that relate to the growth and well-being of the household and of organized society. The instruction is given (1) incidentally as opportanity occurs in the course of the daily work, and (2) in a series of lectures and lessons systematically arranged with a view to correlating kindred subjects in their bearing upon the housebold and upon social life and organization.

The following general outline indicates the scope of the work. It will be noted that every part of the work capable of demonstration has its outcome in actual laboratory work.
The home.-Evolution of the home; significance in the social economy; relation to the individual, to the community. Administration of the home. Relation of income to expenditure; the common sense of economy; the vulgarity of extravagance. The executive functions of the housekeeper. The question of domestic service.
The house.-Evolution of the house and its furnishings; its construction, sanitation, heating, lighting, water supply, drainage, plumbing, cleaning. Points to be noticed in a house when one wishes to buy or rent.

Furnishing of the house.-Sanitary considerations. Artistic considerations. Influence of environment upon character and disposition.

Food and drink.-Relation of food and drink to life. Food and growth; food and energy; food and heat. Nature, chemical composition, and uutritive value of various foods. Comparative value of animal and vegetable foods. Suitable foods for infants, for growing children, for adults, for the aged; for the sick, for the convalescent, for the well who wish to keep well. The adulteration of food. Discrimination in the selection of food materials; how to tell good meats, etc.; how to market generally. Drink: Fluids required for the body; effects. Beverages: Nature and composition; effects upon the human sytem. Alcohol.

Constraction of dietaries.-For the different periods of life; for different seasons of the year; for different occupations of life; for different incomes. Actual practice in turning the percentages and quantities of carbonaceous and nitrogenous food required to maintain health into economical dishes for families with limited incomes.

Related physical, chemical, and physiological facts.-General principles of baking, roasting, broiling, frying, etc. Chemical effepts of heat on various food constitu-ents-albumen, starch, gluten, etc. Chemical effects of overheating, on bread, fats, etc. Injurious effects of acroline. Chemical and physical principles involved in raising bread, biscuits, etc. Errors in present general systems of cookery; principles of slow cookery. Comparative value of fuels-coal, kerosene, gas, electricity. The Aladdin oven.

Clothing.-The hygienic considerations of clothing. Clothing for infants, for school children, for adults; night clothing, bedclothes. Materials for clothing. Discrimination in purchasing cottons, linens, woolens, silks, etc. Artistic considerations of dress. Use and value of decoration. Laws and principles of decoration.

Emergencies and home nursing.-Practical application of those facts and principles of physiology and anatomy that fit one to give that first aid so invaluable in the absence of a physician.

## Spring Garden Institute, Philadelphia, Pa.

[Statement of Addison B. Burk, president.]
The institute has three departments: Art, mechanical handiwork, and electrical departments. The art school is educational in its aim, and prepares some pupils for higher studies and others for work as desiguers. The mechanical school is strictly a workshop school, the pupils working eight hours a day. There is no intention to teach a particular trade, but in the course of their training the metal workers become machinists, and the woodworkers pattern makers. They have, however, general knowledge of various other trailes, and are fitted to become learners in any of them. They have also a good foundation apon which to pursue higher studies. In the electrical department laboratory instruction is given as well as practical work in wiring, winding dynamos, etc., so that the pupils may become linemen, makers of electrical apparatus, or electrical engineers.

The institute is independent of other institutions, and is maintained by fees of puyils and interest on its endowment fund. The fees of pupils range from $\$ 40$ to $\$ 75$ for the day classes, and from $\$ 5$ to $\$ 15$ for the night classes, the bulk of the pupils paying $\$ 40$ in the day classes and $\$ 5$ at night. The higher charges are for electricity. The unique feature of our work is the maintenance of workshop schools, with no theoretical studies and work at the bench for eight hours a day.

The shops are fully equipped with hand and machine tools. The pupils are fur. nished with all tools and materials that may be required.

The value of the plant exclusive of buildings is probably $\$ 25,000$. The annual expense of maintenance is probably $\$ 1,000$.
The result of our system is that boys become highly skilled mechanics (without commercial speed) in the course of two years. They become so intelligent (without being taught to do anything but work) that they readily acquire theoretical knowledge by the reading of books. Our aim is that of Stephen Girard, to teach them things, not words, and let them pick up the words afterwards.

## Workingman's School, New York City.

[Statement of Maximilian P. E. Groszmann, director.]
Our school is in no way connected with the public schools, and receives no State aid. It is supported by the United Relief Works of the Society for Ethical Calture, a fund of voluntary subscriptions. We have about 400 papils in our schools, threefourths of whom enjoy free tuition. The tuition for the others is $\$ 75$ in the kindergarten and $\$ 125$ to $\$ 150$ and $\$ 200$ in the school classes a year.
The Workingman's School aims to be a model public school and to serve as an experimental field in which new methods of education, as thev arise, may be tried for the benelit of the entire public-school system. This is the function which it aspires to fulfill. It hopes to remain in constant touch with the public schools, to work with them and for them, and for their advantage to try new educational ideas, such as can be tested under more free and favorable conditions by an institution outside of the system than by one that forms a part of it.
Manual training is one of the special features of the school. Manual training has been introduced into the high-school course of several of the public schools of the country with the expectation that it will work its way downward into the lower grades. To us, the opposite way of proceeding seems far more logical. The plan of education should develop from below upward, like a tree, unfolding its several branches more and more as it rises in height, and thus maturing toward perfect frui-tion at the top.
The school, however, is in no sense a trade school for the education of artisans, nor merely a manual-training school. It is a complete day school in which manual training is utilized solely on account of its educational value.
The equipment consists of one 6 -horsepower steam engine, 1 engine lathe, 6 speed lathes, 6 sets soldering tools, 6 sets carpenter tools, 10 sets carpenter tools, 10 sets metal-working tools, 20 sets mechanical drawing tools, 4 sets forge tools. The pupils are provided with all the tools.
The cost of equipment is about $\$ 3,000$, and the annual expense for material and supplies about $\$ 200$.
It is difficult to determine the effects of manual training upon the length of school life. It is true that our children, even those who are the children of the working, classes, remain with us longer than is usual, but whether this is due to the effect of manual training only or to the general spirit of the school can not be ascertained. There are a number of our pupils who have taken up a technical course after graduation.

## COURSE OF INSTRUCTION.

The course of instruction comprises in all classes: Elementary natural science (object lessons), geography, geornetry (form lessons), construction (manual work), mechanical drawing, free-hand drawing, designing, modeling in clay, reading (literature), composition, language and spelling, German, writing, arithmetic, history, ethics, vocal music, gymnastics. In the three highest grades algebra is taught in connection with arithmetic and geometry. Latio has been intruduced in the two highest classes. Coeducation of the sexes in the same class room and studies is the rale; from the third grade up, however, the boys receive their instruction in manual work in the workshop, the girls being taught in the sewing room; and in some of the lessons in gymnastics the exercises of the boys and girls are conducted in separate classes.

MANUAL WORK AND MECHANICAL DRAWING.
First grade.-Paper folding, cutting, and pasting (geometrical forms and desigus, partly in connection with exercises in color perception); stick laying. Geometrical work with splints. Simple bricklaying and construction of steps, bridge, chiminey, and small house, with building blocks, from drawings and dictation. Sketching and drawing from the same structures liy the pupils. The more difficult structures are built by groups of children. Sewing: Coarse sampler, different kinds of stitches and borders.
Second grade.-Work in lead wire (straight lines, conventional forms, and familiar ED 96 $36^{*}$
objecte) ; construction of simple models of wood (ladder, clotheshorse, etc.) to a scale (wood being furnished cut in strips; tools used, knifo and brad awl). Mechanical sketching of simple objects in two views, free-hand. Sewing: Central design in running stitch (mat), plain corners, hemming. Practice in making seams (running, strong running, stitching, and back-stitching stitches).

Third grade.-Mechanical drawing: Parallel lines fiom construction lines; construction of simple surfaces in connection with geometrical paper cutting and folding. Boys: Work in lead wire completed (construction of link and loop chains); simple scroll sawing; construction of simple models of wood (rake, picket fence, shed, farm wagon, etc.) to a scale (same as in second grade, only more difficult objects; work partly done by groups of pupils). Girls: Flat fell, bag seam, bias fell, and reversible seam. Tucking gusset and gathering sampler.

Fourth grade.-Mechanioal sketching and drawing (cardboard geometry; drawing in ink, two or three views of blocks of wood of different forms). Boys: Work in copper aud brass $\pi$ ire (conventional forms, hooks, loops, ringe, chains, etc.) ; elomentary woodwork (sawing, boring holes, planing); constriction of models of household furniture, to a scale, of wood. Girls: Straight skirt, placket openings, child's drawers.

Fifth grade.-Geometrical drawing in connection with mathematical work; construction of angles and surfaces. Boys: Mechanical sketching and drawing; projection of lines, surfaces, and simple solids; sketching of familiar objects from home (two projections). Tin cutting and forming. Wood work of fourth grade continued and enlarged, including cutting of chamfers and grooves with the chisel. Gronp work: Combination of geometrical solids, constructed of cardboard and wood, into models of engineering work, sucli as bridges, locomotives, eto. Girls: Mechanical sketching of simple household articles in two projections. Cutting true bias, matching patterns, making buttouholes and loops, darning and patching, binditg, round apron.

Sixth grade.-Aceurate construction of triangles and stuily of angles as measured from their aros. Boys: Mechauical drawing; solids drawn in three projections; parts of machinery from sketches made in shop, sketching of ornamental ironwork to connect with designing and carving. Elementary carving in wood (chsmfer edges, relief work) ; wood'turniug (tarning between centers, hollow chack work, and face-plate work). Elementary brass turning (use of the graver). Group work: Physical apparatus as required by E. H. Hale's Elementary Lessons in Physics. Girls: Sketching of plain household furniture; drafting of lines and curves at given angles, preparatory to dress cutting. Machino sewing: Chemise and nightgown. Hemstitching and feather stitching.

Seventh grade.-Drill in accurate geometrical construction. Boys: Mechanical sketching and draming of details of architectural works, such as doors, windows, parts of structures, etc. Blue printing. Making in wood of simple patterns for casting; green sand molding and casting in lead; iron chipping, filing, and drilling; brass turning. Group work: Series of physical apparatus as begun in sixth grade, completed. Girls: Solids in two projections. Millinery.

Eighth grade.-Drill in accurate geometrical coustruetion. Boys: Working, detailed, and assembled drawings of engine in shop and pump in boiler room. Architectural drawings from photograpls and dictation. Sketching of detailed parts of machinery, to be worked up for quick working drawings. Lead and iron forging; engine-lathe work. Group work: Constrnction of simple models of machinery in wood and metal. Girls: Solids in three projections; drafting in connection with dress cutting. Drafting waist, using Brown's sjstem; making of a simple dress. Both sexes: Faotory excursions.

## Sloyd Training Sceool, Boston, Mass.

[From a circular of the school, 1895.]
This school was established by Mrs, Quincy A. Shaw in 1888. It represents private experimental work in the interest of education, and offers free instruction to teachers in the hope of giving them such acquaintance with the subject of manual training as will tend to an understanding of the pedagogical basis of the work, as well as to givo thorongh iustruction in mechavical drawing and wood work.
Heretofore the work of the Sloyd Training School has been confined to the preparation of toachers for grammar-grade pupils. The superior facilities of the new location of the school not only afford better opportunities for the training of toachers, lut make possible the introduction of a conrse of work for high schools based on the eincational principles characteristic of sloyd. The recout act of the Massachnsetts legislature regarding mannal training in high schools and the demand for thoroughly equipped teachers make more than ever apparent the need for this work.
The Slosd Training School now occupies nearly the entire upper floor of the North

Bennet Street Industrial School. Two large, well-lighted and well-ventilated rooms, thoroughly equipped, are devoted to the normal classes.

Another room aceommodates classes of children, giving to normal students ample opportanity for obsorvation and practice of teaching.

The commodious office contains a careful selection of books for the use of studente, and also complete and graphic illustrations of various manual-training courses.

## COURSE OF STUDY.

Daily lectures on thie educational primeiples of manual training, including reasons for and explanation of the exercises and their progression, and also the application of gymnastic principles to movemonts and positions in working.

Lectures on: The nature and development of the child as the guide to that which the teacher must provide; history and growth of manual training; the great educators, as Comenius, Rousseau, Froebel, Cygnæus; the use, construction, and care of tools; woods, their growth, qualities, and structure; suitable sloyd room, proper outfit, prices, etc.

A coursé of lectures on psychology is also given by a recognized authority.
Students are required to produce weekly abstracts from the lectures, and also papers showing their ability to demonstrate the educational value of the work.

REQUIRED TECHNICAL WORK.
The satisfactory completion of 31 models, including the making of 15 different joints and involying the use of 47 tools. The course represents 72 different exercises.

Working drawings of each model, full size and to scale.
simple projections and geometrical problems.
The sharpening of every tool used in the course.
Recognition and selection of the proper material for each model,
Oiling, shellacking, and polishing.
Selection and preparatiou of specimens of various woods.
Working out in wood, steps showing the progression of exercises in the first six models.
Invention of a sloyd model involving certain exercises. This model to be the property of the sehool.
Estimate of proper wood and outfit for a given rumber of pupils.
Criticising and narking the finished work is an important feature of the course. Two of the teachers and two or more studerits examine each model and pass judgment upon it before it receives the mark of the school.
The high-school course will include wood turning, wood earving, and advanced drawing, besides more practice with tools than is given in the grammar-school course, and on a different set of models.
In addition to the above, the following are required: Observation of children at work as a basis for child study; teaching of individuals and classes; a thesis on a given subject concerning educational mauual training.

Twenty-five hours a week for eight months must le given to the study of the theory and practice of educational manual training.

A working drawing must be made previous to the making of each model. The drawilig to be handed in, with the complete woodwork, for approval.

Models must be made in the given sequence.
Notes must be taken of the "talks" given in class, und stadents will be required to read such notes in class when called upon.
Each student will be required to keep his tools sharp. The use of dull tools will not be pernitted.

The use of file or sandpaper will not be allowed until the work is as well done as possible with the edge tool, and is accepted by the teacher.
Students must sclect lumber and submit it to the class teacher for inspection before using.

Morlels made out of school hours will not be accepted.
The benches and tools must be left in perfect order, also the pigeonholes and linuber on the sholves.

Admission to the high-schoo course will be granted only to men who give evidence of special fitness and to graduates of the Sloyd Training School.
Students are recolved on probation. Those showing little aptitude for the work will be advised to discontinue the course.
Students will be expected to follow a special course of reading, and are advised to obtain the following books:
The Theory of Educational Sloyd. By Otto Salomon. Price, $\$ 1.25$. Published by Silver, Burdett \& Co., Boston.-Psychology. (Briefer course.) By James. Price, \$1.60. Published by Henry Holt \& Co., New York.-Educatiou. By Herbert

Spencer. Published by D. Appleton \& Co. Price, \$1.25.-Mechanical Drawing. By Linus Faunce. Price, $\$ 1.60$. Published by the author, Massachusetts Institute of Technology.-Bench Work in Wood. By W.T. M. Goss. Price, 80 cents. Pablished by Ginn \& Co., Boston.-Working Drawings of Models in Sloyd. By Gustaf Larsson. Price, \$1.50. Published by E. L. Kellogg \& Co., New York.-Handbook of Geometrical Wood Carving. By Gustaf Larşson. Price, 50 cents. Published by E. L. Kellogg \& Co., New York.

The making of the models and drawings alone is not considered by the Sloyd Training School a sufficient preparation for teaching sloyd. The educational bearings of the subject should be studied thoroughly in connection with the bench work, and for this reason: The regular diploma and the badge of the Sloyd Training School will be given to students who satisfactorily complete the whole course of study, giving continuous daily attendance during the school year.

Special classes are formed for those who are engaged in teaching.
A special certificate will be given to members of weekly classes.
SLOYD FOR AMERICAN SCHOOLS.
[By Gustaf Larsson, principal.]
The course for grammar schools in tool work and drawing here submitted is one which is adapted to the teaching of classes in elementary sckools. It includes the making of 15 different joints and involves the use of 47 tools. The course represents 72 different exercises.

Sloyd is not the outgrowth of a single mind, or of the experiments at one time or place, but the result of the work of wise investigators and practical teachers in many countries. Based, as is the kindergarten, on the philosophy of Froebel and Pestalozzi, sloyd aims primarily, by its appeal to many activities, to make the boy, and not the wooden model. This system was originally planned after the Swedish sloyd as taught under the direction of Herr Otto Salomon, who has devoted a lifetime of faithful study to this subject at Nääs, at which place educators from all parts of the world have contributed their thought. As a result of actnal experience in Boston, since 1888, with classes of boys, it has now been carefully adapted to the needs of American children. The drawing as an integral part of sloyd work is a conspicuous American gain.

## Aim of Sloyd.

The harmonious development of the pupil, during the formative age, giving him by manual exercises and the use of the creative instinct such general training as will tend to fit him, mentally,-morally, and physically for any subsequent special training.
Sloyd is not limited to work in wood. Clay, cardboard, and iron, if adapted to the physical and mental requirements of the papils, may serve as sloyd materials.

## Conditions and Meang.

In pursuance of its aim, sloyd insists upon the necessity for:
(1) Properly located, well-ventilated and well-lighted workrooms, with sufficient space for freedom of movement for each pupil.
(2) Adjustable benches which are so constructed that they can be adjusted at any lesson.
(3) The maintenance of gymnastically correct positions in the performance of all kinds of work.
(4) The exclusion of all kinds of tools and forms of work tending to retard growth, to injure or malform the body.
(5) Giving prominence to the use of such tools as require the exercise of both sides of the body equally, and to those which require strong muecular effort.

## Toozs.

Since the chief object of this training is the evolution of forces, not the acquisition of skill, as such, a great variety of tools are provided, calling constantly for new effort in gaining control. In fact, sloyd employs more tools, more exercises, and requires greater variety of manipulations than any other course of mannal trainiug yet presented for schools.
To insure carefnl thonght, the more mechanical contrivances are avoided and hand tools requiring a higher degree of muscular control are employed. Right anderstanding of a tool and a certain degree of control resulting from using it are what the worker is intended to gain, not such mastery of guy ope tool that using it
requires a minimum amount of effort. This is one of the differences between industrial and educational manual training. Yet even if technical skill were the only. object in view, the sloyd method would be found far more successful as a means of securing it than abstract exercises and long practice with a limited number of tools.
The manner of using tools in sloyd having reference always to the physical and mental need of the worker will increase his ability to handle skillfully and successfully the instruments of any occupation or profession, because it gives him control of himself. A surgeon, a lawyer, a clergyman, a chemist should be as much indebted to sloyd for the gain of power as the cabinetmaker or carpenter. No peculiar methods, however, are used which followers of the latter occupations would have to unlearn.
It is of utmost importance that the first impression of the purpose and method of using a tool should be correct and effective.
In using any tool the results produced by $i t$, in the wood, should be tested at every step, in order that the purpose for which the tool is used may be fulfilled.

Exercises.
An "exercise" in sloyd is the specific use of a tool involving certain mental and physical effort.

The progression of exercises follows carefully the increase of power in the child. The models are based on the exercises.

Models.
(1) Models should be simple but pleasing in appearance. Form and proportions should be as far as practicable such as a true artist would approve.
(2) The models should be serviceable articles for home use, suited to local requirements.
(3) The exercises in each model should be so related to the previons steps that they "constitute a gymnastic exercise of the attention and the will, never au exbausfing labor." ${ }^{1}$
Note.-It has been found that, as a general rule, a suitable progression does not allow more than four nor less than one new exercise in a model.
(4) The finislied article should be a truthful expression of the amount of effort or skill the child has exercised in making it.
(5) A large proportion of the models should involve such exercises as will require testing by the unaided eye and the sense of touch.
The principles previously stated have been so carefally followed in arranging the course liere illustrated, and the course has been so yell tested by experience that it is presented with great contidence for the training of children from 12 to 15 years of age; but it is not considered in any particular as a finality. Better means are constantly sought and suggestions leading to improvement most cordially welcomed.
It will be seen that the value of a course of sloyd models should only be testerl by considering their fidelity to the fundamental principles, and that changes of models should be made with great care. It is also evident that while no one series of models need be arbitrarily used, all adaptations which conform to the same principles will possess strong points of resemblance. So long as the completed object forms the basis of judgment, there will be as many systems as there are persons to make new models, and the educational value of manual training will suffer. Not until the motive and the significance of the progression of exercises is nnderstood can the value of any systern of work be estimated. Thorough investigation of manual training conrses is urged upon those who are concerned in the introdnction of the subject into schools or reformatories. Such investigation will show that this is not a matter of mere theory, but, in the words of a prominent reformatory officer who has seen the work of sloyd for several years, that "The moral improvement of the individual is as clear and indubitable as his advance in skill."

## Drawing.

The making of the working drawing, which is a concise means of thoughtexpression, shonld precede the making of each model. The drawing would be tanght to greatest advantage in the regular schoolroom by the class teacher or the drawing teacher, who shonld he supplied by the sloyd teacher with models and directions about the drawing. New life wonld be given to the drawing, for the pupils would he eager to nnderstand and draw the objects to be made in the sloyd room, a great gain on the blind copying of processes which is now carrierl on in so many schools.

The connection of sloyd with the rogular school work in this way wonld lead to a better appreciation of its value by teacher and parents and to greaterinterest in the frawing on the part of the pupils.

In introducing mechanical drawing into schools, independent of sloyd, objects can be selected from the sloyd models and these rules followed:
(1) The pupil should be led to see that drawing is a convenient and forcible means of thought expression.
(2) In teaching orthographic projection the third angle is employed; that is to say, the olject is placed below the lrorizontal plane and behind the vertical plane.
(3) Pupils should be taught to read understandingly any simple working drawing.
(4) A working drawing should contain only such views, lines, and dimensions as are actually necessary to a clear comprehension of the object to be made.
(5) The objects used should present such a combination of principles as will afford variety, and also sufficient repetition to impress them upen the pupil's mind.
(6) As a rule, no object should contain more than four new facts.
(7) All the objects should be made to oxact dimensions.
(8) The inspiration which comes from the use of the creatire instinct is as useful in drawing as in other lessons, and therefore, oven when drawings are to be mado independently of tool work, they should represent, as far as possible, objects of use.

## Time.

It is difficult to say just how many sloyd exercises can be executed in a given time, for, as has been stated, the work is based on growth, and this varies in different individuals; however, from observation and experience the following course shows approximately what can be accomplished in three years (forty school weeks in a year), giving two hours per weok to the work.

This course might be taken in one year, if six hours a week (threo two-hour lessons) were allotted to the subject.

Nоте. - Whenever this time has been given to sloyd, under a thorough teacher, improvoment in the ordinary school studies has been marked.

## Elementary Sloyd.

Tho demand for manual work for children younger than those provided for by the sloyd course has led to various attempts to meet this want.

The danger of exacting from young children work which requires constant repetition of fine precise movements has been so plainly pointed out by physiologists that in the following course there has been constant endeavor to provide for exercising the larger groups of muscles. But this work is still experimental, and it must bo clearly understood that it is not so confidently recommended as was the previous course.
Elementary sloyd is a comrse of work in two dimensions of the wool, requiring, in most cases, but one view in irawing.

A special roon, fitter with suitable benches, is necessary for this work. But the ontfit is not so expensive as the regular sloyd, the tools being fewer and smaller. The knife is not used in this course. The objects are suited to the age of the children ( 9 to 12 years), and the exercises are very simple. Elementary sloyd is considered a valuable training by the teachers, who have observed its results in the children.

Before attempting to teach this course it is important that the regular sloyd course be completed in order that the principles of the work be understood and snfficient mastery of tools acquired.
Special attention should be paid to the selection of tools for elementary sloyd. There must be suitable benches, with proper vises. The splitting saw should be 14 inches long, with 12 teeth to an inch; turning saw 8 inches long, one-eighth inch llade, 15 teeth to an inch; smoothing plane 8 inches; center bit well arljusted and sharpened, etc.

## Whittling Course.

Many earnest teachers, particularly in the smaller towns, feel the need of manual trainiug in their schools, but are unable to secure it on account of the expense involved.
A special tsacher and sloyd outfit being out of the question, a course of woodwork that can be given in the schoolroom by the regular teacher, and requiring but few implements, has been planned for such cases.

With simply a desk board, sketchbook, pencil, rule, compasses, try-square, knife, anil sandpaper block (all costing about $\$ 1$ ) for each pupil, the course here outlined. can bo executed.
The exercises aro chiefly whittling, but are planned to gire as great variety of thonght and movement as possible. The exercises involve drawing, lining, weasuring,
testing with rule, try-square, etc.

While I would not recommend a course of woodwork requiring the use of one cutting tool only, if a fuller outfit were possible, yet I feel sure that the development which will be gained by such a course as this is far better than having no manual training in the school.
A sharp distinction must be made between cutting wood with the point of the knife, "knife work" (so called), and whittling.
The former is done in a bending or sitting position and with a cramped muscular movement.- Though a great variety of forms may be cut in this way, there is not sufficient stimulus to new thought after cutting the first pieces, the muscular action being nearly the same in all cases.
Whittling, on the other hand, is done in a good, standing position, with free muscular movements. Now thought is constantly required in making the various articles which are carefully selected with reference to awakening and holding the interested attention of the worker.

The pupil should in most cases express his thought of the model in a correct working drawing before making each model (such a drawing to include but one vierv of the object).

Thus drawing lecomes of more consequence to the pupil as ho realizes that the care and accuracy with which he measures dimensions and makes his drawing go far to determine the excellence of his model.
The pupil should also have practice in reading working drawings from the blackboard.
No teacher who has not herself satisfactorily completed both the drawing and the whittling of the entire course should undertake to teach it.

FIRST YEAR．
［Children 12 to 13 years．Time，two hours a week．］

| Drawing． | New exercises． | Repeated exercises． | New tools． | Models． | Kind of woods． | Dimonsions （inches）． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Conalso and correct thought expression． | An exeroise in sloyd is a specific use of a tool involving certain mental and physioal efforts． |  | Instruments by which the hand gives ma－ terial expression to thought． | Child＇s motives for the exercises． | Variety of native woods suited to character of the objects． |  |
| Worlding drawings，full size，including freo－ band curves and aim－ ple geometrical prob－ Fems excepting Nos． 4. 6． 11,18 ，when the children read anoth－ ar＇s drawing． | 1．Straight whittling． <br> 2．Oblique whittling． <br> 3．Cross whittling． |  | （Drawing instra－ ments ：Drawing board， T－square，triangle， pencil，rule，and com－ passes．） <br> 1．Knife． | 1．Wedge． | Pine． | 212 $\times$ 喠 $\times 1$. |
|  | 4．Point whittling． <br> 5．Sundpapering（without block）． | 1，2，3． | 2．Sandpaper． | 2．Flower pin． | Pine． | $12 \times \frac{1}{2}$ ． |
|  | 6．Ripsawing． <br> 7．Natrow surface planing． <br> 8．Squaring． | 2，3． | 3．Splitting saw． <br> 4．Jack plane． <br> 5．Try－square． | 3．Flower stick． | Pine． | 15x $\times 1 \times \frac{1}{2}$ ． |
|  | 9．Boring with drill bit． <br> 10．Fytting a peg． <br> 11．Curre whittling． | 1，3，2， 5. | 6．Drill bit． <br> 7．Bit brace． | 4．Penholder． | Pine． | 71 $\times$ x $\frac{1}{6}$ ． |
|  | 12．Crossont sawing． <br> 13．Gauging． <br> 14．End planing（in bench hook）． <br> 15．Boring with auger bit（vertical）． <br> 16．Sandpapering（with block）． | 6，7，8，3， 1. | 8．Backsaw． <br> 9．Marking guage． <br> 10．Block plane． <br> 11．Bench hook <br> 12．Auger bit． | 5．Tool rack． | Pine． | $16 \times 1$ 年又妥。 |
|  | 17．Curve sawing． <br> 18．Smoothing with spokeshave． <br> 19．Boring with brad awl． | 6，7，8，13，14，5， 16. | 13．Turnixg saw． <br> 14．Spokeshave． <br> 15．Brad awl． | 6．Coat hanger． | Pine． |  |
|  | 20．Broad surface planing． <br> 21．Vertioal chiseling． <br> 22．Horizontal boring． <br> 23．Filing． <br> 24．Find planing（without bench hook）． | 12，7，8，17，13， 16. | 16．Cutting－off saw． <br> 17．Winding sticks． <br> 18：Firmer chisel． <br> 19．Flat file． <br> 20．Divider． | 7．Cutting board． | Pine． | 18×7x和。 |
|  | 25．Nailing． <br> 26．Sinking naila． | 12，6，7，8，13，14，1，3， 16. | 21．Hammer． 22．Nail set． | 8．Flowerpot stand． | Pine． | $15 \times 5 \times 1{ }^{\frac{1}{2}} \times 1 \frac{7}{18}$ ． |
|  | 27．Making halved－together joints． | $\overline{12,6,7,8,13,14, ~} 1,3, \overline{21,16}$ ． |  | 9．Flowerpot stool． | Pine． |  |
|  | 28．Countersinking． <br> 29．Gluing． <br> 30．Sorswing． | $\begin{aligned} & 12,6,20,7,8,13,14,2 t, 9, \\ & 21,22,19,21,16 . \end{aligned}$ | 23．Countersink． <br> 24．Screw－driver． | 10．Bench hook． | Pine and cherry． | $14 \times 5 \frac{1}{2} \times 1 \frac{1}{8}$ ． |
|  | 31．Modeling with spokeshave． <br> 32．Soraping． | $\begin{aligned} & 12,6.7,8,13,14,17,18,23, \\ & 5,16 . \end{aligned}$ | 25．Smoothing plane． 26．Half－round file． | 11．Hatchet handle． | Beech． | $14 \times 18$ x ${ }^{\text {a }}$ ． |
|  | 33．Beveling with apokeshave． | $12,6,7,8,18,14,11,15,20$, <br> 24，17．18． 31, b，16，25， 26. | 27．Cabinet scraper． | 12．Corner bracket． | Pine． | $10 \times 10 \times 18$ ． |
|  | 94．Oblique planing． | $\begin{aligned} & 12,6,7,8,13,14,17,18,31 \text {, } \\ & 28,32,5,16 . \end{aligned}$ |  | 13．Hammer handle． | Beech． | $12 \times 17 \times 8$. |

SECOND YEAR．
［Children 13 to 14 years．Time，two honrs a week．］

| Drawing． | Now exercises． | Repeated exercises． | New tools． | Models． | Kinds of wood． | Dimensions （inches）． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Concise and correot thought expression． | An exercise in sloyd is a specifio use of a tool involving certain mental and physical effort． |  | Instruments by which the hand gives ma－ terial expression to thought． | Child＇s motives for the exercises． | Variety of native woods suited to character of the objects． |  |
|  | 35．Spacing with compasses． <br> 36．Veining． <br> 37．Carving． | 12，6，7，8，13，14， 16. | 28．Bevel． <br> 29．Veining tool． <br> 30．Skew chisel． | 14．Keyboard． | Pine． | $15 \times 2 \times \frac{1}{2}$. |
|  | 42．Beveling edge with jack plane and flle． <br> 43．Boring with center bit． | 12，6，7，8，13，14，32， 16. | 33．Center bit． | 16．Ruler． | Maple． | $16 \times 1$ |
| The same as the first year，increaring in difficulty as the models become more complex． | 46．Open mortise and tenon joint． <br> 47．Making and fitting dowels． | 12，6，7，8，13，21，15，24， 16. | 34．Mortise gauge． <br> 35．Mallet． | 18．Frame $q$ | Pine． | $10 \times 8 \times$ 易。 |
|  | 48．Fittiug and nailing square joints． | 12，6，20，7，8，13，14，16， 26. |  | 19．Box． | Whitewood． | $11 \times 5 \times 2 \frac{3}{8}$. |
|  | 49．Grooring with gouge． | 12，6，7，8，13，14，32，5， 16. | 36．Firmer gouge． | 20．Pen tray ． | Gum wood． | $10 \frac{1}{2} \times 24 \times$ 星。 |
|  | 50．Chamfering． <br> 51．Straight edge beveling． | $\begin{gathered} 12,6,20,7,8,13,15,45,21, \\ 23,11,2,16,29 . \end{gathered}$ |  | 21．Hatrack， | Pine． | $18 \times 24 \times 3 \frac{1}{2}$. |
|  | 52．Half lapping． <br> 53．Grooving with chisel． | $\begin{aligned} & 12,6,7,8,13,14,21,36,37, \\ & 42,16,30 . \end{aligned}$ |  | 22．Picture frame．$a$ | Gum wood． |  |
|  | 54．Compass sawing． | $\begin{aligned} & 12,6,20,17,13,18,15,49 \\ & 132,31,23,5,16 . \end{aligned}$ | 37．Compass saw． | 23．Cake spoon． | Cherry． | $13 \times 2 \times 8$. |
|  | 55．Grooving with rabbet plane． 56．Mitering． | $\begin{aligned} & 12,6,7,8,13,29,25,26,42, \\ & 30,16 . \end{aligned}$ | 38．Rabbet plane． | 24．Picture frame． | Cherry． |  |

［Children 14 to 15 years．Time，two hours a week．］

| Drawing． | New exarcisee． | Repeated exercises． | New tools． | Models． | Kinds of wood． | Dimensions （inches）． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Concise and correct thought expression． | An exercise in sloyd is a specifio use of $n$ tool involving certain mental and physical effort． |  | Instruments by wihich the hand gives ma－ terial expression to thought． | Child＇s motives for the exercises． | Variety of native woods suited to character of the objects． |  |
| Working drawinga to scale and from deacrip－ tiou．Difference be． tweon orthograplifo， isometric，and perspeo－ tive drawlug． | 57．Half－oblique dovetail． | $\begin{array}{r} 12,6,20,7,8,13,24,34,22, \\ 17,11,16,29,21,18,25,26 . \end{array}$ |  | 25．Footstool． | Pine． | $13 \times 7 \times 6$. |
|  | 58．Vertical gouging． <br> 59．Cutting with drawing knife． | $\begin{gathered} 12,6,7,8,13,24,17,21,18, \\ 49,32,5,11,23,16 . \end{gathered}$ | 39．Firmer gouge（bev－ eled inside）． <br> 40．Drawing knife． | 26．Scoop． | Cherry． |  |
|  | 60．Plain dovetailing． <br> 61．Carving curve design． | $\begin{gathered} 12,6,20,7,8,13,24,17,11, \\ 1,23,16,29,25,26 . \end{gathered}$ |  | 27．Book rack or bracket． | Pine． | $\begin{aligned} & 16 \times 5 \frac{1}{4} \times 6 \frac{6}{2}, \text { or } \\ & 8 \frac{1}{2} \times 7 \times 5 . \end{aligned}$ |
|  | 62．Plain jointing． <br> 63．Square grooving． <br> 64．Quarter－round planing． | $\begin{array}{r} 12,6,20,7,8,13,14,60,16, \\ 29,15,54,17,18,11,5,24 . \end{array}$ | 41．Jointer plane． | 28．Knife box． | Pine． | $12 \frac{1}{2} \times 9 \times 2 \frac{9}{16}$. |
| Lettering work and mak－ ing bluo prints． | 65．Uso of matching plane． 68．Cleating． | $\begin{aligned} & 12,6,20,62,29,13,7,8,24, \\ & 15,30,16 . \end{aligned}$ | 42．Matching plane． <br> 43．Cabinetmaker＇s clamp． | 29．Drawing board． | Pine． | $19 \times 13 \times$ 乭． |
|  | 67．Dovetailing with a miter． 08．Shellacking． | $12,6,20,7,8,13,14,15,54$, $17,18,11,23,5,16,29$ ， $24,64,36,37,19,28,30$. | 44．Parting tool． | 30．Tray． | Pine or cherry． | $16 \times 10_{10}^{5} \times 2 \frac{1}{2}$. |
|  | 69．Panel grooving． <br> 70．Half－blind dovetailing． <br> 71．Blind mortise and tenon joint． <br> 72．Fitting hinges and lock． | $\begin{gathered} 12,6,20,7,8,13,24,60,16, \\ 68,29,56,25,26,64 . \end{gathered}$ | 45．Miter box． <br> 46．Framing chisel． <br> 47．Plow plane． | 31．Tool chest or cabinet． | Pine． | $27 \frac{1}{4} \times 13 \frac{1}{4} \times 0$ 年． |

Note．－Wood turning may be practiced after 13－24－31．
[Children 7 to 12 years.]

| avi | ow oxercises. | Repeated exercises. | New tools. | Models embodying the exereises. | Kind of wood. | Dimensions . (inches). |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Concise and correct thought expression. | New oxerima. |  | Instruments by which |  |  |  |
|  | An "exeralse" in sloyd is a specific use of a tool involving certain mental and physical effort. |  | rial expression to thought. | Child's motives fo exercises. | Variety of uativ wood. |  |
| Working drawings, one view of each model to be made or read by the pupil pre. vious to the making of each model. | 1. Measuring- <br> 2. Lining. <br> 3. Ripsawing. <br> 4. Crosseout sawing. |  | 1. Pencil. <br> 2. Rule. <br> 3. Try-square. <br> 4. Splitting saw. <br> 5. Back saw. | Preparation for each model. |  |  |
|  | 5. Planing with the grain. <br> 6. Planing across the grain. <br> 7. Squaring. |  | 6. Smoothing plane. <br> 7. Block plane. <br> 8. Bench hook. <br> 9. Sandpaper. | 1. Ruler. | White, $\frac{1}{6}$. | $6 \times 1$. |
|  | 8. Squaring. papering (with bloek). | 5,6,7,8. |  | 2. Label. | White, 者. | $5 \times 1$. |
|  | 9. Oblique planing. |  | 10. Compasses. | 3. Key tag. | White, $\frac{1}{4}$. | $4 \times 1$ |
|  | 10. Filing. <br> 11. Boring. |  | 12. Centerbit. |  |  |  |
|  | 12. Gluing. | 5, 6, 7, 9, 10, 11, 8. | 13. Turning saw. | 4. Pencil shar | erry, 18. | $5 \frac{1}{2} \times 1 \frac{1}{4}{ }^{\prime}$ |
|  | 13. Curve sawing. <br> 14. Smoothing with spokeshave. | 10, 11, 8. | 14. Spokeshave. <br> 15. Screwdriver. | po | hite, ${ }^{1}$. | $6 \times \frac{1}{4}$. |
|  | 15. Sorewing. <br> 16. Boring arcs. | 5, 6, 7, 8. | 16. Brad awl. | 6. Fish-line winder. | Cherry, $\frac{3}{18}$. | $6 \times 1 \frac{1}{4}$. |
|  | 17. Boring with brad awl. 18. Nailing. | 5, 0, 7, 8. | 17. Hammer. | 7. Flowerpot stand. | White, $\frac{1}{4}$ and $\frac{1}{2}$. | 51 $\frac{1}{} \times$ 特. |
|  | 19. Sinking nails. |  | 18. Nail set. |  |  |  |
|  | 20. Block planing without bench hook, 20. Blorter-round flling. | 4, $0,10,8$. |  | 8. Vase stand. | White, $\frac{1}{4}$. | $5 \times 1$. |
|  | 22. Modeling with sporeshare. | 13, 14, 10, 8. |  | 9. Bread board. | Pine, $\frac{1}{2}$. | $11 \frac{1}{2} \times 8$. |
|  | 23. Fitting and nailing square joints. | $\frac{5,6,7,8,18,19 .}{}$ |  | 10. Pentray. | Gum, $\frac{1}{4}$ and $\frac{1}{8}$. | $10 \times 23$. |
|  | 24. Modeling to $\frac{8}{}$ sharp edge. | 5,6,7,22,10,8. | 19. Round file. | 11. Paper knifo. | Cherry, $\frac{3}{16}$. | $11 \times 1$. |
|  | 25. Making symmotrical corners and curres. | $5,6,7,11,16,10,23,21,8$. |  | 12. Letter box. | Gum, $\frac{1}{4}$. | 4 $4 \frac{3}{4} \times 4$. |
|  | 26. Making cylinder with spokshave. <br> 27. Oblique planing of broad surface. | $5,6,7,11,14,22,10,8$. |  | 13. Spade. | White, $\frac{8}{8}$. | $18 \times 3$. |
|  | 28. Sawing and filing poncavecurves. | 5,13, 14, 10, 11, 18, 19, 8. | 20. Half-round fle. | 14. Bracket. | Gum, $\frac{1}{4}$. | $6 \times 3 \frac{1}{2}$. |
|  | 29. Compass bawing. | 5, 6, 7, 11, 10, 18, 8. | 21. Compass saw. | 15. Frame. | Cherry, $\frac{3}{18}$. | $8 \frac{1}{3} \times 6$. |

[Children 10 to 12 years.]

| Drawing (one view and seotion). | New exeroises. | No. | Models embodying the exercises. | Kind of wood. | Dimensions (inches). | Tools. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Measuring. lining, squaring, etc., on paper and wood. |  |  |  |  |  |  |
| Oblong. diwensions, extension lines, arrowheadr, figures. <br> Dinensioning oblique lines, use of frantions. <br> Circles and semicircles. | Straight and cross whittling, sandpapering with block. $\qquad$ <br> Whittling to a convex line, boring with | 1 2 3 | Rule* Label. Kextag | Bass, $\frac{1}{8}$-inch Bass, $\frac{1}{8}$-inch. Bass, $\frac{1}{8}$-inch. | $6 \times 1$ $5 \times 1$ $4 \times 1$ | For each pupil: Desk board, sketchbook, pencil, rule, compasses, try-square, knife, sandpaper |
| Center liue, tangent, arc. | hand auger. <br> Gluing sandpaper | 4 | Pencil sharpene | Birch or cherry | $5 \frac{1}{2} \times 1 \frac{1}{4}$ | block. |
| Square, dimensioning corner | Cutting out square corners (use of the board). | 5 | Thread winder | Bass, $\frac{7}{8}$ :inch | $2 \frac{1}{4} \times 2 \frac{1}{4}$ | General tools in care of the teacher: Cut- |
| Review of Nos. 3 and 4 | Whittling to a convex line, with square shoulders. | 6 | Match striker | Bass, $\frac{1}{8}$-inch | $6 \times 2 \frac{1}{4}$ | ting-off saw, back- <br> saw hatchet, hand |
| Construction of hexag | Whittling a hexagon........................ | 8 | Mat (hexagon) | Bass, $\frac{1}{8}$-inch......... | $4 \times 4$ | saw, hatchet, hand |
| Review of N08. 4 and | Cutting triangular incisions.............. | 8 | Fish line wind | Birch or cherry, $\frac{1}{8}$-in. | 5 x | awl, oilstone, oil can, |
| Construction of quarter foil | utting and whitting right-angled triangles. | 10 | Mat (quarter fo | Bass, $\frac{1}{8}$-inch. .-...... | $2 \frac{1}{4} \times$ | leather strop, cotton waste, sandpaper |
| Ares with given radii...... | Whittling concave curves | 11 | Mat (quarter f | Bass, $\frac{1}{8}$-inch. ........ Birch or cherry, - in . | $\begin{aligned} & 4 \frac{1}{2} \times 4 \frac{1}{2} \\ & 3 \frac{1}{2} \times 2 \end{aligned}$ | Nos. 1 and 0. |
| Tnoomplete oross seotion | Modeling with knife, notchi Bereling to a sharp edge... | 12 | Clay-modeling too | Cherry or birch, ${ }^{\text {3 }}$ - in | 6   <br> 6 8  <br> 6   | Price of tools for each |
| Intorsection of curves andstraightsurfaces. | Round and point whittling | 14 | Flower pin | Pine, 者inch......... | $\begin{array}{rrrr}6 & \times & \\ 12 & \text { x } & \frac{1}{2} \\ 1\end{array}$ |  |
| Review of No. 14................... | Modeling hook. | 15 | Crotchet neerl | Cherry or birch, $\frac{3}{16}$-in | 9 x 3 ${ }^{18}$ | General tools for class, |
| Construction of equilateral triangle....... | Modeling to a sharp ed Curve and round whittl | 17 | Paper knife. | Cherry or birch, , ${ }^{3}$-in | $11 \times 1$ |  |
| lines. <br> Detajled drawings, or drawings from deseription. | Making halved-together joint | 18 | Windmill | Pine, $\frac{1}{2}$-inch | $6 \times \frac{1}{2}$ | Wood for each pupil in this course, 20c. |

The whittling should be done in a good standing position, the cutting and drawing while sitting at the desk.
Sandpaper should not be used until the work is as well done as possible with the knife, and approved by the teacher.
Parallel numbers for the more able and rapid workers consisting of objects, type forme, and figures, which are suited to the capacity of such children, should be selected by the teacher.
\#The rule may be spaced for a measure after completing model No. 7 .

PLAN OF SLOYD ROOM-CLASS OF 20 PUPILS.


Room A-38' feet by 28, feet. Noom B-16 feet by 13 feet $\mid$ Room $C-16$ feet by 13 feet

1. Sloyd benches (Larsson adjus. table).
2. Platform

Demonstration benoh
4. Desk.
5. Pigeonholes.
3. Closet for material.
7. Shelves for general tools.

Room C-16 feet by 13 feet
9 inches.

1. Closet for material.
2. Shelves for lumber.
3. Stationary washstand.
4. Grindstone.
5. Shelf for oilstone.
6. Hooks for clothing.

Prioe of complete outfit (benches and tools), \$475. Sloyd Training School, Boston, Mass.. Gustaf Larsson.

The Boston Normal School of Cookery was founded by the late Mrs. Mary Hemenway. It is designed to enable those who wish to become teachers of or experts in the theory and practico of cookery and aHied subjects to obtain adequate preparation for positions in public or private schools, medical schools, or other institutions, training schools for nurses, etc.

The course of instruction has covered hitherto only one year, but experience has shown that this timo is insufficient, and it will henceforward extend over two yeare. By this means it becomes possible to supply better laboratory facilities, more advanced instruction, and moro thorough practical work.

Provision has now been made for a sound elementary training, in chemistry, physics, biology, physiology, and hygiene (in whieh subjects the instruction, by special arrangement, is given in the laboratories of the Massachusetts Institute of Technology), as well as in the theory and practice of cookery and the cognate housebold arts. For the latter subjects, a kitchen laboratory in one of the public school buildings of Boston has been fitted with all necessary appliances, and placed under tho supervision of an expert teacher. Here are taugh't the manifold practical details of kitchen and lamndry work, as well as the domestic applications of modern science.

THE COURSE OF STUDY.
First year.-First term: General chemistry, physies (elementary), the household arts, first principles. Second term: Chemical analysis (qualitative), biology (elomentary), cookery (theory and practice).

Second year.-First term: Physiology and hygiene, chemical analysis (volumetric), bacteriology (lectures and laboratory), cookery (special practice). Second term: Physiology and hygiene, chemistry (sanitary), practice in teaching classes in cookery, thesis work.

SUBJECTS AND METHODS OF INSTRUCTION.
Chemistry.-Inasmuch as cookery is based upon an application of chemistry to food preparing, and deals with food stuffis and their treatment by fire and water or by other mainly chemical methods, chemistry has been made one of the principal features of the course. After a general introduction and practice in elementary analysis covering the entire first year, the students proceed to volumetric analysis, and, finally, to the careful chemical examination of air and water, as well as of milk, butter, bread, and other foods. Constant laboratory work accompanies the more formal lectures and recitations.

General biology, plysiology, bacteriology, hygiene, etc., are of equal importance with chemistry to the expert teacher of cookery. The income and outgo of the human body, its sources of energy, its relation to food stuffs and foods as illnstrated by digestion and indigestion, absorption, circulation, metabolism, and oxcretionthese and many kindred topics, such as fool economy, shrold be familiar to every teacher of cookery. The modern advances in bacteriology, which underlie a scientific comprehension of canning, preserving, refrigeration and cold storage, yeasts, and fermentation, sterilization or pastenrizing of milk, etc., will also henceformard claim a much more considerable equipment on the part of well-informed teachers of the household arts.

Professional scork.-The principal oljject of tbe school is the fitting of persons, adequately prepared, to become teachers of cookery and tho cognate household arts. To this end, therefore, all the other instruction offered is tributary. Side by side with the more general and theoretical training there goes thronghout the course instruction in the theory and practice of cookery; and in the last half year the students themselves become teachors, and actoally apply in practice what they have learnel. Each student is also expected to prepare a thesis embodying careful personal study of some appointed subject relating to the professional work of the school. The following is a more detailed outline of the courses in cookery.

Tho work is arranged on erlucational as well as technical lines, and affords both theoretical and practical instruction, which is given in the well-equipped kitchen laboratory already referred to. There are four courses.
(1) The fundamental principles of foods and cookery. The preparation of simple food stnffs, dishes, and courses. Cost of materials and arrangement of simple meals with consideration of nutritive valnes.
(2) The second course inclndes instriction and practice of an advanced character. The application of chemistry to cookers; clemistry of foods and calculation of dietaries; public school observation and practice.
(3) After a very careful and thorough study of the essentials of the subject as being most important, a course is given in the making of more elaborate dishes, as fancy breads, desserts, entrées, frozen dishes, cakes, etc.
(4) Cooking for the rery sick.

This contrse affords special instruction-in the use and preparation of dishes for the very sick as well as for convalescents. The pupils are thus enabled to make a specialty, if desirable, of training medical students and nurses.

Course 2.
(1) Fuels. Construction of ranges, stoves, use of Aladdin oven. The building and regulation of fires; the use of gas and oil with relative costs of various fuels.
(2) The physiological relations between food and the body. Average composition of the body under given coaditions.
(3) Composition of food stuffes and a study of the "fool primeiples" thus afforded for the body. The effect of heat with objective points to aid digestion by taste, solution and dilution of food materials, and partial chemical change (or decomposition). A study of the. physical and chemieal properties of foods with experiments to illustrate such properties.
(4) Special consideration of nutritive value. Cost and food value obtained for a given outlay.
(5) How to select, combine, and prepare the most necessary and wholesorne food materials.
(6) Practical instructions in marketing as to different cuts of meat and their selection, with relative casts and values.

## REQUIRFMENTS, FOR ADMISSIONF.

To be admitted to the Boston Normal School of Cookery candidates must not we less than 17 jears old, and must give evidence satisfactory to the director, by examination or otlrerwise, that they possess a good elomentary education, and sufficient proficiency in English, arithmetic, algebra, plane geometry, French or German, ank history, or equivalent subjects, to make it likely that they are qualified to undertake with success the work of the school, and, eventually, to become teachers. Graduation from an ordinary high school should in general enable one to enter.

## REQUIREMENTS FOR GRADUATION.

Diplomas will be awarded to those who, having completed the course and satisfied all the requirements, have given evidence of their fitness to teach.

## FEES.

The tuition fee is $\$ 150$ a year, payable as follows: Upon entering, $\$ 75$; on Felruary 1, \$75.

Students furnish at their own expense their text-books and dissecting iustruments, but in the several laboratories pay only for their breakage.

Girard College, Philadecphia, Pa.
[From the report of the president for 1895.]
manclal training.
Our manual training school has harl a successfal year. Thero has been a marked increase in the interest shown ly the boys in their work. The improvements in the building have been accomplished by still greater improvements in the work of instraction. Every effort is being made to get the best results, to give the woys that training which is best for hand, eye, and mind. Heretofore the metal working las been, to an extent, the center around which the work of the other departments lias revolved. That is to say, the work of other departments has been largely preparatory to that of the metal-working section. While this line of work will bo continued, it will not bo given quite so much emphasis. We do not know what the future of any boy of the college will be. The question for us to consider is, "In what way and by what means can we best develop the special capacities and aptitudes of each boy, so that he may most easily find his proper place in life and become a self-dependent and self-governed manp" The new curriculom now beivg developed and applied enlarges the work of each departnent, gives it greater variety and more practical worth, places all departments nore or less on the same level, and enconrages the head of each to make the most of his own splere of labor.

Some friends of mannal training are now advocating trade teaching. Whether this is better than to give mere skill of hand and knowledge of the use of tools is a
question. In Girard College, in which the boys are all very young, I believe that the best resalts are obtained by giving the all-round training which will enable the lad to employ his time to the lest advantage when he leaves the college to earn his livelihood. From statistics it would seem that specializing has not brought the best returns. During the five jears ending with 1894 we did some trade taaching in several departments, and yet the number of boys going to mechanical occupations on leaving school was 40 per cent less than during the previous five years when little or no trade teaching was attempted. These statistics may not be, and probably are not, conclusive. We can understand, however, that there are many boys who care more for manual skill than for trade skill, who are pleased with the idea of being taught the use of carpenters' tools, but who lose interest at once when they suspect that they are to be taught the carpenter's trade. * * *

While we would emphasize the fact that manual training is not trade teaching, we hold that it brings pupils a long way on toward the learning of the trades. This is because the instruction is based on the principles underlying the trades, not in the details of the trades themselves. It is the result of applying the science of education to the learning of trades. As a trained mind is the best preparation for the study of a profession, so are the trained hand and the trained eye the best preparation for the successful acquisition of a trade.

We believe that the problem is now being satisfactorily solved under the wise action of the board, recently taken, first in restoring class teaching in place of the elective system, and, second, in giving to graduate pupils the privilege of taking a special course in any one of the departments of the mechanicai school. This will give manual training to all and trade instruction to such as shall desire and meritit.

Lasell Seminary, auburndale, Mass. ${ }^{1}$
[From the catalogae for 1893-94.]

## COOKING.

Since the management of a household is to be the-occupation of most women, we endeavor so to train our pupils that this responsible office shall seem to them an interesting and noble one by showing them, practically, in some departments of work, what a vast differeace intelligence and skill, forethought and sell-possession can make; as, for example, in cooking. For eighteen years women who a:e known throughout the country as skilled specialists in their work have cooked and explained their methods in the presence of all the pupils.
Miss Parloa, Mrs. Daniell, Mrs. Lincoln, Mrs. Oakes, and Miss Barrows need but to be named to give assurance that the instruction has been the best to be obtained in this country.
We hold that applied science can have no better uses for most girls than iu scientific housekeeping-since in no technical art will a little practical knowledge go farther to simplify what is otherwise complicated and laborious; or do more toward what is a chief result of all science-adding to the comfort and happiness of the human race. The application of chemistry and physies to daily living, and of sach knowledge of sanitary principles and domestic economy as can be turned to practical use in homes by housekeepers and mothers, seems to us an essential part of girls' education, and not to be neglected. Hence, for instruction in cooking we have a thoroughly furnisherd lecture room, with raised seats, and the appliances of a wellordered kitchen, and we give the subject a place in the required carriculum. In other branches of domestic accomplishment instruction is also given. Dress cutting and fitting, mending, honse furnishing and management, marketing, etc., receive careful attention.
The results have been well tested in homes, and numerous testimonials to practical efficiency from delightel mothers prove the thought and work to be no visionary one. Better than all is the approval of earlier pupils, bearing now the burden of life in their own homes, who thank us especially for this instruction, assuring us that it has helped them over many hard places in a young housekeeper's life.

The instruction in cooking is arranged for a course of three jears-the whole free of cost to pupils, and attendance req nired of all until satisfactory acquirements have been made. Those who pass examinations in the first year's work are advanced to the second year; those failing are conditioned, or recommitted to the first-year class, as seems best; from the second to the third year pupils are passed in the same manner. The first and second year's work is by demonstrations; that of the third year is done entirely by the papils in the practice kitehen.

Private classes for personal work, at fixed rates, for any grades, are open to all pupils.

1A private institution of secondary grade for girls.

## DRESS CUTTING.

An opportunity is given to learn dress cutting by the most approved method.
The best dress cutters are always in*demand, and receive high wages. Some of our former pupils are now earning their living by this; others doing all the work at home. Many a woman who fails in music or art might excel in some handicraft. Foolish prejudices must yield to the increasing necessities of the age. The department of dress needs the influence of educated women. The actual work done in this branch has shown its praeticability.

## MILLINERY.

Like thorough instruction is offered in millinery; the pupils, if they wish, making their own hats or bonnets. The success in this class has been encouraging.

## MENDING.

We do what time permits to teach those who need it, how to mend their clothing. The matron will give special attention to any for whom her offices are requested.

These, like other studies, may not be suited to all; but to many they will furnish added elements of independence and strength for the needs of life.

All is furnished at the lowest possible expense. It is not proposed to make money, but to fit our girls to be self-helpful.

## University Schpol, Cleveland, Ohio. ${ }^{1}$

## [From the eatalogue for 1894-95.]

The aim of University School is to develop the pupil symmetrically in mind and body, to impart to him as much as possible of useful knowledge, and to aid him in acquiring healthful and manly habits and in forming an earnest and upright character.
The courses of study are arranged with the aim of fitting pupils to enter any college or technical school, and of giving a good education to those who intend to go from the school immediately into business life. During the first four years the work is substantially the same for all papils. For the last four years the course is so planned that each pupil may pursue such studies as will fit him for his future work.
The studies are arranged in two courses, the scientific and the classical. The aim of the classical course is to thoroughly prepare boys for the best American colleges, care being taken that, without detriment to his general scholarship, each boy shall be fitted in every subject required by the college of his choice.
The scientific course is designed to meet the wants of those who desire to prepare themselves for business or for technical schools. The special aim is a thorough training in the English branches. The study of some language, ancient or modern, is required, as essential to a proper meutal development. For pupils preparing to enter a technical school, the work in Latin, German, and French is adapted to meet the requirements.

The study of mathematics, science, English, and history forms a part of each course, and is regarded as essential for all.

The work in manual training is begun in the first year with free-hand drawing, which is continued during the second year. In the third year this is replaced by clay drawing or modeling, and in the fourth year by wood carving. This is followed in the fifth year by mechanical drawing and wood work, in the sixth by mechanical drawing and metal work, and in the seventh by mechanical drawing, forging, and machine work. In the eighth year are introduced the study of engines, boilers, and other machinery, experimental work, and the visiting of manufacturing establishments.

The pupils in the classical department are not required to take all of the shop work, but it is believed desirable for the best development that all should follow the course through the fifth year. Classes are so arranged that older pupils may, if they wish, do special work in free-hand drawing or in wood carving.

Tyler school, Providence, R. I. ${ }^{8}$<br>[Statement of E. B. May, sloyd teacher.]

The work is intended for educational purposes, and is a part of the regular school course, which covers the primary and lower grammar grades. The boys are obliged to give two hours a week to mannal training.

The school is parochial, and is under the immediate supervision of the rector of the cathedral. It is supported by the church, there being no charge for tuition.

The course is the Swedish sloyd, as adapted to American schools by Mr. Gustaf Larsson, of Boston, Mass. There are 31 models, intended to cover three years' work. There are also 15 preliminary models for pupils of the lower grades.

There are 6 classes of 8 to 16 boys, with a total of about 80 .
The average age is about 11 years.
The method of instruction, owing to the small number in the classes, is almost wholly individual.

A working drawing is first made by the pupil from a model belonging to the school, and from this drawing he afterwards makes a similar model. This shows him the connection between the working drawing and the model; and also why certain lines, etc.-dimension lines, for instance-are necessary.

Each pupil is allowed to advance as rapidly as he is able, not being obliged to wait for those slower than himself.

The building itself is of the common style of school buildings, four stories in height, and contains ten class rooms and hall beside the manual-training department.

The equipment is as follows: Nine double and twe single benches. The double ones each have 1 common ripsaw and 1 cutting-off saw, and on each side 110 -inch backsaw ; 1 jack plane; 1 smoothing plane; 1 block plane; 1 marking gauge; 1 sloyd knife; 1 spokeshave; 1 bench hook; 15 -inch try-square; 12 -foot rule; 1 hammer; 4 chisels. There are also a number of common tools-files, braces, bits, turning saws, etc.-at the sides of the room. There are several foot-power machines, but they are not used by the boys.

The drawing room is fitted up with adjustable desks, cases for drawing boards, materials, etc.

The cost of equipment is stated as being $\$ 1,600$. The annual expense is from $\$ 1,200$ to $\$ 1,500$, including the teacher's salary.

Outside of the skill obtained by the pupils there seems to be very little to show for the time spent.
The age of the boys is considerably against very great resulte, as the majority are under 12 years.

## United States Indian Sefool, Carlisle, Pa.

## [Statement of A. J. Standing, assistant superinterdent.]

This school has practiced industrial and manual training from its beginaing, seventeen years ago. The object of such training has been instruction, ocenpation, and utility.

Beginning, as this school did, with a class of pupils who had no fnowledge of the English language, it was not practicable to give instraction by any course of lessons or explanation of processes. Of necessity, therefore, skill in any trade had to bo acquired by observation and practice. A competent mechanic was placed at the head of each workshop, whose duty it was to slow the appreatices how to do therr work. The education has been wholly practieal, the carpenters working on necessary buildings and repairs for the school; shoemakers and tailors on articles needed for school use; tinners and harness makers on supplies required by tho Government: blacksmiths and wagon-makers on necessary work for the school farm and in brilding wagons for Government use at Indian agencies. The instraction from the first, therefore, has been productive and at a small cost, for the reason that the various mechanics employed as instructors have done, with the help of their apprentices, the work of the school in their various dines, which otherwise would have had to be done by outside mechanics. This system was the only one open to us under the circumstances, and we also think that with undisciplined and uneducated minds it was the best system to pursue; there was not the ability to appreciato a progressive technical course, but the lowest intellect can derive some satisfaction from being able to make something complete, as a tin-cup, a pair of shoes, a horseshoo, a table, etc.

Another feature of this system is its great utility to tho school, keoping us supplied with many articles which, if not manufactnred here, wonld have to be parehased, combining therefore instraction, occupation, and production.
The syst om that experience has shown to bo the best for us is a half day in the workshop and a half day in the schoolroon for all. Thus each teacher and mechanteal instructor has two complete sets of pupils, changing each lialf day, and the whole reversing each month; so that neither set of pripils will be confined too long to the same daily period at sehool or work.

While the foregofng applies more especially to the instruction civen to the boys, the same systom is pursued with the girls, but witha less variety of ocelapations, they befng instracted in all that pertains to houselold work, plain sewing, dressmaking,
cooking, and some tailaring; but nothing for girls has been attempted aside from these usual and necessary lines.
The school is purely a Govermment institution for the education of Indians; it is supported by Government appropriation at the rate of $\$ 167$ per capita per annum, af Indians of the United States being eligible without charge except the Five Civilized Tribes.
The graduating point of the sehool is somewhat in advance of the ordinary grammar grade. Pupils are of all ages, fromr 8 to upward of 20 years, some entering as adults, withont any edmeation whaterer or even knowledge of the English language, They are therefore of all grades, from the adult primary to the graduating point.
Industrial training in the workshops commences when the pupil is of a suitable age, and if already grown, when they have made selection of the particular trade which they wish to learn.
For the younger pupill a sloyd deparment has been established in connection with the class-room work at the schools, where the instruction is purely educational. A modification of tho Swechish system is used by a competent teacher trainerl in Sweden. A basement room in the school building has been fitted up for this purpose, whieh is light and sunny and well vemtilated. Ordinary manual training benches made in the school workshops are used in this department, the equipment being simple, lut suffient.-
Observation by the teachers leade them to the conclusion that sloyd instruction quickens the interest of the younger papils in their studies and makes them more practical and aetive. In the nafter of discipline it is also helpful, makes them more cheerful and intelligent, and gives them pleasant exercise, developing a tasto that will in a marked fegree determine their fature. It is also expected that when the pupils now in the sloyd department are passed on into the trade shops they will make much more skillful and intelligent meehanics.
The school workshops were formerly cavalfy stables; they occupy three sides of a quadranigle, the buildings being one story brick, 40 feet wide, with 12 -foot ceilings, and a total length of 332 feet.
The constant aim hás been not to introduce a multitude of expensive appliances, but to work with such tools as a young man could easily purchase for himself, the idea being that the use of hand tools makes the bests mechanics.

In the printing offree, which is extremely valuable as an educational and industrial factor, there axe problished two papers, all the mechanical work being done by thestudents. The offiee is the second story of a building 40 by 70 feet; it is well lighted, and supplied with a cylinder and three smaller presses, and is a wellequipped office, the plant being valued at about $\$ 3,000$. The motive power is now electrieity.
The buildings, occupried by the workshops are valued at about $\$ 8,000$, the plant- i. $e$., tools, ete., exelusive of the printing offee-probably $\$ 2,000$ additional.

The annual expense of maintenanee is very small, for the reason that all the operations are productive, with very little waste material, and the labor of instructors counts in actual work done for the school. Instruction is therefore practically without cost.
Experience has demonstrated, in the case of this school at any rate, that literary progress is almost $2 s$ great under the half-day systen with an evening study bour as by having all-day school, while the gain to the elass of pupils under instruction in other ways is of inestimable value, centributing to their education, health, and discipline.

Another result of industrial edrcation is that it preserves an equilibriam between the abstract and physical in edacation. It also gives the student an advantage by opening another avenue for excellence which he may pursue simultaneously with his literary work. The dull student has also a chance to achieve excellence industrially where he may be a positive failure in the schoolroom. This success, of course, gives him encouragement and self-confidence, so that by the end of his five years' school term he may be sufficiently wall equipped in his chosen trade to enter the labor market himself.

In order that a distinction may be made in the workshops between those who are active and intelligent and those who are lazy and unprogressive, a system of grading has been established, promotions being made from one grade to another ly examination at the end of each quarter, grades being that of helper, apprentice, efficient apprentice, and journeyman, no one being graded until having worked at a trade four months and shown sufficient ability and adaptitudo to follow it "p.

Whatever may be the experience elsewhere, at this school we could not do withont our industries, the theory of the education here given being first a knowledge of the English langnage; second, some industry that will give ability for self-sipport; and lastly, a knowledge of books or purely literary education.

Soldiers' and Sallors' Orphans' Home, Xenia, Ohlo.
[Extracts from State laws relating to the home.]
The trustees shall afford to all pupils under their charge such liferary, technical, industrial, and art education as can be made accessible to them. The trustees shall have power to establish schools for the purpose of education, and shall also establish and maintain within the grounds of the home shops wherein suitable trades may be taught and practiced in a thorough and comprehensive manner; and under their regulation the superintendent shall have power to employ the proper persons to teach the pupils under their charge and to dismiss such instructors for canse.
The trustees, and, under their regulations, the superintendent, shall have power to purchase books, materials, tools, and machinery necessary to carry out the said purposes, and to dispose of the productions of the pupils to the best advantage of the institution.

Those pupils working inside the institution shall be entitled on their discharge to the net earnings during the two years previous, to be approximated by the trustees; and, under their regulations by the superintendent, the pupils shall have the right to select for themselves such trade or occupation as they may wish to engage in, but every pupil, male or female, remaining in the institution after having completed his or her fourteenth year, except in case of disability or ill health, must devote himself or herself for part of his or her remaining time to the learning of one of the occupations provided for, and when the pupils are discharged the trustees, through the superintendent, shall, so far as practicable keep in communication with the pupils, to enable them to report to the governor and general assembly in regard to these children of the State.
The curriculum of the studies of the home of those having passed the thirteenth year shall be such as to assist them most effectively in their future pursuits. The division and assignment into schools and classes shall be so regulated that the pupils may have the benefit of instruction in approved literary branches at such hours as woald appear to be most practicable, whether given in evening schools, half-time schools, or in schools during certain seasons only.
Whatever branches of industry the trustees may find it proper to introduce shall be taught and practiced in such a thorough and comprehensive manner, that the Soldiers' and Sailors' Orphans' Home shall be considered as a model school for these particular branches; and said board of trustees shall have power to make all necessary arrangements to carry into effect the purposes of this chapter.

It shall be the duty of the superintendent of the Soldiers' and Sailors' Orphans' Home, located at Xenia, Ohio, four weeks before each child that has been admitted, or may hereafter be admitted there, arrive at the age of 16 years, to ascertain what, if any, trade said pupil has learned while at home, and what trade or business each of said pupils so arriving at the age of 16 desires in the future to engage in; thereupon said superintendent shall forthwith cause a notice to be pablished in two newspapers printed and of general circulation in the State, one of which shall be published in the county which said pupil was sent from, that said pupil desires a situation in the business, as the case may be, aud desires a home in a respectable family, and compensation to be paid to such pupil as the employer may agree upon with said pupil and the superintendent. The said superintendent shall answer all communications and inquiries relating to the securing a respectable home and employment for said pupil and keep a record thereof, which shall be kept open to public inspection.
'EXTRACIS FROM REPORTS FOR 1894.
[From the board of trustees.]
We have in the institution 272 children over 14 years of age-boys, 153 ; girls, 119. Two handred and sixty-nine are receiving preliminary instraction in industrial parsuits. The importance of industrial training can not be overestimated.

The clothing department furnishes a good illustration of what may be accomplished in the way of economy, as well as the great advantage these industries are to the boys and girls. To do the work of this department, there were employed in 1890, 19 lady assistants; in 1891, 25 lady assistants; in 1892, 27 lady assistants.

Since the introduction of machinery and the conversion of the department into a school of industry, the present foreman and instructor, with one lady assistant, aided by his pupils, manufactures all the clothing for the children.
Many other cocupations are doing equally well. The interesting reports showing the condition and progress of all of them are herewith published, and deserve special attention. During the year there has been organized a school of telegraphy, and as soon as the necessary funds can be commanded we hope to see a echool of electricity established.
[From the superintendent.]
In no other year of the history of the institution has the manal training department made a better exlibit. The introduction of first-class machinery, especially in the printing, clothing, shoe, baking, and engineering departments, has successfully demonstrated the wisdom of training these childrert in habits of industry and to be self-supporting. The reports of the heads of departments show that the labor of these children has been utilized in the interest of economy. In every department savinge are shown, aggregating many thousands of dollars.
It is the intention, as near as possible, as Henry Ward Beecher said, "To find the bent of each child." That this is $\mathrm{so}_{\text {, }}$ the vocations followed by many of our-gradnates and ex-pupils give ample proof.
It is noticeable that the greater number of our children take pride in their trades, and the hours devoted thereto do not lessen their interest and standing in the schools. A child in every instance emplofed a half day at industrial training will keep up in the study room with a child who goes to school all day.

Pupils learning trades.

| Occupation. |
| :--- | :--- | :--- | ---: | ---: | ---: | ---: |

[From the chief matron.]
The school of domestic economy, in charge of Miss Belle Pigott, continues to instruct successfully our girls in practical and scientific housekeeping and dressmaking, thereby dignifying domestic service. Everything that tends to elevate labor and make our pupils self-reliant, as well as thorough and competent in all the branches tanght in schools of a like nature, is here promoted and sustained.
[From the printing office.]
At the time of my last annual report 25 boys were at work in the printing office; since then 11 have been admitted and 14 discharged, leaving now on the roll 21 names.

The work of the department is conducted with the fact constantly in view that this is a manual training school apd not a commercial printing office; that is, that the work is done not for its own value, but to teach how.it should be done. The effort is made to give each boy who works two years as a half-day pupil a knowledge and experience in the trade at least equal to that of the nsual apprentice of a full year's experience. Each one, besides typesetting, is given experience in making-up, pressfeeding, and other miscellaneous work of a printing office; and one boy in each half-day's force is regularly detailed to do the job printing, which, though limited in variety and mostly plain in character and of standard forms, gives fally as varied an experience as wonld be acquired in the same time in any office.

Of the boys discharged the past year 7 have been reported to me as working at printing, thongh 2 of these gave up their situations to attend school. Of the others, some are working in different lines of business and some have not written as to their employment. The past record of the department is still snstained that more boys from this department find good positions and continne to work at the trade after their discharge than from any other of our industrial departments.

## [Report of shoe shop.]

I have had an average of 22 boys at work learning the trade. Twelve have been discharged; all are fully able to make a living at the tzade.
The work of the past year has been 2,145 pairs of new shoes, worth $\$ 4,972.50$, and the
mending to the value of $\$ 4,326.50$. I have now in stock 675 pairs of shoes of our own make, worth $\$ 1,521$. Stock and tools purchased during the year to the amount of $\$ 2,359.65$. Salary paid to empIoyees, $\$ 1,500$.
I find the machinery-which was placed in this department a little over a year ago of great benefit to the boys who are learning this trade. This also enables us to turn out a greater number of shoes and of better quality.

## Friendford Industrial Schooly, Roxbury, Mass.

## [Statement of E. C. Honneman, superintendent.]

The school, which is a part of the work of the Ruggles Street Baptist Church, meets each Saturday morning at 10 o'clock for a two hours' session. The term opens the last Saturday in October and closes on the first Saturday in May.

The opening exercises each week consist of responsive reading by ouperintendent and school, singing and repeating the Lord's prayer, after which the several classes are formed and work lasts till noon, when the school is dismissed. The membership of this department is something over 125.

The central idea in the work of the school is educational-intellectually, pretcically, and morally. In many cases the influence here is the only refinement the child receives aside from the public schools, where the size of the class prevents the personal attention we endeavor to give. If so desired, the work may be carried on outsile in a trade.
The boys enter the school of their orwn desire, but regular attendance and punctuality are required. The line of work is optional-sloyd, carpentry, and woodearving, machine drawing or free-hand work.
The school was organized and is supported by the Ruggles Street Baptist Church and friends, being in no way dependent on the city for maintenance. No taition is charged, but each boy pays for the material he uses, having the result as his own property. In the carpentry and wood-earving and sloyd classee each pupil is expected to make something which may be sold for the bonefit of the schoel.

Various classes are as follows: Primary, ages 5 to 8; about 20 pupils. Work saitable for age of pupil, emphasizing drawing. Elementary meehanical, ages 7 to 9; awout 12 pupils. Use of ruler and $T$ square and angles tanght, with application and drill of each. Preparatory sloyd, ages 9 to 13 ; about 30 pupils. In this class the pupils draw the models instrumentally to scale, placing dimensions correctly. A clear understanding of the work at hand is given by skillful questioning on the part of the teacher and from use of model, but no copying from finished drawing is allowed. Accuracy and neatness are insisted on as heing the fundamental principles of all good working drawings. Sloyd, ages 10 to 16 ; about 28 pupils. Here the pupil is assigned the model to be made. First, he draws the model (this time working it ont for himself, the teacher watehing the result step by step), after which he carries his drawing to the shop, where wood is given hims, and he makee the model he has drawn. Machine drawing, ages 9 to 13; aboat 12 pupils. Projection forms the early work of this elass; as well as geometry, lemeding up to the drawing of parts of machinery, learning use, etc., of each part of itself and as related to whole machine. Carpentry and wood carving, ages 10 to 16 ; about 22 pupils. Use and handling of tools taught. Small articles of furmiture, exickets, stamde, frames, ote., are made and carved for ornameat; and some larger pieces have been made by the boys of this class, as chairs, tables, and bookcases. Free-hand, ages 8 to 15; about 16 pupils. This is the only free-hande clase, so the work ie fitted to the pupil. Outline drawing from models and objects (singly and ia gremps), light and shade (charcoal) drawing of same, as well as from casts, covers the wople.

A year is supposed to be spent in each class, though under faveroble circumata nces promotions are made from the younger to the next advanced class as deemed expedtient.

One of the most gratifying results of the work is the streng inaterest the children have for the scheot. They show hearty onjeyment in their classes and are very proud of their work when it is exhibited at the clese of the term. A rell of honor is awarded to those perfect in attendanee, deportinent, and faith ful werk throughout the year, and a card of honorable mention to these nearly perfeet in the same.
As this school is one of the many charities of the church, and there is but one session a week, the drawiag-rooms are not reserved for us alone. One large room or hail accommodates the drawing classes. A table on horses is placed between two seats for a class which has 10 pupils.
In the free-hand class easels and chairs are provided.
In the basement is the shop given to the sloyd and carpentry and wood-carving classes. Here each student has in bench with tools necessary for his work.
Annual expense of maintenance for boys' department, betiveen $\$ 200$ and $\$ 225$.
Mannal and jndustrial work trams the child to think more clearly on otler studies, and, after thinking clearly, to execato his ideas. It has a moral effect in that it
insists on trath, accuracy, and peatriess, and leads to practical use of scquired knowledge in all branches of work. Manual training offsets the mental training a child is constantly receiving, thus making him a' vell-developed all-round beivg.
Some boys after leaving school ge to work with carpenters or machinists, a fow carry on the work toward draftsmamship, and others do not follow the line at all.

Free Industrial School, Woburn, Mass.
[Statement of Willis S. Carter, principal.]
Six years ago the Woburn Free Industrial School was started with 12 pupils in woodwark, 25 in the sewing department, and 30 in the cooking dopartment. The selhol is ron daring the summer months only, and has been free to everybody until this rear, when the age is limited from 10 to 21 years. The school is not a trade school; there is no course of strdy, but each child takes one or more of the courses as he ehooses, and is constantly advancing. Everything is farmished for the pupils. The plant is an old academy building called the Warren Academy. There is a fand connected with the estate, part of the interest being given to support the industrial school. It costs between $\$ 860$ and $\$ 1,000$ to run the school one term. Last year we had a total of 400 pupils; this year, 350 , the falling off being due to limiting the age.
The soloof, over since established, has been very suecessful, the papils, parents, and general pablic heing interested in the work.

New Yohe State Reformatory, Eluira; N. Y.

[Statement of Z. R. Brockway, generaI supecintendent.]
The central idea of instruction in the trades school of this feformatory is the preparation of the inmates in skill and disposition to carn legitimately the means of their satisfaction when released. The ontlines of instraction in the several trades are prepared for a course of one year. Those who by good condmet and gained confidence of the managemetit are adjudged, after so short a periof as one year, to be reasonably well fitted for orderly behavior in free society again are not longer detained to perfect themsel ves in their trades, but having had a year of experience and training, if they can find employment as adtvancel apprentices or in any way in comectior with the business earried on in society which involves the use of the techrical knowlodge imparted here even in this brief period, they are generally released. Of course, others who by miscomduct or for any reason remain lenger than a year get more training than those who are discharged in the shortest time. The organization of the trades classes-here embraces instruetion, in thirty-four trades, the finstrnction being given at present in the evening-two evenings each week for most of the trades, and three eveningg for a few of them. The evening trades sehool session is of two hours' duration. I may properly add that, since, under the new constitution of the State of New York, productive industries must cease in the prisons and reformatories after the 1st of January next, it is contemplated to bring these trades classes under instruction during sonae portion of every day, thus adding very greatly to the number of hours of trades instruction the pupild will receive during the period of one year.

The processes of the several trades are subdivided nuder suitable heads, and there is assigned to each division of the processes of each trade a given number of hours in which that portion of it is to be accomplished, when always an examination occurs; and so, again, at the termination of the arranged courbe of instruction, a review examination is also had. These examinations determine, to the proper extent of them, the progress of each prisoner toward his release. A pupil failing in his trades school examination for any month has lost that month, having made no progress during it toward the goal of his desired release; this is with opportunities to recover losses, of course. The trades classes are under the special care of a trades school directora graduate of CorneH Tniversity, mechanical eugineoring department-who has a trained assistant also, the remainder of the instruction being given by mechanjcs resident in the institution or employed to come in from the city adjacent and assisted by advanced pupils from among the prisoners.
The means of support for the institation consist of annaal appropriations by the legislature and whatever of incidental earninge the inmates accomplish while pursuing their trades. The amount of earnings last year was $\$ 40,000$; the appropriation by the legislature $\$ 200,000$. I repeat, as above stated, that-after the 1 st of January next there can be no more earnings, since produetive employment is prohibited by law.

The age of the pupils for admission here is fixed by law at from 16 to 30 yearsthose convicted of felony, not known to have been previously convicted of a felony. All the inmates are confined under tho so-called indeterminate sentence.

The material equipment of the trades classes, aside from the brildings, is a very complete one.

The biildings are within the reformatory inclosure and are a part of the gromp of buildings which, together with the ground upon which they stand, has necessitatel an investment, roughly stated, of $\$ 1,500,000$. The average period of detention of inmates is abont two years.

Manual training is for other purposes than the practical instruction of the pupib in trades by which they are to earn their living. It is a new departure here, and likely to be very much developed to the extent of the systematic manual training for the purposes intended for say 300 to 500 of the inmates. From the very completo records kept in the institution of the whole previous history and of the physical and mental peculiarities of inmates on admission, it has been practicable to easily select those manifestly defective as indicated by the records kept, and after a time, during which they fail to progress under the ordinary regime of the institution, to withdraw them and subject them to the manual-training treatment. This departure was initiated on the 1st of October last. At present there are 100 defectives receiving manual training, not for the purpose of trades instruction, not for the ordinary common school manual training purpose, namely, the facilitating of progress of pupils in the ordinary common-school studies, but rather for the purpose of overcoming by assigned manual exercises, in contection with physical training and the educational work of the school of letters, the peouliar discovered mental defect of each pupil. A general classification or division of the hundred pupils was made at the beginning into three separate groups: First, those apparently ordinarily normal in all respects, except in their inability to accomplish simple arithmetical procesees those showing a manifest defect in the mathematical faculty of the mind. The second group is composed of those possessing ability enough in every direction except in the matter of moral control of their conduct. Third, the matoids or stupids. In this general classification into three groups the instructor proceeds to assign such manual tasks as are believed to most surely call into play the defective faculties, namely, the arithmetical faculty of the mind, additional moral control, and with the third division the awakening and quickening of interest and development of intellectual power. This latter, I suppose, is substantially the purpose of manasl training in the common schools. Not time enough has yet elapsed to enable a summing up of the work attempted to be accomplished or a tabulation and presentation of any results. So much of promise appears upon the surface here in this new edrcational effort for the defective inmates of the reformatory that it is contemplated to greatly extend it. At a late meeting of the managers authority was conferred to employ additional instructors, and it is believed that for a large number of the inmatat, apparently incorrigible ander the ordinary regime of the institution, something very valuable may be accomplished by these means, and many of them be rescned and ultimately be rehabilitated. I have no published matter relating to this, but we shall at the close of the fiscal year, September 30 next, write it up in our report to the legislature.

Lyman school for Boys, Whetboro, Mass.
[Statement of T. F. Chapin, superintendent.]
We have two shops especially devoted to manual training. The contral idea of instruction in each is educational, and the training is obligatory. In one shop the training is the sloyd system, as worked out for public schools by Gustaf Larseon, of Boston. In the other we have wood turning, machinery, benchwork, and forging.

About 100 different pupils are instructed in sloyd each year, receiving about 200 hours each; in the other shop about 32 boys, receiving 400 hours shopwork each. The boys are from 13 to 16 years old. Those receiving the iron and wood work combined are, as a rule, 15 or 16, while those receiving the sloyd are, as a rule, not much over 15.

As far as possible, the instruction is class instruction. In order to provide for the quick boy and the slow boy, the boys are classified some what with reference to their rate of working, and also those who do rapid work are permitted to make designe which they work out in their spare monents, thus giving them a kind of busy work.

The sloyd shop is equfpped with 25 benches; the other shop with 16 forgee, 16 benches, and 8 turning lathes. The outlay is principally for tools, and represents, perhaps, $\$ 2,500$. The cost of maintenance aside from instruction is not far from $\$ 350$ a year for material, light, and heat for the sloyd, aud $\$ 250$ for the forge and woodtarning shop.

The cost of instruction in sloyd is $\$ 900$; for iron and wood tnrning, $\$ 1,000$. The pupils who take this conrse are visibly more competent in other lines of work, and they seem to do, on the whole, better in their school work.

In a good many individual cases the pupila instructed in manual training, going out from the school, seem to do letter and get better places to work. We have ni sufficient data to make a generalization upon in this respect, however.

## CHAPTER XXII.

## HIGHER AND SECONDARY EDUCATION IN THE UNITED STATES.

By Dr. Gabriel Compayré. ${ }^{1}$

## HIGHER EDUCATION IN THE UNITED STATES.

The following abstracts iuclude the substance of M. Compayre's report on higher education in the United states. They are translations, with little or no condensing of the passages selected. The aim has been to present only M. Compayre's own observations or comments on the character and scope of higher education in this country as it was presented to him for study, principally at the Columbian Exposition at Chicago. So far as possible, therefore, all the details of information which are contained in the reports of the Bureau of Education and the catalognes and programmes of institutions which M. Compayré was obliged to publish and digest as the basis of his observations have been omitted in giving the results of his study, they being besides well known. In the course of his work many reflections occur to this competent observer from studying the influence npon education of the peculiar form of democracy exhibited in this country, which are interesting and valuablenot to say entertaining-not only to those who are interesterl in the special subjects under investigation (the teaching of metaphysics, for example), but to the gencral sturlent of social conditions as well.
M. Compayré begius his review with noting the multiplicity of universities in the United States. They abound, he says, in this country. If we have few in France, and if even the projects of reconstruction of our higher education promise us only a small number of them, it may be said that the Anericans have too many, at least. apparently. With them the word university has lost its high significance. Any institution, however small its pretensions, where Latin and mathematics are tanght, does not hesitate to give itself the pompous title of university. This great name has become vulgarized and almost dishonored by the great number and the mediocrity of some of the institutions which havo assumed it. There are many pseudo-universities which have nothing, or almost nothing, to do with hirrher education. In the statistirs published in 1880-90 by the Bureau of Education there are no less than 125 universities, and they are of all kinds, including Protestant of all denominations, Catholic, and nonsertarian. Some are open to young men only, while others are for the benefit of both sexes, and some have been founded expressly for negroes (theso latter are institutions of an inferior grade, estahlished since the war of secessiou). Their efficiency also varies from those having more than 200 professors and several thonsand students to others having five or six professors and less than a hundred students. I'rofessor lBryce, in his American Commonwealth, speaks of a Western

[^22]university where the faculty consisted only of the president and his wife. A glance over the list of these 125 or 130 so-called universities is suffeient to show that the distinction between socondary and higher education is not clearly established. A university simply represents a scholastic institution of a somewhat elevated character. To baptize it with the name of university littlo attention is given to the character of its instruction, whether secondary, technical, agricultural, industrial, or superior, in the sense which we attach to the latter term in Europe. This is so true that some of the real universities, which by the number of their students and the high plane of their studies best merit the name, have preferred to content themselves with their old and more modest name of colleges. It was only in 1887 that the traditionary title of "Yale College" was changed to "Yale University." If we attempt to distinguish in this multitude of nominal universities those which are in reality only small institutions of secondary instruction, comprising the preparatory and collegiate departments, and those which approach more or less to the conditions which we expect of universities in Europo, there still remains a great number of institutions which aspire to give, wholly or in part, what we call in Franco higher instruction-theology, law, medicinc, and high scientific, literary, and philosophical culturo-together with technical instruction, in rarying proportions, which in France is reserved for special schools:
$\Lambda$ first glance at Amcrican universities gives an impression of diversity, an indelinite multiplicity of forms, and an absenco of a common type. To begin with, there are the universities which hare beon founded by private individuals, and which aro the most powerful and the richest in the country, such as Harvard, Yale, Columbia, and Princeton, which date from the seventeenth and cighteenth centuries; others, like Cornell and Johns Hopkins, of recent date; and still others-Clark University, the University of Chicago, and Leland Stanford University, in California-which were founded only within a very short time. In theso institutions, which owe nothing or next to nothing to public assistance, which are independent of the State, which owe their existence to the liberality of private individuals, and are private corpora-tions-some being uonsectarian, while others are nnder the auspices of a church or a denomination-it is natural that the character of the studies shonld be infinenced by the private initiative, or the original wishes of the founder, or of the body of men who now have their control. In these institutions the iustruction must be adapted to tho object for which they were founded, which is evidently not the same in universities free from all religions control and perraded with a purely scientific spirit, such as Johns Hopkins or Clark, and where, consequently, there is no theological instraction, and in those which aro under Methodist or Baptist auspices, as at Boston and Chicago. The studics are selected with a view to local needs and different environments. At Cornell, for example, professional instruction is uppermost, while at Harvard or Yale the old classical training prevails. As means allow and when suitable donations have been made for the purpose, new departments of instruction are organized. In a word, each university has its own constitution, nor is it obliged to follow a single and uniform model, but adapts itself with an admirable facility to its varied circumstances, having its own character and ways and its own distinct originality. Some havo the stamp of time upon them, and while endeavoring to regenerato themselves and adrance in new ways, must still obey their ancient traditions, while others, founded from day to day, with millions at their command, can, in tho fnll independence of their joath and novelty, make innovations at will and inangurate bold experiments hitherto untried. Side by side with the institutions of private origin are the State universities ( 28 in number in 1889-90), which are majntained at the public expense, and which, after the primary and high schools, complete and crown the national system of elucation. In them, too, a great diversity prevails. They have no fixed rules nor a common programac. In the absence of a central power imposing a nniform system of regnlations over the whole conntry, each State, Jike cach private corporation, acts in its own way, distrilutes the studfes as it pleases, and restricts or enlarges, as it has means, the number of
departments of instruction. These State institutions also show great diversities in their means, ranging from Ann Arbor, with a yearly grant of $\$ 274,272$ (in 1889-90), to others, in Nevada and Oregon, with $\$ 30,000$, and the teaching corps varies correspondingly from over 100 to 14 or 15 , while the number of students varies from over 2,000 to a little orer 100.

We do not mean to say that this diversity is in itself an evil. If it is due to a settled intention to develop one part of higher education in particular without neglecting the others it would be rather a good. Even when it owes its origin to circumstances it has the adranfage of parceling out higher culture over the whole country. In france, where we aro suffering from the contrary evil, wo would like to have a little more flexibility and variety introduced into the rigid framowork of our tradition-bound faculties. The question was proposed and answered favorably to such a proposition at tho Lyons meeting in 1894 . It must bo said, howevér, that the excessive American decentralization presents grave drawbacks, and leads to a dispersion of effort and a real waste of force. Aside from a very small number of institutions, seven or eight at most, which really possess all the apparatus for high education, American universities are, generally, only the beginnings or fragments of unirersities. The different portions of superior instruction are scattered in a multitude of separate institutions so that both professors and students aro in insufficient numbers in most of them. This is a necessary consequence of a system of cacessive liberty of initiative. Each State and each city wishes to have its uniyersity, and there appears the contrary of what happens in France, where we sometimes have the thing but not the name-they have the appearance and paraphernalia of a university without the solid and substantial reality. In America they first build a city, open its sireets, lay the parements and gas pipes, or light with electricity, and then the inluabitants come if they can. I ought to add that they generally do come, and in large numbers. But the same process applied to the foundation of universities does not always succeed. The buildings are erected, the programmes drawn up, the professors appointed, and then the students are awaited, but it sometimes happens that they do not crowd to the new institution.

## LAW SCHOOLS AND MEDICAL SCHOOLS.

If we reflect that there are 52 law'schools in the United States, it is not necessary to consult statistics to learn how prejudieial this excessive dissemination is to the study of law, there being neither a sufficient number of capable professors nor of students to constitute solid and vital centers of instruction. [The statistics quoted show that the number of students ranged from 1 to nearly 500 , and the professors from 1 to 23.] Harvard and Yale had only 153 and 106 students, respectively, while there is no law school at Johns Hopkins, or Princeton, or Clark University. So with medical schools; the report for $1888-89$ showed that aside from many nonregular schools there were 94 distinct institutions in that year, with a great range in numbers of students and professors.

## DISPERSION OF EFFORT AND WASTE OF FORCE.

We can not too often repeat that, sustained by their enormous wealth, the Americans give themselves over to a veritable waste of force. They commit follies in the way of education. Carried away by local pride, or, rather, to speak more accurately, moved by the legitimate desire to put higher edncation within reach of the young in as many places as possible, they increase the number of foundations of the same kind without caring for doubling the expenditure of money for the same purpose or disturbing themselves about competition, so that it too often happens that their costly institutions, which have been established under unfavorable conditions on an unfraitful soil, lauguish painfully, and only make a problematical success. But how could it be otherwise when we find three or four schools of law or medicine not ouly in the same region but in the same city?

This is a luxuriant vegetation of which we can form no idea in our country of restricted activity and limited initiative, a vigorous growth which springs ap on every side, and if it is impossible to disguise the bad features of this unrestrained fecundity, we can not repress our admiration at the extraordinary power of the sap which so profusely nourishes the numberless branches of the tree of knowledge even at the risk of their mutual injury from their varied superabundance and intergrowth,

## THE IDEA OF THE UNIVERSITX.

From what has been said upon the schools of law and medicine, one might be tempted to conclude that the Americans have but little conception of the necessity of uniting or grouping side by side, like the different children of a family, the different branches of superior instruction, and that the idea of the university-that is to say, of an intimate association of all the higher studies-does not exist in the United States. Such a conclusion would not be absolutely exact. There is undombtedly a marked disposition to regard the schools of law and medicine as capable of separate growth and function in the condition of professional schools, which is their official title. They have a separate place in the report of the Bureau of Education, under the head of professional instruction, by the side of the theological schools. In the same way, conformably to this spirit of special classification, the schools of pure or applied science (of téchnology, agriculture, and mechanic arts), some endowed by the State and the others private institutions, are placed separately under the head of schools of science, even when they are annexed to universities. The contrary tendency, however, is making its appearance in the opinions of some of the leaders of American pedagogy and is also becoming realized in fact, Thus, at the Chicago congress we heard Prof. Woodrow Wilson, of Princeton, announce his deliberate opinion that a professional school could not exist by itself. It must, he said, form part of a university, so that the university atmosphere may envelop and penetrate it. And, in fact, in most of the leading universities, those which, by their work of two centuries or more, have gradually enlarged their scope, like Harvard and Yale, and also in those which we see springing out of the ground at the magic call of their millionaire founders, like Leland Stanford, for example, the idea of the universality of instruction seems to prevail. Compared with so many other institutions which are, as we have seen, only fragments or portions of universities, the most renowned of the new institutions aspire, not without an evident exaggeration, to embrace and contain everything in the nature of high instruction.

Harvard and Yale disconcert our habits of measurement and surpass our mediocre imaginations by offering to the choice of their students fifteen or twenty distinct programmes of special studies. They resemble towers of Babel, where all languages are spoken, or rather scholastic caravansaries where one can provide oneself with all articles concerning instruction. The truth is that we are in the presence of two opposite conceptions of the development of the university, between which the leaders of American pedagogy have not yet made a final choice. On one hand is the tendency to particularization, as shown by the existence of so many schools of law and medicine, and independent and isolated scientific schools, as is shown also by the recent creation of nniversities really worthy of the name, which, expressly disclainaing a complete education, aim at excelling some parts only of the entire field of knowledge, such as Clark University', which is above all and almost exclusively a school of experimental sciences analogous to one of the sections of our Ecole francaise des Hautes Etudes: such, also, as Cornell University, which is principally a school of agrienlture and mechanic arts, the equivalent to both our Institut agronomique and onr Ecole centrale. On the other hand, there is the opposite tendeney toward the excessive centralization of all these studies and the full application of the formula of Comenins, "omnia doceantar." M. Compayr6 then proceeds to follow the discussion, given in the "pruceedfing" of the Chicago meeting, of the question

Whether universities should be of a uniform type, and concludes that if, even in France, where central authority has such weight, the effort to compel uniformity has been unsuccessful, still less is it to be expected that the dissertations of educational theorists could force uniformity in a country where each university corporation and each political community can dispose of its resources as it wishes.
financial resources of amerigan universities.
The want of money alone can prevent the growth of American universities, which is an improbable event, says M. Compayre, in educational matters in the rich and generous American democracy. What, he continues, are our expenditures of ten or twelve millions [of francs] for higher education, obtained, too, with difficulty, conspared with the sumptuous liberality, nay, the princely prodigality, for its universities of which America is constantly giving examples? We could not understand the situation of higher education in the United States if we did not consider, above all, how rich the universities are there, and how the dollars flow in to endow them and maintain them in a splendid condition. In the first place-and it is a circumstance which is hardly met with elsewhere and certainly exists nowhere else in the same degree-there is the extraordinary emulation among private benefactors-enriched individuals of the industrial and commercial classes-who believe that they can not make a better use of their fortunes than by devoting them partly, sometimes wholly, to the foundation, support, or development of schools of higher instruction. Sometimes, if they are particularly rich, they create at one stroke a now university, complete from top to toe. Sometimes, to increase the scope of an old institution, they present it with a department or faculty which it needs, or, at least, with a special chair; and, again, if they can do nothing more, they enrich libraries alread'y existing with collections of books, or equip laboratories and muscums with costly instruments and rare specimens. What is elsewhere only an accident or a rarity is a habit in America. The United States is the only country in the world where proper names are given to the universities, the names of the generous men to, whom they owe either their existence or their aggrandizement. Harvard, De Pauw, Cornell, Vanderbilt, Johns Hopkins, and Clark are at once the names of universities and of the free givers who have contributed more or less, in proportion to their means, to building up these different houses of study. Sometimes the benefactor conceals his identification with the university by suppressing his name. For example, the foundation of the Catholic University at Washington was due to the liberality of Miss Caldwell, of Philadelphia. So, also, Mr. John D. Rockefeller would certainly have a right to be called the godfather of the recently founded University of Chicago, since he presented it with more than $\$ 5,000,000$ for its christening.

Of course the universities of the United States have not always had such splendid begiunings, such fortanate births. But even those which, like Harvard and Yale, had an humble origin and received only a moderate endowment from their original benefactor, have seen their treasury increase year by year, thanks to the incessant and continuous generosity of their former students, their protectors, and their friends. What the fanciful munificence of a Leland Stanford could do at one stroke in California an uninterrupted succession of small gifts has accomplished, or almost accomplished, at Harvard. In two centuries and a half Harvard has come to possess an annual revenue of $\$ 720,000$. Who is to ask such wealthy institutions to moderate their ambition and contract the sphere of their activity ${ }^{\text {i }}$ Their resources are enormous, nearly unlimited, and it is natural that their scope should be correspondingly great.

After giving a brief account of State institntions and State aid, including land grants, M. Compayre proceeds to the subject of degrees and their multiplicity in America. He continues as follows: American universities, therefore, are rich and even opulent from various sources, but it is uot their popularity alone (whereof their richee are the proof) which will maintain and develop them. It must be said that
thero is another cause, of an entirely different order, which tends to promote the excessivo multiplicity of educational institutions, and that is the conferring of degrees. This prerogative, which is too easily accorded to institutions of all griades, is a power which those who possess it appreciate rery highly and which they are not disposed to surrender ; and this explains, in part, the great number of colleges and nniversities in America. We all know the extent to which the division and subdivision of degrees are pushed in the United States, and this fact would suffice to show, without any examination of the programmes, how fragmentary and scattered, and consequently how superficial, to some extent, much of the American education is. It is true that wo suffer from the same evil in France to some extent, and there is the story of a candidate for a degree who presented himself before one of our faculties on the morning When ho was to begin his written examination, perhaps a little slcepy or confusel by the near approach of the dreaded ordeal, and who declared that he did not know exactly in what particular series of what particular section he was to begin his work. Ho was like a traveler who enters a railway station where there are many trains reatly to start and asks anxiously for the proper train to which his ticket entitles him. I know that mach can be said in favor of this system, and that just as it is fortunate that the network of railways by their maltiplicity make communication casier, so it may be urged that by splitting up and diversifying the baccalaureates, licenses, and doctorates we facilitate success by augmenting the number of ways of reaching it. Nevertheless wo must say that the object to be attained has been excceded in the United States. We are far from equaling the Americans in this respect, with their endless nomenclature of diplomas of all kinds. Nowhere, except in the country of the mandarins, las the superstition of degrees been pushed to such an extreme; and it may be said in passing that in America it is not always well to refuse diplomas even to those who do not deserve them. With us the victims of the caminations content themselves with reviling their judges. Bad marks are rare, and the rage for obtaining diplomas is only equaled by the facility with which they can be obtained at least from certain institutions.
(The statistics quoted show that in 1889-90 some 400 colleges and universilies conferred pearly 10,000 degrees of twenty-four or twenty-five different kiuds.)

THE DEGREE OF DOCYOR OF PMILOSOIPY.
We will not insist non what is so strange from our European point of view, riz, sèeing bachelors in music or painting, or doctors of veterinary medicine, nor npon other singular peculiarities such as that one can become a bachelor in philosphy after laving followed a course simply of geology, chemistry, or architecture, nor upon the confusion which results from giving different names to the same degree. What merits our attention more, and what the Americans themselves most complain of, is the absence of guaranties, the insufficiency of the conditions under which the degree of doctor in philosophy is granted, a degree which assures to its possessors more consideration than any other. The question was discussed fally at Chicago and the evil was clearly defined. On one hand is the ardor with which the title of Ph. D. is sought if only for the sake of being called "doctor," and on the other is the culpable compliance of some institutions which lend themselves, unfortunately, to the unjustified pretensions of tho seekers after diplomas. It is interesting to remark that while in France we aspire to a certain degree of diversity, the Americans would like to lhave a littlo moro centralization. We complain of an excess of regulations, while they regret the absence of a common dirceting power. One of the speakers at the Chicago congress, Mfr. Sproall, dean of the faculty of tho University of Cincinnati, expressed the wish that there should be a general understanding in regard to the essential conditions to which tho examination for the degree of doctor in philosophy shonld conform. As there conld bo no appeal in such a matter to a ministerial department or a central government. it was suggested to appoint a committeo composed of the chiefs of the principal unirersitics. It should be the daty of this
committeo to draw upa list of theinstitutions which it should judge were qualified by their importance and the value of their studies to confer the degree. A journal, to be the organ of the comimittee, would pablish this list, which might be extended or restricted from jear to year. This proposition was accepted by the congress and a committee was appointed, including the presidents of the Johns Hopkins, Yale, Columbia, Princeton, Chicago, and California universities, with instructions to take the necessary steps to maintain the plane and protect the significance of the degrees of doctor of philuosophy and of science.

This committee will have only a moral effect, as it has no legal sanction or anthority.
Moreover, it is not only in itself and at the moment of conferring it that the ligh degree of doctor allows of criticism and is too easily acquired. On this point it is some defense to say that the evil is not general; that certain institutions maintain the dignity of this title, and that after all an enlightened public opinion can distinguish the tares from the wheat. A graver fault is that even the more serious universities open their courses of law and medicine to students who are insufficiently prepared. It is not yet a-settled question in the United States whether an antecedent liberal education should be required of students in law and medicine or not. Americans are right in retaining the titles of professional schools for their schools of law and medicine. The irrstruction which is usually given in those schools, as it does not rest upon the solid base of a liberal, that is to say general, education, hardly merits the dignified name of higher education. As it is given to young men who have not f́eeejved secondary instruction, and are therefore without sufficient preparation, who often leavo college in their freshman year to enter the professional schonl, the instruction they receive in the latter can only form practitioners and empirics without breadth of mind or a wide scope, and who will be imprisoned closely in the circle of routine and daily business. The Americans are well aware of this defect, but are at a loss how to remedy it. Opposed to the interest of society, which demands better instructed physicians and lawyers, is the interest of the individual, who demands the shortest cut to the practice of a lucrative profession. There is no appeal to the law. "One of the principles the most intimately and tenaciously united with our conception of a democratic government is that admission to the different professions should remain almost absolutely free, and our legislators are urwilling to place any restrictions upon it." So it is public opinion, as usual, which must be convinced, and that is far from being won over. "Public opinion is not disposed to act summarily in this matter, because it has not yet learned that general education onght to precede professional instruction. A given commnnity is proud that its lawyers were admitted to the bar after ouly six weeks of study." As long as the public is satisfied, doctors and lawyers without education will continue to multiply. Even if pablic opinion should reach the idea of reform it would not be easy to carry it out. "In America reforms can only be made bit by bit, by way of trial and example; there is no central authority which can impose them all at once and in their entirety." [The name of the author from whom M. Compayre takes these quotations is not given.] In short, the remedy must come from those universities which, like Harvard, are rich and strong enough to be severe, and demand from their students sufficient evidences of qualification, and if the mere conception of the ideal were sufficient to realize it, higher education in America would have nothing to desire.

The evil is aggravated by the short duration of the course of study; while primary anil secondary studies are relatively long and slow in America, and are free from the feverish, dizzy rapidity which seems to whirl everything along, university studies are too much abridged and too hurried. By a kind of regrettable compensation, after the American student has loitered and reflected a little in the high schools and academies and then in the colleges, from which ho emerges as a bachelor of arts at the age of twenty-one, two, or even three years of age, in the universities he is
obliged to quicken his pace, and in three years he becomes a doctor of medicine, or in four a doctor in law. This triennium or quadriennium also is a maximum, and is only required in the more important universities. In many institntions less time is required, as the statistics quoted show.

## RECRUITING OF PROFESSORS.

The requirements which must be fulfilled in France before a candidate can receive the appointment of professor do not obtain in the United States. "Anybody who chooses may call himself a professor "(Discourse of President Jordan, Proceedings, p. 34). But the great universities at least make the greatest efforts to obtain a personnel which shall be of the highest rank. Cardinal Newman's saying is often quoted in America, "Install your universities in hovels or terts, if you will, but give them great teachers." The Americans do not install their universities in hovels, but they do try to give them great teachers, and for this purpose they resort to aid on every side. The titular professor of the chair of European history at Leland Stanford University is Dr. Andrew D. White, who was envoy extraordinary and minister plenipotentiary from the United States to Germany from 1879 to 1881, and in 1892 to Russia. His name gives reputation to the chair assigned him. At the same university Mr. Harrison, who was Mr. Cleveland's predecessor as President of the United States, is the professor of constitutional law. These are things which are only seen in the United States, and we would have diffculty, in France, in imagining a former President of the Republic, Mr. Grevy, for instance, giving lectures on law. Of course, it is hardly necessary to say the salaries of the university professors are large. They also enjoy all sorts of facilities for their work. They are allowed to visit Europe periodically and study on the spot, at some university, the progress of their favorite science. When Mr. Stanley Hall was nominated as president of his university, and before he assumed his duties, he made a lengthy visit in Europe to examine the organization of higher education there. A great number of American university professors have studied in Europe, especially in Germany. They also move about a good deal in their own country and change their residence frequently, on account of the great number of institutions and the difference in the salaries.

WHAT IS THE ROLLE OF THE UNIVERSITY PROFESSORT
American pedagogy has clearly coneeived, in its dreams for. the future, even if there is no present realization, that the function of a university professor is not only to transmit ready-made knowledge to his students, but that his mission is to create knowledge as well-that is to say, to add to the patrimony of acquired truths and extend the field of knowledge by original researches. President Jordan says that "a professor to whom original investigation is unknown should not find a place in a university. The day will come when our universities will understand that the most useful of its professors may be those who give no lectares, but devote all their strength and time to profound investigation. Their presence and example are, perhaps, a handred fold more valuable for a body of students than the lectures of other teachers." The idea of a higher instruction looking to the future rather than the past and opening out new ways to science is, therefore, nof new to American pedagogy. It even appears that in certain universities it dominates with some exaggeration and diverts a certain number of teachers from their original duties. If we may believe a Harvard professor, who has described the spirit and tendencies of that university in the Educational Review [for April, 1894, an article by Professor Santayana], it sometimes happens that some of his colleagues, in the exclusive preoccnpation of their investigations and personal work, come to forget and neglect their professional occupations. Hesays: "There still remain at Harvard some professors of the old sehool, with whom intimate and moral relations with the students is the first care, but for the typical young professor the principal interest is science,' and we are shown these teachors demonstrating with indifference and alnost with dis-
dain the-well-known principles, which are, however, the forindation of instruction, and only becoming animated when they come to speak of the novelties and discoveries of the day. They aspire to be scholars and are teachers only by accident.

STUDIES, TEACHERS, AND METHODS,
Speaking in a general way, it may be said that the best American universities sensibly approximate the ideal of higher instruction, bat in the greater number of universities of second or therd rate the common defects are excessive specialization, a dribbling out of knowledge, the want of a broad initiation into the principles of science, and an anxiety to get a diploma as soon as possible. Of these institutions the criticism may be repeated that has already been made of English colleges. "In them letters are not literary enough and science is not learned enough; in the former they only study texts and in the latter processes." (Quotation from Demogeot et Montucci, De l'enseignement secondaire en Angleterre.) Whatever may be the speculative efforts of friends of the university in the United States, it is not in vain that their surroundings are utilitarian, so that their institutions are like scholastic oases planted in an immensity of workshops, grain elevators, cattle yards, docks, and manufactories of every kind, and that they have the formidable task of maintaining the rights of thought and opening the springs of moral and intellectual life in the midst of a society which is a prey to an infernal industrial activity, and is, as it were, possessed or bewitched by the demon of business. It is impossible that the universities themselves should not be affected, in their tendencies and spirit, by the practical and positive character of the entire nation: Even in the schools of the greatest renown the methods in repute wonld not accord with our ideas. In the law school at Yale, for example, the methods consist largely in learning by heart. The lecture rooms have the significant name of recitation rooms. Properly speaking, there is no didactic course, no lectures ex cathedra. The student stndies his textbook in his own room and is questioned upon it in the lecture room, the teacher limiting himself to giving explanations upon the subject stadied. " It is the conviction of the faculty of law," say the Yale programmes, "and it is also the tradition of the entire university, that precise and durable impressions of the principles of every abstract science are best acquired by the study of text-books at leisure in the student's room, and supplemented by the questions and explanations which are given in the recitation room." We must add that this method of instruction is not of general use in American law schools. At Harvard, for instance, the method by recitation is formally repudiated; the regulations declare that it is not desirable to memorize pages of text-books. In the law schools, as in all others, care is taken to favor practical exercises, and the students are encouraged to discuss the subjects tanght, either by themselves or under a professor. So in the scientific schools extreme importance is attached to manipulations and laboratory experiments; without suppressing theoretical instruction, greater attention is given to the practical side, to things which the student learns by hiuself in the laboratories, which are admirably furnished with all the instruments and appliances of research.

One thing which acts as a constraint upon the full development of American miversities is that they find difficulty in freeing themselves from the traditions of secondary instruction. (Secondary in the French sense, as here used, relates to the lyceo, which corresponds to our high or preparatory school with two years of our colleges.)

They started, for the most part, with being simply colleges, and only gradually have the schools of law and medicine, of letters and higher sciences been added to the primitive colleges, usually by the wills of generous benefactors, like so many annexes, which are rather juxtaposed than associated and fused together in a harmonious plan. New departments, institutes of fine or industrial arts, of music, schools of veterinary medicine or electricity or archæology are constantly added to ED 96-37*
a pedagogical domain whieh is constantly widening, and this indefinito branching out is not always crowned with success. Harvard, for example, has recently found that it is difficult for studies which are too dissimilar to prosper side by side. The Bussy Institution, which was estallished there at great expense, only had six stu. dents in 1892-93. In many years it has only conferred three or four diplomas of bachelor of agricultural sciences, most of its students being only amateurs.
The great evil which pervades the whole system of American education is th it is without definitions and delimitations. In France wo do not mix different things, and aro fond, perhaps excessively so, of logical regulations. We allow only welldefined categories and precisely determined divisions. In American institutions, on tho contrary, everything is confused and intermixed. Secondary instruction is divided into two portions, one, corresponding to our grammar schools (classes do grammaire), in the high schools and acatemies, and the other, which is nearly equiralent to the higher classes in our lycées, in the colleges and the universities. Ont of 2,000 students at Yale, only some 500 take the higher instruction. Of 1,300 at Cornell and 1,000 at Princeton, there are not over 200 who tako university courses, properly so called. Everywhere the collegians, the nnder graduates, that is the students of secondary instruction, form the great majority. Anjone can see the great disadvantage of this coexistence of two kinds of instruction which are profoundly distinct in their character and objects. Is there not danger that the interests of one or the other might be sacrificed; that the secondary instruction might become too specialized and too technical, so as to loso its proper character, which is to give a general culture to the mind May it not be that professore who teach both in the university and the college (at least as far as letters and science are concerned) might either import into their secondary instruction the requirements and habits of learned research which do not belong to it, or, conversely, might they not introduce into their higher instruction the olementary methods of college instraction, whereby the higher culture would bo lowered"and lessened, the line of demarcation between the "two not being well defined? If wo complain in France-and not without reason-that the professors of the faculties of letters and sciences are impeded in their proper work of scientific investigation and original work by the heary and tedions drudgery which the baccalaureate examinations impose upon them several times a jear, in America the evil is still greater, becanse there the professors not only have charge of the examinations but of the studies which precede them besides.
[M. Compayre devotes a short notice cach to students, clubs and university oxtension, and conclndes this introductory review with presenting the riews of well-knomn American university presidents upon higher cducation in America. He can not refrain from admiring tho spacious and sometimes oven palatial buildings of nniversities and schools.] "Undoubtedly," he says, "the largest and finest buildings in $\Delta$ merica are generally those of banking and commercial houses or hotels, but the buildings for educational institutions, whether aniversities or primary schools, are therivals, at least, of charch edifices both in size and the ornamental character of their architecture. Externally they look like strongly bailt chateaux or citadels with towers, buttresses and battlements. Within, with their large, vaulted halls, their colonnades and bas-reliefs, they resemble temples. Alh, what fine class and lecture rooms there are at Harvard and Yale! How spacions and convenient, with plenty of light and air! It is impossible to visit them without thinking low good it wonld be to study or lecture in them."
[The romaining chapters of the mork aro devoted to details of the rarious mirersities and their programmes. We pass to the chapter on instruction in philosophy, to which, as the lighest branch of learning, M. Compayre devotes considerable attention, and give the following extracts.]

## AMERICA HAS AS YET NO ORIGINAL PHIIOSOPFIX.

The story goes that an intensely patriotic citizen of Chicago once asked his fellowcitizens if they would like to establish a school of "American geometry." We need not be astonished at this naive outburst of nationalism in the midst of a pcople which voluntarily affects to depend on itself alone, and which would like to show itself original in all things. It must be acknowledged, at any rate, that there is yet very little originality-in philosophy in America despite very laudable efforts in that direction, and that if an American geometry is impossible, there is, properly speaking, nos"American philosophy." Undoubtedly there has been a great change sinco De Tocqueyille wrote, in all truth, "I believe that there is no country in tho civilized world where so little attention is given to philosophy as in the United States. The Americans hàve to philosophical school of their own, and they care very little about those-which divide Europe. They hardly know even their names." On this point, as on some others, the reflections of the author of "Democraey in America" hare become somerrhat antiquated. Timé has been moviag, and to keep oneself au courant and not fall behind in studying a nation particularly active and alive, which is always geing ahead, one must strike the balance of its progress cvery jcar and almost every month. The Americans of to-day differ in their intellectual and moral condition from those described by De Tocqueville nearly as much as some of their large cities-Washington, or Chicago for instance-Chicago especially-are different now from what they were fifty yoars ago. Even in the domain of philosophical speculation, where progress is least perceptible, meritorious attempts hare been made in these latter days, and some interesting results have been reached, especially in direct contrast to what De Tocqueville affirmed, and what he was justified in saying, half a century ago. It is true that the works of Europenn philosophy, preferably the latest, are now studied with ardor and often with enthusiasm, and it would not be paradoxical to say that German philosophers are better known and more frequently translated and read at the present time in America than in France. However, Do Tocqueville uttered a permanent truth when he said that "the social condition of the Americans turns them away from speculative studies." Withont taking too strictly the humorous adage which the Americans themselves repeat, that philosophers are as rare in America as snakes in Norway, wo must acknowledge that they are not numerous, and it is not difficult to discern the reason of their rarity.

ELPREMACY OF THEOLOGY, OR, AT LEAST, THE CHRISTLAN SPERIT.
What strikes us at first is that philosophy is much more under the influence of religious belief in the United States than in Europe. The "servant of theology" is far from having shaken off the old yoke in most American colleges and universities. The State University of California, for instance, announces itself as nonsectarian, but it nevertheless remains religious in tone, as its president declares. In a country where theology and religious thonght are diversified and separated into an infinity of distinct sects and denominations, philosophical thought finds in this same dirersity a semblance of freedom and easily accommodates itself to each creed. And, on the otber hand, a vagne, undefined Christianity is always exercising its sway, even over the most enfranchised minds, so that, in one way or another, it is almost always under the patronage of religion that philosophy strives hesitatingly to develop itself.

THE NONTHEOLOGICAL SPIRIT IS RARE IN AMERICA.
The "lay" spirit; as we understand it in France, is a rarer thing than would be expected in the free American society. Even when they believe that they do not belong to any religious denomination, that they are unsectarian, the educational institutions, as we have said, can not always detach themselves from biblical traditions. Here is a striking example: "When I visited Girard College," says M. Paul de Rouziers [la vie Americaine, p. 656], "the janitor asked me if I was a clergy.
man. I was surprised, and made him repeat the question; and when, after I had answered in the negative, I was admitted into the building; I related the circumstance to the president. 'These are the instructions,' he replied, 'because Girard, the founder, declared in his will that no minister of any denomination should ever cross the threshold of the cellege.' 'But what is the meaning of that handsome chapelp' I asked. 'It is for religious exercises. We have prayers there morning and evening, and on Sunday one of us gives a lecture on the Bible.' 'And do you think that the shade of Girard is pleased with these lectures $q$ ' 'Oh, you know the Bible is unsectarian.'" So here is a college which its founder, a French freethinker grown rich in the United States, endowed generously on the condition that no clergyman should ever be admitted to it, and whose legatees, faithful as is usual in America to the wishes of the testator, really believe that they are carrying out his will by refusing, very vigorously it is true, the ontree of the college to clergymen even for a visit, while they throw the doors wide open to the sacred books of Christianity. In such a medium-of men completely imbued with Christianity, even when they belong to no denomination-philosophy-that is to say, the spirit of independent research which goes right on to the conquest of truth, without caring either for the beliefs which it may injure on its way or the dogmas which it will have to contradict ulti-mately-philosophy necessarily remains the privilege of a select number of enterprising and bold men. The crowd of thinkers continues to move in the narrow and impassable circle in which traditional opinions inclose the steps of human reason without feeling its limitations or aspiring to a liberty of which they feel no need.

We have examined a great number of catalogues of American colleges. Philosophy is certainly represented in them, but in the most elementary and lumble form. In general the president of the college takes charge of instruction in philosophy, which is usually moral and pedagogical and most often designed as an instrament of edification or of Christian moralization rather than an ensemble of free and scientific research. The professor is rarely a specialist in philosophy; he unites wi th that accidental instruction other and very different kinds. If it is true that in Spain, as is said, there are still professors of Latin and singing, and if we remember to have known at the college of Soréze in France a regent whó boldly styled himself "professor of rhetoric and physics," this confusion of things which, with us, is a very rare exception, is of very frequent occurrence in America.

## THEOLOGICAL TENDENCY OF PHILOSOPHICAL INSTRUCTION.

But it is not only the insufficiency or the want of specialization on the part of the teachers which compromises the future of philosophical studies in the United States. The primordial cause of the evil-we must repeat-is the semitheological tendency of the instruction. This tondency is favored and developed by the private nature of most of the secondary and saperior institutions of learning. In France, political and social centralization, of which the university is the scholastic expression, undoubtedly has its inconveniences and dangers. Butit at least permits the State to disengage a sort of general conscience from the ensemble of diverse and often contradictory individual aspirations, which becomes the rule of education and elevates university stndies above all sectarian spirit and any particular religious tendency. In our lycees and faculties a teacher of philosophy is not responsible to anyone except his own conscience and society-the nation at large. Now, the nation is neutral as far as religious opinions are concerned, and consequently theological prejudices do not enter the philosophical lecture room. In America, on the contrary, where the system of private initiation prevails, so fruitful from other points of view, where colleges and universities owe their existence for the most part to the liberality of some private individual enriched by commerce or industry, who has become philanthropic in his old age, and where the institutions are nader the supervision of a committee of trustees who are the vigilant depositories and gnardians of the will of the founder, and sometines under the direction of the founder himself, if he is still alive, it is to be feared that the freedom of the teacher of philosophy may often be only a myth.

Those who have contributed from their means to create and maintain an institution naturally wish that the suirit of its studies should conform to their own opinions or doctrinal preferences. They, or their executors, have the choice of teachers, and it can not be expected that they should take professors from outside the ranks of the faithful of their own denomination. The college or university becomes thus the chattel or property of one man or a small number of men. It would be unjust not to add that these observations do not apply to all the universities of America. At Harvard, at Columbia, and half a dozen other institutions-to take the figures of Mr. Stanley Hall-emancipation is nearly complete. We are only speaking of the generality of colleges and universities.

It is noticeable, too, that the American who is so active and energetic in business matters becomes indifferent and indolent about questions which have no direct relation with practical life. Doubt does not seem to be in any sense an American product. It is astonishing how easily ready-made dogmas and a well-determined religion, which is accepted without discussion, satisfy positive, busy men, who have no time to seek for truth at their own risk and peril, through the difficulties and obscurities of philosophical speculation, and who yet wish to satisfy their need of belief. And so they like to observe Sunday by complete repose after the feverish labor of the week, and they are willing to bestow, as the crowning act of their tormented life, a docile acquiescence upon any religion which will free them from all intellectual worry and offer them the tranquil shade of traditional beliefs. Add to this that the flexibility of American theology is of a nature to facilitate adherence. If you find that you are nnwilling to accept some of the numerous Christian dogmas, which you are called upon to believe, do not let that disturb you; there will always be some aecommodating sect which has effaced the objectionable articles from its creed, and so can free you from the trouble of submitting your belief to them. In this profusion of different denominations, if we may be permitted to use so familiar an expression, all tastes can be satisfied. The choice is easy; the supply always responds to the demand. In France, if you have broken with one of the two or three accredited religions, you are reduced to the necessity of entering at once the diocese of free thought; there is no intermediate ground between belief and unbelief. But in the United States there is a multitude of degrees of successive steps and insensible transitions interposed between ignorant and blind bigotry on the one hand and free thought on the other, the latter being rarely met with.

But, however convenient for preserving liberty of conscience may be these manifold forms of a Christianity, which is more and more attenuated, in which dogma is, so to speak, reasoned out in different ways, so as to respond to a diversity of appetites, it is none the less true that the American is usually tied to some theological party or definite sect or other, so that if he does flatter himself that he is as little religious as possible by having reduced his beliefs to a minimum, he has none the more become philosophical.

ABSENCE OF TRADITIONS.
The American philosophical spirit is not sustained by the traditions of the past as it is in our old conntries of Europe. Assaredly, in one sense, it is an advantage not to be compelled to follow furrows already made and to be free from the incumbrance of oppressive hereditary traditions which prescribe the course of our thought. Originality appears to have every thing to gain by the absence of established schools, and the Americans, who are a young people without a history and but recently awakened to the life of thought, seem to realize in actual life that fictitions condition of the tabula rasa in which Descartes essayed to place himself when stripping his mind of all old opinions he attempted to approach the problems of nature and the soul with a reason entirely fresh and freed from prejudices. Still, the inheritance of long-continued previous labor, even if it leaves the field of thought covered with much deadwood, is nevertheless a necessary condition for serious philosophical
development. Philosophical systems can not bo improvised; they are not built in a day like a gigantic house or a colossal bridge. The complicated, refined, and penetrating turn of mind which distinguishes philosophers can only spring from the slow preparations of a progressire evolution. In Europe how many philosophers there are who are only such becauso they have followed the footsteps and developed the thought of some distinguished or eminent thinker whose reputation was established jears or even centuries ago. From this kind come the "scholastics"-tradition has its bad side-who survive long after the disappearance of the head of their school, and who too often paralyze all invention and innovating tendencies. But in return, thanks to these legacies from the past, the habit of philosophizing has gradually insinuated itself into our minds; numberless suggestions and inspirations come to us from those who have struggled with the same problems before us; we are rounded with examples and lessons; we live in an atmosphere satarated with questionings, hypotheses, problems proposed, and formulated solutions. All this is wanting in the United States, hence Mr. Stanly Hall obserres "As a nation we are not jet old enough to have had time to develop a philosophy."

## IMITATION OF ECROPEAN PHILOSOPIT.

The same author continues in the article here quoted:1 "We have too much curiesity and are too receptive to despair of having one hereafter." To prepare themselves for this crent Americans resolutely go abroad for assistance from foreign schools. Having no philosophical traditions of their own they go to Europe for them. Philosophy is an imported article with them and, it should be added, German philosophy particularly. Our classical French philosophers are generally little known; Descartes is the only French writer who is studied in America. Among philosophers of the nireteenth century Cousin is cited once or twice in the programmes; Auguste Cornpte is scarcely mentioned and I hardly seo any French writers besides Janet and Ribot, who are quite widely known. Tho Germanic influence is manifestly preponderating, not only in the domain of psycho-physiologieal researches, the success of which in America is not surprising, but also, and this is more remarkable, in the higher speculations of the great metaphysicians. Hegel and Kant are among the authors who are most read, if not textually, at least in the critical expositions which American authore have made of their doctrines, and it is astonishing that such a transcendental philosophy conld find a place in an industrial and business community. "Kant is the Julius Cæsar and Hegel the Augustas of motern philosophy," says Professor Everett of Harvard. And, again, "Hegel is the sovereign in the world of thought and Fichte in that of life." Tho following translations of German philosophical classics have been published at Chicago: Kant's Critic of Pure Reason, by Morris; Watson's Schelling's Transcendental Idealism; Everett's Fichto's System of Knowledge; Kedney's Hegel's Esthetics; Noah Porter's Kant's Morals; Morris's Hegel's Philosophy of History ; Harris's Hegel's Logic. Tho programmes show what a largo place is given to German thinkers. This preference for German philosophy over English philosophy itself, although difficult to explain fnlly, seems to be dne to several causes. First of all, and it rould bo ungracious not to recognize the fact, it mast be attributed to the scientific value and porrer of German philosophic thought, and then to a number of minor reasons. When Americans go to Europo to study they hardly ever go to English univcrsities. If only for the sake of learning a foreign language, they go to Berlin or Heidelberg or Jena, and while learning German they learn the German philosophy. On the other hand, it must not be forgotten that German immigrants are the most numerous in Americn, and the saying isnearly true that the market for German books is nearly as good in the United States as in Germany itself. There was at one time quite a prononnced Hegelian movement at St. Louis, and it was there, it is said, that Dr. Harris became acq⿴ainterl with the philosophy of tho pantheistic German. The

Journal of Speculativo Philosophy, which is devoted to metaphysics, is published at St. Lonis. Is not the explanation of this kind of intellectual activily to wo found in the fact that in this city of French origin-it was ceded by Louis XV in 1763 - out of a population of 450,000 inbabitants about 180,000 are German 8 Whatever may be the carnse, the fact is incontestable that Gorman influenco predominates in philosophical matters in the United States, eren orer English. Tho latter, howover, also has its weight. Tho English psyehologists from Locko to Sully are held in high esteem. Critical expositions of the doctrines of Stuart Mill and Spencer have been published, and scientific instruction is thoroughly impregnated with tho orolution theory; Darwin is a la mode, his teachings being reconciled, of courso, with religion and Christian doctrines. American philosophy is in process of formation under these diverse influonces of continental philosoply, and what augurs farorably for its futrire is the prominence which is giren to its study in the colleges and universities.

BROAD MEANING OF THE TERM PHILOSOPHY.
It is obvious that the term philosophy has not the same meaning in tho United States as with us. In some universities, Columbia for instance, it is a synonym for the ensemble of literary studies; the philosophical faculty in Germany is a school of philology more than philosophy proper. "This broad uso of the term is pushed still further and is applied to scientific studies of all kinds and cren to technical. Columbia College confers the title of bachelor of philosophy upon candidates wha have studied only gedlogy and paleontology, analytical and applied chemistry, or followed a course of architeeture. In many upiversities the single degree of doctor of philosophy crowns studies of overy kind, philological and scientific as well as thoso which are exelusively philosophical.

## PHILOSOPHY YROPERLY SO CALLED.

Philosophy proper, understanding by that term the special study of psychology, logic, morals, and even metaphysics, is no less in honor in American universities. And as far as psychology is concerned, including physiological and oxperimental psychology, for studying which special laboratories are provided, furuished Tith every kind of instrument for research, American universities have nothing to envy in those of the Old Worid. Photographs of the different rooms of the psychological laboratory at Harvard; to cite only one instance, were shown and much admired at Chicago. In America philosophical studies are regarded as peculiarly belonging to higher education, and it would seem at first sight as if the intention was to exclude them from secondaxy instraction, but such is not the fact. Philosophy is not reserved for graduates alono buthelps to form graduates-bachelors of arts and of philosophy. It is part of the collego carriculum before becoming part of the university course. Nor is it, as with us, roserved for a single class-the last in our plan of stndies-but is taught in tho last two years of the college course to juniors and seuiors, and somotimes to sophomores. At the present time when the question is being discussed in France whether the teaching of philosophy should we retained in the lycées or be relegated to the faculties, it will not be uninteresting to consider in detail how the matter goes in some of the more important institations of the Uniterl States. [After giving the programme of Harvard and the report of the experimental laboratory, the anthor concludes as follows:] It is not only at Harrard that the psychological laboratory is organized. Clark, Johns Hopkins, Yale, Columbia, aud othera have equipped them at great expense. This is one of the distinctive traits of the philosophic movement in America. Professor Royce declares that two branches of philosophical study have prospered in tho United States, one is experimental psychology and the other the history of philosophy. To this should we alded, perlaps, the study of social morals, which is certainly carried further in American universities than with us, where it is too much neglected. Here is the
course of applied ethics at Clark: The subjects of study are normal and pathological forms of human life; criminal anthropology, criminal embryology, the object of which is to collect from "all the kingdoms of nature"-i. o., even from animals"the acts which committed by man become criminal." Then there are divisions and subdivisions of anthropometry, craniology, physiognomy, teratology, etc.

It is, therefore, incontestable that the colleges and universities of America are making praiseworthy efforts to develop for their students an almost complete system of instruction in philosophy. From 16 to 20 years the American student can, if Le wishes, acquire a better idea of philosophy than his comrades of the same age in Europe; and these ideas are taken from the most recent anthors. There is no reserve of even the most delicate questions. The school youth are placed an courant with everything which contemporary innovators are thinking. There is, besides, no official doctrine or uniform tendency. Opposite opinions are often net with in the same university. It is true that by a general understanding all teachers show themselves respectful and deferential to religious beliefs.

## SECONDARY EDUCATION IN THE UNITED STATES.

We take from M. Compayre's report on secondary instruction in the United States several extracts in which the author brings out features that impressed him as a foreigner and which he was able to criticise, both as a competent observer of great exper'ence, and especially as an outsider. In selecting the passages on methods of study it has been the aim to take those which treat especially of the subjects that conduce to culture rather than those in which the stndies that qualify for business are handled. M. Compayré begins with general considerations on secondary instruction which is given, he says, in high schools, academies, and in colleges. In other words, notwithstanding appearances and the intentions of the Americans themselves, who in their defective definition only assign high achools and similar institutions to this grade of instruction, American secondary instruction comprises two parts and is divided into two periods. On one hand are the public or private schools, which are either common to both sexes (when they are public) or are for one sex only, which differ in their programmes and in the duration of their studies, and give a course of instruction corresponding nearly to that of our classes of grammar (sixth, fifth, and fourth), or of the first year of our secondary modern instruction; and on the other hand are the colleges with their traditionary four years of freshman, sophomore, junior, and senior classes, which are nearly the equivalent of the higher classes of the French lycées, and lead to the baccalaureate degree, which is obtained on graduation. The Americans, therefore, give, so to speak, without knowing it, secondary instruction in their colleges, while they refer these institutions to higher and professional instruction. Words do not have the same meauing with them as with us. Secondary instruction in their point of view only represents an intermediary grade or transition between primary studies and the higher instruction of colleges and universities. In France a lycée or a college consists of a series of progressive classes, in which the same students receive a continnous instruction, formed on the same principles, which is adapted to a general preparation for active life or for professional studies. In America secondary instruction is made up of pieces or portions, at least of two portions, the high schools and the colleges. And in some States, in Massachusetts notably, certain secondary studies, that of Latin for example, have been introduced inte the grammar schools which are the highest grade of primary schools, so that a little secondary instruction is found in every grade of instruction without being distinctly organized in any one. It is true that in the great majority of colleges the two parts of American secondary instruction are found associated or juxtaposed by combining the preparatory departments, so called, with the collegiate. Of 384 colleges and universities enumerated in the atartistics for 1880-89 there were only 40 which did not have both a preparatory and collegiate department. It is to be remarked that the colleges without a preparatory department are found principally in the Eastern States-New York and

Massachusetts-where pedagogical organization is most complete, from which it may be inferred that the separation is regarded as an advance, and that where the high schools are numerous and well organized the colleges do not concern themselves with preparatory instruction.
The Americans themselves are the first to recognize the imperfections of their system of secondary instruction, but are not, perhaps, so sensible as we would be of the incoherence of an organization which intrusts to different institutions the suceessive development of one uninterrupted grade of instruction. One inconvenience which results from this arrangement is that a majority of the high-school pupils do not pursue their studies further. While in France nearly all the pupils of the quatrième continue their studies until the end of the secondary grade, hardly a sixth of the population of the American high schools pass on into the colleges. Possibly the Americans do not yet realize sufficiently what confusion there is in the management of their high schools, which are half secondary and half superior primary institutions, by the simultaneous attendance of pupils who do not intend to pass beyond the high schools and those who are preparing for college and the universities. Think what disorder, what a pedagogical medley would result if all the grammar classes were suddenly suppressed in our colleges and lycées and the superior primary schools were to take their place, and, by a partial transformation, through the introduction of Latin and Greek into their course, were to invite to their heterogeneous lessons-half French and scientific, half classic and Greek-Latin-an indiscriminate crowd of pupils, some of whom intended to take the humanities while the others expected no more than simple primary instruction of a superior grade. The evil from which American secondary instruction suffers has an historical explanation. When their existence began in the seventeenth and eighteenth centuries there was no intermediate grade between the primary schools and the colleges and universities. Later the State, or, to speak more correctly, the States, took in hand the organization of the primary schools, which became the common schools, but they left the colleges and universities alone as having an independent life of their own. Then the directing powers proceeded to intercalate an intermediate class of institutions between the common schools and the private colleges, which should unite the two and also be public schools. This was the origin of the high schools, and as they were established at the public expense, it was necessary to take into account both their adaptation to the wants of the majority of the citizens who do not wish their children to have a complete course of secondary instruction, and also the needs of a small number of scholars who desire to enter college.

## OPINION OF DR. 'HARRIS.

But if American pedagogues do not sufficiently apprehend the vices of the general organization of their secondary instruction, which is, so to say, composite and derived from different sources, and consequently wanting in order and unity, they do not hesitate to declare themselves on other points of their inferiority. The proof is that the question of the reform of secondary instruction has become more than any other the order of the day. In 1892 a committee was appointed under the auspices of the National Educational Association to consider the improvements which might be introduced into the courses of study in the high schools and academies. This committee published a long report, of which Dr. Harris declared that it was the most important pedagogical document ever published in the United States. In his letter of introduction to this report Dr. Harris says that it is admitted by all that the most defective part of education in the United States is that which is given in secondary schools. He points out the discrepancies which exist in the regulations, plans of study, selection of subjects, and the different importance which is attached to the latter in different institutions. He speaks of the uncertainty of opinion upon the definition of secondary instruction and the unfortunate consequences which have followed this state of confusion, both on the part of the elementary schools, which can not tell on what condition their pupils will be admitted
to tho higli schools, and on the part of the colleges and universities because the pupils of the high schools are not well qualified to enter them. All of which shows that American pedagogy, having cut secondary instruction in two, finds it difficalt to fit the two pieces together.
opinion of president fliot, of harvard.
It is interesting io observe that this eminent educator decides in favor of our French system of secondary instruction; and it is especially to be noted that in reaching his conclusions, which aro so favorable to European methods, President Eliot makes his comparison between the common and universal methods of our 300 lyc 保s and colleges, and what is a rare and exceptional type in the United States, the programme of the Boston grammar schools and the Latin school. He says, "The French programmo is decidedly more substantial, that is to say, it calls for greater oxertion on the part of the pupil than the American, introduces the children earlicr to serious subjects, and is generally more interesting and stimulating to the intelligence." In Franco the child of 8 studies a foreign language, English or German; in America he does not begin such stadies before the age of 13 , when the most propitious time for learning foreign languages is past. Then, at 8 years tho French boy bogins his histors, which is presented in a peculiarly attractive and instructive form, that of the lives of great men. The American boy does not begin history until he is 13 , and he is launched at the start into Greek history. On the other hand, the American programmo gives three times as much arithmetic as the French, and yet it does not appear that the French are less skillful in handling figures than the Americans. The French scholar also begins natural history earlier than the American, and the subject is better presented to him. The French scholars generally are of the age prescribed by their plans of study, which is not the case with Americans. At the Boston Latin School, whilo the plan of studies is designed for pupils from 11 to 16, the real age is from 13 to 18.

So far wo have repeated what the Americans themselves lave criticised in their secondary instruction, but onr study will show, on the other hand, whaterer of gool there is in the efforts already made and the results obtained. In the first place, there is the long duration of socondary stadies, during which young people of both sexes reccive a liberal education, designed to bo an instrument of general culture for developing the faculties and character. Then the comparatively late perioct of completing secondary studies-21 or 22 years of ago-is a good rather than an evil, and it seems evident that a complete education, intimate and profound, which mast penetrate into the marrow of the souls, subjected for a long time to the intellectual and inoral discipline of its liberalizing influence, must result from such a long-continued course of training, lasting even to majority. Why say anything of what everyone knows already-the material conditions under which American secondary instruction is developed Everywhere sumptuons high schools, like palaces, are established in the cities within reach of all the childron of the people, while, by way of contrast, the colleges are situated in the country in the midst of verdure and groves, far from tho unhealthy excitement of the feverish lifo of cities. This is found in every State of the Union. Everywhere are comfortable, somotimes elegant, and at any rate spacions, buildings, and often in the colleges there are rich libraries of 50,000 volnmes like those of universities; besides, also, laboratories and musenms which offer the greatest resources for personal research or artistic culture. The high schools have no durmitories and their pupils live at home, but oven in the colleges where the contrary system prevails there is the greatest freedom. While offering the students the advantages of the common refectory and rooms in the dormitories, these college authorities allow them freedom to live in private houses if they prefer to do so. But those who sleep and board in the college are nevertheless treated like day pupils (externes) or, as it is expressly stated, like gentlemen, and they are constantly reminded that they are responsible for their own actions. Sometimes even
collegians help to form a council of administration, which acts with the official authorities in maintaining order and decorum. Edacation of the character is the principal care, and to this end associations and societies of all kinds are encouraged, not only athletic clubs, but literary societies, where the soung men practice debates and learn to conquer the timidity of their age and speak in public. There are also musical and singing societies, and in some institutions there is a gencral meeting of professors and students every week, in which, under the form of lectures, readings, etc., the effort is made to develop elevated sentiments and cultivato the minds of the scholastic community.

## EXTENT AND FLEXIBILITY OF THE PROGRAMMES.

What strikes us especially in this investigation is the organization of intellectual training in the United States, comprising both the extent and richness of the programmes and the flexibility and elasticity of the studies. Strictly speaking, the authorities in charge of American secondary instruction do not themselves choose the different subjects of which their programmes are composed; it is rather the pupils who make the choice. They are offered a great variety of studies which, taken together, would make a reritable encyclopedia; the scholar who can not take all decides in faror of such and such a study, according to his tastes and aptitudes. It is like a richly served table, supplied with dishes of every kind, which is set before the student, who sits where he pleases and helps himself to whatever ho wishes. How far removed from the uniform and tyrannical regulations of secondary instruction in Europe is all this. The general rule in America is for each student to choose for himself. The rood is pointed out to him-in fact, two or three-at the end of which a different baccalaureate awaits him. But even to reach tho same end and attain the same degree students can take one route or another, as best suits them; can concentrate their attention on some subjects and neglect others, and, in short, act in full freedom, and consequently work with more spirit and succeed better in studies Which are voluntarily undertaken and which they have chosen in preference to others. We do not hesitate to say that the system of elcetive courses which is more or less practiced in the secondary schools of America confers upon these schools a character of vitality to which our lycees can not pretend, because our pupils are all constrained to follow the same course of instruction, without regard to their diffcrent intellectual capacities or social destinations. And it is to be noted that this liberty of choice allowed to young Americans does not carry with it, as might perhaps be expected, an abandonment of classical studies, for the Latinists are quite nuncrous. Greek-Latin instruction, too, is in esteem and holds its place through public opinion, nursed by the leaders of education, who, in spite of the practical and utilitarian tendencies of a commercial and industrial nation, understand the value of the old humanities and, so far from consenting to sacrifice the classics upon the altar of science and practical arts, defend and maintain them with as much conviction and enthnsiasm as the humanists of the old world.

The report of the committee of ten, appointed by the National Educational Association makes it evident that there is a tendency to give a largo place to what may be called modern instruction-the physical sciences, natnral history, geography, history, and modern languages-in opposition to tho preponderanco hitherto given to classical iustruction-Greek, Latin, and mathematics-which Americans call "old and renerablo subjects." There is no danger of breaking with Latin. If there is anjone who wonld like to "deliver us from the Greeks and Romans," as there are in France, it would seem as if there wonld be no hope for him in America. The Americans manifest almost a religious veneration for the classical humanities; bat they also feel, and very sensibly, the need of strengthening the course of positive and scientific studies.

Of the diverse suljects of stady in the high schools and colleges wo can only give M. Compayre's remarks on Latin, Greek, and history. Ho says: "Despite the morement which is making itself felt in America, as everywhere else, toward modern
and scientific studies, Latin has remained in practice one of the fundamental studies of the high school. And in theory nearly everyone recognizes its importance as an instrument of intellectual discipline. What strikes us at first is the late period (i.e., about 15 years of age) at which, according to the traditionary usages of Europe, American scholars begin Latin. The two essential points in the study of Latin as it is understood in secondary schools of the United States are reading the Latin text and Latin composition. The latter is only nsed because it is regarded as an excellent means of penetrating the secrets of Latin construction more thoroughly, learning the meaning of the words and remembering the forms and inflections of nouns and verbs; of giving, in short, a better understanding of the rules of syntax. Now this is what one must know in order to le able to read a Latin anthor easily, which is the object sought. The pupil is therefore exercised in composition not in order that he may acquire the useless talent of writing Latin, but in order that he may surmount all the dificulties which he meets in reading the text. It can not be denied that Latin and Greeks studies in Amerioa are conceived in a somewhat narrow spirit. I do not dispute the advantages which may follow from studying only one author and only one work of that author. [The programmes show that Cæsar's Gallic Wars and the AEneid are the only Latin books studied the first two years in the high schools.] It was the method of the middle ages when there was hardly more than one book studied in each faculty. But how much more liberal is the modern method which introduces the scholar to all the productions of Greek and Latin genius, and opens to him the treasures of classical antiquity! Is there not danger that by restricting as much as it does the list of authors to be read and explainel, American pedagogy may transform a rich study, which is fertile above all others, into a mechanical and sterile roatine? The conference has, however, declared that the selection of Cæsar's Gallic Wars is most unfortanate, as the work is too difficult for beginners and uninteresting from its too exclusively military character. Its vocabulary also is limited by the nature of the subject."
The committee of ten also points out that Latin is not to be studied merely to understand the meaning of words and the form of construction, but alse in order to enter into the spirit of Latin literature, and so gain an idea of the thoughts and sentiments of a people who have contributed so largely to the civilization of the present day. Accordingly they recommend certain works of history and criticism in which modern authors treat of Cicero, Cæsar, and Virgil, and their times.
To sum up, the features which distinguish elementary instruction in Latin in the high schools of America are, the beginner is brought in contact with difficult authors sooner than with us; composition is considered more useful and is more generally practiced than [written] translation; grammar is only taught as an adjunct to the explanation of the text or when translating English into Latin; the number of anthors studied is very limited, and, what is remarkable in a land of absolute freedom of choice, the same authors are used every where.

## GREFK.

The number of scholars in the high schools who take Greek is very small, not over 3 per cent of the school population, and of this small number Massachusetts alone has one-third; and this small number does not carry its study very far. The strdents of Greek are those who are fitting for college, and the council of ten does not deem it desirable that the study should be extended. While the Greek classes of the high school correspond in degree pretty nearly to those in which French boys begin their Greek, the age of the American scholars is greater than that of the French by three years. The books studied are the Anabasis and the Miad, and the conference has phtested against the exclusive use of the Anabasis as not sufficiently important. The beanties of Homer are not celebrated in France with more conviction than in America, as shown in these words: "The prospect of reading Homer is no small inducement to pupils to study Greek; in schools where children have been
encouraged to read translations of Homer the number beginning Greek has been considerably increased. The Homeric poems appeal to the pupil's imagination and arouse his interest in the life and thoughts of the Greeks," and the "Odyssey deals with fairyland, enchantment, and human effort."
American teachers hardly recommend written translations of Greek any more than of Latin, but they place great stress on the merits of oral or written composition. These exercises are limited to the ideas aud words of the lesson of the day, contained in the texts studied in the class room. The exercises of Greek composition are considered necessary to a complete understanding of the texts studied in the class. The object assigned to the study of Greek by the conference is thus defined: It is to teach the language of classic Attic prose by making the Attic grammar understood and by reading Attic texts, but the object is also to excite a taste for Greek literature by reading Homer. Reading, and cursory reading at that, is the great instrument for the acquisition of languages, according to the Americans. This reading is of course accompanied by explanations on questions of geography, history, and mythology suggested by the text, and these explanations are expressly recommended. Nevertheless, the progress of the student is measured by the number of lines or verses he has read. One teacher felicitates himself on his success and judges it by the fact that a few years ago his students only read three books of Homer, while later they could read five, and still later eight, and he hopes to go still further with them. The knowledge of grammar, in other words, is in no sense the final object of the study of Greek, but is only a means for reaching the real end, which is facility in reading a Greek text, and as the student does not begin Greek until he has studied Latin for a year or more he is forced to rely upon his knowledge of Latin syntax to understand more easily and quickly that of the Greek.
[The author cites authorities to show that the same idea prevails in teaching modern langages. The teachers are recommended to confine themselves to instructing their pupils to read French and German readily without requiring them to write or speak those languages.]

## HISTORY IN THE HIGH SCHÓOLS.

The study of history has not obtained the importance it deserves in the secondary schools of the United States, only 27.31 per cent of the attendants of these schools having taken it in 1889-90. In later programmes it also occupies a subordinate place. In the high schools of Chicago, for example, there is no history until the third year, when general history appears. It then gives place to other studies. There is no ancient history for students of the general course and no national or modern history for students of the classical course, nor do the young scholars have any instruction in history before entering the high schools, and none in the grammar schools until the third year, when the history of the United States until the Administration of Washington is introduced. The child is therefore 13 years old before he learns the history of his own country. Is this not because the practical American, absorbed by his care for the present and future, is indifferent to a past which he disdains and can not see the use of studying the Old World The committee has made a remarkable report on this subject. Rarely have the importance of historical study and the influence which it exerts on the development of the mind, when properly directed, been better defined.

MOKAL RDUCATION IN THE RIGH SCHOOLS.
These schools are attended by scholars who only come a few hours a day to follow a certain course of study, and they would seem to be above all and almost exclusively schools of intellectnal education. Are they schools of moral education as well The Americans asy that they are and that they contribute with the church and family to form the morale of the young from 14 to 18 years of age. It is a universal testimony, says Mr. Huling, that the senior classes of the high schools show a manifest
moral improvement over the lowest classes. They have developed in reflection, conscience; and propriety. They have a sense of responsibility and duty, are less egotistical, and more devoted to goodness for itself. Thero is less lying and flirting, and a general progress in dignity and self-respect. Donbtless this moral progress is in the first place the natural effect of mental work, But the studies are not allowed to exercise their moral effect unaided. Every opportunity that instruction in history and literature call afford for forming the character is utilized, and advantage is taken of public exercises and religious or other lectures to impress the minds of the students with a high ideal of morality. Use is also made of private conversations adapted to the wants of individuals, and even the aid of parents is invoked to the the same end.

## LATIN AND GREEK IN THE COLLEGES.

We find nearly the same authors studied in all the colleges. Except Virgil, which is a book of the high school, nearly all the great Latin prose writers or pocts figare in the programmes. The aim of the instruction given is manifestly to teach the students to read Latin easily, and also to use the study of the text as a means to know the history of the manners and arts of the Roman people. The programmes of Greek instruction lead us to the same conclusions. [Gives Greek programmes of Oberlin, Amherst, and Williams.] The Greek authors studied in American colleges, it will be secn, are nearly the same as those used in France. The question is, are they studied in the same spirit? They are, assuredly, in some points. The Amhurst programme says: "It is our aim to give the student an exact appreciation of the style and thought of the Greek writers and open to him the treasures of wisdom and knowledge which their works contain." But what especially characterizes the American Hellenists is that they try to have a good doal of Greek read and read rapidly. Thns, at Oberlin, it is specified in the programme that "all the comedies of Aristophancs will be read" except certain ones which, for obvious reasons, are read only in part. Greck composition, like Latin, is not practiced after the freshman year, nor is Greek [written] translation regarded with favor any more than Satin. Cursive explanation of the text is the rule. We must add that the study of the Greek langaage is combined with that of the literature, institutions, manners, and art of Greece. At Williams, for example, while reading the Odyssey the principal Homeric questions are discussed, and while translating Lysias, the political and social circumstances alluded to in his orations are explained. The use of dictionaries of Greek antiquities is recommended, and Athens and Olympia are studied from the topographical and archæological point of view. In a werd, the study of Greek is not limitel to a dry apprenticeship to the langaage alone, but it penetrates into the genins of the Greek race and attempts to know its thought and life, and it is declared that the knowledge of Greek is an inestimable discipline for the mind and is at the same time an indispensable condition of the knowledge both of ancient and modern languages and literature

## CHAPTER XXIII.

## MENTAI FATIGUE IN SOHOOL.

The Annual Report of 1894-95 contains an article under the caption "Mental Fatigue in School" (see Part I, pp. 449-460), in which the views of leading German and other Europeal educators and investigators are stated. It contains quotations from Richter, Kræpelin, Mosso, Bargerstein, and others, and attempts to represēnt the pedagogical side of the question. The subject of mental fatigue has occupied English and American educators and a rery interesting discussion has ensued, the sum and sabstance of which is here sketched.

Prof. M. V. O'Shea, of the School of Pedagogy in the University of Buffalo, says in Intelligence, after defining mental fatigue from a phẏsiological standpoint:
"Many nervous diseases have their origin in the schoolroom, and are due in part to the ignorance and neglect of teachers in their watchfulness of individual chillren; we say in part, for certainly the unhygienic conditions of the ordinary schoolroome are far more blamable than the teacher who, while charged with grave responsibilities, yet must work under the conditions impesed upon lier.
"The practical questions for the teacher in the study of this sulbject are, What conditions produce fatigue more easily in some children than in others? What are the signs by which the existence or approach of this state may be detected? In the first place, it should be understood that fatiguo means simply that the nerrous system has been depleted of energy which can be restored through proper mutrition or rest. But, if ono should speak correctly, rest and nutrition mean one and the samo thing, for they both imply the filling up and onlivening of nerve cells by means of proper elements from the blood. In sleep this process of repair goes on more rapidly than waste, provided there are sufficient nourishing properties in the blood, for then there is, or should be, little offort to use up nerve force; and by mental effort must be understood not simply intellectuad activity, but all emotional and volitional activity as well. If, then, fatigue implies a lack of nutrition of tho zerre centers, from whatever cause produced, it is necessary for the teacher to know, in the first place, whether individual pupils, in whom she may find signs of undue nerrousness, partako regularly of a sufficient amount of proper food, and whether there is assimilation of the essential elements of the food, oven if there is the right amount and kind. It may be easy enongh to find out about the quality and quantity of food, but it is not so easy, of courso, to determine what each individual appropriates therofrom, and perhaps this can ouly bo found out by the adrice of physicians. But homever the problem be met, it is an extremely important matter, and ono which rill explain the restlessness and apparent stupidity of at least some pupils in the classroom."

After citing some eramples observed in the schools of Buffalo, the writer goes on to say :
"It will not be necessary to multiply examples, for in all likelihood every teasher can recall a number in her own experience. But there arc other conditions besides improper food that may cause fatigne ensily in individual childreu. A pupil who is
without being stimulated, and time and quantity of the action of the nerre centers are not determined by circumstances around. A slight noise may make him start; on the other hand, speaking to him may not be follewed by a ready reply; the useless starting movement is in excess; the reply we want can not be obtained from him. You will find it difficult in this condition of the child's brain to form any new organization for movements, or to get him to loarn anything. Further, there may be a tendency to an action the opposite to that usual under tho ciroumstances-an inverted ratio of action among the centers. When irritable, the child may turn his head away from the sight of objects at which in happier moments he would look. You say he turns his head away from his dinner because he is irritable and peorish; his nerve centers turn his head away at the sight of food because they are not in good acting order. Reflex action is usually in excess in the state of exhanstion; movements upon touch are excessive, hence it is not well to try to impress the child much when in such a condition.
"Tho condition termed 'irritability' in a child is usually an accompaniment of fatigue or exhaustion. Such a state is indicated by the following sign: A slight noise makes him start. This is a reflex movement in oxcess-a reflex that does not occur in the more perfect condition of health under such stimulus. In irritability other stimuli besides sound may produce excessive reflex action; a touch upon the shoulder is followed by sudden movement. Not only is the amount of reflex movement excessive and out of due proportion to the stimulus, but the kind of movement may differ from that usually following such a stimulus under better conditions of the nerve system. A child 3 years of age, when irritable, may turn away his head from a familiar object such as usually attracts his attention, or from the sight of his food and say 'No, no!' Here the sight of the object, instead of causing a reflex movement of head, eyes, and hand toward the object, moves them all from it. The irritability of the nervo centers is indicated by movements in the opposite direction from that which the same stimulus would produce in a more restful condition. Besides these reflex signs, we find the voice altored. When spoken to, he may answer sharply; the motor force generally is lessened and irregular in kind; tritching, irregular movements like the spontaneous movements of younger children are not uncommon in this state of irritability, which seems to be a condition of reduction to a more infantile state. Nervous children often show marked signs of irritability; the spontaneous postures assumed are those of fatigue, with the addition of slight irregular twitching movements. This irritability may result from exhanstion, and, liko explosions of passions, it may lead to exlaustion. Abnormal conditions in the body, particularly in the stomach, may render the child irritable; so may fever or other illness. The child that is irritable may require rest and feeding. Inquire as to his sleeping, and do not try to produce much impression on him by talking whilo he is in this state.
"Fatigue and exhaustion are best removed by feeding and rest. Restfulness implies recreation of the parts fatigued or exhausted; the nerve centers are the parts most needing rest after work, and they do not all get equally tired. One occupation exercises or tires one set of centers; a different occupation may exercise another set of centers and allow the first set to rest; reading may bo followed by writing, and this exercise by singing, which employs the respiratory nerve apparatus. On the other hand, the centers concerned in mental work may alone be fatigued, as indicated by the ejes not being readily drawn to the work, and by uncertainty to reply to questions and delay in replying. The nerve-muscular apparatns concerned in active play may be found in good order when the lesson is finished.
"Complete rest is needed at all times; the whole of the body and brain at times requires to go tbrough a period of quiet nutrition, without any expenditure of force that can we avoided. This may best be effected after feeding, when the blood is rich with nutritive material. The signs of restfulness are negative-the absence of movement, as in sleep; indeed, this state differs from sleep only-we will not say in the retention of consciousness, but in the signs of impressionability; the child when
restiug speaks if spoken to, and is impressed with what he sees and hears. To procure complete rest, let the sources of ixppressions be removed from around him. It has been said that the signs of rest are negative; that rest has been effected is known by subsequent activity and increase of spontaneous action, greater capacity for the proper functions of the brain, and the removal of all signs of fatigue.
"Rest is a condition of nutrition leading to the signs of recreation indicated by sulsequent activity. The mostessential element in the expression of the condition of rest is the subsequent activity. During rest there is still impressionability which affords a distinguishing character between simple rest and sleep; arising out of this We have the fact that in rest uncomplicated by sleep the eyelids usually remain. open.
"One of the special characters of rest is the absence of movement, although. impressionability is retained. Rest is usually preceded by fatigue, and it is followed by activity; the sequential signs of recreation and activity indicate that during the period in which mevement was absent there was rest. Rest is expressed by the present signs of rest, followed by the signs of recreation and activity.
"As a matter of interest it may be noted that forces, such as the sound of soothing masic, may affect movements. Music may canse a man to keep quiet and rest.
"In contradistinction to the state of rest we have activity. The condition of activity is indicated by actions, i. e., movements. In activity with strength the movements are probably fewer in number than in the state of irritability, and the kinds of movements differ in the two conditions.
"One sign of healthy activity is a quick response to movement upon stimulation. For example, the movement-quickly follows upon the sight of the object or on hearing a sound. If such movements are looked upon as reflex actions, the quick and. ready answer is a reflex series of movements when the period of latency is short; this, of course, implies also that impressionability is good.
"The necessity for alteration of activity and rest in training young people arises from the fact that each is necessary to aid the nutrition, growth; and development of the body and brain.
"The signs of nutrition are so important that, although the subject has been tonched apon, I must speak of it here again. A well-nourished body has a weight and height equal to that of the average for the age; the proportions of the various parts are the normal; the skin is of healthy color, and the tissues beneath it are firm; the face is full and bright. A body thus well nourished is not necessarily possessed of a well-nourished brain; a body badly nourished is probably never possessed of a brain well nourished, for this, of all parts of the body, suffers first in conditions of depression. The state of the brain must be observed independently of the rest of the body of which it is a part: look to the varioussigns of brain action as they have been described. When brain action is defective, observe how impressions are produced upon it by sights and sounds. It may not be sufficiently stimulated by the events of daily life, and it may need special training.
"Natrition may be expressed by (1) form of growth and (2) by motion, which is due to natrition.
"As evidence that motor signs, or movements and the results of movements, may express nutrition, let ns examine a few examples.
" 1 . In an ill-nourished infant spontaneons movement is much lessened, or the child may lie almost motionless, instead of being constantly full of movement while awake. The retarn to spontaneous movement is a sign of the improved nutrition.
"2. In a man, after a severe illness, such as a fever, the tone of the voice is usually altered so that we can no longer recognize the individual by his voice. This motor sign, as well as the worn countenance, indicates the man's lowered nutrition. Returning health is shown by the patient 'looking like himself' and recovering his old voice.
"3. In a child 7 years old emaciation and ill nutrition, indicated by loss of weight,
may be accompanied by St. Vitus's dance or by finger twitching, which disappears when weight increases and nutrition is improved.
"4. A strong, well-notrished man is less fidgety than a weak one.
"Now, as to the expression of nutrition by form and growth, proportions of growth often indicate conditions of nutrition. Let me describe a typical example of a nerrous child. Reports may be made of a child that he sleeps badly, talks at night, grinds his teeth, emaciates, although there is no disease of any of the organs, often suffers from headache, and is irritable, though quick in mind and affectionate. Let such a child stand up, and observe him. As to conditions of growtli, defects of proportional development are commonly seen. The form and make of the head and the features, as well as the character of the skin, may be good. The height of the child, in relation to circumference or to weight, is defective; the child is too tall and too thin; either fat or muscle or both may be defective in quantity. The emaciation may be unequally distributed. Often it is less in the face than in the limbs and trunk.
"Now, as to the motor signs, indicating the state of the nerve system. Let the hands be held out with the palms downward and the fingers spread. The left upper extremity is probably at a lower level than the right. 'The nervous hand' is seen on either side, perhaps marked on the left. There may be finger twitching, separate digits moving in flexion and extension or laterally. The head is slightly flexed, with some inclination and rotation, usually to the right. The spine is arched too much forward in the loins, often with inequality in the level of the shoulders, and slight lateral curvature. The face as a whole is too immobile, although there may be some overaction of the muscles, widening the month on one or on both sides. The eyes move much, mostly in the horizontal direction, these movements not being fully controlled by the sight and sounds of objects around, except under strong stimulation. The tongue, when protruded, is too mobile; some of the teeth are naually found ground at their tips. This is most commonly the case with the canines.
"Such a child should be watiched carefully as to matters of health. He should rest much, and never be allowed to get exhausted by work, play, or late hours.
"Certain general conditions of the brain will now be described in terms which indicate points for observation. A child is said to be inert when slow in all his movements, each movement itself being slow, the formation of compound movements (associated movements), and the time of action after stimulation being all behindhand. In such a case look for signs of defective make of the features, signs of ill nutrition and exhaustion. In any case a wisely conducted training is especially necessary to aid brain development. In such a child you will want to see signs of increasing brain power, quicker movement upon stimulation, the action being more exactly and quickly controlled by the eye and the ear; greater strength for fatigue; greater capacity for the formation of the groups of movements or unions among nerve centers. Increasing brain development is also shown by lessened spontaneous movement, as the child grows up, concurrent with increase of intelligent movements controlled through the senses. The power to sleep and rest should remain unimpaired.
"The indications of mental anxiety and bodily pain may be compared. In looking at children it is well to see what is wrong before trying to find out the cause. Looking at the face you may see an average of fixed expression, principally located in the frontal zone, as rertical furrows, not apparently due to present impressions through the senses, lut apparently to a delayed expression of long antecedent impression. Such usually indicates a brain state corresponding to mental anxiety or pain as distinguished from suffering due to states of other parts of the body. Suffering produced by some part of the body at the time of observation is indicated in the lower part of the face by depression of the angles of the mouth. Depressed angles of the mouth suggest inquiry as to some cause of pain or something acting and about to produce an ontburst of crying. In searching for the canse of the
expression of mental anxiety, watch the face as you touch upon various subjects in conversation; see what increases or diminishes the appearance. It may be that all conversation lessens the appearance of anxiety, which returns the most when the child is left mimpressed. Then it is probably due to some fixed thought or fear. In the condition of mental pain, corresponding to a memory or a sad thought, the expression there is written on the forehead, the eyebrows being drawn together, causing vertical creases. I have seen a class of boys all frowning and their eyebrows thus knit wheu hard at mathematical work. A placid face with changeful expression is an index free to show us varying brain states."-(Mental Faculty, Waruer, pp. 74-86.)
While the foregoing quotations are, for the most part, merely argumentative, though evidently based on careful observation, and carry conviction by circumstantial evidence chiefly, a witness may now be introduced who presents an array of facts carefully gleaned from teachers and students. The statements are based upon individual reports of 116 teachers, hence are the depositions of eyewitnesses.

Mr. Francis Galton, F. R. S., president of the Anthropological Institute of Great Britain and Ireland, published a few years ago, in the journal of the institute, a paper read at oue of its annual meetings, in which he says:
"I determined to test the matter of fatigue, and sent out a number of selected questions bearing on the subject. The Teachers' Guild kindly assisted me by circulating my questions. The replies received form the basis of the following remarks:
"The objects of my questions were, first, to determine the signs and effects of incipient fatigue in as measurable a form as possible, for it is obviously most desirable to know what the tests of fatigue should be, in consequence of the contradictory opinions entertained frequently. There ought to be no room for doubt as to whether the pupils in a particular school or class and at a particular time were or were not overfatigúed. Secondly, I wished to hear from the teachers whether they had themselves ever broken down from overwork, and what their own experiences might be concerning their pupils and friends. The actual questions are subjoined: Nos. 1, 2, and 3 regard the person addressed; Nos. 4, 5, and 6 regard their pupils and acquaintances:
"Question 1.-What particular mental work can you perform easily when your mind is fresh that you find difficult or impossible when your mind is somewhat fatigued?
"Question 2.-Has illness, due solely to mental overwork, independent of domestic anxiety and worry, ever incapacitated you for more than a month at a time from ordinary school work? If so, give dates and symptoms? Do you consider your present health to be in anyway affected by that illness?
"Question 3.-Has experience discovered to you any warning signs, bodily or mental, distinct or obscure, of the imminent approach of mental fatigue other than the growing sense of becoming fatigueds If so, describe them.
"Question 4.-What particular intellectual work do you find your pupils perform with ease when their minds are fresh in which they fail, more or less, when they are mentally fatigued, even though they are still interested in their work?
"Question 5.-Have you known cases of more or less serious prostration from mental overwork as distinguished from the effects of domestic or other anxiety ? If so, give initials and dates and a very brief notice of the severity and duration of the illness.
"Question 6.-Has experience discovered to you any warning signs of imminent mental fatigue among overzealous pupils:
"The upshot of the replies to the questions is as follows:
"General aspect.-Experienced teachers place most dependence on the general aspect of their classes, due to a variety of small indications, euch as jaded expression and abnormal skin color. They more especially speak of a strange look in the eye, which is variously described as dazed, weary, fixed, or lack luster, as being a peculiarly characteristic indication that work should be slackened at once.
"Nervous irregularities.-Restlessness appears to be the commonest sign of partial fatigue; that is, of the attention being wearied, while the muscles are craving to be
employed. I may here for one moment break my plan of not traveling beyond my brief by alluding to a short account I wrote in Nature, vol. 22, pago 174, but signed only with my initials, entitled 'Measure of fidget,' describing how 1 had stucceeded in counting the rarying rate of fidget of a section of a large andience during the reading of a wearisome memoir. I have since frequently tried this method. It is an amusing way of passing an otherwise dull evening; but, in drawing conclnsions from the number of movements, the average age of the audience and their habits of thonght hare to be taken into account. Children aro extraordinarily mobile, and those adults who are little accustomed to concentrate their attention are rarely still. oxcept when spellbound by cloquence. On the other hand, I have frequently noticed at meetings of the Royal Society that as many of the persons present as 1 conld hold in a glance were all as rigid as statuary for many seconds together. Yawning and lolling are common among tired children, and twitchings and grimaces, which in serious cases culminate in St. Vitus's dance. Here are some extracts from the rations replies:
"(1) Sudden muscular movements. (2) Grimaces, frowning, or compression of the lips are marked signs. (3) The fingers sometimes twitch and the whole nerrous system seems affectel, (4) Twitching of the face. (5) Twitching, blinking the ejes. (6) Fluttering of the eyelids. (7) Tendency to nervous laughter or movements. One corresponient has fits of sneezing in the early morning when ho has been fatigued over night.
"General unsteadiness of muscular coordination is shown by bad and slaky handwriting; this is sometimes specifically mentioned, but more often implied by such phrases as: (8) Careless writing or (9) failure in all work requiring neatness. (10) Sometimes a loss of power to continue writing, the pen going orooked, etc. Fatigue is also very frequently indicated by disordered utterances, as (11) tendency to stumble over words when speaking; (12) refusal of the tongue to obey the will, so that in speaking or reading I substitute ono wrord for another.
"Irregularity of nervous action is further shown by conditions of pallor or of flushings in the face. They sometimes alternate, testifying to a depression of general nerve power, combined with morbid excitability. Allnsions to abnormal skin color are frequent in the replies. Ono teacher goes so far as to lay particular stress on the color of the tips of the ears in deciding whether and in what way the girls of her class are suffering. If the tips are white, flaccid, and drooping, she concludes the girls are thoroughly weary in mind. If they are relaxed but purplish, she concludes that they are tired not with study but from straggling with their nerves, whicls the average schoolgirl of 14 or 15 very rarely has completely under control.
"Headaches.-The frequent occurrence of headaches in varied forms and in every degree of severity may be accepted as a matter of course, similarly as regards cold feet, faintness, and actual faintings. Sleeplessness in a very scrious degreo is another well-known sign; much more rarely somnolence. Grinding the teeth at night and talking in the sleep are frequently mentioned; somnambnlism occasionally so. I do not propose to enter into details respecting any of the matters just mentioned, as they are all of them well-known signs of over fatigue. It mas, however, perhaps interest the meeting to seo a drawing I hold in my hand mado in sleep not many weeks ago by a young friend and connection of my own, who was studyiug rather too hard for a Government cxamination. He awoke in the night and fonnd himself in his nightgown, sitting at his table, with the gas burning and with his grotesquo sketch of an elephant's head and of some other animals just completed. The ink was still wet. Ho had not the slightest recollection of anything previous to the act of awakening, but there had been conversation before ho went to berl that probably suggrested the sketch.
" Disposition.-Irritability is perhaps the commonest sign of incipient fatigue. My correspondents freely acknowledge it to bo so with themselves, and it is very
easily noticed among their pupils, who become cross and peevish when tired. I shall motenter further into this, as the fact is a familiar one; it is also well known that the nerves of sensitive people become so irritable by overwork as to be painfully jarred by what they wholly disregard when well, such as the ticking of clocks and the rattle of the street. A most pitiable amount of suffering is disclosed in these replies, due to nervous irritability. Much is said of the gloomy way of looking at life that is brought on by overwork; of the serse of incapacity, of magnifying trifles, and of dread of society. Irritability is sometimes accompanied by a notable amount of ordinary excitablity expressed by such remarks as: (1) I get nervous and start at noises; (1) I start sometimes at a sudden noise or movement in the room.
"It is, I need hardly say, known by experiment, that both the quickness and, the magnitude of the reaction to any stimulus is greatly affected by fatigue.
"There is an experiment, not so well known as it should be that after a class had practice in performing it, can be repeated at any time in a few seconds, which gives an excellent measure of the varying amount of reaction time. The class take hands all aronnd, the teacher being included in the circle; a watch with a second-hand lies on the table before him. All the pupils shat their eyes. When the second-hand of the watch comes to a division the teacher gives a squeeze with his left hand to the right hand of the pupil next to him. That pupil forthwith with his left band squeezes the right hand of the next pupil, and so on. Thus the squeeze travels around the class and is finally received by the right hand of the teacher, who then records the elapsed time since he started it; or he may let it make many circuits lefore he does so. This interval, divided by the number of pupils in the class ard by the number of circuits, gives the average reaction time of each pupil. The squeeze takes usually about a second of time to pass through each dozen or fifteen persons. We should expect to find uniformity in successive experiments when the papils are fresh; irregularity and prevalent delay when they are tired. I wish that teachers would often try this simple, amusing, and attractive experiment, and when they have assured themselves that their class enters into its performance with interest and curiosity, they might begin to make careful records at different periods of the day, and see whether it admits of being used as a test of incipient fatigue; Deceptions must of course be guarded against.
"Senses. -The frequency with which serious alteration in the power of hearing and of seeing is mentioned, and the feelings sometimes of intense sensitivity and sometimes of numbness, show that the delicacy of the senses is markedly affected loy fatigue.
"Hearing is often heightened in keenness; sometimes it is dulled. It is heightcned in those numerous cases of irritability of which I have spoken, when the tired brain becomes almost maddened by an organ grinder. It is temporarily paralyzed in others. The following is a mixed case: (1) My hearing had never been very acnte, and I think the first symptom of fatigue is a feeling of deafness, but at the same time that I can not hear the roices I want to hear, the outside noises of traffic, bells, etc., become intolerable. Other cases of deafness from fatigue are (2) inability to hear in school without a painful offort and (3) increased deafness.
"Vision is greatly affected by over fatigne, not only owing to the strain upon the eyes from much reading in a bad light, but apparently through more deeply seated canses as well. It it difficult otherwise to account for the following interesting case in which color-blindness was brought on by fatigue and disappeáred after rest. It has much physiological interest and well deserves being placed on record. The lady allows me to mention her name for the sake of authenticity. She is Miss J. Beckett, Girls' Grammar School, Ripon. She reports as follows:
""After several hard hours of continnous study I have been subject to attacks of color-blindness, which leave me after resting. The first time I noticed that I was not able to distingaish one color from another was when I was reading for the Loudon matriculation years ago. I was at the same time etching for an American
magazine and teaching most of the day. This lasted from Cliristmas to July, when I began to feel considerably worn out. One day I went to spend a few hours with a friend, and while there began to paint some ivy leaves on a terra-cotta plaque. Imagine my distress when my friend told me the leaves were orange instead of green. On my return I went into my study, and to my astonishment the curtains, which were blue in color, looked a kind of dingy yellow. However, in a few hours I was quite well. Toward the end of the year I was obliged to give up work on account of my health. I got well and took up my work again, still subject to temporary color-blindness when tired.' In answer to further inquiries she adds: 'I do not remember whether I have any difficulty in recalling colors when tired. From a little child I have been particularly fond of them, and can readily paint flowers, foliage, and neutral tints from memory.'
"The frequency and severity with which the sight is affected by fatigue is sufficiently shown by the following extracts:
"(1) The eyes fail first. Sometimes after hurrying to a lesson, on my arrival I could not see a single note on the page of music for a few minutes. After writing and playing long everything goes black, or black spots dance up and down. (2, A time of great excitement or worry will so affect my sight that for about half an hour at a time I can see nothing clearly. The outline of everything is deficient in some part, so that I only see half of a thing at a time. . There seems to be a bright wheel of light whizzing in the corner of one or the other eye. (3) At first the lines of the page become indistinct, then at intervals they appear to vibrate; finally they merge into one mass. (4) The words appear to rise from the paper, and frequently a double row of words is visible. (5) Lights and after images are distinct before my eye. (6) A confusion in the lettering of mathematical diagrams is sometimes an early symptom of fatigue among my pupils.
"As regards sensations in the eye itself, beside such remarks as: (7) A dazzling and burning sensation in the eye, the following is a case of an affection of the eye being subordinate to that of the brain rather than vice versa. (8) A nervous sensstion in the eyes as though the eyeballs were loose in my head and would fall whichever way the head is inclined. The sensation is worse on lying down. I am somewhat nearsighted and wear glasses, but only feel this disagreeable sensation when mentally weary, not necessarily through overreading.
"Memory.-A very common and early symptom of fatigue is failure of memory, using that word in the allied senses of recalling ideas at will, or else of former ideas presenting themselves readily by association, or else of the sure association of muscular movements engaged in utterance with the idea of the words intended to be uttered. I have made extracts of no less than twenty-five cases of failure of memory, out of which I will select half a dozen.
"(1) My firstindication of mental failure is an inability to spell common words; my second, an omission of words in writing; my third, sudden forgetfulness of what I am actually saying. (2) Tendency to forget the meaning of words in a foreign langaage which are usually well known or have been met with quite recently. Tendency to make stupid blunders in subjects in which, when the mind is in full vigor, it is accurate without effort. Simple and obvious mistakes are increased twofold in number, and that throughout the class. (3) Through days and weeks together the utterance of wrong words or sentences not intended or desired to be spoken, and the writing of wrong words. (4) Tendenoy to stamble over words in spesking, and to misplace letters in writing, generally putting them too soon, as 'Wesday' for 'Wednesday.' (5) Want of power of calling at will to memory names and little matters connected with everyday life. (6) Some of the pupils never spell correctly when tired.
"Arithmetic and mathematics.-The studies that are the first to fail under fatigue differ in different individuals, but in the majority of cases those of arithmetic and elementary mathematies go soonest. Though many of the 116 replies come from
teachers who have little, if anything, to do with those subjects, no less than 47 specially mention them, For example:
"(1) The merely mechanical processes of arithmetic become bewildering at the end of a day in which I have been particularly engrossed with school work. (2) Arithmetic and algebra become impossible when fatigued, not as being disagreeable or painful, bat because I then blunder so much that it is hardly any use attempting them. (3) Another correspondent speaks of the impossibility when fatigued of doing work that requires both accuracy of detail and a certain force of will to fix the attention, such as arithmetic. (4) Speaks of the difficulty to tired boys of working out any common-sense problem in arithmetic.
"Though very many similar answers could be quoted in corroboration of these, there are two that tell in an opposite direction. They are: (5) Whenever my mind is wearied it affords me a certan amount of relief to do some work which involves the solving of arithmetical and algebraical problems, and by preference such as call for the use of logarithms or of the slide rule, (6) I find accounts a great rest when I can not exert my mind usefully in any other way.
"I may be permitted again to break my rule by adding a case from my own knowledge of a very distinguished man, now deceased, who, having always found repose in his favorite mathematics when he was fagged and worried by multifarious duties, naively recommended the same remedy to a friend whose brain had so broken down for a time that he shrank from the least mental exertion as from a fatal danger.
"Languages.-A difficulty in translating is another of the noticeable effects of incipient fatigue, and is partly due to the lapses of memory already spoken of. (1) In translating, words and phrases do not occur readily to the mind. (2) Translation iuto or out of a foreign language with which 1 am not very familiar. (3) I have occasionally lost the power of speaking German when fatigued, though when in my ordinary condition I speak it without conscions effort. The failure to translate well is due, of course, to much more than the simple failure of memory in small things, and depends on the loss of power of grasp, and on depressed mental vigor generally. The following is an instructive case:
"When I taūght young boys of ages 8 to 13 all day, I took arithmetic and Latin in the morning, and English reading, geography, etc., in the afternoon. On some occasions the Latin lesson got put off till the afternoon, and I was surprised to find that lesson, which was always a successful one in the morning, failed entirely in the afternoon. The boys wished to learn but could not. Their ordinary work, which made less demand on the intellect, they did in the afternoon well enough. This and such like cases fall more properly in the next division.
"Failure of mental grasp.-The evidence that the mind fatigued is unable to work up to itn normal standard, and that itwastesitself in futile exertion, are very numerous. They are such as: (1) Failure of abilhty to grasp the meaning of even simple things. (2) Failare of the portative memory. In reading, complete inability to take in the matter whilst mechanically scanning the page. A curious incapacity to count the cups when serving tea. (3) Reading sentences without recognition of what was read. (4) Confusion alternating with excessive clearness of thought. (5) Tendency of thoughts to wander. Failure in pupils to grasp the meaning of what is said to them quickly and fully. (6) Before the actual sense of power to grasp ideas, and of an incapacity for conveying them clearly. (7) Inability to read the Journal of Education. (8) Rapid disappearance of immediately preceding concepts, and hence difficulty in establishing connections between paragraphs, as in writing a review article. (9) Tendency to use long words. (This strikes me as a very anggestive reply.) (10) Any book in which the language is wanting in ease and simplicity, though its subject may be familiar or easily understood. In short, to use a common and vigorous phrase, the mind ceases to bite when it is fatigned.
"Failure of energy.-It requires no evidence to corroborate the well-known fact that ED 96- 38
euergy fails as fatigue increases. New subjects are distasteful; teaching dullards becomes almost an impossibility, Sustained effort, vigorous inspection, quick decision-all are impossible.
"Possibility of tests of incipient fatigue.-The replies I have received do not contain any distinct proposition of tests of incipient mental fatigue, and I am myself far too ignorant of the practice of education to venture to formulate any. On the other hand, the replies are not deficient in indications of what such tests might be directed to ascertain. They are principally as follows:
"(1) The length of time during which neatness of execution can be sustained in performing a prolonged task. (2) Promptness and sureness of memory in simple things. (3) Common-scnse arithmetical problems. (4) Reaction time. The measure of fatigue is inversely the measure of endurance, and this strikes me as being a faculty that well deserves investigation. Under the strain and exhausting calls of morlern civilized life, the power of endurance is rising continually in importance. Men and women have nowadays to act rapidly and for many hours, and not only to act exceptionally well. It therefore seems very reasonable that teachers should direct their attention to some fair way of appraising the relative power of endurance among their pupils. It is of course incidentally discovered in the ordinary course of tuition, but one would like to see appropriate tests directly applied to determine it, and such as would show at any time, in a definite and unmistakable manuer, whether the minds of prupils were fagged or not.
"Breaking down.-I now come to the evidence given in these replies respecting the frequency with which both pupils and teachers are found to break down. Thure is an intelligible and very transparent teudency in not a few of the respondents to say that such a thing as overwork is impossible in their respective schools. Some of then protest so much and so extravagantly as to raise not a little suspicion. There are even a few who say they have never heard of a case of breaking down.
"Taking all the replies together, I find that, out of my 116 correspondents, no less than 23 of them liave at some period of their lives broken down, and that 21 of these have never wholly recovered the effects. There are 6 other cases of a less scrious kind, some of them slight. In other words, 1 ont of 5 teachers has, so far as the evidenco before mo goes, been severely stricken. As to the cases well known to my correspoudents, there is a ragneness in some of the replies where the word 'several' and the like are usel, to which I am quite unable to assign a numerical value, but 59 sad cases are specified in detail in answer to question 5: 'Hare you known cases of more or less serious prostration from mental overwork, as distinguislied from the effects of domestic or other anxiety? If so, give initials and dates and a very briaf notice of the sererity and duration of the illness.'
"In many", ther cases the writers express the difficulty they feel in distinguishing between worry and overwork. The latter is a consequence of the former, while the former often results from the gloom, anxiety, and sense of incapacity caused by the latter. It is a self-regenerating circle of evil.
"I draw tro conclusions from the replies. The first is, that the reason why mental fatigne leaves effects that are so much more serious than those of bodily fatigue is largely owing to the cause just mentioned. When a man is fatigned in body he has very similar symptoms to many of those meutioned above, but there is a preat after difference. As soon as the hodily exertion has closen for the day, the man lies down and his muscles have rest ; but when the mentally fatigued man lies down, his enemy continues to harass him during his weary hours of sleeplessness. He can not quiet his thoughts, and he wastes himself in a futile way.
"The other conclusion is that cases of breakiown nsually ocenr among those who work ly themselves, and not among pupils whose teachers licep a reasonable oversight. Overzealous pupils are rare, as many of my correspondents insist. But the danger is not so much at school, when the hours of study and thoso of play and exercise are fixed, as it is at the age when young persons are qualifying themselves
for the profession of a teacher, and who have also to support themselves, and perhaps to endure domestic trials at the same time. Dull persons protect their own health of brain by refusing to overwork. It is among those who are zealous and eager, who have high aims and ideas, who know themselves to be mentally gifted, and are too generous to think much of their own health that the most frequent victims of overwork are chiefly found."
The Prdagogium, an educational monthly of high reputation and great infltrence, published in Leipsic and edited loy Dr. Friedr. Dittes, recently deceased, contained in the Jannary number (1896) an article on "Mental overpressure in schoolsy" which may bo regarded as an authoritative expression from an "educational standpoint. The article is here reproduced in English as a valuable addition to the discussion. The author is Dr. Alfred Spitzner, of Leipsic. He says:
"The question resolves itself into an inquiry into the causes of nervousuess amongchildren from overtaxation in school. In examining the following points, most important in my estimation, I beg leave to define my attitude from a pedagogical standpoint: We may ask, To what extent does the evil exist and in what direction is it to be looked for? These points are by no means so twell defined as many people; the members of the medical profession in particular, incline to suppose. From the present understanding of the question the practical teacher has good cause to proceed in its examination with the greatest precaution. Let us consider the first point.
"(1) To what extent are schools responsible for the nervous conditions existing among the pupils of both sexes?
"Excepting a few cautious and conservative physicians, we find the medical profession generally convinced that nervousness, as a clisease, is on an appalling increase eren among children, and that this is chiefly due to their being overtaxed in elomentary as well as secondary schools. 'The demands of city schools, particularly, are greatly endangering the health of the coming generation'- 'Every third child attending a city school has, as a rule, poor blood'- 'Thirty per cent of the school children of Europe suffer from nervous affections'- 'Chorea, hysteria, and psychosis among children aro consequences of school work.' Such and similar remarks are frequently heard; the foregoing are culled from resolutions passed by medical conventions.
"The educator who is conversant with the actual conditions of a child's life in primary, grammar, as well as high schools, must, in view of his own experience and psychological knowledge, earnestly protest against these statements of medical men which, in case they be retailed among the people, will result in a pernicious reaction against the cause of civilization, i. e., public education.
"The basis of this protest is the consideration that the statistical material upon which medical opinion is based can not be accepted as sufficiently demonstrative; all of it is collected from the statistics of the consultation rooms and private inquiry. As far as I know, there is no such thing as a comprehensive, officially organized investigation and compilation of facts reforring to the existence and cause of nervousness among school children. In consequence, despite the careful investigations of Hertel and Koy and several others on a smaller scalo made in England and America, the categorical expressions of nerve specialists concerning dangers to the health of school children are by no means sufficiently well established to be gen erally accepted, or to lay the foundation for reformatory measures.
"The protest is furthermore based on the fact that often it is absolutely impossible for nerve specialists to determine with any degree of certainty whether in any one case of nervousness the school be responsible or not. Error is the more likely to prevail the more physicians accustom themselves to consider headache, a dull feeling in the head, palpitation of the heart, indigestion, anæmia, and the various injuries of children's intellectaal powers simply sjmptoms of nervousness, overestimating them in their diagnoses, and the more they rely on their memory in retailing
the statements of children and their parents. Mindful of the dignity of the school, the educator must demand of nerve specialists that they treat the question How and where does nervousness in school children originate? and not merely ask What percentage of school children have nervous affections? The attention and experience of the inedical profession alone do not suffice for an exact and trie setiology of nervousness in children; they must be combined with psychologic-pedagogic observation and experience. Unfortunately this is almost entirely overlooked, to the detriment of the schôel. In consequence schools are held responsible for many cvils originating elsewhere. When the new science of 'child study' has so far advanced that the experience of both the teacher and the physician finds adequate consideration, there will be milder judgment on the part of the physician in regard to how far the school is at fault.
"We must enter into detail on this point. To form a fixed opinion on the causes of the phenomena specified the teacher must, in the first place, point ont the frequent existence of somatic defects which the child in question has either inherited or acquired from some general source altogether independent of school. And in the second place he nust point out the fact that many forms of nervousness are chiefly caused by the evils of public life and of domestic relations, by which childreu are influenced.
"What I have said is nothing new. I only wish to emphasize that in explaining nervousness in children and its canses the facts referred to must be consudered more in their real meaning and should bo considered $1 n$ the light of a teachers experience.
"Professor Kollmann and others maintain that nervons diseases are hardly known in the lower social strata, but are caused by the increase of duties in the higher strata. Every elementary school teacher knows from personal experience that not a few children enter school physically weak and very nervous. In my class of 24 boys between 12 and 13 years of age only 10 are physically strong; 14 are feeble, infirm, and ailing. One boy is epileptic ; 2 are afflicted with St. Vitus's dance; 1 has serions heart tronble; 5 suffer from disturbed or weak power of sensation; 4 from diseased or weak vegetative functions; 1 boy has a stiff leg; 8 are indisputably nervous. Surely neithar the school nor myself would be held responsible for such distressing cases. The epileptic is the son of an innkeeper and spends much of his time in the barroom. One of the loys allicted with St. Vitus's dance is the son of a builder, and being much in company with his father's worknan became a whisky drinker early in life. Most of the others with nervous affertions liave passed through severe contagions diseases. In forming a true judgment of diseases among school children the fact that many children are not in good liealth when entering school should not be underrated.
" Educators must lay special stress upon the fact that in many instances the nerrousness found anoug children is to he charged to the families from which they come. 'Overpressure' is a very convenient term for the use of parents and superiors of children to cover the evils chargeable to their account. Teachers must therefore, as far as is within their power, expose the falsity of such excuses and give vent to their feeling of regret that many physicians comtenance this action on the part of the parents by disparaging schools above all other things in their medical advice. It is a teacher's common experience, before and after summer vacation, to receive petitions addressed, in pursmance of medical advice, to school anthorities stating that this or that child of (wealthy) parents nerds an earlier or more extented trip in the country for the sake of rest from mental application. I am far from wishing to deprive children of this rest. I maintain, however, that unless there has been a serions illuess the need for rest in such cases is commonly attributed to school. Now, do physicians in charge know these children well? Do they know exactly what work is required of them in school and how much they are able to do? Generally not. The teachers of these often pitialblo creatures can point to other causes than overtaxation in srh ol. They know the imperfections, perversions, inconsistencies, and senseless
principles of home training and the sad consequeinces of excessive severity and overexcitement through ambition that torment children in many families. Teachers learn to know the sad state of ghildren in homes where a fondness for pleasure and distractions is prematurely cultivated, the time for recreation is shortened by useless music lessons and coaching, and where imaginative reading and immoderate athletic exercises or pleasures (children's dancing parties, cycling, foot and base ball) are indulged in.
"The consequences of nervousness upon such evil conditions are easily observed and proven. Physicians should rouse the consciences of parents before blaming the schools. Family physicians influence to a certain extent the first education of children, and can therefore in a measure see to it that a want of judgment, energy, 'and sense of duty in parents do not, in children of three or four years of age, engender intellectual faults which afterwards, in consequence of increased duties of school life, develop into intellectual anomalies or disorders of the psychic activities. Observations of the intellectual development of infants, such as we owe to Kussmaul, Preyer, Strümpell, Vierordt, and Wundt, prove the great importance of early education of children.
"According to pedagogical experience the children of plain people-the middle strata of society-are the healthiest. In Leipsic, for instance, as I may believe from private inquiry, complaints about siokly and incapable children are not so frequent in burgher schools as in the higher, the pupils of which belong to more pretentious families. Although it must not be forgotten that the most capable boys in these schools usually leave from the fifth grade (eighth school year) to enter a high school, for which reason the percentage of less gifted and physically incompetent pupils increases considerably in the higher classes, the complaints mentioned are not justly to be explained by this fact alone, nor by the mental overpressure of these children.
"Furthermore, even if many of the children of poor parents suffer from nervous affections, no physician can lay the blame on the schools as the first cause, when experience points directly to bad food, cramped, badly constructed and located dwellings, and-unhealthy sleeping apartments. Moreover, with these children the strain of outside work plays an important part. Thus I learned from two pale, jaded-looking girls in one of my former classes, that they had to sew regularly until 12 o'clock at night, and during the busy season till 4 in the morning. In districts where the custom of house industry prevails-䑚at is, where, instead of factories and large workshops, industrial production takes place in the family dwellings-such facts exist in distressingly large numbers. Such evils offer a mach broader field of action to physicians who are humanely interested in the public health than the sins of the schoolroom. But then, the school is so much nearer at hand and so much more convenient for attack, to be sure.
"In examining the causes of nervousness in children the observations and experiences of teachers lead to exonerating the schools, and plainly show the harmful influence of prevalent customs. Especially is this applicable to hygiene in secondary schools. Thesestudents are in the age which an observant physician has called the storm and stress period. He who penetrates into the secrets of our city youth can not possibly be surprised at the increasing physical and mental derangement of the children of certain social strata. With them overexertion in school can hardly be taken into account, as such young men usually avoid every higher intellectual effort.
"From the little that has been said it follows, that if psychologic-pedagogic experiences are properly applied for the purpose of a true analysis of the material derived from examinations of children the percentage of illness for which the school is held responsible will sensibly decrease. Most of the fault-finding of the medical profession will share the same fate, $i$. e., it will be discredited. Take, for instance, the opinion of Dr. Hasse, which for some years was current throughout Germany, that the overtaxation of school children lays the foundation for later psychic derange-
ments; in other words, that schools increase the number of the insane; reports of all insane asylums under the jurisdiction of the Prussian Government state, upon inquiry of the minister of education, that the views of Dr. Hasse san not be substantiated. The casas in which mental derangement can be properly attributed to mental overpressure in school are very rare.
"Psychologic pedagogy has reason enough to regret that the medical profession is so ready to attributo the responsibility of nervousuess, especially in its origin, to the schools. Such an opinion can and must never become general, and should always bo expressed with the greatest reserve. The term "overtaxation" has already become an excuse among children, a convenient apology for unscrupulous parents who often have no conception of what overtaxation of the brain and nervousness are, and a weapon in the hands of the enemies of schools by means of which they shichd their secret intentions. It is a most significant fact that this term, supported by medical authority, acquires an unconditional popular valne. Pedagogy must point out the danger lying in the indiscriminate use of the term, for it is a danger that threatens all educational progress, clouds the educational wants of the present and coming generations, and checks the promotion of science, art, industry, and trade. If any governments are occupied with the practical consequences of this question, the argument should be emphasized that the strict and earuest fulfilment of duty and intellectual work such as the school requires, both in ethical and scientific regard, is just what is needed to counteract the stimuli of irrational home and exciting public life; it is of too great a value for the bygiene of the mind to be suppressed by obscure and mufounded opinions of some physicians.
"In contradistinction to what lias been said, it is now asserted that schools are partially responsible for nervousness among children, because they are favorable to its development.
"This is true in certain cases. In the first place some children of inadequate talent can do justice to their work in school only by excessive diligence; and in the second place, many children are so hiudered in their studies by pronounced physical derangements, such as epilepsy, heart trouble, neuralgia, ctc., or even by mere inclination thereto, that they are daily exposed to the dauger of overworking themselves. In both cases nervous diseases may be caused or dereloped. Such conditions, deplorable as they are, can no more be ascribed to schools than the overtaxation of a child which, from a want of the sense of duty and respect for school, and a desire for play, etc., idles away or poorly distributes its time, allows work to accumulate, and then, at night, with a hot head and cold hands encleavors to perform its school lessons when it should be in bed.
"The consideration of public schools for the plysical constitution of pupils has its limits; first, on account of the objective educational end which school, conformably to its character, must keep in view; and secondly, because pupils whose physical and mental constitution is normal can not be noglected and wrongen for the sake of the weak and infirm. It is impossible for school to consult erery psychical peculiarity in children and to prevent discinline, increasing tasks, 'and ligher duties from doing harm to those of inadernate ability, energy, and endurance. School can not neglect the general good for the welfare of a few individuals. This is particularly true of secondary schools, but can also, within certain limits, be said of common schools.
"Now, if schools can not depart from their true and normal eourse, and in consequence employ harmful severity wherc certain ineffaceable differences of mental endowment or physical capacity exist in the pupils, it follows that the responsibility rests wholly with those parents who exact a higher edncation for their children than their talents warrant. Neither are the principles of the lower seliools affected by the facts in question. It is to be hoped that a medico-pedagogrical examination will give increased attention to pathological conditions of children, provalent to a greater extent in clementary thau in secondary institutions; views of great value
for mothods of teaching and training would in consequence develop, and their consideration lead to the gradual suppression of many an evil now existing in our common school system.
"The first necessity will be-to give more scrupulons attention to weak and sickly children on their admission into school. Greater efforts must be made for the founding of schools for the feeble minded or mentally deficient, though what has-been done in this direction in some cities deserves praise. With the best arrangements possible for weak and intellectually dull children, the most depends upon the judgment, tact, and personal responsibility of the individual teacher. If he commit an injustice against such ohildren it is his personal fault, and the school must not bo blamed. I know of no school law, regulation, or pedagogical precept which, instead of awakering strength of character and a sense of duty, causes children to be overburdened with home tasks, exacts more from them than they can do, arouses fear and morbid ambition, or spurs weak children on by questionable or degrading punishments and methods of training. On the other hand we must be careful in judging the individual teacher rashly. For it is a most diffcult task to recognize opportunely, and prevent skillfully those mental states in deficient and less-talented children which react harmfully on the nervous system. It must not be forgotten that anxiety; bursts of anger against himself, companions, or even the teacher; onvy of more gifted comrades amounting to hatred; in short, that many exciting states of mind affecting the nervous system of a child of unsound mind (taking this term in the pedagogical sense) can be obserred during school sessions, and must be rightly judged by the teacher if he wishes to avoid injurious rigor in his treatment of these children. From a hygienic stand point, therefore, the greatest possible psychological training is as much to be desired for teachers as the thorough anatomic-physiologieal education which physicians of the present day advocate so energetically.
"From what has been said, it follows that pedagogy disproves the medtical opinion that uerrousness of school children is oftenest caused by mental overtaxation. On the other hand, it is impelled to demand that the medical profession give more attention to the observations and experiences of psyohologic pedagogy in regard to the origin of nervousness in children. It it not necessary at this point to consider a preexisting physically unsound constitution. But it is by no means understood that the modern school need not improve its methods respecting the existence and increase of nervous diseases. Pedagogy, together with medicine, from causes stated and others to be mentioned, recognizes the pressing necessity for the educational practice to take into consideration the actual conditions and relátions among school children in regard to their physical and mental normality and capacity for education within the prescribed limits. The pedagogical opinion is that these relations and conditions should above all things else be made the immediate and chief subject of exact medico pedagogical examination, investigation, and statistics, so that a progressive school hygiene may have the benefit of fixed views and established facts, which thus acquired will be possessed of that intrinsic truth from which deviato the general and ever-spreading wild assertions and unfounded accusations of physicians in disparagement of schools.
"We must now examine the second point.
"(2) In what direction does the evil of mental overtaxation, to the extent of causing nervousness in children, exist in the school practice in vogue fonnded on the principles of pedagogy and considered normal and correct?
"The proposition generally advanced, that present methods of pullic education imperil the health of children, is not only applied to certain evils for which individual teachers or schools are called to account, but directly attacks the normal foundations of school. The censure of physicians does not refer to the harming of already sick or nervously inclined pupils, but to injury done to mentally and physically normal children by methods and practices considered normal. Dr. Pellmann thus tersely expresses himself: 'Children work toe soon, too much, and badly; that is to say,
under unfavorable hygienic conditions.' In interpreting his meaning we are reminded of the loug list of studies, the rushing through of courses, the long duration of hourly, daily, and weekly lessons of useless studies, the method of teaching, unscientific in its disregard of the laws of physiology and purely in favor of psychology, the evil of home tasks which rob children of their short periods of recreation, etc. We receive also the practical suggestions of omitting home lessons, instructing by means of observation lessous, instituting a beneficial interchange of physical and mental occupation, etc.
"It may be truthfully said the judgment of the medical profession on these matter's is not based on an actual, exact, and technical examination of the methods employed-a procedure hardly practical-but on inference from facts connected with nervous diseases of children which from a medical standpoint are not to be explained by any other cause than mental overtaxation.
"Psychological pedagogy must protest against such arguments. The following important points may be touched upon:
"First of all, perlagogy must maintain that the members of the medical profession are to a certain degree uncertain in the definition and diagnosis of the term 'nervousness' as regards its psychological meaning. The reason of this is, that in conserfuence of neglecting nonmaterialistic psychology, we are still in the dark concerning the establishment of the complex of psychical symptoms of presupposed nervous states and their diagnoses. This want is explained by the materialistic tendency of psychiatry in advancing tho proposition: Mental defects and diseases are defects and diseases of the brain. Pedagogy can never consent to this proposition from the standpoint of that psychology which is based upou the acceptation of an immaterial, indivisible soul which is in sympathetic contact and reciprocal action with the brain, and as the support of the whole spiritnal life capable of development. Mental diseases and defects are not diseises and defects of the brain considered as an organ, no more than mental soundness is identical with the health of the organ, the brain. We can only say that mental defects may arise from a conjoined influence of somatic disturbances and diseases upon the psyrhic occurrences in the sonl; as vice versa a disease of the brain and nerves may originate in a psychic process. Therefore, we must demand a more exact proof of the connection between psychic and somatic irregularities and injurics than psychiatry at present adduces. We must maintain that the materialistic proposition referred to in case of its application to the intellectual life of the child, so far as it is influencer by teaching and training, will, unless it be used in ronnection with other and better thonghts, lead to nothing more than a surfeiting of pedagogy with ideas altogether too vague and obscure.
"From this conception there primarily results a physiology which in the understanding and explanation of certain processes, disturbances and unsonndness in the phesical organism, fails to consider the cooperating psychic factors which are at times the true canse. This gives rise occasionally to opinions on the connection between psychic defects and physical conditions in children and their canses, which are not merely questionahle from a mediral standpoint, but prove to be actually false. Surls opinions can create aud to my certain knowledge have occasioned serious ombarrassment in elucational practice. To propose a fitting example, I take the liberty of expressing the opinion that physicians have never with any degree of certainty refmer the difference hetween actual organic disease and hysteria. I know cases in which psychically controlled (hysterical) diseased conditions of individual pupils have been charged to the account of schools as severe physical injuries. In one case where the laming of a boy's legs and paralysis of the orgaus of derlutation was attributed to the influence of school, a judicial error was imminent if at the last moment the evilence of a prominent physician had not saved the court from committing the mistake.
" There are certainly the most cogent reasons for treating the question in hand fairly and conscientiously. No comprehension of the changes to which the condition
of our bodies is subject,' writes a medical authority, Prof. Adolph Strimpell, in Erlangen, 'can be more partial and incorrect than that which attributes every change to an external material cause. The simplest self-observation must acquaint us with the great influence of conscionsness over our physical nature. We can turn aside from the question of the kind and nature of these states of consciousness, for we really know nothing of them. However, so much is evident from superficial reflection that in this case qualities are exposed to the view which we find nowhere else in the realm of the inorganic world; and laws are in force whose deduction from the laws of mechanical processes has so far appeared impossible. The facts of consciousness, however, are clearly open to observation; they are the surest, in reality the only certain knowledge we have on which every conception of the nature of things must be based. Even a cursory observation of the states of consciousness shows us how the change of conditions in consciousness endlessly reverberate in our physical nature. Psychology and philosophy, studies which were formerly taken for granted in the preparation for every scientific profession, are now omitted from the carriculnm of medieal colleges. It is no wonder then that even excellent physicians are deplorably ignorant of psychological questions and slow in comprehending psychological thought.'
"If, in view of what has been said, the doctrinary foundation upon which the medical profession bases its opinion of psychic and in part physiological conditions and processes, can not be accepted. by teachers who must protert their profession against medicine and its encroachments; that is to say, must place psychologic pathology and pedagogical bygiene and therapeutics in so clear a light, that the facts connected with the intellect and development of children be studied in a manner consistent with their real meaning and pedagogical observation. This is especially necessary, because many psychic peculiarities which, under actual conditions and circumstances during childhood, are seemingly natural, but are in reality faults from an educational standpoint and hence to be treated pedagogically, are falsely defined by the medical profession, prejudiced by physiological or materialistic views, as diseased conditions, either caused by existing educational methods, or requiring special institutions conducted by medical men. If, as Pellmann, Friedmann, and especially Koch maintain, psychic irregularities influencing the personality of man, instability and weakness of character and impaired psychic action are to be understood as symptoms of existing brain and nervous diseases, even though (as Koch specifically states) we can not prove presumed illness either anatomically or chemically, the dissemination of such views owing to the frequent errors of medicine regarding psychic facts, threatens education with the immediate danger of an unqualified and paramount influence of psychiatry. This is the more to be feared the more the medical profession overlooks the essential differences between the faults of adults and those of persons physically and intellectually immature.
"Before a physician refers weakness and instability of character in an adult to diseased nerves, he must first examine whether the patient erer has possessed stability and firmness of character; consequently whether these qualities are the result of a decline of psychic aotion. We very often seem to forget that what has no existence can not be destroyed. The educator must therefore defend his empiric knowledge of psychic peculiarities in the nature and development of children against the alleged doctrines of psychiatry. There exists a radical ineffaceable difference between medico-pathological and pedagogic-pathological processes, conditions, and events in a child's life. It can not be denied that psychic and partly physiological faults and irregularities may, in certain cases, be indications of diseased nerves requiring medical treatment; but in most instances the specified states are perfectly normal phaees of a child's development, and require the attention of the teacher who can correct the fanlts and elevate and perfect the physical and intellectnal abilities of the child by educational means. We must insist, however, that pedagogy alone has the right to establish and judge the facts relevant to the peculiarities in the
nature and development of children. These facts are the foundation given by experience in the scientific and practical development of pedagogy. Pedagogy needs neither a medical nor any other guardianship.
"In view of the foregoing remarks, pedagogy can and must refute the reproach, expresserl by the medical profession, that schools in their normal and strictly pedagogical methots are the cause of nervousness in physically and intellectually normal children. Pellagogy must also demand a salntary school hygiene different from that defined by physicians, who are biased in favor of materialistic views. A few remarks on this point may bo desirable.
"Notwithstanding that in poor and ill-regulated communities the health of chiliren has been imperiled by inadequate school buildings, uneducated and careless authorities, all kinds of impediments in the way of hoalthy progress, an insufficient force of teachers, and crude and faulty methods of teaching and discipline-evils against whicl the teaching profession has for a long time been exerting its influence and encrgy-it must be admitted that during this century the development of the practice of teaching has gradually led toward exacting lighter, instead of increased, intellectual work. No profession with the public good at heart receives, especially from persons of influence and authority, so few advances, so little actual acknowledgment and support as that of teachers. The teacher, as a rule, is zealons for the welfare of children and the people. Since the epoch, inaugurated by the works of Roussean and Pestalozzi, teachers and especially those of tho German people's schools, have been unremitting in their efforts to instigate or carry out beneficial reforms and improvements as reçuired by modern pedagogy. A selection and arranrement of smbjects and studies in the natural order, in contradistinction to the redundancy modern civilization demands; the establishment of a natural order for the ends to be olvtained, in contradistinction to the intensity of power conditioned by progress in all departmonts of human exertion; psychologically and physiologically founded inprovements in mothods and means of instruction, in place of antiquated contrivances; proportionate occupation for the prevention of overloading with tasks and duties; the perfection of school as an educational institution, in contradistinction to the school of learning-these are the objects in view to which teachers are dovoting all their energies.
"Efforts are made to bring abont a beneficial alternation of occmpation in school work. The teacher versed in pedagogy conscieutiously tries to bring sense-perception, and reasoning, desk work, singing, and gymnastics, rest and exercise, work and recreation into proper relationship. Intellectual ability, exercise of the organs of sense and the action of the whole body are taken into consideration. What physician, who feels called upon to serve the cause of education, is thoroughly acquainted with the inner work of the modern school. The conscience of a welltrained teacher needs no stirring up by the medical profession; and what is more, in the field of school hygiene he stands side by side with the physician as his equal. The greatest benefit that medicine can confer on the selioons is to put pedagogy in the way of controlling the whole State school system, primary as well as secondary; for the latter is ill-arranged, viewed from a pedagogical standpoint.
"For a full appreciation of pedagogical progress it is likewise necessary to forin an opinion based on experience and scientific facts on the question "In what direction is the practice of teaching to be developed and improved from a bygienic point of riew? "
"The investigations in the department of experimental school hygiene of recent date aro deserving of mention. Whether, as Burgerstein observes, in their first berinning they promise so much that we may expect important results in the future, is a point that may be set asido for the present. Let us confine ourselves to facts. Up to the present these investigations deal almost exclusively with the recurrent expression of a phenomenon known to every teacher: Intense application to mental labor, after a certain time, fatigues the pupil's mind.
"The prowocation to experimental investigation of mental fatiguo in school childrent is due to Sikorsky and Burgerstein, especially tho latter. Since then axticles and volumes on the subject have been published by Kraepelin, Laser, Hœpfner, and Zimmermann. Sikorsky bases his conclasions on 1,500 dictation tests. Burgerstein occupied four classes of children, 11 and 12 years old, each ten minates, with the solution of a large number of simple examples in addition and multiplication. After a pause of five minutes a new set of examples was begun. The hour was thus divided into four periods, in order to study the signs of fatigue as a function of the working time. Kraepelin examined the increase and decrease of mental energy, and paid especial attention to the factor 'practice,' and skill gainet by repetition, which Burgerstein neglected to consider. Laser did not follow the example of Burgerstein in testing the fatigue at the close of an hour, but investigated whether children flagged daring five hours of a forenoon session. He tried classes of boys and girls of the fourth and fifth school year, at the beginning of each of the five hours, with arithmetieal tasks similar to those given by Burgerstein, and to which he likewise devoted only ten minutes earch time. Hoepfuer assigned a two hours' dictation to 469 -year old boys, and then studied the 'fault line.' For two years Zimmermann has instrueted his papils of the third school year in half-hour lessons, or even shorter periods, so that he easily gives five or six different lessons in three forenoon hours. He has made the noteworthy olaservation that more is gained by six half-honr lessons in arithmetic than in four whole-hour lessons per week; that pupils advance farther in six half-hour than in four whode-hour periods in reading, and that six half-hour lessons correspond exactly to four whele-hour lessons in roligion.
"The other deductions from examinations are as follows:
"Sikorsky finds 'the essential difference between morning work and that performed after four or five hoars' instruction to average exactly $33 \frac{1}{8}$ per cent.'
"Burgerstein affirms that children make the most mistakes and work out the smallest number of examples during the third pexiod, or third quarter of an hour. In the fourth quarter of the hour the enervation preceding is followed by a revival of energy. This energy, however, does not come up to that clisplayed at the boginning of the hour.
"Kraepelin draws the conclusion from his investigations'that, according to all examinations and tests so far made, the fact is sundeniable that selools exact more from pupils thata their intellectanal ability admits.?
"Laser dednces the following: (1) Mental vigor is lowest durisg the first hour. (2) It iucreases during the second and third hours, and declines after that. (3) Errors increase in number until the forrth hoar and decrease in the fifth. (4) The number of cerrections made by the pupil increases until the fifth hour. (5) The boys counted fewer figures than the girls. (6) The boys made more corrections than the girls. (7) The number of errors is about the same with boys and girls. (8) The number of those who raade no mistakes in calculating decreases from the first to the fifth hour.
"Hoepfner learned that exrors averaged 2.7 to every 100 leftsers. "In the first five sentenees, nawaly, in the work done within the first half hour, the percontage, averaging on the whole less than 1 , showed a teadency to decline; in the sixth sentence it jramped to over 2, and contizued to rise with few vacillations.'
"Only Burgerstein, Kraepelin, and Zimmermann, drav practical conclusions from their obeervations. Burgenetoin advocates periods not longer than three-quarters of an hour. Kraepelin opposes all the claims of school in toto. Zimmermam advances the proposition of givigg half-hour lessons only, and says: 'If we arrange to give in ten morning houns (or two per day) thirty to thirty-two brief lessons, the afternoens will be free for symnastics, siaging, recreation, nature lessons out of doors, female handiworlr, and boys' manual training.' Zimmermann published 'A reformed course of study for pupils of the third scheol year,' whieh found the
approval of Professor Preyer. Preyer advocates that, from the beginning of the school course to its end, children should never be held down to continued mental effort for longer than ten, fifteen, twenty, or at the highest, twenty-five minutes.
"Observations and investigations of the psychic action and ability of exercise in children, the effect of habit and practice, conditions, duration and return of fatigue, and the alternation of exercise and relaxation, etc., are certainly of great hygienic importance. The question of 'how long a healthy brain of a child can hold out,' is worth investigating. It only remains to be seen whether the experimeuts and experieuces made are adapted or sufficient to set criteria for educational methods. I do not incline to concede the significance generally attributed to the experiments of Burgerstein, and those similar to his. In the first place, it is self-evident that uniform, uninteresting, mechanical, and lengthy work tires children; and in the second place, no normal lesson presents such conditions. The conclusion on the present mode of teaching is therefore altogether wrong. The only deduction to be made is that continuous and monotonous tasks, such as Burgerstein's methods in arithmetic and Hoepfner's two hours' dictation, are to be avoided. The facts so far observed do not permit a conclusive opinion on the length of period or the daily and weekly school or study hours of children. In my estimation, the chief value of these experiments, and what sbould be the chief end in view, is the possibility of determining, observing, and judging actual appearances of fatigue.
"A thorough knowledge of the physiological and psychological eenditions and processes in their effects and first appearances, on which the phenomena of fatigue are founded, is of great importance for school, so far as it may influence the management, occupation, and treatment of the individual child. This individual momentum, so to speak, is much more important than the conclusions on general school managenment and methods. Burgerstein keeps this almost wholly in the background. Kraepelin, Laser, and, especially, Hoepfner do more in this direction. The observations of Hoepfuer are of greater importance for the psychology of teaching than for the question regarding the length of periods. As a matter of course, it is to be understood that muck must be allowed for what is not fatigue; for instance, effects of inattention, carelessness, over-zealousness, all kinds of psychic and physiologic accidents, etc.
"Independent of the desirable general observation and investigation of phenomena, it is necessary to examine the course and differences of mental ability in children individually and generally. To this end more extensive examinations should be made of the experiments started by Burgerstein. According to my experience the results obtained have no general significance.
"In my class of 24 pupils, averaging $12 \frac{1}{2}$ years of age, I have made three kinds of experiments for testing the given conclusions: (1) Those of Burgerstein; (2) those of Laser with the rlifference of giving the ten-minute examination at the close of each lesson, and (3) an experiment with whole and half hour uniform instruction. The tasks given out were those of Burgerstein. More repetitions (eight in number) were undertaken in order to make allowance for the 'factor of practice.' I made the following observations:
"(1) Four repetitious of the experiment allowing for the 'factor of practice' did not prove that the 'line of vigor' drops in the third quarter of the hour; this was true in only one individual. In the other cases, energy declined in the second quarter of the hour, rose again in the third, and remained almost stationary in the fourth.
"(2) Ability, or skill in performing, attained its highest point in the third and fifth hour after the first twenty, and sometimes after the first ten, minutes.
"(3) Whole hour lessons had better results than two half honrs.
"More important for school hygiene than the experiments concerning overtaxation or overpressure are the recent, more clearly defined efforts at obtaining a standard for the selection, regulation, and thorongh treatment of the branches of study by means of observations which refer to the manner of development of per-
ception and interest, as well as thought and speech of children, Such efforts require the greatest precaution and cireumspection, but are likely to lead to better results. The study of the normal child is likely to be more successful than that of the abnormal, there being much more material at hand to judge from.
"Lastly, the comprehensive development of pedagogical pathology belongs to the purely educational measures under discussion in the field of hygiene. In this case repeated exact observations and investigations of the intellectual growth of children in view of existing faults give us an insight into the world of the coming generation; in pursuance of the science of pathology, the thoughtful teacher investigates the conditions under which he can best serve his pupils with reference to their mental and physical health, and in doing so benefits his country. The problems that present themselves in this direction, namely, to determine mental faults in children and classify them according to their psychologic meaning, to trace their causes, to define the healthy juvenile mind, and to care for children by correcting and preventing their fanlts such problems invite the most zealous educational labor. Their solution aims at the foundation of salutary pedagogical school hygiene, supported by thorough empiric, psychologic, and physiologic knowledge.
"The medical science is hindered in all these directions from exerting any noticeable influence on education or ou the control of educational methods. It is called upon only to cooperate in cases of such physical and mental phenomena in children as are beyond the teacher's professional experience and opinion. Even then medicine can not act independently, for the sciences of anatomy, physiology, pathology, therapeutics, and dietetics for children can not aid the teacher in their purely medical character, as has in some instances been claimed; such knowledge must be turned to account specifically from pedagogical points of view, which means, in a manner conformable to the peculiar psychic development of children."

As the writers quoted in the foregoing pages indicate, the question of mental fatigue is closely allied with the movement in favor of child study. Indeed, it may be asserted that the investigations into the manifestations of fatigue have led some physiologists and psychologists to a more comprehensive study of, children. It is therefore not astonishing to notice that medical men begin to bestow attention on the new movement of child study, as will be seen from the following extract from an article in the Journal of the American Medical Association, which says editorially in its number of February 22, 1896:
"While the leading idea of such study is undoubtedly psychologic, the subject is cuggestive in a medical point of view, and may well be worth an editorial comment in a journal that only deals with peychologic questions in their specially merical aspects and bearings.
"There is no period of life when mental and physical development is as rapid as in childhood, and therefore there is none more interesting in a physiologic as well as in a psychologic point of view. Physicians have studied children in their pathologic peculiarities; pediatrics is a recognized medical specialty, but it is a reasonable question whether it might not be as well to wideu its scope and take into it some attention to the unfolding of the intellectual life in its beginnings. The skilled medical practitioner can better than anyone else first take note of and point out the way of correcting the morbid traits and tendencies that lead to physical and mental degeneracy; he can study and estimate the hereditary influences and advise how they are to be met, and can instruct the mother in what should be the most fascinating pursuit of her life-the proper method of studying the development of her offspring. These are the possibilities of the profession; we do not say they are generally or even often realized.
"Considering, however, only the physical side of the question of child study, it is not a credit to our profession that while the studies of the growth and the physical data of childhood are being taken up by laymen and educators, it should be in any degree behind them in the same line of investigation. While physiologists were ahead
of psychologists in recognizing the value of knowledge of the earliest developmental processes and couditions in the study of functions, it seems now that the newer school of psychologists, oulightened by the data of physiology, may in their turn put practical medicine under obligations for important facts and deductions. Sometimes they may be on the wrong track, or on one that is uncertain, but they are alwass suggestive and instructive in their modern methods.
"The practical value of child study should be evident to anyone. The old saying that 'as the twig is bent the tree is inclined,' so often quoted with a moral application, has a physical and intellectual appropriateness as well. Hence every real acquisition of fact or legitimate theory in regard to the bodily or mental development of children has its value, and there is an ample store of such facts yet to be acquired. At the present time we may take, for example, the theories of mental and bodily degeveracy that are just now so much to the fore, and it is easy to see that they can only be proven or disproven by taking into consideration the earlier conditions of the individual and the influences that affected his development. The question as to the existence of such a type as the 'born criminal' is, as might be inferred from the term itsolf, one that can only be settled by the study of the development and beginnings as well as the finished type; in short, by a study of the morbid tendencies and moral development of the child.
"As an almost purely medical line of investigation, and not the least important, may be mentioned that of heredity in childron, which can hardly be studied by anyone so well as by the general practitioner-the family physician. Galton has laid down a plan for this line of research in his 'Natural Inheritance' that is at least worthy of some consideration. The amount of valuable facts and statistics that could be obtained from a general intcrest in this study in the medical profession can hardly be overestimated. Other interesting questions are some of those of the origin of insanity, especially those forms that seem to be more or less dependent upon crrors of education and training and management of developmental periods, and here the well-directed attention to the facts of early life will be found to be productive of valuable results. It is not meant to be understood that these questions are neglected by physicians, but more systematic study of all the stages of early human development is needed to fully elucidate them,"

## CHAPTER XXIV.

## HOW AGRICULTURE IS TAUGHT IN PRUSSIA AND FRANOE.

Contents.-Introduction; Course of study for agricultural schools in Prussia; Official course of study in agriculture in elementary schòols in France; Comments and pedagogical considerations; Elementary, intermediate, and suiperior courses.

## ELEMENTARY INSTRUCTION IN AGRICULTURE IN RURAL SCHOOLS IN PRUSSIA.

It is essential to point out a particular difference between the schools of monarchical Germany and republican France. Newideas, new needs, new currents of thought or action appeal in France, as well as in America, directly to the common schools; while in Germany the minister of education holds his protocting hand over these schools, and points out to the reformers that new things and new methods may first prove their power to-live by being applied in private, continuation and supplementary, technical, professional, industrial, and agricultural schools. These are all schools which take the pupils after they have gone through the elementary schools, i. e., after the fourteenth year of age. Hence we find no specific agricultural instruction in elementary schools in Germany, though we find physice, natural history, and not infrequently gardening taught in the upper grades of the elementary or people's school. It is of more than passing interest to compare the subjoined courses of study for lessons in agriculture in German and French rural schools.

A memorial presented to the Prussian Diet by the royal department of agriculture, in January, 1897, shows that for rural districts in Prussia not much is done in preparing the rucal population for their vocation, certainly not as much as is done in preparing artisans in cities. The industrial schools far outnumber the agricultural schools. Tho authors of the memorial say that the number of boys from 14 to 18 years of age in raral districts of the Kingdom is 828,000 , bat the number of students in agricultural continuation or supplementary schools is only 13,317, while that of industrial and technical and trade schools is over 200,000. The department asks for moro liberal appropriations for agricultural schools, and submits a course of study for such schools of an elementary grade, which course has been in successful operation in the achool at Rybnik. It contains only the technical strdies, besides which the ordinary common-school branches are taught with application to the conditions of rural life.

## COURSE OF STUDY FOR AGRICULTURAL EVENING SCEOOLS.

## NATURAL SCIENCE AND AGRICULTURE-FIRST WLNTER.

I. Physics.-General properties of matter. Attraction, gravitation. Sources of heat and its carriers. Thermometer. Processes of water: Melting, steaming, boiling, fog, dow, rain, ice. Circulation of water. Phenomens of heat in the atmosphere.
II. Chemistry. -The most important inorganic compounds. (1) Oxygen and some of its simple compounds, carbonic, sulphuric, phosphoric, silicic acids;-(2) nitrogen
and atmosphere, ammonia and nitric acid; (3) hydrogen, the water; (4) kalium, natrium, magnesium, calcium, aluminium, iron, and important compounds. In close comection with the foregoing:
III. Mineralogy and knowledge of soils.
IV. Enowledge of fertilizing.
V. Agricultural botany.-Useful and injurious plants; plants for cultivation; meadow plants; how to treat the meadow. Weeds and their destruction. Importance of forests. External and internal form of plant parts; propagation by means of buds or seed; conditions of germination and growth. Nutrition of plants.

FI. Drainage.-Rational treatment of the soil. Sowing, tending, and harvesting of crops of importance, including products of the truck farm.

## NATURAL SCIENCE AND AGRICULTURE-SECOND WINTER.

I. Chemistry.-(1) The most important organic compounds: Starch, sugar, fat, albuminous matter; (2) in close connection with this their relations to the dairy; (3) untrition, circulation of the blood, respiration.
II. Physics.-(1) Levers, inclined plane, pulleys, specific weight, atmospheric pressure, barometer, pumps, syringe, fire engine, siphon. In close connection with the foregoing, (2) all the tools and machines used on a small farm. A little of their development and improvement.
III. Zoology and cattle raising.-(1) Useful and injurions animals, birds, and insects. Skeletons and other anatomical details. (2) Most important breeds of domestic animals; their teeth. (3) Cattle raising. How to keep and nurse them. (4) Feeding domestic animals, especially the young.

IF. Economy.-How soil, capital, and labor work together. Relation of grain and forder raising. Proper rotation of crops. Cooperative and insurance associations.

The work ontlined in this sketch is done either by traveling teachers engagerl for the purpose or by the local teachers who have received the proper training in the normal sehools.

## ELEMENTARY INSTRUCTION IN AGRICULTURE IN RURAL SCHOOLS IN FRANCE.

Contents.-Plan of study; Pedagogical directions; Distribution of time; Comment on the official programme; Elementary course; Intermediate course; First year of the intermediate course; First ideas of agriculture; Second year of the internediate course; 1deas of agriculture; Adranced course; First senvester, agriculture and horticulture; Second semester, growth, obserrations, fertilizing power of liquid or gaseous products; I'ower of absorption; Field of demonstration; Out-of-door lessons in agriculture; Plowing, harrowing, and rolling; Distribution of crops and other minutix.
The Frenclr minister of public instruction and fine arts published in the Bulletin Administratif, January 2, 1897, the following guide for the iustruction in agriculture in rural schools. It is very desirable to know just what is taught in such srhools, hence a careful translation and a reproduction of the illustrations are here off-red, as evidences of the consistent efforts of the European Governments in behalf of young people to furnish not only a general education, but also a preparation for practical pursuits.

## PLAN OF STUDY.

The official circulars of October 24 and November 30,1895 , briefly outline a plan of study in the form of a practical guide, designed for the help of teachers in the elementary instruction of agriculture, which subject is now compulsory (by the laws of June 16, 1879, article 10, and March 28, 1882, article 1). This plan, explained further on, is no more than a general sketch; nevertheless, teachers will find in it important directions, which should be followed by adapting the suggestions to their pupils and applying them to the looal conditions of the district in which their school is situated.

## PEDAGOGICAL DIRECTIONS.

Elementary instruction in agriculture should be addressed less to the memory tian to the intelligence of the children; it should be based on the observation of daily facts in country life and on simple experiments, applying material resources :it hand, and designed to prove the scientific fundamental ideas of the most important agricultural operations. Children in rural schools should learn, above all things else, the reason of these operations, with an explanation of the accompanying phenomena, and not the details of the method of effects; still less, a list of precepts, definitions, or agricultural recipes. The first things for every agriculturalist to learn, things that must be learned by the experimental method, are the conditions essential for the grow th of garden vegetables, the reasons for habitual work in common farming, and the rules of hygiene governing man and domestic animals.
No matter how well arranged a manual may be, a teacher would pursue a wrong course in the instruction of agriculture if he were to require his pupils to study and recite from the text-book. It is positively necessary to instruct by simple experiments, and above all, by observation. It is only by placing phenomena directly before them for observation that children can be taught to observe and fix in their minds the fundamental ideas on which modern agricultural science rests; children in the country are dependent upon schools for these ideas. It is useless to teach pupils what their fathers know better than the teacher and what they are sure to learn by their own practical experience.
Schools should confine themselves to preparing children for an intelligent apprenticeship in the calling that will yield them a livelihood and to cultivating in them a taste for their future profession. A teacher should never forget that the best way to make a workman love his work is to make him understand it. The end to le attained by elementary instruction in agriculture is to give the greatest number of children in rural districts the knowledge indispensable for reading a book on modern agriculture, or attending an agricultural meeting with profit; to iuspire them with the love of country life and the desire not to change it for the city or manufactories, and to inculcate the truth that the agricultural profession, the most independent of all, is more remunerative than many others for industrious, intelligent, and well-instructed followers.

DISTRIBUTION OF TIME.
The end defined would be with difficulty attained were only that time devoted to agriculture which is especially reserved for it by the rules; in other words, were other subjects not studied correlatively in preparing children for their future life. In the country especially, teachers should adapt general education to the daily needs of the local population, giving the reading matter, language, and arithmetic a touch of agricultural knowledge. Pastoral poetry, occupations of rural life, problems in the form of simple accounts and referring to the cost of conmodities bought and sold in the ueighlorhood, and to the mixtures and proportions of food of cattle, etc., are often valuable aids in the lessons on agriculture, as is shown in the division of time per week.

The organized official method ${ }^{1}$ specifies general conditions for a division of exercises in elementary schools. According to the plan of study proposed, "two to three hours a week at least must be devoterl to the physical and natural sciences (with their applicatious), studied at first under the form of object lessons and continned in a regular methodic course later on."

The prescribed regulations do not distinguish between the sciences on the one hand and agriculture on the other; for instance, it is not necessary, during the whole year, to reserve one of the two hours for the sciences and the rest of the time for agriculture. The distribution of subjects on the dual programme published in

[^23]connection with the official method should be arranged with respect to the facilities for demonstration offered by the seasons and the weather. All that relates to vegetable life and development (processes in the course of demonstration in garden and field, out-of-door lessons in agriculture) should be reserved for the spring and summer; that is to say, should be included in the programme of study for the second semester; the rest belongs to the winter semester.

The division of exercises referred to later on accords with this condition, at the same time preserving a logical and methodic connection. If the first ideas of clementary science are properly presented and can be depended upon as the foundation of agricultural and horticultural ideas and for the first principles of hygiene, the two or three hours allotted a week will suffice for the rational application of the programme under the coudition of not adrancing these ideas beyond the pupil's comprehension.

## COMMENT ON THE OFFICIAL PROGRAMME.

In obedience to the law, ${ }^{1}$ most of the departmental councils have arranged special programmes of instruction in agriculture for the schools of the respective department (province). Exaggeration is a fault common to nearly all of them.

We must not fail in a just appreciation of the character of elementary instruction; strictly speaking, this can not be professional. All that can be required of teachers in rural schools is to cultivate the taste for agricultural matters in their pupils, and teach them to understand them as far as their age permits. The general programme in defining a coordinate branch of instruction (physics and agriculture) may, without crowding of subjects, include physical and natural sciences, agriculture, hygiene, and domestic economy for girls, studies that should correlate and matually sapplement one another.

We shall examine the nature of the lessons defined in the official programme for each of the three courses and for every semester in rural schools. The whole forms a sketch of what the majority of pupils must know to be graduated.

## ELEMENTARY COURSE.

## (Children 7 to 9 years of age.)

Object lessons in this course are a continuation of those set apart for infant classes and infant schools, ${ }^{2}$ but from an agricultural point of view; objects from thē garden are simply ranked with class objects.

## INTERMEDIATE COURSE.

## (Children 9 to 11 years of age.)

The length of the intermediate course is to be at least two years. In the first year, that is to say, at 9 years of age, a child can acquire only very rudimentary scientific knowlege and legin to apply it to affairs of agriculture. But in the second year of this course the first ideas of agriculture, properly speaking, can be obtained. According to the prescribed regulations, these ideas should be offered in connection with reading, object lessons, and excursions.

This division into two years presents no difficulty for schools of several grades. In the country, where schools for the most part have but one teacher, lessons in science and agriculture are generally given to the whole school. These lessons necessarily embrace information adapted to each group of pupils and form a kind of concentric instruction from which each pupil imbibes a part proportioned to the caliber and development of his mind.

A teacher does his duty well if his pupils, according to the division to which they belong, acquire the knowledge defined for each course.

FIRST YEAR OF THE INTERMXDIATE COURSE.
First semester:-It would be difficult to give an idea of the principal functions of life, to speak with effect, for instance, on respiration to children agnorant of the properties of air, doubting even its being a material thing. We should then begin with a preliminary examination of the three states of matter. The natural sciences

furnish subjects for parallel lessons matually supplementary. In natural history we should begin with brute animals; the study of man should follow upon the empiric knowledge relative to air and combustion.

1. The three states of matter. Several simple demonstrations are indisponsable for observing and comparing these three states. The following experiments can be made without expense. Immerse a glass in water; also a funnel with the mouth at
the bottom. We either see or feel the air escape. Collect under water air forced from a bellows or exhalation from the lungs; decant and measure it approximately. Produce steam and condense it; in other words, distill water and observe the changes of state. Generate a little oxygen, produce combustion, maintain it by means of a draft, and observe the results. Prove atmospheric pressure and elasticity of air. The rest may follow later. We suggest the form of experiments easily made.
2. Animals.-The curiosity of children should be excited by conversations-familiar discussions on animals well known to them. Teachers should point out the most striking facts in their histories. The dog and the horse may be subjects of several illustrated lessons. The principal varieties of dogs may be compared and the points of resemblance treated between the horse and the ass, the cat and the tiger ami the lion. The habits of domestic fowls; the swallows' periodical travels and those of other migratory birds; the metamorphoses of the frog; those of the May bug and its ravages; the silkworm, bees, and their products, etc, are subjects full of interest for conversations.

3. Growth in water.

Germination of a dicotyl (radish) and of a monocotyl (oats); roots with crown and hairs which absorb the water.
3. Man.-The description of the human body should follow the lessons on animals; it might be begun before the close of the experimental lessons justreferred to, but only after the treatment of tho functions of nutrition and respiration, to which a few remarks on lyygiene ulay be added, have been discussed.

Second semester.-The season permits collecting the objects necessary for demonstrations; either the teacher or the pupils shonld bring them to the class, or the lessons should be conducted near the objects themselves. In the country no object lesson on plants or lesson in botany should be given without the oljects being before the eycs of the pupils.

1. Plants.-Naturally, children's attention should first of all be directed to the active phenomenon of germination, easily produced and followed through its diverse phases, especially in the spring. A bean or a grain of wheat, an acorn or a horse-chestnut, planted in moss or damp soil may serve for the experiment. To make the experiment ordinarily adopted for growth in water the seed is attached to a floating cork. The development of the rontlets and their essential organs, the crown and root-hairs, is easily seen.

Figure 7 shows how the experiment can be made, and the results obtained at about the end of a month.

The stem and the flower, especially the latter, should likewise be studied from nature. A specimen of the subject chosen should be given to each pupil. Under the teachers' direction the parts of the flower-calix, corolla, stamens, and pistil (see fig. 8)-should be separated by means of a knife or a long pin. A few examples well chosen will suffice to give an idea of the character of several families particularly iuteresting because of their good or bad qualities (useful or noxious plants).
2. Pirst ideas of agriculturé.-With children under ten years of age these ideas, to be profitable, must be restricted; they are merely initiatory in preparing a child for olservation and familiarizing it with the technical terms employed in the more systematical lessons of the following yeare.

The plan to be followed is essentially the same as in the first year. The program is completed as follows:

1. Ideas of science.-The study of combustion should extend to that of carbonic acid gas, which should be proved to exist in calcareous rocks. Some lime and a few

2. Arrangement of the pupil's work.

A good way to make these lessons profitable is to arrange and paste the different parts of the flower analyzed on a piece of paper, explaining the natural forms by means of a diagram. The foregoing illustration is an exact reproduction of a page in the copy book of a child eleven years old.
drops of a mineral acid suffice for the following experiments or demonstrations. Convert the lime into quick-lime (the stove in the class-room will furnish sufficient heat for all the papils to convince themselves); demonstrate the loss of weight by comparison with another piece of limestone similar to the first; observe the action of water on quicklime and properties of lack-lime, and whiting-size and lime

9. Preparation of carbomic acid gas.

10. Composition of arable soil. Separation of the parts.
water; produce carbonic acid gas (see fig.9), and let the pupil reconstruct the limestone in theory and practice.

The mechanical separation of vegetable earth (A) into clay (B) on the one haud and silex and Jimestone ( C ) on the other is a matter of little difficulty. A little hydrochlorie acid will dissolve the carbonate of lime; the silex (D) can then be
soparated; the carbonato of lime (E) can finally be regenerated by means of a solution of carbonate of soda. This experiment is easily explained and requires little care to be conveniently carried out. It is advisable to preserve the results and note them down on a card, as chown in fig. 10.
2. Ideas of agriculture.-Examination of the principal kinds of soil, especially during walks. Children should be taught to observe that plants, like animals, require nourishment. For this purpose a few growing plants in pots or garden plots are needed. The following experiment is the first in order. Sow some seeds of rapidly growing plants-iearly beans, for instance. (Fig. 11.)

In the pot to the left exhausted soil without manure is used. In the pot to the right good soil, with a sufficient quantity of manure added, is used. The necessity of manure will be thus demonstrated. The knowledge of its composition follows later on.

The first ideas of common agricultural implements and labor are best gained during walks. They are developed in the more systematic lessons referred to in the programme of the advanced course.

11. Experimental growth in sterile and in fertile soil.

Strietly speaking, the advanced course is ranely organized in rural schools. Ordinarily, the oldest or more advanced pupils form what may be called a higher division of the intermediate course. However the case may be, the rule to be observed is as follows:

Children of 12 or 13 jears of age should receive more advanced instruction in agriculture than that which is indicated in the programme of the intermediate course. For the largest pupils the teaeher should add to what has preceded all that he can add of the following programme, the application of which will present no serious difficulty, provided ideas of fundamental science have been established by means of simple experiments in the class room and in observation of natare.

## ADVANCED COURSE.

## (Children 11 to 13 years of age.)

The ideas from physical and natural sciance presented in this course are, first, an extension of those of the intermediate course. The extension bears essentially on facts of hygieric as applied to man and domestic animals, on ideas of vegetable physiology, and on some elements of organic chemistry. The subjects of lessons are defined for each semester, the natural and physical sciences being confined to the winter and tanght in parallel lessons so as to correlate.

First semester.-(1) Animaln.-The distinguishing traits of classification should be defined by means of cxamples taken as far as possible from among native animale,
either useful or destructive, according to preference. Domestic animals naturally rank first. The facts upon which rules of hygieno and the feeding of cattle are based should be considered above all other things.
A study of the principal organs may be facilitated by the direct observation of a dead animal. Some teachers know how to prepare the digestive apparatus of smaller animals, and even skeletons, by means of which the school nauseum is enriched. Their example deserves commendation.
(2) Man.-The ideas of anatomy should be primarily directed toward convincing children of the necessity of the rules of hygiene. They bear essentially on digestion, circulation, respiration, and the relation of the senses to the nervous system. Exaggeration should we avoided. All recipes, more or less empiric, aro not to be confounded with hygiene, still less with medicine, and should be omitted.
(3) Physics.-The experiments necessary are simple and cheap. This part of the programme should be developed, particularly in cities and industrial centers. In the country demonstrations may be confined to proving the principal effects of heat, light, electricity, and gravitation. In this case it is of importance to excite the children's curiosity and to select examples from among phenomena easily reproduced or observed; others should not be mentioned unless the first series be exiraustod.
Some ideas of meteorology are necessary. Children slould become familiar, not with the construction of the barometer and thermometer, but with the-indications furnished by these instruments and the manner of nofing them; they should even be tanglt to read the meteorological bulletins.
(4) Chemistry.-There aro numerous experimente easily carried out with very limited material. Figure 12 represents the best and most easily mounted of all minor apparatuses, with which any elementary school may be furnished. It can be made anywhere, and suffices to extračt; for instance, alcohol from a fermented drink and ammonia from mineral fertilizers and even liquid manure.

From among practical experiments those should be chosen which refer directly to agriculture; substances which serve as nourish-

12. Distilling apparatus. Preparation of ammonia. ment to plants are the most important. Potash shonld be extracted from wood ashes; a calcined hono should be converted into soluble phosphate by bringing it into contact with diluted hydrochloric acid, and reconverted into insoluble phosphate by néatralizing the acid used by a base, or simply by means of carbonate of soda. With the aid of limestone, ammonia should be detected in the salts of which it is a constituent and which aro used as fertilizers. Pupils should learn to distinguish among the principal commercial fertilizers, nitrates of ammoniac and potassic salts, hypophosphates of scoriæ, etc. It is important that tho precise meaning of each scientific term, current in the language of agriculture to-day, be understood by pupils about to leave rural schools.

The knowledge of the principal fertilizers will be greatly facilitated by the use made of them during the summer semester in experiments of demonstrative growth.
(5) Minerals.- Facts relative to soil, rocks, and earths, should be taught partly in object lessons with the aid of objects from the school museum, and in connection with experiments in chemistry, partly and principally during outdoor lessons in agriculture.
(6) Agriculture and horticulture.-Lessons in theso brancbes should begin before spring. They should bear on all thteresting subjects, especially local crops. As far as possible, a lesson should refer to things seen or objects already examined by the pupils. Teachers should begin with suljects tonched upon in the intermediate
course that have already been explained in connection with reading matter and during walks.

During the whole summer season, lessons should be in close connection with practical excrcises, excursions into the neighborhood, etc. The subject of each lesson on agricalture and horticulture should be that of the last or that of the next walk, or that of a practical exercise assigned for the same period.

Second semester.-(1) Demonstrative growth.-The experiments should be prepared and conductel in a manner to prove the following fundamental maxims:
(a) Air should be allowed to easily penctrate into the soil, as roots can not dispense with oxygen; they breathe like leaves. They should find appropriate nourishmentthat is to say, fertilizers should be mixed with earth so as to enter into all parts of the soil in which roots develop.
(b) In all arable land four substances-azote, phosphoric acid, potash, and lime-suffice for the complete nourishment and perfect development of vegetable life.
(c) No other elements need enter into the composition of arable ground, even thongh those mentioned be supplied in mineral form; in the latter case, the physical properties of the soil may be modified to a disadvantage. Organic matter, far from being incffective, keeps the earth in a state favorable to aeration and to the development of roots; it, furthermore, acts efficaciously on the nutritive sulsstances contained in the soil, so that dung is the first fertilizer recommended for earth in the best condition to furnish the four clements in appropriate proportion; appropriate chemical fertilizers are afterwards added.
(d) A fertilizer is good for soil, if it supplies what is wanting for the maintenauce of vegetable life. The composition of a good fertilizer depends, not only upon the kind of culture for which it is intended, but also upon the nature of the ground. It is impossible to prepare a fertilizer appropriate to all soils, for even one single kind of plant. Formulas, or recipes, termed infallible and geverally applicable, deserve no more confidence than quack remedies alleged to cure all diseases.
(e) To obtain remunerative harvests, the soil, after having been fertilized, must contain the four untritive substances in proportion dependcut upon the kind of plant cultivated. The modern farmer must know that excess of one of the four elements is always useless and expensive; moreover, that it can be detrimental if there he an insufficiency of any one of the three others. In other terms, the excess of au element is just as detrimental as its insufficiency, the development of plants being in proportion to the element of which they find least in the soil.
The first experiments of demonstrative growth, very elementary, but fundamental, shonld be

14. Effect produced by the absence or insufficiency of an element.
The two pots wero filled with sterile or exhausted earth mixed with hypophosphate of lime and chloride of potassium. After the plant appeared (oats), nitrate of sorla was added to one of the pots. The other pot contained only a very small proportiou of azote, the original quantity in the earth emplosed. made in pots, or, better, in boxes with the children's aid. The above illustrations, reproduced from photographs taken from nature, show the simplest arrangements successfully carried out in numerous schools.

The experiment represented by figure 13 proves that the four substances dissolved in the water of the bottle suffice to bring the plant to maturity. If no air is allowed
to penetrate into the water of the flask, the oxygen indispensable for the roots will be wanting and the plant will perish.
Figure 14 shows one of the simplest means of proving that if one of the nutritive elements be found only in very small quantity (all arable land, even the poorest, always contains a little of each of the four elements) vegetation suffers noticeably:
The experiment represented by figure 15 is the starting point of the field of demonstration. More complicated than the preceding, it may also be made in pots or in boxes, or better still in a garden plat, if the soil be of good physical quality but greatly impoverished of nutritive elements. It is very important in point of view of the demonstration of the fundamental truths referred to above. It shows the

15. Demonstrative growth in sterile or exhausted soil.
immense differences in the harvests from the same field in case the fertilizer responds, ur not, to the composition of the soil or the wants of the plant. It does not permit an estimate of the production, for it is a qualitative, not a quantitative experiment, but it suffices to show in a striking manner that the excess of an element is just as detrimental as its insufficiency.
Observations.-Precautions to be observed in growing plants in pots: Pots used for demonstrative growth are and should be made of porous clay; consequently there is rapid evaporation, necessitating frequent watering. Placing the pots in sufflciently deep saucers or troughs, into which water is poured, provides sufficient moisture for several days, even during warm and dry periods.

Holes large enough to contain the pots may also bo dug in the garden. One should avoid overheating, likely to tako place in the neighborhood of a wall in consequence of radiation, and which rapidly withers the plants used in the experiment.
To aroid superficial hardness of the earth caused by repeated watering, the pots may bo covered with a light bed of moss, thin straw, or sawdust; coarse sand or gravel will do, too.
No. 1 is the "evidence" without fertilizer. No. 2 received a fertilizer formed of 2 grams of nitrate of sodium $a, 3$ grams of hypophosphate of lime $b$, and 1 gram of chloride of potassium $c$ to 1 kilogram of soil. No. 3 received $a$ and $e ; N o .4, b$ and c; No. 5, $a$ and $b$. No. 3 gave more straw and less grain than the "evidence" No. 1; hence the fertilizer was detrimental. It was useless in No. 4.
The foregoing experiments, prepared in such a way that they can be brought into the class room during lessons, should be-repeated in a garten plot in connection with experiments in kitchen gardening. Arrangements must be made for those important experiments that supply in a certain measure the place of fields of demonstration where these can not be made.
For instance, transplant cabbage or lettuce plants in three adjoining furrows. The first furroiv should receive no fertilizer; the second, on the contrary, should be liberally provided with a fertilizer equally qualified for the soil and for the plant;

16. Action of different fertilizers.

Transplant cabbage plants in three furrows-A in manure, $B$ in manure enriched with mineral fertilizers, C without fertilizers. The figure represents a plant from each one of the furrows. the third should receive either a fertilizer deficient in one of the elements, or plain manure. Figure 16 represents the results obtained from an experiment of this kind. The weights of heads vary according to the furrow in which they were grown.

Two other important elemeutary experiments that can bo made in pots or boxes deserve very especial mention. The first (fig. 17) proves that the liquid and gaseous products escaping from manure have great fertilizing properties; the second (fig. 18) demonstrates the absorbing properties of land or soil.
Three flowerpots filled with ordinary earth nearly sterile and sown rith grass or a cereal suffice for each of the experiments. One of the three pots (C) serves as "evidence" and receives only plain water; the second (B) receives liquid manure ; the third may receive only the grass liberated from manure and liquid manure (see figare 17) by fermentation, or it may receive liquid manure first and then be abundantly watered. Watering does not lesson its fertility (figure 18).

The value of fertilizing matter lost annually in France exceeds 500,000,000 francs (5 francs to the dollar). A great service would be rendered to agricalturists by persuading them that the first practical progress, without increase of funds, consists in diminishing this enormons loss. The preceding experiments prove this evident loss. If they are concluded with precise indications, appositely given, of pooz or rich manure, the chances are that the lesson will bear fruit. Teachers can do a great deal, by means of ${ }^{\text {a }}$ few lessons in school, toward clearing the streets of our villages of the streams of liquid manure that infect the atmosphere, defile the waters of springs and welle instead of fertilizing fields in the conntry where the leborer, negligent in collecting it, complains of tho insufficiency of his crops.
The experiments just referred to aro the necessary foundation of all instruction in agricultare; they ought to be carried out in all rural schools at least once every two years, so that all children over 11 years of age may lave had the benefit of following them. These experiments, or others similar to them, require little care, and cost
almost nothing; they form a natural and necessary introduction to those following in the field of demonstration.
(2) Field of demondration.-Experiments can not be too prudentiy organized. Their chief end is to teach agriculturists what to do with given soils, to olotain more remunerative production than that which results under ordinary circumstances. It must not be forgotten that the same formulas do not apply to all cases. The fertilizer best adapted for the plant to be cultivated is that whicli contains what is wanting in the soil for its norrishment.

17. Fertiliz̄̈ing povèr of liquid and gaseous products from manure.

Grass is sown in three pots. Pot $A$ has received liquid manure; B received the gas liberated from the fermented manuro in the bottle; C has recoived nothing. Air is renewed in the bottle by forcing it in at $S$, either by means of a bellows_attached to a rubber tube or otherwise.
A knowledge of the soil, consequently, is necessary in order to determine what fertilizing elements should be used in conducting the experiments. Teachers do well in following the advice of specialists or well-instructed practical farmers. Too much fertilizing should be avoided under all circumstances; common local custom should be the basis of comparison. The simplest field demonstrations should always accord with the three following divisions (figure 19):


The earth in boxen numbered 1 and 2 has imbibed liquid manare. Box 1 was afterwards abund. antly watered by rain. Number 3 recoived no nourishment; it was used as "evidence."
I. Evidence (without fertilizer).
II. Manure alone in the proportion in common local use (from 10 to 30 tons to the hectare, about 2 acres).
III. The samo quantity of manure, and in addition complementary fertilizers proportionod according to the natare of the soil and that of the plants to be cultivated.

Under the head of supplementary lessons, and in different divisions, the nature of the fertilizer in the third division might be varied by leaving out one or more of the constituent elements. In the field of demonstration the teacher acts as a collaborator of the work of the official professor of agriculture. However, in his efforts to raise the best kinds of vegetables and fruits the most conclusive experiments are made in his own garden. This one particular point should receive special mention; the culture of fruit and garden vegetables offers useful work in his own sphere, besides being a source of personal pronit.

The participation of pupils in the preceding work should depend upon their age, manual skill, and knowledge of the sciences. It is difficult to lay down any fixed rule in this respect. In some instances the majority of pupils may take part as mere lookers on in the cutting and grafting of fruit trees. In others, the older pupilsmay themselves manipulate the pruning knife, and even acquire the dexterity necessary for obtaining a diploma of grafter. Sometimes all take a hand in watering and weeding, etc., a garden plot devoted to experiments. All that is required is reasonable practice, and that manual labor and intellectual work be combined.
(3) Out-of-lloor lessons in agriculture, or agricultural excursions.-They serve as a preparation for, and a complement to, the lessons given in the class room on minerals,

19. Field of demonstration sown in wheat.

The complementary fertilizer added in No. 3 was determined by the professor of agriculture after he had obtained a knowledge of the soil.
rocks, principal kinds of native soil, insects, useful or noxious plants, the essential operations of growth, the manipulation of agricultural implements, the spreading of fertilizers, the sowing of seed, the gathering of crops, etc.
The application of scientific knowledge derived or to be derived in the regular lessons is what is to be gainerl from the olservation and occasional examination of agricultural operations. It is not enough, for instance, to show how earth is mellowed by plowing; it should be clearly explained how breaking up the soil facilitates the development of roots, bringe them iuto contact with the fertilizers, insures to them by consequent aeration the necessary anount of oxygen for their respiration, etc. Most of the other agricultural operations should be explained in the same war.
Attention is called to the principal subjects of study, to the nature of the ohserrations to he made in walks, and to the practical exercises for the intermediate and advanced courses, as follows:
l'muing.-Arrangement of the different parts of the plow; how the cutter and plowshare break up the earth which is turned back or over by the mold hoard, thus causing a furrow: di-tance from the edge of the cutter to that of the plowshare according to the tenacity of the soil. How the soil is mellowed; its acration; its
mixture with fertilizers; the utilization of the moisture in the subsoil. How the depth of the plow is regulated. Date and frequency of plowing according to season; plowing in fallow land and worked land.
Harrowing and rolling.-Arrangement of the teeth of the harrow; effects produced by them; superficial leveling and pulverization; consequences of sudden rain, according to whether the earth may be argillaceous or siliceous; if hardening is produced it impedes aeration. Action of the harrow on seed beds, on dog grass, and other weeds. Breaking of clods by the roller; leveling to facilitate later mowing; adding new earth to the winter cereals that have been lifted up by frosts. Date of harrowing and rolling.
Use of fertilizers.-Treatment and spreading of manure. Divers fertilizers. Use before and after plowing. Fertilizers used broadcast on cultivated ground, prairies, meadows; effects of manure in hotbeds.
Sowing of seeds.-Conditions necessary for germination; influence of the depth of the seed bed. The date of sowing. Quantity of seed; quality to be selected.
Cutting and grafting of fruit trees, shrubs, and vines.-In the vineyards ravaged by the phylloxera the grafting of grape vines receives special attention.
Particular kinds of soils.-Dressing the earth, developing adventitious roots; second tilling; weeding and other destruction of weeds; aeration of superficial roots; danger of too deep a dressing for certain plants, vines, etc.
Distribution and rotation of crops.-Succession of plants with long or deep rooto to those with superficial or short roots; nitrates again found in the subsoil. Fresh fertilizers. Fallow ground.
Crops.-Principal operations; treatment in barns, preservation; estimates of the crops of a country.
Manipulations of implements, such as rakes worked with horsepower, mowers, reapers, sowers, thrashers, sorters, chaff and straw cutting machines, etc., are interesting subjects for explanation, given either by the teacher or the practical agriculturist employed.
To sum up all in a few words, explanations of agricultural operations in fields or vineyards, in barns or cellars, in stables or poultry yards should be based upon observation; they should aid lessons in the schoolroom and form the substance of written reviews. Notes of appropriate reading matter are to be compared with actual observations.
Pupils leaving the elementary school necessarily have only rudimentary ideas of the science of agriculture, even though their attendance has been normal and regular; but if the study has been made attractive and interesting, they will continue it even under disadvantages.

The introduction in popnlar libraries of well-chosen books on agriculture and special publications on local crops constitutes one of the means for this end, but it is inadequate. The adult must not only preserve, but perfect and enlarge the knowle edge gained in boyhood. When there are no long interruptions facility and skill will come with age. The zeal of teachers who open classes for their former pupils during the long winter evenings can not be too much encouraged, and should be supported. Faniliar discoruses, popular lectures, well-selected practical exercises, conferences for experiments and projects, held from time to time, arouse intellectual effort in young men very profitable to the progress of the country.
As with all other instraction, so with thatin agriculture, the work of schools remains very imperfect if it be not continned. It will have no practical result if the interest in it is not kept up and the study continued.

## CHAPTER XXV:

## INDUSTRIAL EDUCATION IN GERMANY, AUSTRIA; AND SWITZERLAND.

Contents;-Industrial education in Germany; Continuation or supplementary schools in Berlin; Practical training of apprentices in German-speaking countries.

## INDUSTRIAL EDUCATION IN GERMANY.

When, in 1806, Napoleon defeated the army of Prussia, the Prussian Government, prompted by Queen Liouise, resolved to regain its power and influence by quickening the intelligence of the people and awakening political consciousness and patriotic feeling by means of renewed efforts in systematic public education. The result was magical, and the effect is visible to-day in the record of achievements, beginning with the battle on the Katzbach and ending at Waterloo, and latterly at Sedan. Field Marshal Moltke justly said, "The schoōlmaster has won our battles."

When, in 1876, at the World's Fair in Philadelphia, Germany found herself beaten by other nations in the field of art and industry, the courageous German commissioner, Professor Reuleaux, cabled to Prince Bismarck: "Our goods are cheap, butwretched." This determined the governments of the twenty-six German states to try the Prussian manner of regaining lost ground by means of education of the people. The means of this were available owing to the enormous war indemnity paid by France. The result of this educational campaign in less than twenty years far surpassed the most extravagant expectations. The World's Fair in Chicago proved conclusively that Germany occupies a place in the front rank of industrial nations, and such books as "Made in Germany" show that that country is successfully competing with France and England in the worlds markets.

A few striking facts gleaned from the statistics in "Made in Germany" may prove the rapid growth of Germany's commerce. The intervals of time stated are not always the same in the following table:

Exports of German merchandise.

|  | Exported to- | Year. | Value in million marks. | Year. | Valne in million marks. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Japan |  | 1884 | 1 | 1894 | 284 |
| United States |  | 1869 | 175 | 1895 | 2884 |
| South America |  | 1884 | 16 | 1894 | 631 |
| Australis -..... |  | 1884 1891 | 61 | 1893 | 18 |
| Egypt ......... |  | 1880 | 24 | 1894 | 7 |

German exports of special items.

| Exported to- | Articles. | Year. | Value. | Year. | Value. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| England. | Cotton goods. | 1891 | \$1,000,000 | 1894 | \$2,250,000 |
| United States | Paper | 1884 | 13,750,000 | 1895 | 25,500, 1000 |
| Various countries | Toys | 1884 | 26,000,000 | 1894 | 45,000,000 |
| Do | Glass | 1890 | 667\%,000 | 1895 | 1,333,000 |
| Do | Leather gloves | 1885 | 6,250,000 | 1895 | 48,000).000 |
| India | Iron | 1884 | a 9, 411 | 1894 | a 102,334 |
|  | Steel | 1884 | a 1, 609 | 1894 | a 100.188 |

$a$ Hundredweight.
Increase in German ocean shipping.
The steam tonnage of the German merchant marine has increased as follows:


The effective tonnage (including sailing vessels) amounted to $4,214,385$ tons in 1893 and $4,573,526$ tons in 1894 . This shows an increase of 8 to 9 per cent, while the increase of English tonnage during the same year was $3 \frac{1}{2}$ per cent.
Says Mr. S. N. D. North, the secretary of the National Association of Wool Manufacturers, in an article in the Forum: "The record of German progress is most significant. Applying the test usually applied, we find that German commerce has increased from $\$ 180,000,000$ in 1850 to $\$ 815,000,000$ in 1889 , the percentage of increase being 350 as compared with 150 per cent of increase in British commerce. Admitting that these percentages are not a fair test, it inust nevertheless be agreed that German progress has been much the faster of the two, and very much faster when we consider the relative disadvantages under which Germany started in the race. In twenty years Germany had doubled ber exports and lifted herself to a point of vantage equal to that at which England started in 1846. In twenty years more she has attained an industrial development on a par with that of England in practically every line of manufacturing, in many lines surpassing it. German ambition sets no limit on the progress of the future, for it looks upon the development of the half century as merely preliminary and preparatory."

These facts are indications of the enormous industrial activity going on in Germany, an activity which has been developed chiefly since the Franco-German war.

At first the various goveruments of Germany proceeded by setting afoot a number of inquiries into the causes of the evident inferiority, and found (1) that the requisite technical knowledge was wanting among the laborers, a knowledge which could be acquired only in suitable schools: (2) that every industry. if succesiful in the world's markets, relies upon the technical knowledge and ability accumulated in a community by years of skilled labor, not to say transmitted from father to son; hence that special excellence in any branch of industry is a result of both technical schooling and accuuired skill. Instances are the cutlery indistry at Solingen, the silk industry at Crefeld, the toy industry in Thuringia and Saxony, and the furniture industry at Berlin.
The commissioners, examining into the causes of the German industrial decadence, agreed that the excellent results of the French textile industries and the great value of the product of French art industry were owing not only to great innate talents of French laborers, but also to their thorough and very appropriate schooling in designing and manual labor. This special erlucation "for the pur-
pose" has been going on in France from the time of Colbert, the minister of finance during the reign of Louis XIV. Indisputable evidences of this were furnished by the various world's expositions, which opened the eyes of intelligent Germans to the inadequacy of the institutions for industrial education prior to 1876. It may be said that German industry thereupon took an upward start most gratifying in its results, since it was consistently planned and aided by the establishment of a large number of institutions for technical and industrial pursuits.
These inatitutions are of a threefold kind: (1) elementary industrial schools, which prepare the broad mass of laboring people; (2) secondary industrial schools, which prepare the foremen and designers, and (3) higher institutions, like polytechnical and art schools, which prepare engineers and industrial leaders. Of course there were already in existence some schools of each kind previous to 1876 ; but the State governments now began to foster industrial education by subsidizing schools established for that purpose. The communities usually furnished buildings and adequate equipment, and paid for light and fuel, and the State would then defray a large part, and in many cases all, of the expenses needed for salaries of teachers.
It was deemed unwise to introduce purely technical (industrial or agricultural) work into the common school, but efforts were made to draw into the sphere of influence of a systematic industrial training boys and girls who had passed through the common school; hence, all schools for special training admit only students over 14 years of age. An imperial law (that is, a law which is effective in all the 26 States of the Empire) prohibits the employment of children under 16 years in factories and workshops; hence arose the establishment of numerous "continuation or supplementary schools," designed to prevent the results of elementary school education from being lost, and to add industrial features which would be serviceable to the students in the choice of occupations or professions.
These elementary schools are mostly evening or secular Sunday schools; in some instances they have developed into day schools. Many of these special schools, being situated in rural communities, are agricultural schools. Many communities have found it to be to their interest to make attendance at these schools compulsory for boys and girls between the ages of 14 and 16, and certain States make this possible by law. Thus the German child of the humbler strata of society is prevented from forgetting his early education before he takes up his life's work, and is systematically trained to work in directions that will lead to his ultimate selfsupport.

In order not to injure the system by uniformity, the State leaves it to the community to determine what industrial features shall be taught, being fully aware of the fact that each industrial center has local needs not duplicated by any other. For the same reason this system of industrial schools is not under the jurisdiction of the minister of public education, but under that of the minister of commerce and industry. The agricultural supplementary schools are under the control of the minister of agriculture. This may in some instances lead to duplication of efforts, but the economic administration of the States in the German Empire prevents confusion in this direction by giving the supervision of such schools into the hands of master workmen of acknowledged skill, unblemished character, and local prominence. This much is submitted concerning the elementary part of the German industrial system of education.

The State authoritles were not satisfied with providing for elementary work; they also encouraged the communities to establish secondary industrial schools, chjeffy "schools of design," in which drawing and mathematics claim threefifths of the time devoted to study. These "Gewerbe-schulen," all of which are day and evening schools, are found only in large industrial centers of the Fmpire. They have exerted an influence upon the laboring community far ED $96-39$
beyond anything expected of them. Each of these schools has a preparatery department with a one year's course. In this department the student is brought face to face with an almost bewildering variety of designs and occupations, at any or all of which he may try his hand. Soon he finds his favorite occupation, if he has not previously developed a special liking. Toward the end of the year he has, in most cases, a decided leaning in one direction, and the professors foster it by giving the pupil work to do that will help him on in his chosen specialty. One feature in the study of drawing is that there is no copying done; most of the work is from solids. Copies are sometimes placed before the pupils, but they are to be reproduced on a larger or a smaller scale. These schools rarely have workshops, but most of the students, being apprentices or journeymen laborers in factorics or workshops, can make models at home or in the shop after designs made in school; and master workmen encourage this model making in their shops, for in most cases the results of new ideas and inventions benefit the place where they are made.
Side by side with these schools of design there are actual " trade schools," also of a secondary character. These are not, like the "Gewerbe-schulen," schools of industrial art-that is, nurseries of invention and design-but are intended to directly aid the trades by shortening the period of apprenticeship and developing skill in manual labor. Naturally the mental work of these schools consists in mathematics, drawing, and commercial science, besides giving the various bearings of each trade taught. These advanced trade schools are found in industrial centers only. While higher agricultural, forestry, and mining schools are taken care of exclusively by the State, the trade schools are established by the communities and generously subsidized by the State.

All the schools mentioned-(a) elementary industrial and agricultural schools (so-called supplementary schools), (b) schools of design for the industrial arts, and (c) purely trade schools-are specially designed to aid the community in which and by which they are established. The State, as such, does not establish them. They form no uniform system; no two of them have the same course of study, nor is the course of study of any of these schools intended to remain unchanged. It is changed as often as necessity and the demands of the locality require.

Another feature of this movement for industrial supremacy is this: When skilled labor had been multiplied and the German nation began to be successful in industries in which formerly other nations had a monopoly, it was found necessary to find markets in foreign countries for goods which could not be consumed by the lome market. Germany entered the lists in competing for the world's markets. The commercial leaders of the Empire, especially the great mercantile houses in Bremen, Hamburg, Lubeck, Frankfort, Munich, Cologne, Breslau, Leipsic, and Stettin, had foreseen the necessity of a trained army of commercial agents well versed in languages. Hence, simultaneous with the expansion of industrial education, a large number of commercial schools were opented which trained their students in languages, bookkeeping, and commercial science.
Most of these schools have a study in their curriculum called "Waareukunde" (knowledge of merchandise), which term means more than it conveys. It includes a study of modes and ways of shipping and transporting according to the wishes and needs of the customers. One instance may illustrate this: Flour is imported into Central America from Germany, instead of from the United States, simply because the shrewd German merchants adapt their mode of packing to the fact that the mode of transport in Central America is the mule's back; hence they send flour in narrow sacks several feet long, which can be slung over the mules back. In other countries the millers still persist in packing flour in barrels or short sacks, hoth of which are inconvenient to transport in hilly Central America.

These commercial schools of Germany train clerks for correspondence in almost
any living language, and since Germany entered (in 1872) the list of nations which adopted the metric system, the weights and measures cause no difficulty in filling orders from abroad. England and the United States still adhere to their arbitrary measures, and hence the difficulty of rearranging the orders sent to English and American merchants expressed in terms of the metric system.
There are commercial schools of three kinds in Germany, Austria, and Switzer-land-(a) elementary, (b) secondary, and (c) higher. The elementary are found in connection with so-called "continuation schools" in cities; they are evening and secular Sunday schools. The secondary are mostly day schools, and the higher institutions, of which there are only a few in Vienna, Leipsic, Berlin, Munich, Hamburg, Stuttgart, Frankfort, Zurich, Geneva, and Berne, are of world-wide repute and train commercial leaders. Germany alone had 247 secondary commercial schools in 1895, but less than 30 in 1871.
Commercial schools in Germany have come into existence through the initiative of boards of trade in commercial centers, and were at first private schools. The communal government in many cases made them city schools, and the state government granted them subsidies, as it did industrial and agricultural schools. They have no uniform course of study, nor do they form a system of schools under professional supervision. In this respect the governments follow the policy adopted with regard to industrial and agricultural schools.
The German states are primarily concerned about schools that give elementary education; next, each state establishes and maintains secondary schools that lead up to the university; and, lastly, it provides for higher education in universities and polytechnica. These state institutions all aim at general culture, and form the state school system. Technical, trade, industrial, commercial, and agricultural schools of lower and advanced grade are special schools which are independent of uniform regulations. Their establishment is left to the initiative of private citizens or the communities. When they show that they meet the local needs of the community and are likely to indirectly benefit the state, the latter is petitioned for a subsidy, which is rarely denied. This is the reason why we find a silk-weaving school in Crefeld and one in Saxony, and a braiders'school in Berlin, where murh cane furniture is manufactured.
In general, the foregoing statements hold good for Austria proper, and for Switzerland; both countries follow the policy adopted by the various German states.

The 20 so-called small German states (Kleinstaaten) have a population of 5,761 ,087 , and they maintained 2,437 special schools (industrial, commercial, and agricultural) in 1896. This does not include any of the six larger German states, Prussia, Bavaria, Saxony, Wurtemberg, Baden, and Alsace-Lorraine, with a population of $46,485,502$. Minute statistics concerning the special schools in these six states are not available at this writing.

The 2,437 special schools (in states whose area and population taken together are like those of the State of Ohio) are classified as follows:
Elementary supplementary schools, attended by boys over 14 years of age. - 2,047
Industrial or trade schools, attended mostly by apprentices................- 218
Industrial secondary schools and schools of design................................ 54
Commercial schools ........................................................................... 47
Agricultural schools...................................................................... 34
Schools for female occupations ( 12 of these schools are of a secondary character)

The following table shows what the city of Berlin alone pays for its industrial schools, exclusive of State aid:

| Schools in 1895. | Number of teachers. | Number of stadents. | $\begin{array}{\|l\|} \text { Expend- } \\ \text { itures. } \end{array}$ |
| :---: | :---: | :---: | :---: |
| First City Trade School | 65 | 2,183 | \$32,557 |
| Second City Trade School | 31 | ,908 | 16,342 |
| City Builders' School.... | 34 | 381 | 21,305 |
| City Weavers' School | 30 | 383 | 12,005 |
| Central Industrial Hall | 53 | 1,245 | 10,2020 |
| School for- |  |  |  |
| Cabinetmakers <br> Bricklayers | 15 6 | 755 233 | 4,504 |
| Painters .-. | 11 | 388 | 8,155 |
| Chimney sweeps | 5 | 120 | 883 |
| Barbers .-.-.-. | 20 | 492 | 1,899 |
| Wheelwrights | 5 | 95 | , 888 |
| Glaziers...--- | 5 | 83 | 878 |
| Paperhangers | 6 | 250 | 2,702 |
| Shoemakers | 11 | 228 | 1,788 |
| Blacksmiths | 5 | 188 | 598 |
| Braiders |  | 27 | 503 |
| Bookbinders |  | 111 | 1,071 |
| Printers... | 13 | 372 | 1,797 |
| Tailors | 6 | 330 | 1723 |
| Saddlers | 8 | 162 | 801 |
| Total. | 332 | 8,982 | 118,122 |
| Extraordinary expenses. |  |  | 15,970 |
| Grand total |  |  |  |
| Amount spent for industrial education in |  |  | 80,300 |
| Grand total |  |  | 209,411 |

In Chemnitz, Saxony, various trade schools are maintained, partly by the State. They are all under the management of the same board. They are as follows:


The map on the following page is that of Wurtemberg, one of the twenty-six states of the German Empire. It shows the distribution of lower industrial schools, and distances and directions whence their pupils come.

Some idea may be formed of the extent and importance of the efforts in behalf of industrial education in Germany when it is stated (by Professor Thurston, of Cornell University) that to educate our people as well as the people of the most favored parts of Europe, as Germany, we should have in this country:
"Twenty technical universities, having in their schools of engineering and higher technics 50 instructors and 500 pupils each.
"Fifty trade schools and colleges, of 20 instructors and 300 students each.
"Two thousand technical high scnools, or manual-training schools, of 10 instructors and 200 pupils each.
"That is to say, there should be in the United States to-day 1,000 university professors and instructors and 10,000 students under their tuition stadying the highest branches of technical work; there should be 1,000 college professors and 15,000 pupils in technical schools studying for superior positions in the arts; and

20,000 teachers engaged in trade and manual-training schools, instructing pupils, 400,000 in number, proposing to become skilled workmen. We have in this corntry $10,000,000$ families, among which are at least $1,000,000$ boys who should be in

INDUSTRIAL SCHOOLS IN THE KINGDOM OF WÜRTEMBERG.


[^24]under $\$ 300$ per annum per student. Such is the work of which so small a part, at most, can be done by existing colleges, however great the desire of the authorities to carry out the intentions of the people. Such is the somewhat intimidating comparison, also, of the condition of our country and the more enterprising and wisely governed countries of Europe. The latter have had generations the start of us, and only the extraordinary natural advantages of our country and the more extraordinary general intelligence and enterprise of its citizens can possibly prevent this disadvantage under which we labor from telling fatally against us in the course of time, "when the inevitable competition of the world shall affect us."

## SUPPLEMENTARY SCHOOLS IN BERLIN.

In the foregoing article the purely industrial schools (technical and trade schools) of Berlin are mentioned, and a statistical table of attendance and expenditures is given. In that statement an item called "continuation schools" is worthy of further explanation. Continuation or supplementary schools in Berlin are evening schools, held in common-school buildings. They are not trade schools, but institutions for the further education of boys and girls who have passed through the common elementary school and desire to perfect themselves in one way or another, in order to rise in the social scale and prepare themselves for higher pursuits than common labor. Many of the students of these schools are ambitious and take up secondary-school studies, such as foreign languages, mathematics, and drawing. Hence five secondary schools (so-called City Realschulen) have opened secondary evening schools, in which, besides the mother tongue and arithmetic, the following branches are taught: French, English, bookkeeping, highermathematics, drawing, chemistry, commercial science, and related branches. A small tuition fee is charged. Gratuitous instruction is offered to 10 per cent of the attendants if indigent. The cost of these secondary supplementary schools amounted to 38,587 marks ( $\$ 9,185$ ) in 1895-96. About 1,000 boys attended these schools in the winter of 1895-96, while in the summer preceding the number was 738.

Much more extensive than these secondary schools, in both their influence and attendance, are the elementary supplementary schools. There are 12 for boys and 13 for girls. In those for boys the studies are: Mother tongue (grammar and composition), arithmetic, drawing, technical drawing, modeling, bookkeoping, geometry, physics and chemistry, French, English, history, civics, and shorthand. The sum total of expenditure for the boys' and girls' schools, borne entirely by the city government, amounted to 276,606 marks ( $\$ 38,171$ ). No tuition fee is charged. The girls' schools are somewhat more bent upon practical pursuits, as is seen from the following list of studies: Mother tongue, arithmetic; drawing, bookkeeping, embroidery, machine sewing, cutting, ironing, millinery, shorthand, typewriting. French, English, singing, gymnastics. The namber of pupils in these girls' schools was 5,000 in 1895-96. All except the common branches are optional studies.
In a governmental report on the Berlin trade and industrial, as well as supplementary, schools, published in Berlin in February, 1897, the entire number of students attending these schools is found to be 14,750 , or about 1 per cent of the population. These students repesent 160 different trades or occupations. The joiners (837), locksmiths ( 1,420 ), machinists $(1,139)$, machine builders (919), typographers (563), and commercial students $(2,549)$ are the most numerous.

EDUCATION OF APPRENTICES IN CENTRAL EUROPE.
Court Councilor Dr. William Exner and Dr. A. Vetter, of Vienna, recently undertook a journey through Germany and Switzerland in order to study the various modes in which the Governments of these countries encourage the practi-
cal training of apprentices. The Government of Austria has been induced by the fierce struggle for existence, in which continental European nations are engaged in the field of industry, to promote skilled labor by extraordinary means, which we in the United States are accustomed to call "paternal influence." Hence this delegation was sent to neighboring states, which are known to be superior to Austria in some fields of industry. These gentlemen reported in the official organ of the Imperial Austrian Technological Museum in Vierna upon the results of their observations. The report contains so many instructive details that it aroused the attention of many who believe that industrial education is a problem worth considering at the present time. Numerous letters of inquiry received in this Bureau concerning the location of certain German industrial and trade schools and their courses of strudy make it obvious that an English version of the report of the two Austrian commissioners will interest many.citizens in the United States who are apprehensive of the ultimate result of the changed conditions of labor by the introduction of machinery. The following is the report of the two experts:
Dr. P. Scheven said, in his book on Workshops for Apprentices; that it was a problem worthy of our attention how to prevent the training of apprentices by master workmen from falling into disuse after the liberty of trade (Gewerbefreiheit) had been guaranteed by law. This problem has been approached first by three German States, to wit, Würtemberg, Hessia, and Baden. To some extent other German States followed their example, notably Prussia, Bavaria, and also most of the cantons (states) of Switzerland. But only Switzerland has carried out the proposed work of reform in all its details.

It is no wonder that the public affairs of the state are increased by a task which atfects the life of the broadest layers of society if we consider that one of the characteristic signs of the time is the rapid extension of the area of state's duties. We now establish institutions with state aid for the solution of social problems, where formerly individuals attempted it with limited means. In the field of oducation the state began with universities and reached further and further down till at present the master workmen are released from training their apprentices, or, in cases where they still keep apprentices, the master workmen are made organs of the state, i, e., state teachers.

It seems that in the States mentioned above the venerable, ancient institution of training in workshops by masters is reverently fostered, and three other means have proved to be practical and successful. Aside from industrial institutions of purely educational character (foumd in great number in Germany, Austria, and Switzerland ${ }^{1}$ ), we find voluntary, and at times obligatory, examinations for apprentices. Hand in hand with these examinations go exhibitions of apprentice work, test work performed for, and during examinations. The government of the Graud Duchy of Baden went still further in its parental care and attempted to promote the professional knowledge of the masters themselves by paying them salaries and requiring them to follow a prescribed course of work in training their apprentices.

The Austrian minister of commerce began in 1892 to promote the small trades (Kleingewerbe), influencing them by granting privileges and material aid, and they have in consequence developed in a most gratifying manner. On principle, the minister limited his influence to such tradesmen as were either masters or journeymen. His aid was partly given in a concrete way by granting motive power for machines and thus changing the drudgery of mechanical labor to machine work, lifting, as it were, the man who had hitherto done all his work by hand tota small manufacturer and widening his horizon of thought as well as his sphere of trade. But, not satisfied with this material aid, he offered the tradesmen oppcrtunities for the extension of technical knowledge, giving them information

[^25]concerning modern modes of production found in other countries. This enalled them to vie with foreigners.
This information was offered by means of both printed documents and suitable evening and holiday trade schools. Having had such signal success in these attempts, the minister now entertains the idea of extending the work of his department by influencing the younger generation, the apprentices. Hence he sent the authors of this report, Profs. W. Exner and A. Vetter, to Germany and Switzerland, during the summer of 1896 , to investigate what is being done in these two countries toward promoting the practical training of apprentices.

Examinations of apprentices and exhibitions of apprentices' work are found to occur in organic connection in several States visited. In the past they were not always so connected. Some States began with examinations, like Würtemberg, in which kingdom question books for locksmiths (prepared by Mr. Karmarsch, a skilled technologist) were in use as early as 1886. Hessia first began with exhilitions of apprentice work, the first of which dates back to 1848. At present, the apprentice examinations have developed to so high a degree of perfection in Swit\%crland that the regulations existing there are considered models for imitation. The city of Basle made the beginning in $187 \%$ with 17 candidates. From there the movement spread rapidly, so that in 1887 Switzerland had 27 cities (examination centers) with 1,536 candidates.

These examinations, at first, lacked uniformity and organization, but in 1888 the Swiss Industrial Society, which had been the instigator of the movement, took the matter in hand officially and established a normal course of requirements. Only such candidates as could furnish documentary evidence of having followed the course were admitted to the examinations. The Federal Government granted the society the sum of 2,500 francs to publish the course. This proved to be such an impetus to the annual examinations that the draft of a new industrial code of Zürich in 1895 declared the passing of an examination obligatory for every apprentice in the canton, and made it a duty of the cantonal (State) government to supervise the examinations and bear the costs. Zürich is the leading industrial center in eastern Switzerland. The western part of the Republic did not, at first, take readily to the idea of examining apprentices. Not until 1890 did the cantons of Freiburg and Neuenburg adopt the measure. Geneva and Vaud soon followed the example. Freiburg now (1896) stands at the head of the movement and has adopted the regulation of obligatory apprentice examination. In connection with an exhibition of apprentice work in Geneva (1896) a statistical table was published which showed that during the period from 1877 to 1896 as many as 9,178 apprentices, representing $13 \pm$ different trades, have been examined in Switzerland.

On an average, about 1,200 candidates are now examined annually. This number will, of course, greatly increase as soon as obligatory examination is adopted in every canton. The expenditures for these examinations annount to about 20 francs ( $\$ 1$ ) per candidate. The federal and cantonal governments defray onethird, the industrial societies and trade unions and private citizens two-thirds of the cost. In addition to these local examinations, several trade unions arrange their own examinations to meet the requirements of their special professional needs. Thus, for instance, the Swiss printers have had their own examinations for apprentices which date back to the sixties, and it is stated that at least 50 per cent of all typographers in Switzerland entering upon membership after having completed their term of apprenticeship have been rigidly examined. Their number is not included in the total number mentioned above.
The organization of apprenticerexaminations is the work of the Swiss Industrial Society; this is a corporation which has had an extraordinary influence upon industrial cducation in Switzerland. Since the Federal (fovernment pays it an annual subsidy, it attends to apprentice examinations as a duty demanded by the State. The far-reaching result of the second exhibition of apprentice work held in

Geneva (the first was held in Berne in 1891) is the adoption of a radical reform in the mode of the examinations. The regulations contain the following essential points:

The Swiss Industriai Society organizes a uniform system of examinations for Swiss apprentices. Being aided by the Federal and cantonal governments, it supports all local authorities, societies, unions, and institutions which arrange such examinations and comply with the following requirements.

The central office of the society appoints for the purpose of conducting uniform examinations a central board of seven members and determines their duties. The central board watches over the execution of the following rules, appoints expert examiners, takes part, as far as possible, in the examinations, and reports to the central office. It distributes the appropriations among the various examination centers, and is empowered to follow its discretion in giving special consideration and grants to such centers as excel in extending the movement and improving its methods.

The results of examinations are published annually. A roster is keptr of all apprentices who present themselves for examination.

Rules.-All rules of separate examination centers must conform with the following general rules:
(1) To an examination may be admitted all apprentices, male or female, who can prove-
(a) That their apprenticeship has lasted the number of years required for their vocation (prescribed by the central board in a special rule);
(b) That they have spent at least five-sixths of their required time of apprenticeship at the date of examination;
(c) That they have attended regularly at least two half-yearly courses of an industrial continuation or technical school and studied the prescribed subjects. This requirement may be set aside in cases where the applicant can prove that such a school was inaccessible to him or her; but in this case an examination will have to determine whether the applicant has the required elementary knowledge.
(d) Young journey men and women who have finished their apprenticeship in Switzerland may, within a year from that date, be examined also, provided they comply with the foregoing rules, but in such cases the examiners are enjoined to increase the requirements of examination.
(2) The date of the annual examination shall be published at least three months in advance in local newspapers or by means of printed notices in shops and factories and announcements in schools. The notice shall state the date and place for the reception of test work. Sufficient time should be given for the completion of this shopwork.

The central board should be informed of date and place of examination, so that a delegation of the board may attend.
(3) Applications for examination should be made on blanks furnished by the Swiss Industrial Society and be filled out in the handwriting of the apprentice.
(4) Every candilate is required to pass the following examination:
(a) A practical test in shopwork, consisting of a sample of manual work prescribed by the expert and done in his presence. The central board determines, upon motion of the experts, the limit of time within which his work must be finished.
(b) The exhibition of a piece of work done by the apprentice without aid should be made where circumstances permit. This piece may be made in the master's workshop. The experts, or their deputies, appointed by the board should visit the apprentice in the shop during the time in which he is engaged in making his piece. In cases where the making of such a piece is impossible or impracticable the working drawings may be substituted.
(c) In connection with the examination in shopwork an oral examination in the technique of the trade should take place, conducted by the expert.
(d) The examination in school studies embraces the mother tongue, reading, and composition; arithmetic, mental, and written work in denominate numbers, whole numbers, and fractions; simple bookkesping; drawing, free-hand and technical, with reference to the trade in which the candidate is apprenticed.
(e) Excellent school diplomas may release a candidate from oral examination, but only with reference to school studies, not with reference to technical branches. Apprentices who fail to give satisfaction to the foregoing requirements can not be granted apprentices' diplomas (Lehrbriefe).
(5) The oral examination in technical branches (see $4, a, b$, and $c$ ) is to be conducted by two expert artisans and one member of the central board or his deputy. The examination in school studies, in cases where the absence of satisfactory school diplomas makes an examination necessary, is to be conducted by professional school-teachers. The local examining board supervises the examinations. Only the professional experts and the members of the local and central boards have admission to these examinations.
(6) Every apprentice is to be supervised by the experts appointed to conduct the technical examination while the applicant makes a trial piece of his own choosing, and the master of his shop has to certify to his having worked without aid. The prescribed practical test in presence of the examiner is to take place at a neutral place.
(7) The results of the examination are to be stated separately (a) for shopwork of the candidate's own choosing as well as for prescribed tasks; (b) for technical knowledge in oral examination; (c) for school studies.
(8) The diplomas are not to be delivered to the successful candidate until he has finished the required number of years in the shop as apprentioe. The master of the shop certifies as to that fact. The diploma must specifically state what trade the apprentice has learned, or whether only a special branch of a trade, or whether he has been examined for a specialty only, though having learned the whole trade.
(9) Samples of apprentice work handed in by candidates for examination are to be left a few days on exhibition, labeled with the names of the maikers, those of their masters, and the diploma rating.
For Switzerland, it is obvious from the foregoing, the organization of examinations for apprentices is firmly settled for a period of years, though minor points may give rise to discussion and changes. Other States have adopted a different policy, owing to circumstances with which they had to reckon. In Baden, for instance, the test work (not only the shop work of the candidate's own choosing) has to be announced several months in advance of the oral examination. Hessia, too, insists uppn this peculiar feature. Whether the candidates should be granted only diplomas or also premiums is still a mooted question. Opinions and customs in different States differ also as to whether the apprentice's own test piece is to be done in his master's shop or in that of another, perhaps in the shop of the examining expert. In most cases the former locality is chosen. It is worth stating that indigent apprentices are furnished the necessary material free of charge. In Hessia and Bavaria it is the rule that this test piece is to be made earlier, not shortly before the oral examination; that is, within one or two years after the beginning of the apprentice term. In Baden the Government began to regulate apprentice examinations much later than other States, and even to-day local industrial societies are allowed to modify the regulations prescribed by the central authority to suit their convenience or local needs.

In Switzerland the exhibitions of apprentice work are not an essential organ for promoting the education of apprentices. Such exhibitions are held at intervals of five and six years, but then they are arranged on a grand scale. This is done
chiefly to give interested persons an opportunity to inform themselves concerning the status of apprentice training and the results of-examinations. In Hessia and Bavaria, on the other hand, these exhibitions occur annually; the directors of the exhibition form permanent boards; which collect the pieces of work and attend to their tasteful exposition every year.
In Hessia the "Landesgewerbeverein" and in Bavaria the union of Bavarian industrial societies have constituted themselves as central authorities, and are so acknowledged by the State, in matters pertaining to apprentice examinations. The Bavarian exhibitions are held annually in the industrial museum at Nuremberg. The following principles, taken from the General Guide, show how examinations and exhibitions are organically connected there:
(1) Examinations of apprentices and exhibitions of their test work are of great value for the practical training of thorough artisans.
(2) The work of apprentices which is done on or about the date at which they conclude their term of apprenticeship will bear evidence as to the knowledge and skill they have acquired. Hence an exhibition of such work is made a requirement of examination.
(3) Premiums for such work are offered only to apprentices who complete their term of apprenticeship during the season in which the exhibition is held, but any apprentices may exhibit work done during the first and second year of their term of apprenticeship.
(4) In order to judge the work properly, the applicant should bring documentary evidence of his having done the work without aid, and that he possesses the requisite common-school education, as well as technical preparation; for the latter diplomas from industrial schools and working drawings made by the applicant are admissible. A testimonial concerning his condact while engaged as apprentice must accompany the application.

The selection of the work made for examination and exhibition is left to the apprentice, but he is advised to select only such work as is in harmony with his regular shop work, does not require great expense, and does not offer extraordinary difficulties. Technical show pieces are to be avoided. A list of suitable pieces of work for a great number of trades is offered as a guide. This is what is done to promote the techical training of apprentices in Bavaria.

Things are managed differently in Hessia. The local examination board here assigns a task, though, if the apprentice furnishes, besides this, a piece of his own choosing, it is accepted and exhibited. The Bavarian mode of procedure seems to aim at facilitating the selection, while the Hessian mode is intended to give the examiner an opportunity to judge the spontaneity of the apprentice. While the Bavarian list of tasks contains only work that may be expected of apprentices who have finished their term of apprenticeship, the Hessian list of tasks contains work which is designed to tell the examiner what he may expect after the first, second, third, and fourth year of the apprenticeship. In Hessia the following tasks are prescribed for machine builders and metal workers:

Apprenticeship, first year.-Fit a bolt with a button into a round hole; diameter of bolt 20 mm ., length 4 cm . Make a pair of screws with heads and nuts, a fashion piece with handle and crank, or a button on a box cover or on a newel post. File a ruler 25 cm . long and 25 mm . wide. Chisel a cast-iron piece, about 120 mm . long, 60 mm . wide, 25 mm . thick, on three sides perfectly parallel and at right angles. Make a paper weight of pleasing form. Make a ring gauge 40 mm . wide, 100 mm . long with caliper thorn. Turn on the lathe a brace disk 125 mm . diameter, 50 mm . wide, 30 mm . bore-hole, arched.

Apprenticeship, second year. - Fit and weld a stay ring on a cylinder of about 30 to 35 mm . thick. File an angle of given dimensions. File a ruler of given dimensions. Turn on the lathe a screw worm with flat thread, and nut. Cut into a piece of cylinder a nave with wedge teeth. Make a conic valve with three gauges
to fit into place; a two-armed cut clamp with borer and cheeks; a support guide; an inkstand with smooth hole; a joint or rectangular lever, a wall joint, an intermediate joint, or a funnel joint; a brake thread, one with the thread to the left and one to the right, with nuts.
Apprenticeship, third year.-Make a sphere with tin case to fit it in; a "Haarschublehre;" a dovetail conduit with guide strips screwed on; a crosshead for graduating with one or two conduits; a conic valve with seat of 30 to 35 mm . diameter; a cube exactly measuring 40 mm ., straight, parallel, and rectangular with caliper-ring; an elevator cylinder with stay rings and strap disks.

In Bavaria similar tasks are prescribed, but fewer in number. While in Switzerland a regular examination in common-school branches and test work is arranged, Bavaria provides for little more than an exhibition of work. Hessia pursues a middle course. The Bavarian method is, if not the most effective, the easiest to imitate.

And now we turn to the third of the three methods mentioned in the beginning of this report-the promotion of professional or technical knowledge among the masters by subsidizing them for training apprentices.

In 1884 the Mannheim trades union petitioned the Baden diet for an appropriar tion of 10,000 marks, to be expended in investigating the condition of the small trades, and reporting thereon with suggestions for their improvement. This sum was granted and expended in accordance with the petition. The proceedings of the commission having this matter in charge and the debate in the diet led to the adoption of a suggestion on the part of the Karlsruhe trades union. It was to the effect that master workmen who are willing to train apprentices systematically, according to certain regulations, should be supported by the state treasury. Hence, the minister of the interior of the Grand Duchy of Baden asked in 1888 for 5,000 marks per annum for the purpose of subsidizing work masters and shopowners who undertook the work of training apprentices.

This measure was undertaken with the avowed intention to subject it to an honest trial. The success it had is undeniable. Until the year 1895, an annual sum of 5,000 marks was appropriated; since then a larger subsidy has been granted. At the close of 1832, 23 trades; or 122 workshops, employing 180 apprentices, were subsidized in Baden. At this time Switzerland took up the question. A circular letter was addressed to interested parties concerning the feasibility of adopting the plan followed in Baden, and the Industrial Society of Switzerland concluded in 1894 to appropriate 2,000 francs per year for three years in order that the plan be tested in a small way. The organization will be similar to that in vogue in Baden. If after three years (which will be in 1898) the plan of subsidizing master workmen for training apprentices according to set rules and prescribed regulations has proved successful, it is confidently expected that the Federal Government will grant the means to carry out this plan on a grander scale.
The discussion of this plan in Switzerland frequently touched upon the relation of educational institutions for the purpose of training in manual labor and the new apprentice shops. It was said that in industrial education the widest possible freedom should be given; it should not be confined to any one kind. There is no country in Europe which can boast of more industrial schools and trade schools than Switzerland. A characteristic statement concerning an industrial institution in the city of Berne may be quoted here to show how practical the Swiss people are and how wisely they try to meet the necessity arising from fierce industrial competition.

It is characteristic of the trade school in Berne that it combines a large number of trades, so as to give its students not only all the bearings of his own trade, but also knowledge of its relation with others. The school is intended to be not only an industrial educational institution, but also a place where the students can carn
money in working at their trades. According to the regulations in force, the school has the aim (1) to enable young men to learn a trade; (2) to enable young men who have learned a trade in some workshop to complete their technical education practically and theoretieally, so as to prepare themselves for higher positions than that of laborers; (3) to check the immigration of skilled workmen from other countries and to elevate the Swiss laborers to a higher level of culture; (4) to elevate the trades in general. The means needed to carry on this extensive' school are furnished by the community, partly also by the cantonal and the Federal Government, and lastly through the sale of the products of labor in the shops. Instruction is entirely gratuitous. An exhibition of the students' work is held annually, and the graduates of the institution are examined under the rules in force for apprentices (quoted in a foregoing paragraph).

At present the institution has shops for shoemakers, joiners, carpenters, locksmiths, braziers, and tinsmiths. For each of these trades a three-years course of instruction is prescribed. On admission to the institution the student enters upon a contract which is peculiar in some of its features. It is formed like the articles of apprenticeship, the two contracting parties being the authorities of the institution on the one hand and the applicant on the other. The contract fixes the duration of apprenticeship and the term of probation (four weeks), and enumerates the duties of the community, to wit, (a) the carrying out of the course of study, (b) gratuitous instruction, (c) accident insurance of the student according to the provisions of the law, (d) assurance of remuneration for work performed over and above the prescribed tasks. This remuneration is regulated-50 to 75 per cent of it is paid monthly; the rest is deposited in the savings bank in the name of the student. Then follow the articles which state the duties of the student, and lastly provisions are made which enable either contracting party to sever their connection.

Upon this basis an extensive institution is built up. In 1895 it required expenditures to the amount of 128,106 francs $(\$ 25,000)$, which were met by an income of 59,825 francs ( $\$ 11,000$ ) from communal, cantonal, and federal subsidies, and 68,281 francs $(\$ 13,000)$ from the sale of the products of the shops. The number of students was 78 at the close of the year 1895. One of the greatest difficulties to be overcome was found in searching for a market for the shop products. Naturally the local owners of factories and workshops at first objected to the utilization of the students' work, claiming that they entered into competition with legitimate labor. These objections were met with the following argument: The sum total of the school's income from the sale of shop products, if divided by the number of factories and workshops of the trades represented in the school, showed that only an insignificant share of the profit would fall upon each master in Berne, and the authorities appealed to their public spirit and asked them to sacrifice so small a sum toward the elevation of the trade rather than throw obstacles in the way of so laudable an institution.

The city authorities met the claims of the tradesmen half way by limiting the number of applicants admitted into the school to 5 per cent of the number of the tradesmen doing business in Berne. This percentage has not yet been reached. The trades masters of late have abandoned their opposition to the trade school, and most of them are now staunch friends of the institution, which has recently opened a course for the further advancement of master workmen. The school has opened a few sales depots for its products in the city, enters into competition for public works, and manages its industrial features entirely like a well-managed factory. At first the principal was a master shoemaker of pronounced executive skill; lately a manufacturer and merchant stands at its head.

We must deny ourselves the pleasure of quoting other examples of successful Swiss trade schools and industrial institutions for educational parposes for which Switzerland is noted. There are technical schools, masters' courses for typographers, ambulatory schools, traveling lecturers, patronage of apprentice work, and
various other appliances for the popularizing of advanced industrial education. The Swiss nation exhibits a remarkably deep interest in everything that is apt to be for the public good. This is attributable to its purely democratic kind of government, which induces the citizen to participate in all public enterprises. The comparatively small yet compactly populated districts into which the cantons (or States) are divided facilitate the establishment of educational institations which are impossible in sparsely settled countries.
To return to the question as to which of the two methods is preferable (trade schools or the old-time apprenticeship in workshops under specified supervision of masters), it should be stated that the institation in Berne, sketched in the foregoing paragraphs, approaches nearer the technical preparation in workshops than any other trade school. Generally, it may be admitted, trade schools, with scholars' shop attached, are better in large cities representing trades of far-reaching specialization, and difficult trades that need an untsual amount of theoretical edcation and special preparation, i. e., better than the old-time apprenticeship. On the other hand, it can be stated with confidence that the system of apprenticeship in small workshops is preferable in simple trades and small towns, because that system offers opportunities to see all the bearings of the trade to be learned. If the workshop is well equipped; if the master takes a hand in the work, and watches the conduct of the apprentice; if thelatter is permitted to take up all branches of the work and not only repairing and patching; if the master supervises the drawing, modeling, and bookkeeping of the apprentice; if to all this comes the ethical momentum of an insight into a flourishing enterprise which hourly shows how diligence, knowledge, skill, and honesty change into material value, the system of apprenticeship will offer great advantages. But rarely are all these conditions found together. Thoroughly equipped and willing masters are rare; rare are also apprentices who have the capacity to rise above the average workman. We generally find that boys of small or no means at all are "put out as apprentices." Hence the desirability of regulating the training of apprentices by influencing the masters, and offering them a remuneration for the trouble this training causes them.
As stated before, the management of the system of paying for results is an imitation of that adopted in Baden. The central office of the Swiss Industrial Society resolved, September 8,1894 , as follows:
"Workshop masters of various trades who enter into an agreement to comply with the rules for training apprentices may be granted a subsidy of 250 francs for each apprentice. The selection of the masters is made by the central office of the Industrial Society. Masters whose former apprentices have passed the examination with credit are preferred. It is a matter of importance that the masters who apply for a subsidy give board and lodging to their apprentices."
The following is a copy of the regulations issued:
(1) A written contract between master and apprentice is entered into, which contract must be in harmony with the normal contract designed by the Swiss Industrial Society. It must contain the following provisions:
(a) The term of apprenticeship begins with a probationary term of from four to eight weeks, which is to be included in the whole term of the contract.
(b) The term of apprenticeship is not to exceed the normal minimum prescribed by the aforementioned society for the respective trade.
(c) The master is required, in case the apprenticesdoes not live with his parents in the neighborhood, to give him board and lodging and supervise his conduct during and after work hours. Exceptions to this duty are admitted in cases where the master has placed the apprentice in a family in which he is well taken care of.
(d) If the apprentice should fall ill, the master is required to see to it that he is properly nursed and that medical aid be called in. If the sickness lasts longer than four weeks, the master must, if desirable, have the patient sent to a hospital.
(e) The normal contract prescribed by the Swiss Industrial Society contains a number of paragraphs referring to the mode of teaching the trade, which must be conscientiously followed. Work must not be required of the apprentice after the legal work hours, or on Sundays, except in rare cases of emergency.
(2) Every contract entered into, if based upon the-requirements prescribed by the society, must be submitted to the central office, where it is to be deposited in duplicate.
(3) Every apprentice of a subsidized workshop is required to present himself for examination at the close of his term, and the master workman is obliged to grant the apprentice sufficient time and materials to make his test piece.
(4) An apprentice, under the rulés of the society, must have completed his fourteenth year and possess the necessary intellectual and physical qualities. In doubtful cases the society may arrange an examination for admission.
(5) The subsidy mentioned is determined by local and professional circumstances, and is paid in two-equal installments, one at the close of half the term of apprenticeship and the other at the close of the term, after the master has given evidence of having fulfilled all the duties required of him.
(6) The subsidy guaranteed to a master is not transferable to his heirs or assigns in case of death or closing of his shop, unless the central office specially orders the payment.
(7) If the contract between master and apprentice becomes void before it expires, the officers of the industrial society determine the quota of subsidy due the master, or the amount of indemnity to which he may be entitled.
(8) Failure on the part of the master to follow the rules prescribed by the society presupposes his waiving any subsidy whatsoever.
(9) In cases of contention between master and apprentice with reference to the application of any point of the contract, the officers of the society may be called upon for a decision, which decision is final.
(10) For the purpose of supervising the proper performance of the master's duties to his apprentices, and for the purpose of constantly being informed as to the status of the education of the apprentices for whom subsidies are paid, a number of local trustees are appointed, who report to the central office at stated intervals. These trustees may be charged with special duties, such as inspection, special examinations, and judicial duties in cases of contention.

This is the modus operandi adopted in Switzerland. At present the institution is too young to record results; still the officers of the society are convinced that it will be fully as satisfactory in its workings as the one in the Grand Duchy of Baden. Furthermore, in Switzerland, as well as in Baden, the conviction seems to make progress that it is better for the trades and general industrial prosperity to subsidize the masters for the training of apprentices than to extend the system of trade schools hitherto favored by the Government.

## CHAPTER XXVI.

## RECENT EFFORTS IN EUROPE FOR THE ADVANCEMENT AND IMPROVEMENT OF AGRICULTURE. ${ }^{1}$

## I.-Capttalistic Agricultural Production.

It seems strange that agriculture, which has been regarded as the most independent vocation in the world, should be dependent upon the more or less fortuitous aid of capital. But those who speak of the independent position of the farmer are inclined to emphasize his position as a self-sufficing one in which he, like Robinson Crusoe, may satisfy his wants through his own labor. However true this conception of farming may have heen before the temptations offered by traveling agents and newspaper advertisements of enterprising manufacturers magnified the wants and the expenditures of the farmer, it is not true to-day except in the districts which are contented to live "behind the times." Since selfsufficing agriculture, then, does not require a working capital other than is provided by the natural increase of the family (for even the political. economy of Robinson Crusoe admitted the advantage of a man Friday), it is evident that in the following pages the discourse can be only concerned with agriculture as an industry or, as it is called, capitalistic production.

The proposition of the political economists that industry is limited by capital is applicable to agriculture which, as far asit is concerned with producing a " money crop," is thus limited or hampered, like any other industry, by the lack of capital. Let this crop be what it may, wheat in the Northwest, cotton in the South, tobacco or corn in the intervening section, cattle raising in the region beyond the Missouri and the Red River of the South, or market gardening and truck farming in the populous East, each "money crop" requires capital, each exploiter of the soil, like each commission or other city merchant, requires the presence of a fund upon which he may draw in time of need for the purpose of promoting an enterprise or tiding over a failure. But as the city merchant is constantly receiving into his possession moneys which are not, properly speaking, his (the cities being clearing houses), "accommodation money" is very much easier for him to obtain than for the isolated farmer.
"The element of credit,"says the French economist, M. Leon Say, "is the money of others, but its principle is either to get money to spend upon oneself or to invest in business. Money obtained for the first parpose is generally supposed to be a ruinous operation, while money obtained for the second is advantageous only as the brsiness ability of the borrower is good and the amount he pays for the hire of the money (usually called 'interest') is reasonable." Now, attribute it to what you please, this rule holds that people are much more apt to lend to those who are of the same business class as themselves than to those who have neither the appearance of wealth nor the manners of the class to which the lender belongs. "In Germany," says Gustav Schőnberg, "those who suffer the most from want of credit

[^26]are the proprietors of medium-sized or small farms, especially the peasant. The large proprietors sometimes can not get a sufficiont credit, but nevertheless they are better able to procure cash for current needs, either from the money passing through their hands as gross returns from the cultivation of their estates or by writing to their bankers or to an establishment of credit. But when the small farmer, with very little experience in monetary matters and an unknown financial status, has need of credit, he falls into the hands of those whose business it is to exploit his poverty and inexperience."

It is therefore asked by some if it is wise to enlarge the opportunity of the small proprietor to borrow. "It would be disastrous if land owners were to run into debt to improve their land," says Rodbertus ${ }^{1}$ and others. To these objections Signor Leone Wollemborg, an expert in such matters, answers in this fashion: "Is it useful to create a loaning fund for the agriculturist? Some agricultural societies and some representative agriculturists assert that it is dangerous to do so, for the peasant is consumed with such a fever to acquire land that he contracts obligations which eventually bankrupt him. Credit is therefore a dangerous as well as a precious ally, and it is necessary to use it rationally." From Signor Wollemborg's admission in his defense of agricultural credit it follows that capital borrowed by the farmer, though beneficial when used in judicious exploitation of the farm, is a dangerous expedient to resort to in order to acquire it.

Other considerations are not wanting to illustrate, if not to explain, the inadequacy of capital in coined money at the disposal of the farmer. One of these, though of a theoretical or speculative nature, may be stated in concluding the foregoing remarks upon farming as capitalistic production.

The true value of property of all kinds in the United States in 1890 is placed by the census at $\$ 05,037,091,197$, yet the amount of money in circulation at that date was $\$ 1,429,251,270$. In brief, had it been possible to put up all the property in the United States at auction on June 30, 1890, one of two things would have happened, either there would not have been cash enough in the country to buy it in at its "true valuation," or its "true value" would have shrunken until it became only one forty-sixth of what it was the day before; or, to say the same thing over, in such a market every one dollar of "true valuation" wonld have become two cents. In England and France the same conditions prevail. Now, in 1892 the United States exported an unprecedentedly large amount of her products which are principally obtained from nature. These exports amounted to nearly $\$ 800,000,000$, and if paid for by the exporters before shipment abroad must have sent perhaps half the money in circulation into the agricultural States.

It is of course impossible to say that there is an instructive conservation of exchange forces similar to the mechanical equating in physics known as the conservation of energy, but it seems evident that the farmer who is placed between nature and the middleman is not nearly so favored as a possessor of circulating coin as is the business man who is the intermediary between the farmer and another business man. The returns of the farmer are the residuum of the final price

[^27]obtained for his wares after others have deducted the price of handling and converting them, and are profitable or not relatively to the price at which he hired money a year before he harvested his crop. Or, to use the illustration once employed by a political economist to explain the wage-portion or wage-fund theory, the matter is simply a question of division; the volume of money in circulation, the dividend, is stable, while the crude products vary; thus the coin values, the quotient, received in return by the farmer fluctuates inversely with the volume of the productions arising from the labor of the class to which he belongs and the favorableness of the season. The difficulties encountered by political economy in defining the word "value" are as perplexing as those met by political philosophy in defining the word "equality" or "liberty." ${ }^{1}$

## II.-Meaning and Use of the Term "Agricultural Credir."

In regard to the acquisition of the soil he cultivates, the American farmer has been favored beyond the farmers of any other nation or of any other time. In Rome the division of the public lands was accompanied by the riotous epoch of the Gracchi. In Great Britain one-fourth of the arable public lands were "inclosed" during the last two hundred years, and became the property of individual landlords. ${ }^{2}$ In France the revolutionary Assembly of 1789 confiscated the immense land possessions of the Catholic Church ${ }^{3}$ and sold them, in lots of 2 or 3 acres, for a nominal sum to the peasants who had for so many years cultivated
${ }^{1}$ It is possible that an objection may be raised to the foregoing matter as in reality advocating overproduction. It is said by Mr. Giffen, the eminent English statistician, that countries whose productions are merely of an agricultural or mining nature indubitably feel the consequences of a depression in trade much more severely than manufacturing communities. The first reason he gives for this dictum is "the greater liability of raw material being occasionally produced in excess of the demand for it" by the manufacturing community, which can more quickly proportion its ontput to the public wants. Assuming that Mr. Giffen's first reason is true, it would follow that a plenitude of capital put at the disposal of the agricultural class, as discussed in this chapter, would stimulate an overproduction of raw material and a lessening of the price obtained for it by the farmer. Nevertheless, it is difficult to see why equally injurious results would not follow if capital in large quantities were to be placed at the disposal of the manufacturing class unless protected by the trades unions we call trusts. It seems that as long as raw products, especially food stuffs, are salable in and transportable to the markets of the world there need always be less apprehension of overproduction in agriculture than in manufactures, at least in stable economic conditions, such as where the application of machinery to the transformation of raw material into artiflcial forms of convenience or luxury has not overdirected capital to manufacturing by the offer of high interest or a patent-right system has not stimulated the production of machinery itself, or overconstruction of transporting agencies should overstimulate agricultural production, or vice versa. When the economic conditions are lopsided or when prices are being lowered in a lopsided way, that form of production-agricultural or manufacturing, as the case may be-will attract the most people which has the most capital at its disposal, and it is the people who feel the hard times, for to them that term means not deprivation of the pleasures, but frequently the want of the necessities of life. In 1883 a report of a royal (British) commission on the depression of that date characterized the situation in the propositions:
(1) A very serious falling off in the exchangeable value of the produce of the soil;
(2) An increased production of nearly all other classes of commodities;
(3) A tendency in the supply of commodities to outrun the demand;
(4) A consequent diminution in the profit obtainable by production; and
(5) A similar diminution in the rate of interest on invested capital.

A series of changes of this description, if universally and not merely theoretically true, would fnevitably result in an entirely new basis of finances; a sort of mild economic revolution only recognizable when the future shall have given the necessary "historical perspective."
${ }^{2}$ The effects of this are thus described by the Right Hon. G. Shaw Lefevre, M. P.: "The right of turning out cattle on the waste and other rights overgthe commons were highly favorable to the existence of small ownerships, and when disconnected from these rights the small farms and small freeholds became economically impossible to maintain." Of course it will le understood that the inclosed wild land was put under culture by capital, and leased to small farmers, and also that those farmers who owned land were forced to sell, their property being "soon swallowed up by their neighbors." (Nineteenth Century, October, 1885, 517-5i8.)
${ }^{2}$ And of the emigrés or noblemen who had left the country from fear of decapitation.
them for their ecclesiastical lords. But in America none of these disagreeable features appear; for the Federal Government by its preemption laws, dating from 1801, has given the land away at the mere cost of surveying it, and by the homestead law of 1862 allowed it to be acquired for nothing. Thus Congress, up to 1880, had practically endowed agriculture with $268,150,000$ acres, which, at the price fixed by the act admitting the new States beyond the Red River of the North, would have produced, if sold, $\$ 2,681,000,000-1 \frac{1}{2}$ times the amount of the present national debt. The arable public lands in the United States are now exhausted, and our agriculture is coming under the conditions that prevail in Europe, both in the tenant-farming agricultural community of England and in the smallproprietor farming community of France. In Europe instruction in agricultural processes and theory has not been found to be a panacea for the competition set up by the fresh and cheap lands of America, and experimental fields are possibly more calculated to enrich science than the farmer. The most experienced and thoughtful people on the continent, therefore, have for some years been giving their attention to other methods to relieve the "agricultural crisis" of the decade last past. In the following matter an account is given of the most prominent of these methods, which, if it have no other effect, will be a school of economics for the farmer which will inevitably remove one disagreeable feature caused by his isolation, to wit, his ignorance of bookkeeping and the course of exchange-two capital accomplishments in an age which appeals so strongly to everyone to make money, and to combine with others to effect that object.

The expression " agricultural credit" has a definite meaning. It does not mean the ability of the farmer to borrow money for any purpose whatever, but a fund upon which he can draw in order to procure stock, necessary implements, and fertilizing material. It is not intended for the tenant farmers of England, nor the metayer (farmer on shares) of France, but is especially intended to aid and perpetuate a class of farmers which from the time of the Roman Republic every experienced government has striven to protect from the inroads which its own necessities and improvidence have ever made upon it-that is to say, the class of farmers called in France "small proprietors," as distinguished from the great proprietors, known in England as "landlords," who are people who manage their estates through an agent, as a manufacturing company manages its business through a superintendent, or, to magnify the matter greatly, as European governments managed their possessions in America, by viceroys, and ancient Rome her colonies by proconsuls. This is the fundamental principle, it is thought. of the Raiffeisen system of agricultural credit for small proprietors, the avowed basis of which is cooperative local financial self-government.

## III.-The Mechanism of A(iricultural Credit. ${ }^{1}$

It is a fact in Europe that banks which accept and discount the notes of a mechanic or sinall merchant known to be honest refuse to do the same with the paper of a farmer. In France it has been proposed to pass a law requiring State banks to accept the paper of agriculturists. Yet this aversion to agricultural paper is not the result of ill will. but of business instinct or necessity. In the first place, the small proprietor is unknown to the banker, while the small merchant lives near him in the same little city or town, and it is upon this very confidence, resnlting from comparatively intimate relations, that credit is founded. In the second place, there is a still more material obstacle to lending to a farmer. Sup-

[^28]pose the banker is willing to advance money to a small proprietor in whom he has confidence, then another difficulty presents itself. It is the custom of the French banks not to lend money for more than three months. In three months the man of commerce has sold his merchandise, been paid for it, and pays his own debt with the proceeds. Three months will not, generally speaking, permit the farmer to accomplish these matters. If the farmer can not obtain a credit for a longer period than three months, it is better not to borrow at all. Some forms of market gardening, or other form of agriculture, which closely resembles the specialized work of the mechanical trades, have found favor with existing institutions of credit when organized, as the "Chamber of the Mouths of the Nièvre" or "The Vegetable Growers of the Valley of Auge." But the operations of these two bodies are confined to the buying of stock in the spring and the sale thereof in autumn, which allows a short term of credit, and the transactions are wholly done in cash. But these operations are conducted by men of far greater standing than the ordinary peasant.
To constitute an agriculture credit it is necessary to overcome two obstacles, which are: (1) To connect the small proprietor with the banker by a third person known to both; (2) to create a reserve fund which will permit the third person to give the small farmer a longer credit than the banker will grant, so that the small proprietor may indirectly profit by the credit offered by the bank.
The whole question is contained in these two propositions. It would be perfectly useless to force the national banks to accept "agricultural paper," for if such paper were presented under the same conditions as commercial paper it would be willingly discounted. Equally useless would it be to estallish in France a new bank especially for the purpose, since the Bank of France, La Société Cénéral, Le Credit Lyonnais, etc., would be enchanted to trust their money to agriculture if they could be assured of the prompt repayment of the loan, and the special bank must have that assurance if it would avoid bankruptcy.
These two ideas, then, are fundamental: First, there is a difference which separates agricultural operations from commercial operations, the farmer from the merchant as a business man; second, it is illusory to make agricultural credit a sort of subsidy granted by the State to encourage agriculture. Agriculture, as any other industry, has no need of alms. What is required is a servant that can be used and paid. Such a servant has been named by a member of the French Assembly "family banks;" that is to say, banks which are simply mutual associations, each of which fortifies the credit of its members by pooling the credit of all. But how, it is asked, can an association of small farmers who have no cash become a bank. Where will such a bank get its money? The answer is this: Banks which have money will willingly listen to a joint and several association of proprietors who guarantee the engagements of its members individually. Such a mechanism is already in existence. In Germany they are called Darlehenskassen (lending banks), and are now introduced into Austria and, thanks to the propaganda of Sig. Wollemborg, into Italy.
The Darlehenskassen of Herr Raiffeisen, or Raiffeisen's loan banks for farmers, answer exactly to the needs of agricultural credit, ${ }^{1}$ and are founded upon keen observation of the social life in the country. Every borrower from a bank must

[^29]be a member of the association, being admitted thereto by vote of the members. It is not necessary to be wealthy to obtain the loan, which is granted after admittance.

The borrower is expected to be industrious and economical, and must have impressed his neighbors that he is both these things. "There are one hundred of us mutually standing guard over each one, so that there is no possibility but each member will be made acquainted with his duty," said an Italian peasant to Signor Wollemborg. To anyone acquainted with life in the country, such a guaranty appears sufficient. What else have peasants in the long winter evenings, at home, at church, on Sunday, at the fairs, marriage ceremonies, and other entertainments, to talk about if not the affairs of their neighbors, and nine times out of ten it is the financial condition of their acquaintances which is the matter discussed. Such a one has scored a success, he has secured so much wheat, or feeds his animals in this or that way, or has a wife who is a poor manager; and before the subject is dropped a balance sleet is struck as to the man"s possessions, his energy, and his administrative ability. A bank having capital to lend can depend upon the judgment of a society of this kind, if it can be held jointly and severally responsible to the bank for its decisions. In this manner is the first obstacle to an agricultural credit overcome; for all the members of a community have gone bail for the honor, industry, and rational expectations of one of its members.

In order that this surveillance may be effectual, the financial society can not embrace more than the limits of a single parish, for it is not enough to know that a man is industrious and economical; it is also necessary to know what he is going to do with the money borrowed and to witness the application of it to that purpose, for if the loan is not applied to the purpose for which it was granted, the association exacts its immediate restoration. Under this system it has been very rare for the Raiffeisen loan banks to come upon the mutual responsibility of its members, the reserve funds having been sufficient to repair the losses that have followed an unsuccessful loan.

The Raiffeisen loan banks solve the second difficulty by confining thenselves strictly to the work of an intermediary, by avoiding all speculation, all inducemonts of profit sharing, so as to in no way jeopardize the security they offer nor to infringe upon a wise caution. They have a reserve fund, but even this is not distributable on dissolution, but is deposited in the Imperial Bank ${ }^{1}$ (Reichs Bank) until a new association is founded in the same village so that the system is graranted against the danger of a too great prosperity and the desire of some persons to profit loy that prosperity by demanding a dissolution. The reserve fund is the profits arising from the operations; there is no entrance fee to be absorbed into the possession of the bank, though a sum (generally $\$ 2.50$, the minimum required by law, and only exacted becanse required by law) is paid by the new member on entrance, which is his own property, however, and never goes in to the reserve fand.
The constant, and consistent effort of the agricultural credit association system of Raiffeisen is to keep each association as the loaning body politic of the parish, antl to keep it out of the power of the feverish impulsation of the times to make money under all circumstances, which results, in joir.t stock concerns, in giving great opportunities to enterprising managers, frequent " mismanagement," and occasional defalcation. It must ever be remembered that the associations or so-called " banks" for agricultural credit are intended to aid the small farmer, and

[^30]not to exploit his necessities and crude conceptions of financial operations. The reserve fund only becomes important in amount after some years. In the beginning there is mone. But this does not prevent capitalists from lending money through the association. Ten associations selected at random show that the patrimony of the nnembers is twenty-eight times greater than the debts held against them.
"Under such conditions credit will never be wanting. Even in times of crisis, when money is being withdrawn from banks, industrial and commercial enterprises, capitalists are only too glad to be able to prefer the agricultural credit to that of State bonds. During the wars of Prussia with Austria (1866) and with France (1870) capitalists offered their money to the Raiffeisen banks without interest; for even admitting that an enemy should overrun the country, carry off the stock, and burn the buildings, the soil remains [and the owners], and that would only fall to half its vafue. What other investment is able to be compared, as far as security goes, with the security offered and guaranteed by the Raiffeisen associations? The result is that just as fast as these institutions become known they have more than enough capital placed at their disposal." ${ }^{1}$ Some owners of large estates (noblemen or capitalists) desire out of good will to aid these associations for procuring agricultural credit and become members, and as such put their large landed property under the same joint and several responsibility as that of the peasantry with whom they have joined themselves, voting upon questions of according and refusing credit as any other member.
IV.-The Attack of Schultze Delitzsch, the Founder of the Class of Institutions Known in America as Building and Loan Associations, on Raiffeisen, the Founder of the Associations to Procure Agriculture Credit.

The Darlehenskasse, or Raiffeisen lending bank, to create an agricultural credit, is the application of the idea of the Vorschussverein (association for advancing money) to agriculture, just as the building and loan association of the United States is the application of the same idea to the purchase of property, ostensibly as homes for mechanics and other wage earners in cities. The first Vorschussverein was established in 1850 on the idea of Schultze Delitzsch. This gentleman had been struck with the fact that the possession of a sum of money, frequently a very small sum, might, in the hands of a mechanic or small merchant, produce very satisfactory results, and in many cases might procure for the industrious and saving laboring man who had a little laid by the means to advance his position. But the essential condition to effect this good must be that the borrower must be industrious and saving. The same results might ensue from public or private gifts, but the educative effect in that case would be nil. It is a general law, based upon human nature, that the price of a thing fixes its value, and that in consequence charity never produces the moral virtues of energy and economy, which alone are capable of permanently ameliorating the social condition of a man. Hence the necessity of credit for the poor in purse, and also the necessity of procuring this credit not by the intervention of charity, but by the personal exertion of the party to be benefited, or, to put the matter squarely, to be educated. This is the problem that Schnitze Delitzsch solved. The Vorschussverein makes its members jointly and severally (creates a solidarity, to use a word not frequently employed in English) responsible for the money advanced them by capitalists, and also creates a capital of its own to guarantee its debts and pay running expenses and make profits to be distributed among the members as dividends. But Schultze

[^31]Delitzsch did not like the plan of Raiffeisen. In the year 1873 and again in 1876 he attacked the Raiffeisen system on the floor of the Imperial Parliament of Germany, of which he was then a member, and in 1875 , in a brochure, he put in print these charges:
(1) The Darlehenskassen have not a business or reservefund (Geschäftsantheil) [or, as we say, "stock shares," i. e., the regular payment of a small sum at monthly or other intervals]. Yet these payments are indispensable for the security of the association.
(2) The Darlehenskassen lend the capital they receive for longer periods than it is borrowed for, which invites bankruptcy.
(3) The reserve fund, which is constantly growing larger, is never distributed, which is an anomaly.
(4) Associations which do not hold out hopes of profit are running counter to the aspirations of human nature and will not encourage saving, and can have no independent existence (auf eigenen Füssen zu stehen).

These points have been answered in detail and so effectually by M. Durand ${ }^{\text { }}$ that his defense is probably the best exposition of the Raiffeisen system extant.

To the first charge made by Herr Schultze Delitzsch, M. Durand replies:
"There is no necessity for a reserve fund in the Raiffeisen system of agricultural credit, for the system is operated by and among a body of small proprietors who have land and instruments of tillage. The possessions of the members of the association on the plan of Schultzo Delitzsch are by no means sufficiently large to reassure capital, and the accumulations of the Geschäftsantheil are a necessity for it. Again, if it is absolutely essential to have a Geschäftsantheil, the Raiffeisen system has a small but constantly growing one, which is held perpetually, while the Schultze Delitzsch scheme permits any memver to withdraw with his ' Geschäftsantheil.'"

To the second charge against the Raiffeisen system, M. Durand replies by denying the validity of Herr Schultze Delitzsch's contention. What bank is there that does not accept deposits payable at sight? Do not the associations founded on the idea of Schultze Delitzsch pay depositors on demand with accumulated interest? The fundamental principle of banking is not the length of time of the deposit or of the loan, but of ability to meet the demands of the depositor, and this is done by lending to parties whose paper another bank will discount in case of need. The Raiffeisen associations conform to this principle of banking. They have three resources: (1) The repayment of short-time loans (generally made for one or two years) ; (2) the long-time loans are subject to a sinking fund or repayment by installment operation, which practically reduces them to several short-tinue loans; and (3) the ability to borrow from other capitalists to repay the one demanding his money, in the guaranties they have to offer-and what establishment possesses the guaranties offered by the Raiffeisen system of Darlehenskassen, possessing, as they do, from ten to sixty times the amount of their debt? It is not to be supposed that a powerful coalition of large bankers would attempt to wreck the system. Establishments giving credit have, it is true, been ruined by this means, but these wrecked banks were undermining the speculations of those who coalesced to ruin them. The very essence of the being of "agricultural credit," on the Raiffeisen principle, is not to speculate so as to make money, but merely to attract money where it will not flow unless the banks which have it to lend can be assured that it will be returned. And, strange as it may appear, in times of public financial doubt, as during the Franco-Prussian war in $18 \% 0$, the Raiffeisen societies were obliged to refuse the deposits that were offered to them without interest. But suppose a still greater crisis, sappose every commercial house, savings bank, banks

[^32]of issue, and, finally, the State, shall have bankrupted. Under such extraordinary conditions the societies that guarantee agricultural credit may fail without dishonor. During the twelve years of prosperity in Germany, from 1875 to 1886 , with no war, no commercial crisis, 200 of the societies founded upon the grand conception of Schultze Delitzsch became bankrupt, which in itself is a very sufficient answer to his second charge against Raiffeisen's profound modification of his Vorschussvereine to adapt it to an agricultural society.
The third and fourth charges are in reality but one. The Raiffeisen society, according to Schultze Delitzsch, can not exist, can not stand on its own feet, since it is founded upon the principle of philanthropy and not of business, and it therefore lacks the mainspring of prosperity, the spirit of gain. In reply, it is to be said that Raiffeisen recognized the absolute necessity of self-help, but he labored to procure it in a manner which will not expose the brotherhood of peasants to the danger of being fleeced or used by the sharper members of the organization for their own personal benefit under the pretense of placing a precious opportunity in the hands of each laborious and worthy member. As to the very lively attacks made upon the undistributed reserve fund, to the exclamations of pity for the poor peasants who are creating a fund which they will never enjoy, it is to be remarked that as the fund increases the interest paid on loans will decrease, as the money will come cheaper. At least it is a precaution that has been taken to prevent too high an interest being asked. Such are Mr. Durand's responses. But to those who see the rate at which the rural populations are crowding to the cities the accumulation of a local fund coming to one generation from its predecessor has a meaning, especially when each generation is compelled to add in its turn to the total by its own saving, thus keeping constantly in view the means, the only means, by which such a fund may be created, as also the value of money in the form of cash, not for pretentious "internal public improvements," the opportunity of contractors and their friends, but for private enterprise in its efforts to support a family in the slow and legitimate round of unostentatious living. ${ }^{1}$

## CHAPTER XXVII.

## COLLEGES ENDOWED BY CONGRESS FOR THE BENEFIT OF AGRICULTURE AND THE MECHANIC ARTS. ${ }^{1}$

The income from the land grant of 1862 and its potential value as an interestbearing fund; State aid to agricultural and mechanical colleges, its character and amount; Comparison of the three great sources of income of the landgrant colleges; The gross amount of all revenues expended for the subjects specified in the act of August 30, 1890; Classification of the amount expended for these subjects out of funds from Federal Treasurg received or on hand during the year 1895-96; Diversity of the interpretation of the meaning of the terms used to indicate technical courses ofं study; Farmers' institutes, the cause of their origin; Their probable antecedents; The law of Michigan (1895); The organization and administration of institutes; Course of instruction in agricultural colleges of France and America; The possibility of improving agmiculture; Engineering testing laboratories in Europe; Students in land-grant colleges by sex, grade, and course; Reports of presidents to the Federal Government; Tables showing in detail the numerical facts concerning professors, students, and finances.

## I. The Land Grant of 1862 and its Present Money Value.

For the first time since the grant of land by Congress in 1862 it is possible to state with all desirable accuracy the amount of the income it affords to the institutions for the benefit of agriculture and the mechanic arts which it called into existence. The income is now (1896) $\$ 617,506$, of which $\$ 588,144^{2}$ is enjoyed by institutions either specifically or practically for the Caucasian race, and $\$ 21,752$ by three institutions specifically for the American negro. This amount is not permanent, as there are two elements that will cause it to fluctuate. One of these, the rate of interest, will tend, probably, to decrease until every State has reached the limit fixed by the Federal law, which is 5 per cent. The other element of change is the increase which the lands still held by several Western States will yield to the agricultural and mechanical college fund of each of those States particularly, and to the whole fund considered for all the States generally. To illustrate these fluctuations in the productive value of the fund derived from the sale of the $9,600,000$ acres granted by the Federal act of 1862, either as land or "scrip," the following comparison is made:

In four years there has been a decrease of 2 per cent in the income. Still these years, it is to be remarked, are considered to have been years of great financial depression. Had the income of Michigan been excluded, the decrease would have

[^33]been 5 per cent. In eleven States the figures are exactly the same for 1892 and 1896 , which seemingly indicates a guaranty by the State of a fixed rate of interest which has not been changed during the four years included in the comparison above. In Michigan there has been an increase of $\$ 16,918$ in the income derived from the State fund, or 65 per cent, while in New York there has been a decrease of over 41 per cent $(\$ 7,500)$ and in Missouri a decrease of 20 per cent. The income received by the Kentucky Agricultural and Mechanical College has been reduced, at least for $1895-96$, to nearly one-fourth of what it has been-that is to say, has been reduced to $\$ 2,190$. But this is not due to any loss of the fund. as the State holds unimpaired the original fund of $\$ 165,000$, upon which it has hitherto paid an interest of 6 per cent per annum.

As remarked above, the Federal law of 1862 requires the fund derived from the land granted by the act to be invested in safe stocks yielding an interest of not less than 5 per cent per annum on their par value. ${ }^{1}$ Considering, therefore, that the States, in accepting the conditions imposed by the Federal law, have guaranteed interest at that rate, the income of $1895-96, \$ 617,506$, would represent, if capitalized, a principal of $\$ 12,263,000$ as the product of the sale of the $9,600,000$ acres of public lands granted in 1862, not counting the unsold lands of Michigan, Nebraska, Missouri, etc. At the close of the year 1890, however, 5 per cent would have been too small an interest upon which to capitalize the principal. At that date, perhaps, even 6 per cent would have been too low, though most of the States gave that interest to their respective agricultural and mechanical colleges or agricultural and mechanical departments in their universities. Assuming, then, that the income of $\$ 617,506$ derived from the fund created by the Federal act of 1862 is probably about 6 per cent of that fund, the fund would then amount to $\$ 10,219,000$. It is safe to assume that the fund is in the neighborhood of $\$ 10,000,000$, which, therefore, constitutes the present permanent and productive endowment of colleges for the benefit of agriculture and the mechanic arts. Such an amount at 5 per cent, the lowest legal rate, will produce $\$ 500,000$ annually for the support of the institutions endowed with the Federal land grant of 1862, by the legislatures of thirty-eight States, including the new State of North Dakota, but none other admitted since January 1, 1889. The new States of the upper Missouri and Rocky Mountain region are obligated, by the provisions of the law admitting them into the Union, to hold the lands granted them for educational purposes until those lands will realize $\$ 10$ an acre. Such a provision in the act of 1862 would have realized $\$ 90,000,000$, or an income, at 5 per cent, of $\$ 4,800,000$.

## II. State Aid.

The main sources of support of the colleges of agriculture and the mechanic arts are the funds created by the Federal acts of 1862 and 1890 and, indirectly, or rather, so to speak. sympathetically, the fund created by the act of 1887 for State experiment stations which, with two exceptions, are part of the college in the same State. But these colleges are State institutions as well as national. Like the citizen of a State, they have a double function in the Republic. Congress, however, in subsidizing them, has left the control in the hands of the State or of the Territory. It is to be expected, therefore, that the State or Territory will feel an interest in the colleges practically created and in a large measure maintained for them and through them by the national purse. In Delaware, in New Jersey, in New York, and in Tennessee it is to be remarked that this interest is not represented br appropriations of money, at least during the year $1895-96$, and the appropriations in Oregon and Florida are for repair of the baildings, the latter State appropriating rather liberally in view of the great disaster it experienced during the unprecedented frosts of the winter of 1894-95.

[^34]The aid derived from the State may be classed under three heads. To name them and the amounts appropriated under them-

| Appropriation for current | \$1,257, 048 |
| :---: | :---: |
| 2. Appropriation for building (raainly) | 811, 566 |
| 3. Income from endowment granted by | 149,486 |
| Total | 2,218,100 |

But these appropriations are in some cases for instruction in subjects not named in the act of August 30, 1890, among the subjects calculated to directly benefit agriculture and the mechanic arts. It is therefore requisite to ascertain how much was actually spent by these universities and colleges for instruction in the subjects specified in the act of 1890 . Such an amended statement will take the following form:

| Amount rece | \$1,257,048 |
| :---: | :---: |
| Amount received from State for building (mainly) for all depa | 811,566 |
| Income received from State endowment for all departments. | 149,486 |
| Income received from fees and other sources. | 1,508,869 |
| Income received from Federal grant of 1862. | 817; 506 |
| Income received from Federal grant of 1890. | 924, 758 |
| Total, excluding schools for colored race except in Maryland | 5,269,233 |
| Disbursements for instruction and facilities for instruction specified | 2, 486, 251 |
| Total expended for other than subjects specified in act of 1890 | 2,782,982 |

But the figures of the above statement require still further consideration. The gross sum of the item "Amount received from State for current expenses" is very largely contributed to by the total grants to several State universities (Ohio, Illinois, Wisconsin, Minnesota, Nebraska, and California) and the State College of Pennsylvania. The appropriations to these seven institutions, in which the technical work is done in colleges of the university, amount to $\$ 800,000$, or 64 per cent of the grand total received from the States by the fifty institutions for the Caucasian race within the Union. Again, the amount of the item "Income from fees and other sources" looks very large, but its importance is reduced when it is shown how unevenly it is distributed among the fifty institutions, for one-half of the amount, that is to say, $\$ 759,000$, is contributed by Cornell University and the Massachusetts Institute of Technology. Let us exclude the Massachusetts Institute and include in the computation the universities of Cornell, Illinois, Wisconsin, and California. Even then it is iound that 50 per cent of the sum total received by the aforementioned fifty institutions from "fees and other sources" is paid into the treasury of four universities, all founded upon Mr. Cornell's idea of a university-where anyone can come and learn anything.
Leaving now the matter of State aid, the subject of the annual national aid may be in turn examined. Other than the grant of two townships to provide for a university, and the grant of 500,000 acres for internal improvement (act of 1841), the grants made by the Federal Government have been a grant per capita or by actual extent of territory (sixteenth and thirty-sixth sections in each township for school purposes). Thus the surplus revenue deposit of 1836 was distributed according to representation in Congress, as also the grant of land given by the act of 1862. But by the act of 1890 Congress placed all States upon the same footing by granting to each an equal amount. The way in which the institutions have distributed the amount in expending it is given in the following statement:

a 157,048

It is quite certain that much which is reported to this Bureau as expended for "natural science" may be included as instruction in agriculture. Horticulture, however indefinite the term may be, ranging from " market gardening" to orchard growing, is, it would seem, more nearly related to agriculture than it is to natural or physical science. The same may be said of veterinary science, and even, perhaps, of agricultural chemistry; yet these applications of the sciences in the "garden or orchard," in "animal pathology," and in agriculture are frequently returned as natural or physical sciences. This distribution of one university is interesting from the emphatic way it reports under agriculture, to wit:

## [Amount received from Morrill fund alone.]




Horticulture (assistant) .-............................................................................................................. 100



Instructor in chcese making - ............................................................................................... 410

Instructor in milk testing...................................................................................................... 19. .

Total ....-..............................................................................................................................
Note.-The State. through special appropriations to the college of agriculture, provides funds which cover the cost for all apparatus, machinery, and stock and material purchased for use in said college.

This university under the head of natural science gives one item, namely, physics, throwing back civil ["IRR"], electrical, mechanical, and experimental engineering to the general head of the applied science called mechanic arts.

It is thought that the variation of the reports in classifying the subjects of instruction is probably due to there being one professor for sciences so nearly related as chemistry, botany, and meteorology are to agriculture.
The manner in which the science of construction or the engineering sciences have been classified presents quite as much diversity as the biological sciences, spoken of in the preceding paragraph. Engineering and the scientific generalizations and the applications of mathematics in representing its facts are divided up among three of the five heads given in the form sent to the treasurer of each institution, to wit, natural science mathematical science, and mechanicarts. (ne institution will do this in one way; another in quite a different way. To illustrate:

## Institition A.

[All under mechanic arts.]
Mechanical engineering (one professor).
Electrical engineering (one professor).
Marine engineering (one professor).
Experimental engineering (one professor).
Mechanical drawing (one professor).
Institution B.
[U゙nder hearl of mathematical science.]
Mochanics, hydromechanics. bridge building. differential calculus, and integral calculus one professor).
Merhanies, astronomy, and calculus ione professor).
Algebra. descriptive geometry. and drafting (one professor).
[C'ncler heall of pheysiral srience.]
Physics, elements of mechanism. and electrical science (one professor).
The most notable diversity of classification is. as might be expected, in the case of civil encrineering, which is about as frequently placed under mathematical science as under mechanic arts. There is some diversity also in the location of
drawing. In general, however, it may be said that when one subject is confided to a single professor the arrangement is this, despite the ambiguity of the term mechanic arts: Engineering (whether mechanical, electrical, experimental, or civil), shopwork, and drawing are placed under mechanic arts; mathematics, pure and " applied," under mathematical science, and the general or" elementary" laws, which matter obeys or the so-ealled "natural philosophy," under physical science.
In order to ascertain what was meant exactiy by the terms civil engineering, mechanical engineering, etc., this Burean, several years ago, made a critical examination of the programmes of the larger technological institutions in Europe and America, the result appearing in volume 2 of the Commissioner's Report for 1889-90, where the matter is discussed at some length.

## III. Farmers' Institutes. ${ }^{1}$

The agricultural experiment station, says Prof. John Hamilton, deputy secretary of agriculture and director of farmers' institutes in Pennsylvania, after having endearored to assist farmers by solving questions of interest to them and then disseminating the solutions among them, found that many farmers, by reason of their lack of scientific training, were unable to understand the full force and application of these results. Thus there was created a necessity for persons familiar with science and its relation to practice to go out into the country districts and explain the meaning of the experiments and their practical value. From this necessity grew the modern farmers' institute. ${ }^{2}$ But this institution reaches back further in the history of this country than is commonly supposed and reported.

In 1799, Count Fellenberg had established at Hofwyl, in Switzerland, the agricultural school of that name. "The rational agriculture," said this enthusiast, "which will proceed from Hofwyl and will penetrate not only every district of Switzerland but of-the whole civilized world, is the instrument for the physical and moral regeneration of mankind."
The first notice published in America of this experiment was by "Professor Griscom, of the New York school," but the account given during 1830-31, in the American Annals of Education, by W. C. Woodbridge, its editor, who had resided at Hofwyl off and on for nine months, is far more interesting. While Fellenberg was building up a love for agriculture in Switzerland, Albrect Thaer, a student of the then flourishing agriculture of England, established his experimental farm at Celle, whence he was called by the King of Prussia to create, in 1804, the "first" higher agricultural institute in existence (höhere Lehranstalt für Landwirthshaft) at Möglin. Thaer, the author of the formerly well-known work on the Principles of Rational Agriculture, stipulated that there should be attached to the school an experimental farm, as nothing in his opinion is so educative in agronomy, considered in a practical sense, as the ability to see processes in operation and to handle the implements of culture. ${ }^{3}$ Let it not be supposed, however, that

[^35]the foregoing statement is intended to make the assertion that Thaer's experimental farm (perhaps a synopsis of English practice) was anything more than a place for exhibiting proper methods of cultivating the soil. The real scientific experiment station based on organic chemistry made its first appearance during the thirties upon the farm of Brechelbronn, in Alsace, under the direction of Boussingault, and in 1842 at Rothamstead.

In Scotland the earliest agricultural association was established in 1723 as the Society of Improvers in the Knowledge of Agriculture in Scotland, but it is said that the tenantry took no interest in it, inasmuch as they are always unwilling to adopt the practices of those who cultivate land for amusement. During the period from 1795 to 1815 it is said that the substantial education of the parish school of Scotland had diffused through all ranks such a measure of intelligence as to enable the Scots to promptly discern and skillfully and energetically take advantage of the spring tide of prosperity produced by the constant wars on the Continent of Europe and further to profit by the agricultural information then plentifully furnished by the Bath and West of England Society (1777), the Highland Society (1784), and the National Board of Agriculture (1793).

But to return to America. A national figure at once attracts attention. The earliest proposal for promoting "useful knowledge among the British plantations in America" was made in 1743 by Benjamin Franklin. The society contemplated by this proposal, among other matters, was to aim to improve the breeds of useful animals, the cultivation and the clearing of land, for "all philosophic experiments that let light into the nature of things tend to increase the power of man and multiply the conveniences and pleasures of life." It is only necessary to add that the society for the promotion of knowledge among the people established in 1824 is called the Franklin Institute, to say nothing of the Brooklyn Institute of 1823, the Albany Institute of 1824 , the Smithsonian Institution of 1838, and the Cooper Institute of 1852 , all of them apparently catching as an ideal expression at the name of the Institut de France, into which were combined by the first French Republic the so-called learned bodies styled academies before the French Revolution. ${ }^{1}$

In 1824 Stephen Van Rensselaer, of New York, employed a very able gentleman, Prof. Amos Eaton, with a competent number of assistants and sufficient apparatus "to traverse the State on or near the route of the Erie Canal and to deliver in all the principal villages and towns familiar lectures, accompanied by experiments and illustrations in chemistry, natural philosophy, and some or all of the branches of natural history." This scientific and educational journey through the State was made during the summer of 1824 and "aroused a prodigious interest."

It is readily seen that this idea is not new as far as the method is concerned, and it only remains to speak briefly of a possible defect which the method may contain. The higher instruction of France, or, in American phraseology, post-graduate instruction, was at one time given in the form of public lectures. The result of this was rery unsatisfactory, not only to those who had the desire to study, but to the professor who desired to instruct. "What could be more hamiliating," says Ernest Renan, in speaking upon this delicate topic, "than for the professor to find himself before an audience made up of idlers and other persons whose time hang heavy on their hands, whom he was compelled to amuse; for his success was comparable to the merit of the Roman actor whose end was attained when it could be said of his performance, 'Saltavit et placuit'-he jumped and he pleased."
There are thirty-two States having farmers' institutes. One-half of these are under the auspices of the agricultural colleges or experiment stations, and the other half under those of the State board or department of agriculture. The latest

[^36]form of organizing these institutes is shown in the law passed by Michigan in 1895, which follows:
"SEOTION 1. The people of the State of Michigan enact, That the State board of agriculture is hereby authorized to hold institutes and to maintain courses of reading and lectures for the instruction of citizens of this State in the various branches of agriculture and kindred sciences. The said board shall formulate such rules and regulations as it shall deem proper to carry on the work contemplated in this act, and may employ an agent or agents to perform such duties in connection therewith as it shall deem best.
"SeC. 2. When twenity or more persons, residents of any county in this State, organize themselves into a society to be called the _ county farmers' institute society for the purpose of teaching better methods of farming, stock raising, fruit culture, and all the branches of business connected with the industry of agriculture, and adopt a constitution and by-laws agreeable to rules and regulations furnished by the State board of agriculture; and when such society shall have elected such proper officers and performed such other acts as may be required by the rules of said board, such society shall be deemed an institute society in the meaning of this act: Provided, That not more than one such institute society in any county shall be authorized by this act: And provided further, That any existing organization, approved by the board of agriculture, shall be considered a legally organized institute society under the terms of this act.
"SEC. 3. In each county where an institute society shall be organized under the provisions of this act, the State board of agriculture shall hold one annual institute, two days in length, at such place in the county and at such time as said board may deem expedient, and shall furnish at least two speakers or lecturers, with all expenses paid, to be present at all sessions of the institute. The county institute society shall provide a suitable hall for the institute, furnish fuel and lights and pay other local expenses, and shall provide speakers who shall occupy one-half the time of the institute that is given to set addresses: Provided, That upon the request of any local institute society who desire to conduct their own institute the State board of agriculture may, in their discretion, appropriate from the institute fund, money, not to exceed twenty-five dollars, in lieu of the speakers provided for by this act, said money to bo expended by said local institute society entirely in institute work.
"SEC. 4. If the funds appropriated by this act will permit, the said board of agriculture may hold a number of four-day institutes, at such places and times as said board may determine, at which the primary object shall be to furnish a school of instruction in practical agriculture and kindred sciences.
"SEC. 5. The State board of agriculture shall maintain the course of reading known as the Farm Home Reading Circle, and may expend from the moneys appropriated by this act a sum not to exceed two hundred dollars for each of the two years for which the appropriation is made for the maintenance and extension of said course.
"SEc. 6. For the purposes mentioned in the preceding sections the said board of agriculture may use such sum as it shall deem proper, not exceeding the sum of five thousand dollars in the year ending June thirtieth, eighteen hondred ninetysix, five thousand dollars in the year ending June thirtieth, eighteen hundred ninety-seven, and such amounts are hereby appropriated from the general funds of this State, which said sum of five thousand dollars shall for each of the years eighteen hundred ninety-five and eighteen handred ninety-six be included in the State tazes apportioned by the auditor-general on all the taxable property of the State, to be levied, assessed, and collected as are other State taxes, and when so. assessed and collected to be paid into the general fund to reimburse said fund for the appropriations made by this act."

ED $96-10$

Nineteen States favor a centralized control; four think it should be in charge of local managers. It is thought by at least one manager of State institutes that local talent is very inadequate to meet the demands of science. The general rule in the selection of speakers by the management is this: The official speakers are selected by the State or college authorities having charge of the work, and the local speakers by the local committee. But the answers seem somewhat scattering. Maryland would hate the speakers selected by the local committee with reference to neads of communities; Minnesota wants practical men, and Mississippi sends the men who can be spared musteasily from the work of college and station. This matter of the selection of speakers may be dismissed by putting the weight of the opinions in the form of " official speakers to open the road and local men to lead the audience in discussion."

The number of sessions held at each meeting varies from one to six, bat in general the opinion is that there should be either one or two days devoted to the institute, and that in the case of the one-day institute there should be threesessions, and in the case of the two-day institute there should be five sessions. The number of sessions held during the winter varies considerably. Michigan, Iowa, and New Jersey have 1 in each county; Delaware has 4 to 6 in each county; Alabama, Georgia, Kansas, New Hampshire, and Rhode Island have from 20 to 20; California, South Dakota, and Mississippi have from 12 to 16; Indiana and Wisconsin have 100 or more; Ohio, 150; New York, 250; Missouri, Minnesota, and Maine, in the neighborhood of 50 or 60 each; Idaho, 2, etc. Some of the States speak highly of the summer institute.

The attendance at these meetings is given in round numbers, except in the case of Wisconsin, where there was an attendance of "484 at last year's moetings," and Ohio, where the attendance was 423.3. In Delaware the attendance varied from 30 to 200 each; in Georgia, from 50 to 500 ; in New York, 100 to 800 ; in Indiana it was 250; in Idaho, 100; in California and Mississippi, 200, etc. All the States reply that the interest and attendance is increasing. The great majority of the States also find a marked increase in the intelligence and critical character of their audiences, demanding a higher order of ability and special training on the part of the speakers. Thus Maine reports, "Speakers who did good several years ago are of no use now." New Jersey reports that after a good institute, university extension lectures have been demanded, and, when obtained, sapportel. At least half a dozen other States speak with similar emphasis; others are not s) positive. The work in the institutes is reported to have had considerable effect in improving the methods of cultare employed in working the soil, especially in the localities which have exhibited a lively interest in the work of the institute. The majority of States think that the institutes should be increased in number and advanced in character. Two or more want to invade the remote rural regions, where much missionary work is possible.

In ten States all expense is paid out of State funds. In one all the cost is tupon the county. In six States the agricultural college and the local committee divide the cost between them. In one the university pays it all. In another the college faculty volunteer, the railroads furnish passes, and the local managers entertain the speakers and furnish the hall. In all others the State furnishes a fixed part of the expenses, and the local managers furnish the residue. Where appropriations have been made directly by the State, they have been increased. The amounts now appropriated by these States are:


The speakers are paid $\$ 2, \$ 3$, or $\$ 5$ per diem; in Delaware they are paid according to value, from $\$ 5$ to $\$ 20$ for a lecture. Some States pay only expenses; others a per diem and expenses. Wisconsin pays $\$ 25$ for four days' work to the conductor, $\$ 20$ to his regular assistant, and $\$ 5$. per diem and expenses to others. The exact cost of an institate in Ohio was \$89.04. In Wisconsin, in the winter of 1894-95, it was about $\$ 58$, though for the eight preceding years it had been about $\$ 110$.
The system of farmers' institutes is very thoroughly organized in Pennsylvania. The institute in that State is a propaganda not only for good farming, but for good housekeeping, good sanitary surroundings, and good roads, In addition to this there is an educational session of a very practical and otherwise valuable nature, in which the "proper education for country children" is discussed in connection with country graded schools and township high schools. In fact, the sample programme published by the agricultural department of Pennsylvania is so interesting and suggestive that it has been inserted here in reduced form, the original circular being composed of four octavo pages on good paper and well printed.
(COVER.)
SAMPLE PROGRAM.-This sample is designed as an aid to institute managers in making up their programs.

## PROGRAM

TO BE HELD UNDER THE AUSPICES OF THE
DEPARTMENT OF AGRICULTURE,

| IN |
| :---: |
|  |  |

On Friday and Saturday, November 5 and 6, 1897,

## EXEBCISES PCBLIC ATD FREE.

EVEBEBODY IS IXVITED.

## (Second page.) <br> ORDER OF BUSINESS. FRUIT GROWERS SESSION.

Wednesday afternoon, November 5, 1.50.
Presiding offlcer, $\qquad$
1.30. Music.

Prayer.
Address of Welcome.
By
Response.
2.30. Potato Culture.
8.30. How to Grow Small Fruits.

Discussion opened by
By ..................................................
By
By
Discussion opened by
4.30. Adjournment.

## LADIES' SESSION.

In the Interest of Country Homen.
Wednesday evening, November 5, 7.00.
7.00. Music.
7.15. A Model Country Home.
7.45. The Quality and Preparation of Food.

By
By
8.15 Heating, Lighting, Ventilating, and Sanitary Arrange-
ment of Country Homes.

By
9.00. The Yard and Garden.

By
By
9.30. The Care of the Sick.
10.00. Adjournment.
(Third page.)

## GENERAL FARMING SESSION.

Thursday morning, November 6,9.00.
The Question Box.
9.30. Dairy Feeding.
10.30. Fertilizers, Home and Commercial.

Discussion opened by .......................................................................
10.30. Tortilia, Home and Commercial.
11.15. Market Gardening for Proflt.

Discussion opene
By
By
Discussion opened by
12.00. Adjournment.

## GOOD JROADS SESSION.

Thursday afternoon, November 6, 1.s0.
The Question Box.
2.00 How to Build a Good Road. By $\qquad$
2.45. How Can we secure Good Roads?

Discussion opened by
Discussion onened
3.30. Should the Road Taxes be Paid in Money? By

By
4.00. Should the State Aid in Buflding Roads? By

Discussion opened by
430. Adjournment.

## EDUCATIONAL SESSION.

In the Interem of Education for Barmerm and their Childrem.
Music.
Thursday evening, November 6, 7.00.
7.15. What is the Proper Education for Country Children? By

Discussion opened by
7.45. Should we Have Graded Schools in the Country? By

Discussion opened by
8.80. Should we Have a Redistribution of the School Funds Appropriated by the Stat ?

Discussion opened by
9.15. Ought there to be Towaship Eigh Schools? By
10.00. Adjournznent.

Discussion oppned by

## SPECIAL NOTICE.


#### Abstract

The foregoing order will be followed as closely as possible, but other exercises will be introduced if found desirable. Speeches, essays, and papers ought not to exceed twenty minutes. The papers, when read, are considered the property of the Department of Agriculture. Although these institutes are designed and conducted for the education and advantage of farmers, yet all who are interested are invited to attend, and it is hoped that they will show their appreciation, not only by being present at the meetings, but also by taking part in the discussions.


## ASK QUESTIONS.

A question box will be kept upon the secretary's desk, and all are invited to place therein such questions as they may wish to have discussed during the session. At a proper time, designated by the meeting, these questions will be referred to some one for answer, or brought up for general discussion.
All granges, alliances, agricultural societies, and kindred agricultural organizations are specially invited to attend.
For further information and for programs address
Chairman of the Board of Institute Mäagers for Mame, County.

| Local committee. | Committee on questions. | County board of managers. |
| :---: | :---: | :---: |
| Wm. Stevens ${ }_{2}$ Address, | William Stover, Address, | J. A. Walker, Address, |
| Mrs. Jane wilie, Address, | Miss Jane Miller, Address, | Wm. Cedars, Address, |
| Miss Emmas stone, Address, |  | John Williams, Address, |

MEANS OF ACCESS.
Trains on the B. C. R. R. arrive from the East at $8.30 \mathrm{a} . \mathrm{m}$. and $5.19 \mathrm{p} . \mathrm{m}$. ; from the West at $9.40 \mathrm{a} . \mathrm{m}$. and $9.38 \mathrm{p} . \mathrm{m}$.
On the P. R. R. trains from the East arrive at 4.52 and 9.54 a . m. and $4.32 \mathrm{p} . \mathrm{m}$. ; from the West at 10.18 a . m , and 5.08 and 9.23 p . m.

## IV. The Agricultúral Course in the French Colleges of Agriculture.

It is evident to anyone who will take the trouble to survey the field of agricultural curriculums that, though the term "education" is popularly synonymous with "school," and "degree" with "learning," the "agricultural college" is by no means the same thing as the "agricultural course." As the reason for this seems rather unobvious, it may be permitted to the compiler of the foregoing matter to enlarge upon the subject.

In the first place, it is important to recall that each one of us is aware not only of his own personality, "the thing he calls himself," butalso of an infinitely varied panorama or series of phenomena outside himself, which he instinctively insists is not a mere modification of himself. Equipped with this reflection, it may now be said that in the early educational process, whether on the banks of the Nile, the Euphrates, or the Seine, men gathered together in monastic-like establishments for the purpose of elaborating the spiritual self and fashioned a method of accomplishing their object, which in a wonderful degree facilitated the growth of language and confidence in logical soliloquy, or, as Bacon calls it, the intellectus sibi permissus. ${ }^{1}$ Dissatisfaction having set in with this method of education, owing to astronomical proof of its limitations when it attempted to account for physical phenomena, man turned to the consideration of the world without him as to a sphere of matter of fact, and this new process or education was called at first philosophia experimentalis, to distinguish it from the intellectus sibi permissus philosophy, as elaborated by the Greeks, from what, so it seems, they had an

[^37]opportunity to pick up in Egypt and Mesopotamia in their naive educational effort to free the human mind from coarse superstition and brutality by diffusing knowledge, even though, as Plato claimed, they manufactured it for sale. ${ }^{1}$

Thus throughout the history of education since the Reformation we have two systems of education, one old and established, which is based on the development of the self within, and the other based on what is from without and distinguished from self; and this new education proceeds by the widest aecumulations of facts and their reduction to so-called laws. But though the methods of these two systems as instruments for the instruction of the young are opposed, they agree in having the same object, which is to train the pupil to reason rightly and to go out into the world with a love of simplicity, of independence, and of work; a passion for justice, a disdain for hollow declamation and falsehood, and a contempt for vain distinctions and ill-acquired riches; in short, their object is to inculcate the virtues of perseverance, courage, respect of family, and all the solemn plausibilities of a noble life. In organizing this new or so-called scientific instruction, however, the monastic form of congregation into educational temples has been followed. We have had seats of learning rather than a diffusion of learning, though now those seats have entered upon the instruction of the people with an enthasiasm that it is hoped may not be prematurely chilled by a comprehension of the diffculties and the Herculean labors of the task.

The study of agriculture is the study of nature. Agriculture is not a branch of chemistry or of botany, bat chemistry and botany are branches of it. It is not dependent upon industry, but industry is dependent upon it. Minerals existed before vegetation, and it is the province of vegetation, in a biological sense, to convert mineral matter into food. Thus the course of an agricultural college is an encyclopedia of sciences, and the following remarks are an effort to illustrate the so-called agricultural course in the curriculum of the French agricultural colleges by the other concurrent courses.

DISCIPLINE IN FRENCH AGRICULTURAL COLLEGES.
The students of the French colleges of agriculture are treated in the same way as those of the literary colleges called lycees; that is, all exuberance is repressed by certain monitors or surveillants who watch, under the authority of the director of the school, for infractions of order and discipline among the students. Each college has two of these gentry and one a surveillant-général. The average age of the students on admission is 19 to 20 years. "The long school hours and the constant supervision in the French colleges are favorable to discipline, and the Frenchman is born with a turn for military precision and exactitude which makes the teacher fall easily into the habit of command and the pupil into that of obedience. French teachers who have seen English schools are struck with the greater looseness of order and discipline in them, even during class hours, and I have seen ${ }^{*}$ large classes in France worked and moved with a perfection of drill that one sometimes finds in the best elementary schools in England, but rarely, I tbink, in English classical schools."2

The "notation" of examinations adopted by the national French schools of agriculture runs from 0 to 20: $0=$ nothing (néant); 1 and $2=$ very bad; 3,4 , and $5=$ bad; 6, 7, and $8=$ mediocre; 9,10 , and $11=$ passable; 12,18 , and $14=$ pretty good; 15, 16, and $17=$ good; 18 and $19=$ very good; $20=$ perfect. The standing is obtained in the following manner: For students of the first and second year, take the average of marks of the particular examinations and practical tests held by the repetiteurs during the year and multiply it by 3 , then the arerage of the marks obtained at the general examination at the end of the course

[^38]${ }^{2}$ Matthew Arnold: Schools and universities on the continent, page 80.
and multiply it by 5 , and then the average of the marks obtained as a result of practical tests at the end of the course and multiply it by 2. Add the three products thus obtained and divide the sum by 10 and the quotient will show the standing of the pupil. If he has obtained 11 (for first year) or 12 (forsecond year), the student is promoted. For students of the third year (or fifth session) the average of the marks for the examinations and tests during the year is multiplied by 2, while the average of the practical tests of the final examination is multiplied. by 3 , the other features remaining the same. The standing of the graduating pupils is thus fixed up: The standing of the first year is multiplied by $\overline{3}$, that of the second year by 3 , that of the third year (one-half year) is multiplied by 4 ; the products are added and then divided by 4. If the final average is 13 , the diploma of the school is given. ${ }^{1}$

## NUMBER OF CHAIRS

Comparison of the "courses" in the French national schools of agriculture. (The professors are assisted by préparateurs-répetiteur, a bilateral individual-coach and teacher.)

$a$ It is possible to say that the term zootechnie is "applied" comparative anatomy.
It is apparent that these curriculums above given are more specialized as nne reads the columns from left to right. In fact, the Grand Jouan College is influenced by the idea of an extensive farming such, perhaps, as is necessary in breaking up new land and reducing it to an agricultural state until it approaches the tilth of a garden. Its instruction is, therefore, more condensed than] that of the Grignon College, where much more stress is put on botany and chemistry as becomes an institution championing the intensive farming idea, while the Montpellier College, situated in the wine-making and silk-growing portion of France, has a complete course for grape growing (viticulture), for silkworm raising (sericulture), and for wine making, etc. (technologie). In the same way it might be expected that the American colleges in California and Florida might strive to make specialists in " agrestrian arbericulture," or as the Floridians say, "grove culture," while in Kentucky and Virginia tobacco growing and its industrial preparation might be the bias of the college, and in Alabama and Mississippi cotton, and in Lovisiana sugar might be matters that the States concerned would find it advantageous to push in the institutions that have been endowed by the Repnblic.

We see that each French college has from six to twelve courses, but that one of these, namely, the course in agriculture, comes first in every case; for, though th 3 Montpellier College includes under agriculture the cultivation of the mulberry

[^39]and olive tree, whicn of course are not commonly regarded as vegetables, as they occupy the ground for many years, yet it should be remembered that a bed of asparagus (certainly a vegetable) is said to be capable of lasting twenty years if well prepared. Let us, then, take the course of agriculture in each of these colleges and compare them with each other and then with the other parts of the curriculum.

THE OBJEGT OF THE AGRIOULTURAL COURSE.
The Grand Jouan College ${ }^{1}$ under the agricultural course comprises the study of (1) the vegetable soil-that is to say, the agricultural workshop (l'atelier agricole); (2) fertilizing matters-that is to say, the food of plants; (3) work of the fields (the handling and use of agricultural tools); (4) the most useful plants, and (5) rotation of crops. Although this instruction has reference more particularly to the regions of the west and center, it never loses its broad and general character. Nevertheless, over 100,000 acres of the "department" in which the school is situated are waste lands, and it is said by the technical secretary of the national agricultural society of France that the system of culture is as yet semipastoral, though, thanks to the efforts of M. Rieffel, the founder of the Grand Jouan College, a "considerable step" in advance has been made.
Leaving the upland prairies of the coast for the environment of Paris, we find the management of the school of Grignon striking a different note. Here is what is said in the annuaire for 1893: "Grignon desires to give young men who wish to become agriculturists the sum total of those scientific and practical ideas which are recognized as indispensable for good cultivation of the soil; to turn out men who will know the researches of agricultural industry and its conditions of existence; men capable of choosing, selecting, and applying different methods; men who join to a knowledge of economic science a profound knowledge of the technical details of the profession of agriculture; men, finally, who shall either on their own exploitations in the councils of the country, or in the professional chair, be able at need to successfully develop the principles and facts which shall clear up hazy discussions which disturb agricultural interests." Here we evidently have a school of agricultural politics or statesmanship.
The College of Montpellier owes its foundation to the wine makers of France and its importance to a native of America, the phylloxera. "The début of the school was not very satisfactory, for the viticulturists of southern France, justly proud of the results they had accomplished by an intelligent management of their business, had no particular use for a school. But very soon-following the arrival of the phylloxera-the aspect of things changed." ${ }^{2}$ Here we have a school for forming agricultural specialists or scientific police, or physicians, especially necessary for a certain class of vegetables, such as graperines and fruit trees, whose lease of life and whose unproductive period from seed to bearing are long.

Outlines of the agricultural course proper.

| Grand Jouan. | Grignon. | Montpellier. |
| :---: | :---: | :---: |
| 1. The vegetable soil. <br> 2. Fertilizers. <br> 8. Field work. <br> 4. Usefnl plants. <br> 6. Rotation of crops. | 1. Agrology (the make-up of soil). <br> 2. Means employed to modify the physical propertiesand chemical composition of soil. <br> 3. Study of different kinds of agricultural plants. <br> 4. Rotation of erops. | 1. Formation of soil. <br> 2. Cultivation and harvesting. <br> 3. Fertilizers and liming, etc. <br> 4. Cultivation of special crope <br> (e.g., in America, cotton). <br> 5. Tree growing. <br> 6. Rotation. |

It will be interesting to compare the mere outline of the above course in agriculture with the outline of our own institutions. Some years ago the American Agriculturist referred to our agricultural colleges as not having succeeded very well, with two exceptions-one, in the East and one in the West. Possibly what may have been true long before the act of August 30, 1890, is not true to-day, but as both the celleges excepted have by no means retrograded during the interval that has elapsed they may be taken as examples of the most successful institutions of their kind. We will take the Grand Jouan College to represent the French curriculum:
$\operatorname{ED~96-40*~}$

History of agriculture and solls.
Botany
lementary chemistry
Mechanical drawing-.................................................. Bookkeeping
Advanced aigebra and geometry
French $\qquad$
Study of tactios -

Total $\qquad$

Second year: Recitations.
Agriculturo
Irrigation aud disposition of sewage, ma nures, otc.
Hours

| 108 |
| ---: |
| 140 |
| 45 |
| 72 |
| 32 |
| 173 |
| 86 |
| 157 |
| 16 |
| 829 |



Nomenclature of certain families of in terest to agriculture.
Rural ongineering.
Conic sections.
Suryeying.
Projection.
Mechanics.
Motors, tools, water and wind power, draft animnls
Rural logislation and economy
Elementary political economy (general). Elementary political economy (rural) Rural business and agricultural statistics.
yysical science
Phyeorology.
Chemistry.
Metals and salts.
Zoology
Animal anatomy and physiology
Animal form (exteriony
Comparative anatomy or breeding.

## Total

Second year of professional instruction (7 chairs alone).

Agriculture $\begin{gathered}\text { Cultivation (conciuded }\end{gathered}$
Culture of plants (gpecial).

| Hours. | Western United States College (4 years' course). | Hours. |
| :---: | :---: | :---: |
| 6060 | First year: Recitations. |  |
|  | Soil physics, tillage, drainage, crops, etc.... | 179 180 |
|  |  | 185 |
|  | Elimentary chemistry. | 50 |
| 60 | Physics ................... | 88 |
|  | Chemical 1aboratory Blacksmithing. | 20 <br> 20 <br> 25 |
|  | Carpenter shop. | 75 $1: 0$ |
|  | Drill | 108 |
|  | Rhetoricals |  |
| 60 | Algebra. Geometry Grammar English. | 130 50 42 44 |
| 60 | Total $\qquad$ School in session | 1,284 |
| 60 |  |  |
| 30 |  |  |
| 330 |  |  |
| 00 | Soil physics, tillage, etc. |  |
|  | Botany: Recitation | $\stackrel{24}{15}$ |



As far as the number of hours is concerned, the above table does injustice to the French College. This Bureau has as yet failed to obtain the (manuscript) emploi de temps, ${ }^{1}$ which of course varies from session to session, and the remarks which follow may not perhaps be strictly true of the French College whose course has been given, though true of one of its fellows or of the lycees of France, these lycées being the institutions which prepare for the bachelor's degree. The duration of a professional lesson (leçon) is one and one-half hours. The first one-half hour is given to questioning upon the matters which had been presented in the preceding lesson. The professor thus assures himself that those matters are understood. After the lesson of one hour experimental demonstrations are given, and in addition to this each student is questioned at least once a month by the repetiteur (coach or tutor, or, literally, one who demands back-in Latin, repetitor) attached to each branch of the curriculum. Of these under teachers or repetiteurs there are at Grand Jouan five, each of whom aids the professors in making the applications of his remarks and in the manipulations. In addition they complement his work by "conferences" and examine the students. The chief gardener and the chief of agricultural work also hold conferences and the military exercises are under a special instructor. Again, the instruction at Grignon is both scientific and practical. In addition to the lessons given in the amphitheaters (lecture rooms), and to the laboratory work, are the daily observations collected by contact with actual cultivation, the work in the botanic garden, in the arboretum, market garden, and fruit tree (dwarf) garden, and in the dairy, sheepfold, and stables.

The students are charged with all the "services" of this exploitation for fifteen days (1st and 16th of each month), which services consist of the service of culture (gardening, plowing, etc.), of animals and the barnyard (cour), of engineering and operating machines, of the demonstration plots, and of the gardens, of the botanic school and the collections, and finally of meteorological observations and such other services as may be necessary. The different services are each confided to a student of the second year, as chief, and two students of the first year. Each day a surveillant posts the names of the students who are to perform the different kinds of "practicsl work," but theevening before the students who are to perform it, knowing their turn perhaps, call upon the director to learn the part they are to perform upon the morrow, and they are required to note what they have observed during the course of the work in their scholastic notebook (cahier).
The curriculum of the six courses of the Grand Jouan College has mainly occupied our attention in the foregoing, but it may be interesting to those unfamiliar with the order of procedure in a French agriculture course, properly so called, to examine the manner in which the course is developed in the Grignon College. A translation of this course follows.
${ }^{1}$ The time table of a French lycee is somewhat like this:
[From report of A. Tolman Smith, specialist in this Burean.]


SYLLABUS OF THE AGRICULTURAI COURSE PROPER, TWO AND ONE-HALF YEARS, WHICH IS ONE OF THE NINE COURSES IN THE AGRICULTURAL COLLEGE OF GRIGNON, FRANCE.
Agriculture, properly so called, its importance, and the variety of knowledge it requires because (1) of the character of the formation of the soil, (2) of the multitudinous influences which affect production, (3) of the variety of agricultural products. All these make it depeadent upon the sciences of geology, mineralogy, chemistry, physics and meteorolgy, botany, mechanics, and rural engineering. The subject of agriculture will in this school be considered under (1) agrology, or the study of the surface of the earth as to its origin, composition, and physical and chemical properties, then (2) will be taken up the study of the means employed to modify the physical and chemical properties of the soil by application of matters to its surface or by cultivation, then (3) will be considered the different agricultural plants, and finally (4) the rotation of crops.

## I-AGROLOGY.

[The compiler has allowed himself the liberty to run the bald statement of each fact into a connected account, and he must be held accountable for everything in the translation except the names of the things taught and their order.]
The soil and subsoil-the vegetable stratum-origin of the soils. The component parts of the soil and the importance of studying them and ( $\alpha$ ) mineral elements which are furnished by the rocks, which are primitive, eruptive, sediméntary, or mataphoric. This leads us to examine more particularly (1) the elements which form the backbone, so to speak, of the soil (squellette du sol), to wit, sand, clay, lime, and (2) the less strongly represented elements, to wit, phosphoric acid, sulphuric acid, potash, maghesia, and oxides of iron.
Having thus studied the mineral elements as just given under $a$, we now pro* ceed to study (b) the organic elements-humus and its origin, composition, and rôle-nitrogen, and different states in which found in the soil as waste organic matter, ammonia, and nitrates. Then follows a study of the soil as a sort of sponge, bearing first upon its physical propertios and then its chemical properties, to wit: The soil considered in respect to its weight and its volume, or density; then in respect to the implements of culture (tenacíty, cohesion); then in its relations with water (permeability, capillarity, etc.); then in relation to solar heat and the causes which interfere with the action of heat upon the soil. We now pass to the chemical properties of soil-the fixation of gases and absorption of fertilizing matter.

Thus, having gone over the organic elements of the soil and the physical and chemical properties which enable the soil to clutch the fertilizing matters coming in contact with it, we proceed to examine the relation of soil and climate, to wit: Necessity of completing the ideas relative to the properties of a soil by those relative to the environment; special necessity of studying climate in this respect as dependent upon geographic situation, height above the sea, shelter, distance from large masses of water, frequence of rains, influence of snow, climatic divisions of France. Classifications of soils by Varro, Thaër, etc., and classification adopted by this college, which is based (1) on what mineralogy teaches us about its chemical composition, (2) the size of the particles which compose it, which is the most important factor of the physical properties of the soil. By these considerations we are thus led to establish the following division: Sandy (rocky, stony, gravelly, coarse, fine, clay sand, calcareous sand, and calcareous clay sand, or "terre franche" ");

[^40]volcanic soils; lime soils (rocky, etc., fine powder, chalky, soft limestone, as in Kentucky, and marl); clay soils (lime clays, sand clays); schistous soils; humus soils (peaty, marshy, etc.); oxide (or silicate) of iron soils, i. e., ferruginous soils (ferruginous sand, clay, or lime soils); magnesian soils (dolourite sands, calcareous magnesian lands, magnesian clays). Finally are taken up the importance of the depth of soils and the influence of the subsoil.
II.-Study of the Means Employed to Monify the Physical Properties and the Chemical Composition of Soils.

In the foregoing we have familiarized ourselves with a knowledge of what nature has placed at our disposal and the way in which she has arranged it in different localities, and the influences which she brings to bear upon it. This study in France is called agrology, though it might as well be called agricultural or soil physics, the formation of the agricultural soil being due to the action of atmospheric phenomena upon the rocks. We have now to consider the utilization of the nature of the soil, which from an ideal standpoint should possess: (1) The proper physical properties, (2) a good mineral composition, and (3) organic matter. New soils rarely unite in themselves these three conditions, and the farmer endeavors to create them by introducing one of the three backbone mineral clements or a fertilizing material either of a mineral or organic nature, to wit: (1) By dumping sand, clay, or lime in some form upon it; (2) by manuring it with vegetable matter, turning under green crops of various kinds, seaweeds, rushes, skins and pulp of grapes and other fruits which liave been through the press.etc.; (3) by animal fertilizing material-blood, flesh, waste from fisheries, hair, feathers, horns, leather, guano, fecal matters, urine, etc.; (4) by mixed fertilizersbarnyard manure, city scavage (boues des villes), composts, street or road streepings, deposits in stagnant water (vases), and sewage; (4) chemical and mineral manures-bones, natural phosphates, superphosphates, chloride of potassium and sodium, sulphate of ammonia, chlorhydrate of ammonia, etc.; and, finally, (i) by cultivation, such as paring and burning, i. e., scobuage, meaning, however, not the burning of the clay crust, but of a fibrous one, colmatage, $i$. e., the manner of elevating the surface of a soil by letting the muddy water of a stream flow in unon it, drainage, breaking up, the kinds of cultivation by various instruments, spade, plow, harrow, etc., in regard to depth, form, whether in round ridges (billons), flat ridges (planches), or flat; cultivating and weeding and hilling up (buttage).

## III. -Study of the Different Agriclltural Plants.

Having studied the soil in its scientific aspect-that is, as to its formation and the opportunities it offers to man, and then the method that experience has shown to be the best for man to follow in availing himself of the work that uature has done for him, or holds out hopes of doing for him-it now follows in course to study the vegetable which is (by leave of the new-discovered agricultural or nitrogenous microbe) the living organism which converts the minerals or gases held in suspension in water into a structure which, as forage or fruit, fodder or seed, is the food of animals. First, then, plants mainly cultirated for their seed, such as wheat, rye, wheat and rye sown together (meteil), oats, barley, maize, millet, and sorghum. Then follows the care and preservation of these cereals before and after thrashing, in mills, granaries, and silos, and the manner of such preparation. After the cereals, or gramineae, come buckwheat, to represent the polygonacea; then the various kinds of beans and pease, to represent the leguminosæ. The stady of forage plants is introduced by a consideration of natural pastures, and then (a) the characteristics of artificial pastures put down to grass for mowing, etc., preparation of the soil, choice of seed, sod, regeneration, irrigation, care, returns, curing, breaking up; (b) pastures [permanent?], their proper situation, care, and exploitation; (c) meadows [herbages?], proper soil and climate. The foregoing
are (probably) pèrmanent, whether created by nature or man. We now come to the consideration of temporary pastures, their importance, composition in regard to plant life, etc.; then follow plants cuitivated for their roots or tubers; and the preservation thereof, then plants cultivated for their stalks and foliage, and the caring thereof, either by drying or siloing; trees whose leaves answer the purpose of fodder; industrial plants, and, finally, plants of "grande culture," as pumpkins and cabbage.

## IV.-二The Rotation of Crops:

The last subject is the order in which the soil should be cropped. Definition of the term "assolement" (sole being the feminine form of sol, soil, but is used to designate a field or other division of the farm) : Relations which should exist between the rotation and the agricultural, economic, and climatic conditions; periods of rotation and examination, and discussion of the principal types;
NOTE. -The professor, -accompanied by a repetiteur and a chief of agricultural practice, makes the excursions which are necessary for the topographic study of the surrounding country. The school is so favorably situated that one finds within a radius of 12 miles-a distance not exceeding a day's walk-every variety of soil from chalk to peat, while the clay plateaux permit a study of very varied climates and special soil formations. Within the school the students are exercised in the grooming of draft animals and harnessing and driving them. They learn the make-up, the outline, and the handling of the various agricultural tools and machines. They sow by hand and machine, and are familiarized with the work of cultivation and harvesting. They are obliged to learn all the duties of the farm under its superintendent, and to perform work which is of a nature to make them babile and adroit in the management of machines, and thus cause them to acquire by a consciousness of ability to perform (par le savoir-faire) that authority which is indispensable to a director of a farm.

## V. The Possibility of Improving Agriculture.

## L-The Meteod (in terms of Hindu Agriculture). ${ }^{1}$

On one point there can be no question, and that is, that the ideas generally entertained in England, and often given expression to even in India, to the effect that Hindu agriculture is as a whole primitive and backward and that little has been done to try and remedy it, are altogether erroneous; for the conviction is forced upon the investigator that, taking everything together, and more especially considering the conditions under which Indian crops are grown, they are wonderfully good.

At his best the Indian "raiyat" or cultivator is quite as good as, and, in some respects, the superior of, the average British farmer, while at his worst it can only be said that this state is brought about largely by an absence of facilities for improvement, which is probably unequaled in any other country, and that the raiyat will struggle on patiently and uncomplainingly in the face of difficulties in a way that no one else would. The lacking facilities are water and manure, for nowhere can one find better instances of keeping land scrupulously clean from weeds, of ingenvity in device of water-raising appliances, of knowledge of soils and their capabilities, as well as the exact time to sow and reap, as one can in Indian agriculture; and this is not said of its best alone, but of its ordinary level. It is wonderful, too, how much is known of rotation, the system of " mixed crops," and of fallowing. Nevertheless, while some have condemned all attempts

[^41]at improvement, asserting that the raiyat knows his business best, others have equally erred by calling his agriculture primitive, and, forgetting that novelty is not necessarily improvement, have thought that all that was needed was a better plow, a reaper, a thrashing machine, or else artificial manures to make the land yield as English soil does. On one point, however, there can be but little doubt. The native, though he may be slow in taking up an improvement, will not hesitate to adopt it if he is convinced that it constitutes a better plan and one to his advantage.

The first aim in any scheme of agricultural improvement should be to modify those differences which exist; first of all, by teaching in the more backward parts of India the better practices of the most advanced Indian agriculture; and secondly, by supplying, wherever it is possible, those facilities which exist in the best agricultural districts. It is in the existence of these differences that there is a warrant for the belief in the possibility of improving Indian agriculture, and it is in the modification of them that the great hope of improvement lies. These differences and the best way of modifying them appear to be-

1. Differences inherent to the people themselves as cultivating classes; for instance, the fact that by hereditary practice certain castes and races are bad, others are good, cultivators.
2. Differenoes arising from purely external surroundings and not directly from any want of knowledge, to wit:
(a) Physical causes, such as climate, soil, facilities for water, manure, wood, grazing, etc.
(b) Economical or political conditions, such as are the relative ease or difficulty of living, paucity or pressure of population, etc.
3. Differences arising directly from want of knowledge; for instance, the existence of diversity of agricultural practice in different parts of the country.

Having thus stated the differences, it is desirable to consider, in the next plece, the means by which they may be removed, or, at least, modified:

1. The modification of existing differences in agricultural practice and methods must proceed from positive measures taken-
(a) By the people themselves.
(b) By the Government.
2. So far as it is possible for Government or for agricultural departments to assist in the modification of these differences, it is their duty to do so.
3. It is the work of Government to test Western practice and the applications of modern science as also to introduce them when found suitable for India.
It will be well now to illustrate the foregoing differences and indicate how their modifications may be carried out.
4. Differences inherent to the people themselves.-It is well known that certain castes and races have been prevented by religious prejudices or "historical causes" from adopting the more skillful or laborious systems of cultivation in vogue among other castes or races. Thus the Rajputs, Brahmans, Kolis, and Kols may be mentioned as hereditarily inferior as cultivators to the Játs Kurmis, Lodhas, Káchhis, and others. Here it is not so much that the external surroundings are unequal, nor that agricultural knowledge is at fault, but the real cause is found in the inherent differences of the people themselves. Side by side in the same village one may, for instance, see both superior and inferior husbandry, the explanation being primarily in a reference to the respective caste of the cultivator in each case. In Behar, I (Dr, Voelcker), on seeing a quantity of dang lying about in heaps on a field, not spread out, but between the rain and the sun speedily losing ite goodness, asked a neighboring cultivator why the owner did this. The reply was, "He is only a goatherd," meaning thereby that he did not belong to a good cultivating class. Here the people of this caste evidently required to be taught better methods of agriculture and how to manage properly the manure at
their disposal. The modification of such differences will, in some cases, be effected by the people themselves in the gradual abandonment of their prejudices and the adoption by them of more profitable practices. A change of this kind has been seen in the adoption of indigo cultivation by castes who formerly considered indigo an unclean thing. Another instance is the extension of cultivation of the potato, against which a religious prejudice existed on the ground that it is "flesh." The work that Government can do and is its duty is to assist in raising the level of the people through the spread of education. This will continue to do, as it has already done, a great deal to break down prejudice. Further than this the Government can do little, if anything.
5. Differences arising from purely external surroundings.-(a) Physical causes: These may be subdivided into climate and soil and facilities for water, manure, wood, grazing, etc., and first climate and soil. These stand in a different category to the others. They are fixed by geographical and gealogical considerations; over them neither the people nor Government have more than a limited control, and consequently comparatively little can be done to modify the differences. For instance, it is not possible to compare agriculture under the influence of a damp climate and abundant rainfall, such as prevails in the greater part of Bengal, or below the western ghâts of Bombay, with that of the dry parched plains of the Maltan and elsewhere in the Punjab. Equally impossible is it to find a resemblance between the rich black cotton soil of Berar or the central provinces and the sandy soils of Sirsa or other parts of the Punjab. The planting of trees may indirectly modify the rainfall, and plentiful manuring may improve the poorer soil, but they will be powerless to make the one locality or soil really like the other.-

In regard to facilities for procuring water, manure, etc., we have a set of physical causes giving rise to differences which, unlike those in the case of climate and soil, it is in the power both of individuals and of Government to mitigate to a considerable extent. Marked, indeed, are the differences between parts plentifully supplied by wells or through which streams or canals flow and those where these features are absent. So, again, the differences are great between the treeless tracts and those in which forests abound, the latter giving alike shelter, grazing, and wood, besides causing a saving of manure to the land. Much has been done in the past, and more may yet be done, to mitigate the differences resulting from the existence of this class of physical causes. The people in certain dry localities have dug wells, constructed tanks, and taken channels off streams. On the other hand, in some parts valuable land has been recovered by means of drainage or by the construction of dams, made either by the people themselves or by the Government, through its engineers. In the matter of wood and grazing supply, natural differences have, in many parts, been intensified through the reckless extirmination of forests by the hand of man, or through excessive grazing with cattle and sheep, and more especially by goats. But although the people are likely to do little to remedy this, yet it is in the power of Government to save what is remaining and to provide "reserves" for wood, fuel, and grazing, whereby, too, the supply of manure to the land may be saved. It becomes, therefore, one of the most important duties of agricultural departments to ascertain and point out what measures are possible for the judicious modification through Government agency of differences resulting from such physical causes as the above named. This can only come as the result of close and careful inquiry as to what the needs of each locality are and how they may be best supplied.
(b) Economical and political conditions: There are cases to be met with, e. g., in parts of the central provinces of Bengal and of Madras, where, owing to the natural richness of the soil, the sparsity of population, or other causes, there is not the same struggle for existence as is felt elsewhere, and as a consequence the agriculture is often found to be inferior. Here the change will only come with the inevitable disturbance which time and increasing population will cause in the
easier circumstances under which the people in some parts live at present as compared with those in others.
3. Differences arising directlyfrom wrant of knowledge.-There are many instances of the cultivation of one district being inferior to that of another, not on account of caste differènces, nor yet on account of external and unfavorable physical surroundings, but simply because à better practice has not been known; or, again, an implement is not in use in a district, though employed advantageously elsewhere, or cattle are poor because not properly fed, or manure is wasted (more especially the urine) because there is no litter to conserve it, or crops are inferior in yield because seed is not carefully selected. The want of knowledge and the lessening of the local differences arising therefrom can not be supplied directly by the people themselves, but they may be by the State, partly by means of education and partly by the introduction of better methods from localities where they are known to those where they are unknown, but their application to which is both feasible and desirable. This can not be done without.systematic prosecution of agricultural inquiry, which must precede any attempt at agricultaral improvement. Such an inquiry can only be effectively carried out by a permanent agency closely associated with the existing authorities in each State. Further, the assistance of an expert with special knowledge of the application of chemistry to agriculture is desirable in any such inquiries.

## II.-The Means (Employed or Sugarsted) <br> In China (La Cite Chinoise, Simon¹).

Limiting the scope of our examination to China, properly so called, it may be said to have an area of $1,250,000$ square miles, or about one-third of the area of the United States, upon which lives a population of over $400,000,000$ people. Europe, with an area four or five times as great, has scarcely $337,000,000$; but there are in China provinces as large as France or Germany where 5, 6, and even 7 inhabitants may be averaged to the $2 \frac{1}{2}$ acres; and there are districts as large as Belgium where this density exceeds 12 and even 15 inhabitants to the $2 \frac{1}{8}$ acres (hectare). No country of Europe, with the possible exception of the Isle of Jersey and the Province of Valencia in Spain, is comparable in this respect with China. This density is so extraordinary that it has frequently been contested as a hoax, but it is apparent to those who have had the opportunity to travel over the vast territory of the Chinese Empire. Out to the frontiers of Thibet, 2,400 miles from the sea, it frequently happens that the traveler passes through cities of 500,000 to $1,500,000$ people, and in the most distant provinces he frequently journeys along with crowds which are going to a fair (aux marches), where are gathered 15;000 or 20,000 persons at a place previously comparatively unpeopled. From one end to the other of China, so to speak, villages, hamlets, cottages follow in such quick succession that the country is like the environs of one of our great cities. Nevertheless the Chinese continue to consider the multiplication of the species a virtue. They have no doubts about the future. If the surface of a field is measurable, who has ever been able to measure its fertility? But it is necessary to say that the Chinese are very economical in regard to everything which serves to augment the fertility of the soil. They do not export the wealth of their country by turning the sewage of their farms and cities into the rivers.
Quite the contrary. The Chinese collect the waste products of haman existence and consider it an act of justice, to neglect which would be sinful, to retarn to the earth what she has loaned. Aryan and Semitic forms of worship are inspired by a contrary doetrine. In them, work is a chastisement, from which it is the universal desire of all to be delivered, but the Chinese do not recognize the

[^42]servility of labor, and the professions that we call liberal and those of the artisan are upon the same footing as far as professional precedence is concerned. A bricklayer or carpenter is not less estimated than a physician, and receives about the same pay. ${ }^{1}$ What a difference is there, then, between Chinese agriculture and ours. How erroneous to think that for a long period it is possible to replace the wooing of nature by tricking her; manure by big machines! The Chinese ask nothing from the land which they have not solicited by the application of labor and plant food. This may not be agricultural science, but it is agricultural sagacity. The secret of Chinese agriculture may be given in two words-work and justice (to the soil).

IN HOLLAND (REPORT OF MICHAEL G. MULHALL, STATISTICIAN ${ }^{2}$ ),
Holland has been aptly described as a kingdom scooped out of the ocean, onethird of its area being below sea level. The Dutch have expended more than $\$ 1,500,000,000$ on levees or dikes to keep out the sea and to guard against the overflow of the Rhine at certain seasons. They have; moreover, reclaimed 45,000 acres by pumping out Lake Harlem, a work which took thirteen years to accomplish; and now they propose to pump out the Zuyder Zee, which will give them 520,000 acres of meadow land, at a cost of $\$ 150,000,000$. Their manner of life is almost amphibious, for it may be said that while the husbandman with one hand sows grain he is bailing out water with the other. In whatever direction you go, the scene is the same; fields separated not by hedges but by water courses; windmills whose sole occupation is pumping water from one canal into another. These canals have a total length of $1,920,000$ miles, or sixty times the circumference of the globe; and the total area of the country being only $8,000,000$ acres (one and one-half times as large as Massachusetts, with twice its population), there are 420 yards of canal to every acre. There are three kinds of canals: (1) Those which serve for navigation; (2) those used by men and women for skating to market in the winter time, and (3) the smallest kind, serving merely for drainage or irrigation. How Holland can support in comparative opulence so large a population, having neither coal, iron, nor any manufactures worth mentioning, is a problem for the economist, which is perhaps only explained by the thrift and industry of the people. There is here no indication of agricultural depression, hard times, nor struggles between capital and labor. The people and the Government are on the most friendly terms. In religious matters, too, the relations are enviable. In fact, for a well-ordered country, it would be difficult to imagine anything better, for all classes seem equally bent on living in good fellowship and doing their best for the public welfare.

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\text { IN DENMARK (REPORT OF THOMAS P. GILL }{ }^{8} \text { ). }
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The population of Denmark is $2,200,000$. At the end of the last century it was one of the poorest countries of Europe. To-day it is one of the richest, and that progress in wealth is almost entirely represented by its progress in agriculture; in short, butter, pork, and bacon. But before entering into details it is necessary to mention that the leading agriculturists of Denmark insist on attributing the intelligence and capacity for organization of the Danish farmers and the enlightened relations which they had been capable of establishing with their

[^43]Government to two special clauses: (1) The education received by the peasantry in the peculiar institutions which they call rural high schools; (2) the distribution of land amongst small freeholders. In the high schools men peasants of 18 to 30 spend five months of winter, and women three months of summer, receiving an education which leans chiefly to the human side, and gives but a secondary place to the scientific and technical side, the object being to develop the heart, mind, and will. The agricultural authorities in Denmark, when questioned on the subject of education, have almost always replied that apart from the advanced, specialized study of agriculture in the university stage-a stage of scientific researchthey rely more upon the "highly developed common sense" of the Danish farming class, as brought out by their [peculiar?] high-school education and their system of organization,.for the spread of improved methods of farming, than they do upon any special technical training in the schools.

## IN SWITKERLAND (LA ORISE $A G R I O O L E-D R O Z ~ 1) . ~$

Despite the shortcomings that may be urged against our Swiss agriculture, we have best recognized the necessity of changing the character of our products. Since the railroads bring in grain and meat at a price which defies all competition, we have been forced more and more to relinquish the culture of the cereals and the production of beef. Switzerland has seen that her soil produces with infinitely more profit certain highly flavored grasses which are in reality the base of her mills industry. This industry she has therefore developed, and so advantageously that the products enable her to buy her bread and meat more advantageously than if she had obstinately persisted in attempting to produce them herself. It is necessary for the agriculturists of each country to have their eyes open to their true interests, and to give a new direction to 'their activity whenever they find it necessary or advantageous to do so. The State may aid individual enterprise by creating experiment stations, and by endeavoring to disseminate a healthy agricultural instruction (une saine instruction agricole). But there is in general no universal solution of the problem which is presented to each farmer, who must exercise his own judgent in selecting the branches of his vocation which will turn out to be the most lucrative under his own conditions.

## IN IRQLAND (RECOMMENDATIONS OF THE " RECESS COMMITMEE."

We have in Ireland a poor country, practically without manufactures, dependent upon agriculture, with its soil imperfectly tilled, its area under cultivation decreasing, and a diminishing population without industrial habits or technical skill. Leaving aside the question of the causes of this condition of affairs, the great fact we have to deal with here is that agriculture is now not only the main, but, over the greater portion of the country, the sole Irish industry. It being theindustry in which the greater portion of the working population is now actually engaged, it is in connection with this that the industrial habits, which must eventally spread through every class, can soonest be implanted. How, then, is our agriculture capable of improvement? That it is capable of some improvement is a proposition which we need not argue. Ours is by common consent one of the simplest and most barbarous systems of agriculture in western Europe, both as regards the want of variety in the crops and the scantiness of the produce.
The first lesson we have to learn, then, is taught by our continental rivals; it is the necessity for organization. Agriculturists there have spontaneously organized themselves for the protection and advancement of their industry in various forms

[^44]- of societies, chiefly cooperative. Where the agriculturists themselves have not been sufficiently alert to initiate this organization, the State has sometimes gone the length of enforcing it on them by law. It is everywhere on the Continent now recognized as a principle (1) that the action of the people themselves through industrial combination is more important than the action of the State, and (2) that the assistance of the State can only be truly effective when there exists a system of local representative organizations of the (in Europe) so-called industrial classes, to cooperate in its administration. All attempts of the central government to act through unorganized individuals in schemes of agricultural and industrial improvements are by implication condemned as likely to do more harm than good. For Ireland this lesson seems to us even more vital than it is for countries longer inured to habits of industrial enterprise. The effects of organization upon character are even of more value than its economic advantages. It engenders self-reliance and mutual confidence among the people; it sharpens their intelligence; systematizes their habits, and opens out to them new conceptions of their own powers and of the resources of self-help. Without organization spreading pari passu among the people, state aid is in danger of stepping beyond its proper limits and may prove distinctively mischievous. A lavish expenditure of public money, which taught the people to lean more than ever upon government and still further weaken their backbone, which demoralized officials and the public by wastefulness and jobbery, would leave Ireland worse than she is now.

The Government should aim next at diffusing among the agricultural class through the medium of their organizations and through its educational system, the most enlightened ideas upon cultivation and upon the latest applications of science to agriculture. The method of instruction by traveling instructors is particularly noted as being one of the most effective means of improving the methods of the agricultural class.

It will be obvious that a work so large and so various yet in its general purpose so homogeneous will require for its due discharge a special machine of government; and it is therefore proposed that Parliament should establish a ministry of agriculture and industries for Ireland which shall consist of a board with a minister.
in France (EXtracis from the letter of m. tisserand ${ }^{1}$ ).
I think that on the present occasion I shall be responding better to your wish if I lay before you the ideas which sixteen years' experience of the working of this ministry has suggested to me, and if I tell you what, in my judgment, a ministry of agriculture ought to be, what it ought to do, and what it ought not to do, what ought to be its rôle in government and in society, how it ought to be organized, and of what machinery it ought to consist to insure its regular and useful working.

The first point to be understood is that a ministry specially for agriculture has become in our day a necessity, an imperions need in all countries, whether they be states of old Europe or countries newly opened to civilization. This arises from the fact that everywhere nowadays agricultural and economical questions have assumed a capital importance and dominate all others. Everywhere man clings to the land; it is the earth that nourishes him, and, like the giant Antæus, he ever has need to touch it, to feel it beneath his feet, in order to renew his strength. It is a general sentiment that on the rational and scientific culture of the soil depends to-day the exdstence and power of nations.

Formerly tradition, handed on from father to son, sufficed the husbandman for the advantageous utilization of the soil. The methods of culture were simple. It called for no grest effort of the mind to till well, to regulate the rotation of crops

[^45]and the breeding of live stock. Everything went on in a restricted circle and the son, working as his father had done before him, was able to live comfortably and bring up a numerous family. To-day the situation is no longer the same. In this extraordinary century when everything has been profoundly modified by steam, when distances have disappeared, and the Australian, with his wool, the Hindoo, with his wheat, the American, with his cattle and his dead meat, can reach the markets of Europe at less cost than it took the farmer of Yorkshire at the beginning of the century to carry his produce to London, old methods and paternal traditions have become insufficient for the struggle which has to be carried on against foreign competition. It is no longer the struggle for life between man and man which is the question, it is the struggle for existence between industry and industry, between agriculture and agriculture, between country and country, and in all directions it is felt that the agriculture of Europe is like an old and leaking ship, and that to save it from foundering it needs to be steered by abler hands and navigated by pilots who will join to a thorough, practical training a profound and extensive scientific knowledge.

It is under the influence of these apprehensions and menaces, and in face of an abnormal and critical situation, that there has come into being in almost every country the idea of creating a department of agriculture. This is a response to an imperious demand, and means an appeal for the help of all, a grouping and marshaling of the strength, the energies, and the wills of all toward a determined and definite end-the raising up of agriculture.

## VI. Engineering Testing Laboratories.

Much space was given to the subject of engineering in the report of this Bureau for 1889-90. Since that report has appeared attention has been attracted to a new form of an engineering laboratory recently organized or reorganized in Germany. ${ }^{1}$ There seems to be some confusion in regard to the character of these institutions, not only in connection with their political side, but also in connection with their functions as technological laboratories. It is necessary, therefore, to recall that the German Empire is composed of twerity-five independent States, each of which has a government independent in matters concerning education of the Imperial (Reichs) Government, of which the King of Prussia is head, with the title of Kaiser or Emperor. The States of Prussia, Saxony, etc., are, therefore, as far as regards education and the managerfent of their own internai affairs, very much in the same position as a State of the American Union. But the States of the German Empire have assumed control of lines of railroads and telegraphs, etc., and apparently exercise a more intimate inspection into the operations of private enterprises than is assumed by the States of this Repablic, which renders it necessary to employ a trained corps of officers and to have a convenient place for making tests upon which, in the interest of public and private business, so much depends.

There are in Berlin two institutions for making technological tests. One of these is called the Imperial (Reichs) Institution for Physical Tests, and the other the Royal Mechanico-Technical Experiment Institute, which is connected with the Royal (Königliche) Technological University at Berlin This Bureau is not yet sufficiently informed to enable it to explain the full import of the ase of the word "Imperial" in connection with the first-named institution, but the organization and purpose of the second may be briefly told as follows! ${ }^{2}$

The object of the Royal (Prussian) Mechanico-Technological Experiment Institute at Berlin is to make investigations in the line of general scientific and public

[^46]interest, and, when requested by public or private bodies or persons, to test the strength of material, etc. The institute is composed of four divisions, which are denominated, respectively, the metal-testing, the building-material, the papertesting, and the oil-testing divisions.
By the order of the Prussian minister of public works, dated January 7, 1886, it was announced that properly prepared young persons might, in the guise of unremunerated volunteers, have the opportunity of conducting practical scientific experiments upon material used in the sciences and arts. Such persons as desired to avail themselves of this permission must obligate themselves (1) to serve for tbree months at least, (2) must obey the regulations of the institute, and (3) must finish in the manner prescribed by the director of the division the work assigned by him. As far as is compatible with the management of the institute, these volunteers may be-given an opportunity to acquaint themselves with its several departments, and in specially suitable cases it is also permitted that the wishes of any individual volunteer may be considered in the assignment of work.
A student of the Royal Technological University at Berlin, if not occupied by immediately pressing work, may be permitted to attend the institute by its director. In addition to this, an opportunity is given to the students of the technical university to acquaint themselves with the organization of the testing institute and its method, through the lectures of the director and the assistant director, and the illustrations thereof done with the machines and apparatus of the establishment.
During the year elapsing from April 1, 1895, to April 1, 1896; there were performed for public authorities and private individuals 1,352 tests. Two handred of these were done by the division for "metal testing," 341 by the division for "testing building material," 687 by the "paper-testing" division, and 120 by the "oil-testing" division.
In the course of the year 1895 experiments were made upon Arundo donax as a raw material for paper manufacturing, testing the writing paper offered by the retail trade, comparative experiments upon the quantity of resin contained in petroleum, and its susceptibility to separation, etc.
The interest evoked by this new movement-for such it is as far as it is a feature of educational institutions-made it desirable to obtain, as quickly as possible, more intimate information than was on hand in this Bureau. The specialist in foreign exchange, Dr. Klemm, had the courtesy to address a distinguished engineer and professor of one of the German technical universities, who, with equal courtesy, has made the following answer:
"Berlin, November 7, 1896.
"Dear Str: In reply to your inquiry of October $13, \mathrm{I}$ wish to state that in Prussia scientific testing stations for the engineering science are only found in Berlin. The most important is the Imperial Institution for Physical Tests, an institution which has not as yet met the expectations of the engineering fraternity. It has from the beginning, and also after the death of Helmholtz, remained in theoretical channels, and furnishes, aside from some gauging precisions and tests, very little material for engineers, whose needs it very little comprehends. Indeed, a number of scientific tasks which were suggested by the association of engineers as desirable have been rejected by this institution, claiming inability to perform them. We have therefore appealed to the Prussian Government, asking for means (which have been granted) to connect a testing station with the Technological University at Berlin for the purpose of instituting scientific tests for engineering problems. A building for a machine laboratory is at present in process of erection and the extension of existing scientific laboratories is going on.
'The mechanic technical testing institate in the Technological University at Berlin is the best-arranged institution for tests of material of every kind. An account of its woris is contained in the publications of the institution. There is
not another institution of its kind in Prussia, but in the polytechnica of Dresden (Saxony), Munich (Bavaria), and Stuttgart (Würtemberg) there are similar institutions, only less complete than the one "in Berlin. Outside of Germany, Prague (Bohemia, Austria), Vienna (Austria), and Zurich (Switzerland) have testing stations in connection with their polytechnica. There are no annual reports of these institutions. I might procure the information in printed form, but at present I lack the time, and I therefore ask whether it will still be serviceable if I send it at the beginning of next year?
"Yours, respectfully,
A. Riedler."

## VII. NUMBER OF STUDENTS AND CHARACTER OF THEIR STUDIES DURING THE YEAR 1895-96.

There were, all told, 25,723 students in the colleges endowed by the Republic for the Caucasian race. Their distribution in departments and the number of eaeh sex are shown by the following table:


These students, at least those not in "other departments," were instructed by faculties whose aggregate number of members was $1,429 \mathrm{men}$ and 110 women; in all, 1,539. In addition to the college faculty, the experiment station is credited with 431 professors or instructors.

Of the students pursuing technical courses there were in-




Architecture .-.........................-.................................................................................... 537


Military science............................................................................................................-. - 9,062
In the schools for the negro race the following facts appear, one institution not reporting at the date of this writing:

|  | Men. | Women. |
| :---: | :---: | :---: |
| Professors and instructors | 86 | 53 |
| Students in- |  |  |
| Preparatory department <br> College department <br> Other departments | $\begin{array}{r} 1,100 \\ \quad 428 \\ \hline 628 \end{array}$ | 702 130 588 |
| Total | 2,156 | 1,420 |

VII. REPORTS OF PRESIDENTS OF COLLEGES ENDOWED BY THE ACTS OF CONGRESS OF 1862 AND 1890, TO THE FEDERAL GOVERNMENT, FOR THE YEAR 1895-96.

President William Leroy Brown, State Agricultural and Mechanical College: The courses of study in the freshman and sophomore classes, with few exceptions, are required of all students, constituting the usual studies recognized as essential for a sound general education. Though Latin is not required of all students, English is, and in every class from freshman to senior, if leading to a degree. In
the junior year students are permitted to elect any one of the following degree courses of study: (1) Chemistry and agriculture; (2) mechanical and civil engineering; (3) electrical engineering and mechanical engineering; (4) general course, including the Latin, French, and German languages; (5) pharmacy. Much attention is given to laboratory work, the college being provided with fairly well equipped laboratories in the following departments, to wit: Chemistry, civil engineering, botany, biology, drawing, mechanic arts, physics, electrical engineering, mechanical engineering, pharmacy, and physiology and veterinary science. Last year a gymnasium of wood was built, 80 by 40 feet, at a cost of $\$ 1,884$, also a greenhouse, 80 by 20 feet, for horticultural investigations and to promote the interest of horticulture in the State.

President John L. Buchanan, of the Arkansas Industrial University: Our methods of instruction, stated in general terms, are recitations, lectures, and work in laboratories, shop, and on the farm. All the larger classes, especially those less advanced, are divided into sections of convenient size, so as to promote frequent drill. Blackboards and illustrative apparatus are largely used. In the departments of chemistry and physics, biology, geology, engineering, and agriculture from two to eight hours per week of laboratory and other work is required. In English and other languages frequent written exercises are required. We have a new machine shop, with office, boiler room, and coal house, which has been completed since my last report; cost, about $\$ 7,000$. These buildingsreplace those lost by fire in April, 1895, but are more commodious, more conveniently arranged, and more substantial. An abundant water supply from the city waterworks has been provided in all the buildings, and a sewerage system will be completed during this fall.

President Howard Bellman, University of Arizona: The university is organized to give instruction in the following courses: Agriculture, civil engineering, mechanical and electrical engineering, mining and metallurgy. We have also a general course, which embraces much that is common to the other courses, except that instruction in the severial branches is not carried so far as in the engineering courses. It is designed particularly to meet the needs of young lady students, and such others as have not decided upon their calling in life. Special instruction is given along certain lines as students may call for it. The year has been one of marked progress. The number of students has been doubled, and those entering have been capable of doing a higher grade of work than heretofore. The advance in the mining department is especially noticeable. Many students have somewhat vague notions as to what they desire; it is difficult, therefore, to classify them early in their course. One new building, now almost completed, has been erected during the year. It is a dormitory, and is built of stone, in a very substantial manner, two stories in height, containing a dining room and kitchen and lodging rooms for about 35 students. Its cost when completed will be $\$ 15,000$.

President Martin Kellogg, University of California: There are no changes of any importance. There isin contemplation, however, a plan for a general architectural reconstruction of the university, and when decided on we have a promise of a fine building for one of the departments of engineering.

President Alston Ellis, Colorado Agricultural College: The college is in a highly prosperous condition and is meeting the wishes of the people. We have established during the year a department of domestic economy and a commercial department, each of which has been placed under the control of a capable instructor. Some of our buildings have been enlarged and others have been repaired, so that at the present time the ten buildings found on the college grounds are in excellent repair and are admirably suited for the purposes for which they were constructed. The number of pupils has more than doubled within the last four years, which is a cause of congratulation, in view of the depressed financial condition existing throughout the State.

President B. F. Koons, Storrs Agricultural College, Connecticut: The courso is essentially that authorized by the act of 1890, and laboratory methods are employed wherever the subject will allow. The year ending June 30,1806 , was one of the most prosperous the institution has known. There was a slight falling off in attendance as compared with the previous year-perhaps owing to the general financial depression-yet in substantial work and real growth in those things which make for permanent development no previous year equals that just closed. We have but one course, or perhaps, speaking moro accurately, two, namely, agriculture for the young men, and domestic science for the young ladies. The courses are the same in most of the sciences, mathematics, English, etc., and diverge only when they approach agriculture, agricultural chemistry, veterinary science, stock breeding, surveying, etc., as far as concerns the courses for young men. The institution adheres strictly to the labor system, requiring three hours of manual labor a day, thus keeping the students in close touch with the indusitries of life. The last legislature appropriated $\$ 12,000$ for a dormitory cottage of wood, for the young ladies, which is now completed.

President Albert N. Raub, Delaware College: Tho courses of study are six in number, namely, (1) classical, requiring Greek and leading to A. B.; (2) the Latin scientific, omitting Greek, but leading also to A. B.; (3) the course in agriculture and science leading to B. S., and the three courses leading, respectively; to B. C. E., B. E. E., and B. Mech. E. Much machinery was added during the year. The departmental libraries which were placed last year in the recitation rooms have aroused much interest on the part of the students. The new rule making military science and tactics compulsory on all students below the senior grade, with certain exceptions, has been very successfully carried out during the year.

President O. Clute, Florida Agricultural College: Our graduating class numbered 13 , the largest heretofore being 6 . The work of all departments of the college is getting into better organic shape, and there is a stronger inclination on the part of students to remain longer than three months or a year. The State legislature of 1895 gave the college $\$ 10,000$, of which sum $\$ 7,500$ was used mainly for repairs, equipment, and salaries during the year 1895-96. Considering the present financial condition of Florida, this grant is relatively large. Good progress is being made in the mechanic arts and in horticulture. In technical agriculture much remains to be done and will be done in a time not so very remote.

President H. C. White, Georgia State College of Agriculture and Mechanic Arts: The condition of the institution is good and the progress made during the year is satisfactory. The preparation for admission shows marked improvement as compared with previous years. The college is much in need of additional buildings.
President F. B. Gault, University of Idaho: Courses of study that have been under consideration for two jears have been adopted. The college courses are now nine in number. Greater emphasis is placed upon scientific instruction. Students may take four years in agriculture, chemistry, botany, zoology, or mathematics and physics. A course in mining has been added; also a course of two years in bench work in wood, including wood carving for ladies. One year of the course in bench work in wood is required for admission to the freshman class in any course. The first graduating class received degrees June 11, 1896, the gentlemen taking degrees in B. C. E. The scientific equipment has been largely increased. There are now seven laboratories-agricultural, botanical, chemical, zoological, engineering, mining, physical-besides drafting rooms, woodworking shop, and free-hand drawing, all of which are thoroughly well supplied with apparatus and libraries, to which additions are being constantly made. An annex for assaying has been built, as also a room with basement and annexes for dairying, which is well supplied with modern apparatus. Instruction will be given next year.

President Andrew S. Draper, University of Illinois: The last year has been marked by a liberal increase in students and by the advent of students more thoroughly prepared than formerly. We have erected a new metal-working building and a president's residence in the course of the year. An astronomical observatory and a new library building $(\$ 150,000)$ are now in progress of erection.
President James H. Smart, Purdue University, Indiana: On the 1st of Júly, 1896 ; the board of trustees was reorganized under an act of the legislature. The university has maintained a university extension course during the year, and has projected what may be known as the Purdue Mechanics' Institute An assistant in physics, another in literature, another in German, and another in electrieal engineering have been added to the faculty. A series of monographs on sanitary science have been projected, two of which have been published under the title of (1) Nature of sanitary science and its value to the State; (2) Some sanitary aspects of milk-supplies and dairying. The front of the new engineering building has been completed, and the building was dedicated early in December, 1895. It is built of stone and brick, in the most substantial manner, is 150 feet long, 50 feet wide, and three stories high, with a tower 150 feet in height. It contains 15 rooms, which are used for recitation, drawing, and offices. This gives us an engineering plant worth about $\$ 200,000$.

[^47]"JAMES H. SMART, "President of the University.
"MAY 1, 1896."

President Beardshear, Iowa State College of Agriculture and Mechanic Arts; The past college year is most marked in the harmony, industry, and thrift of students and faculty alike. The spirit of improvement in buildings has kept pace with the upgrowth of recent years. It has been a most encouraging year throughout. During the year we have erected a greenhouse, at a cost of about $\$ 6,000$. It is designed for experimental work in horticulture, floriculture, agriculture, and the various sections of the experiment-station work. It is composed mainly of iron and glass. We have also improved the main farm barn by putting in a new foundation and thoroughly fitting up the basement with stalls and apartments containing modern conveniences for the cattle. It is lighted with electricity and supplied with water throughout. The total cost is $\$ 4,000$. We are putting in complete system of waterwarks, supplying all the buildings, adding efficiency to the sewerage system, and affording fire protection. To this end we are sinking a deep well, in order to have an adequate and unfailing water supply. A large standpipe is erecting, and will be a prominent help to the system. With everything complete, the entire system will cost about $\$ 36,000$.

President George T. Fairchild, Kansas State Agricultural College: Arrangements have been entered into by which those students who choose to lengthen their course by a year may do so by adding electives during the last two years in advanced study of the sciences. In this lengthened course a mention of special proficiency in lines of study pursued at least one year is made upon the diploma of graduation. The largest class in the history of the college graduated this year, and the largest attendance in all the classes shows the increased usefulness of the institution. A short course of lectures was given, as usual, in February, but after a three years' trial the lectures have been abandoned, as they failed to attract any considerable number outside the immediate neighborhood. The general provision for agriculture in the course of study and its adaptation to the wants of farmers' sons and daughters make any special provision in the way of short courses of less importance in this State than where no agricultural college appeals directly to the young people. No new buildings have been added during the year, but quite extensive repairs have been made and considerable additions to the equipment in the shops and in provisions for heating and lighting.
President James K. Patterson, Agricultural and Mechanical College of Kentucky: Our attendance during the last collegiate year was about equal to that of the preceding. With the prices of all farm products so low, there is not so much money at the command of the rural population to spend on education as heretofore. It is gratifying to note that the matriculation in the college proper as compared with that in the academy has shown for some years past a marked advance. The veterinary department has been discontinued on account of insufficient attendance, despite our efforts. Mechanical engineering still takes precedence among our courses. The standard of graduation is high, and our graduates in several instances have taken a rank in the examinations for assistant engineers equal to that obtained by graduates of the best technical schools in the country. In addition to the course of lectures in agricultural science, attendance on which is obligatory on all, a short course of instruction in agricultural science has been provided and extensively advertised, covering a period of about three months during the winter. Whether it will succeed in attracting students to this course, I do not know. Farmers in the State do not take to an agricultural education for their sons. The equipment of the mechanical engineering department has been increased.
President J. W. Nicholson, Louisiana State University and Agricultural and. Mechanical College: Our buildings and grounds formerly belonged to the Federal Government as a military post, and are thus poorly adapted to college purposes, even had they been in good condition when we came into possession. The legislature has appropriated $\$ 20,000$ for a central building, the plan of which has not yet been determined upon.

President A. W. Harris, Maine State College of Agriculture and the Mechanic Arts: During the year there have been added the following-named courses of study: Spanish, Italian, Old French, eight courses in Latin, and the arrangement of a four-years Latin scientific course, modern analytic geometry, advanced inte= gral calculus, theory of equations, differential equations, two advanced courses in laboratory physics, animal histology, theoretical electricity, power stations, electrical engineering shopwork. The corps of instruction has been increased by instructors in mathematics, Latin, and German, agricultural chemistry, shopwork and mathematics, French, and English. The chemical laboratory has been restored and enlarged. A new laboratory room has been constructed at a cost of about $\$ 9,000$, giving accommodation for 120 students at one time.

President Henry H. Goodell, Massachusetts Agricultural College: The college has continued to feel the effects of the hard times, and the attendance has fallen off in a marked degree during the year ending June 30, 1896. Other than this, the year has been one of prosperity. The personnel remains the same, but the course of study has been modified to meet the demands of the hour. It has been deemed unwise to carry on longer the two-years course. In its place eleven short winter courses have been substituted, all optional, all free to citizens of the State, and all without limitation of entrance examination. These are arranged under the heads of general agriculture, animal husbandry, dairying, fruit culture, floriculture, market gardening, botany, chemistry, and zoology. Three new elective courses have been offered in engineering, mathematics, and advanced English. With appropriations from the State the following buildings have been erected: A laboratory at a cost of $\$ 3,000$, two stories high, 32 by 36 feet, containing stands and appliances adequate for instruction of 18 to 20 students in economic entomology; and a gun room, at a cost of $\$ 1,800$, 28 by 60 feet, providing shelter for the new breech-loading steel cannon issued by the War Department, and a shooting gallery for practice during the winter months. In addition to the above, with a legislative appropriation of $\$ 5,500$, the college domain has been increased by the purchase of 20 acres for use in the horticultural department.

Secretary H. W. Tyler, Massachusetts Institute of Technology: The course in military science has been greatly improved and much has been added in the way of theoretical instruction. The institution received $\$ 25,000$, the first annual installment granted by the State for six years.

President J. L, Snyder, Michigan State Agricultural College: A number of important changes have been made during the year. Heretofore, in order that practical agriculture might be taught to best advantage and that needy students might have an opportunity to earn money by teaching district schools, the college calendar was arranged so that the long vacation took place during the winter months. Conditions have changed very much in this State sincethis plan was first put into operation, and it has been decided that in the future the long vacation shall take place during the summer months. The four-years course in agriculture has been rearranged and very much enriched along practical lines. During the coming winter months the college will offer four special courses in the following subjects: Dairy husbandry, live stock husbandry, fruit culture, floriculture, and winter vegetable forcing. A four-years course of study for women has been planned and adopted, to go inte effect at the beginning of next school year. This course, besides embracing literature, mathematics, modern languages, music, art, and electives in fruit culture, floriculture, kitchen gardening, and poultry raising, offers an especially strong course in domestic science and household economy. A cooking laboratory has been built as an addition to the ladies' dormitory, at a cost of about $\$ 1,200$. These changes seem to have met the approval of the people of our State, and everything looks bright for the future.

In a paper read before the Asseciation of American Agricultural Colleges and Experiment Stations, entitled "What should be taught in our agricultural col-

# leges," Prof. Clinton D. Smith, of the Michigan college, gave an analysis of the course given under his own direction. This course is as follows: 

## FRESHMAN YEAR. <br> Fall term.-Awakening curiosity and developing faculties of observation.

## Hours.

Soil: Study of the size of particles, per cent of humus present, water-holding capacity, gross anatomy of the soil ..... 40
Plants: Laboratory work, watching the germination of seeds, growth of roots and stems, studying root systems, forms of stems and leaves, gross anatomy of plants ..... 140
Animals: Study of the forms of animals of prominent breeds, going into detail and arous- ing the interest of the student in the seleation, breoding, and aare of farm animals, and stock judging, gross anatomy of animals ..... 100
Algebra ..... 70
English ..... 70
Military drill ..... 42
Winter term,-Training the mind and hand.
Soil: Matter, force, and motion; the general properties of matter; the atom, molecule; solids, liquids, and gases; osmosis and diffusion. ..... 48
Plants: Plants as individuals and in relation to each other, the use of the compound micro- scope, and beginning of plant histology ..... 40
Farm mechanics:
Blacksmith shop ..... 25
Carpenter shop ..... 75
Algebra ..... 60
Drawing ..... 120
English ..... 24
Drill ..... 36
Spring term.-Applying laboratory methods to field work.
Soils: Elements and their chemical properties; what things are made of and how the ele- ments are put together; soil chemistry ..... 70
The physics of the soil continued; why and how we plow, harrow, and cultivate thesoil; elements of fortility, and-
Plants: Selection of seeds of cereals, grasses, and farm crops; tests of purity and vitality; methods of planting and caring for crops; general spring work on a farm; bookkeeping and farm management ..... 125
Physics: Sound and light. ..... 40
Geometry ..... 50
Language ..... 20
Drill ..... 30
SOPHOMORE YEAR.
Fall term.
Soil: Water in the soil and air; the hygrometric state of the air; dews, frosts, and the dew point; testing soils for phosphates, potash, and nitrogen ..... 70
Continuation of the work on methods of tillage, drainage (fleld work), classiflcation ofsoils for different crops, and-
Plants: Study of the characteristics of varieties of cereals and grasses, methods of storing, silage and filling silos; general farm work in the autumn; farm basiness continued. ..... 87
Animals: General anatomy of man and animals. ..... 56
Farm mechanics: Theory of heat, conductors, radiation, fundamental principles of boilers. ..... 70
Geometry ..... 70
Language ..... 23
Drill ..... 21
Winter term.
Plants: Plant histology and physiology ..... 96
Animals: Axatomy, physiology, and hygiene of the domestic animals and man ..... 200
Prozimate principles of plants and animals, organic chemistry, and volumetricanalysis. ..... 60
Feeding live stock, lectures on the theory and practical work in the stables
150
150
Dairy worl. ..... 75
Drill ..... 18
Language ..... 12

## Spring term.

## Hours.

Plants: The kitchen garden and growing vegetables ..... 75
Landscape gardening ..... 25
Trees and shrubs ..... 30
Surveying. ..... 70
Entomology ..... 70
Language ..... 20
Drill ..... 30
JUMIOR YEARE.
Prall term.
Plants: Origin and history of the various fruits; methods of propagating, grafting, bud- ding, layering; nursery work, pruning; soils, exposure, and fertilizers for fruit trees_ ..... 195
Parasitic fungi; cryptogamie diseases of plants, including a careful study in the labo- ratory and fleld of the diseases of gresses and grains ..... 122
Łanguage ..... 70
English history ..... 70
Drill ..... 21
Required:
Winter term.
Soils: How supply of plant food may be made more available; and Plants: Food of plants and how they appropriate it ..... 60
English literature ..... 60
Drill ..... 36
Elective:
Floriculture, spraying, and greenhouse work ..... 210
Or Live stock: The attention of the student may be devoted to the care, feeding, and man- agement of either cattle, sheep, or swing ..... 210
Required:
Spring term.
Civies ..... 40
Drill ..... 30
Language ..... 30
Forestry ..... 30
Gystematic botany of weeds and useful plants on the farm ..... 25
Elective:
Horticulture: Either pomology, vegetable gardening, greenhouse work, or floriculture, advanced and expert work ..... 175
Agriculture: Either some branch of live.stock or field crops ..... 175

## SENIOR YEAR.

The work of this year is entirely elective, the-course for each stadent being laid out to fit him for the particular branch of agriculture or horticulture that he has chosen. For example, if the student bas decided to make dairy husbandry, his major, he takes bacteriology, 98 hours; chemistry of stock feeding, 140 hours; advanced work in stock judging, 120 hours; advanced dairy work in the butter room, 120 hours; veterinary science, 180 hours.

If his major be field crops, he devotes 250 hours to laboratory work in soil and plant chemistry, the same amount of time to the botanical side of the subject, about the same to work in the fiele on the practical side, and the remainder of the year as he may elect from the list of studies presented.

In the same way, the student that has elected work along some horticultural line selects his studies in the senior year in such a way as to make himself thoroughly familiar with the practical field work and sciences on which it is founded.

The other electives offered for the year, with the hours devoted to each, are as follows: Bacteriology, 98; constitutional history, 70 ; meteorology, 70; advanced physics, 70 ; veterinary science, 180; economic zoology, 60; engineering methods, 60; psychology, 60; domestic engineering, 60; geology, 50; logic, 50; political economy, 50; French or German, 180, and advanced work in botany, chemistry, and entomelogy.

President Cyrus Northrop, University of Minnesota: The college and school of agriculture have prospered the past year more than ever before. Progress has been made in all departments, notably in agriculture, horticulture, and chemistry, for the last of which a most useful course of practical instruction has been provided. The State has expended $\$ 64,500$ in the last year and a half for new buildings, in the following manner: For a dining hall, $\$ 42,500$; enlargement of dairy
building, $\$ 15,000$; for a sheep barn, model poultry house, blacksmith's shop, and improvement of the barn and swine building, $\$ 7,500$. Large delegations of farmers, sometimes numbering 300 , have visited the experimental station during the year.

President R. H. Jesse, College of Agriculture and Mechanic Arts of the University of the State of Missouri: Laboratory exercises in all technical subjects run parallel with the elass-room instruction, two and one-half hours of laboratory work being equivalent to one hour of class work. During the year a complete dairy equipment, exclusively for instruction purposes, including different styles of separators, churns, butter workers, testers, pasteurizing apparatus, etc., has been provided. An entomological laboratory, with a cabinet of over 8,000 specimens, has been equipped for the study of economic and systematic entomology. A herbarium of the fruits and twigs of the leading forest trees has been added to the forestry collection, and more than 700 jars of preserved typical specimens of fruits and vegetables have been added to the horticultural laboratory collection. On the horticultural grounds are being grown, primarily for experimentation, but used also for instruction purposes, 400 varieties of apples, 60 varieties of peaches, 120 varieties of plums (incluबing complete collection of domesticated Japanese sorts, all grown in orchard form), 125 varieties of grapes, 500 strawberry seedlings, selected from more than 4,000 seedlings bred here during the past four years. A large collection of Japanese, European, and American nuts has been planted during the present year. During this year several hundred seedling plums, handpollinated cresses of European, Japanese, and American types, and several hundred seedling peaches of known parentage have been grown for experimentation and instruction. There has been added during the year a horticultural laboratory consisting of a central building 30 by 30 feet, and two wings, each 22 by 30 feet, heated by steam and so arranged that different temperatures may be maintained in each compartment. It has stone foundation, pressed-brick walls 3 feet high, T iron frames filled with white pine, grooved sash bars, and best American A glass. The glass walls in main portion rise 8 feet above the brick walls and 27 feet above the floor in the center. Granitoid walks. Connected with the laboratory is a brick boiler house 12 by 14 feet, with a 14-horsepower horizontal boiler capable of heating the entire laboratory and forcing houses attached. The purpose of this structure is the study of methods of hothouse forcing of fruits and vegetables, floriculture, and experimental work in vegetable physiology. Cost, $\$ 4,500$.

Director Walter B. Richards, School of Mines and Metallurgy of the University of Missouri: The school continues to emphasize its technical side and to strengthen its courses of study. Pure mathematics and physics have been moved up about half a year, so as to give the student at an earlier stage preparation for specializing. The chemical laboratory is being enlarged.

President James Reid, College of Agriculture and Mechanic Arts, Bozeman, Mont.: Special attention has been given to laboratory work in chemistry, physics, physiology, and botany, two hours of laboratory work being considered equal to one hour of class work. Five buildings have been erected for class and laboratory work, to wit: A main building 90 by 110 feet, of brick, with stone foundation, three stories and basement; a chemical and physical laboratory building in one, 70 by 90 feet, of brick, with stone foundation, with basement; a shop building of wood, with stone foundation; a drill shed of wood, with stone foundation, and a veterinary building of stone, two stories high. The main building, laboratory, and shop are to be heated with hot-air furnaces. The estimated cost of the five buildings, including furnishing and equipment, is $\$ 100,000$, raised by bonds secured by 50,000 acres of college lands received by the State on admission to the Union.

Chancellor George E. MacLean, University of Nebraska: As never before in the history of the institution, the inseparable union of culture and agriculture, with emphasis on the latter word, has been brought out. The new professor of agri-
culture has inaugurated a more scientific training in applied agriculture. A three-months course in agriculture has been added to the agricultural college. Farmers' institutes have been provided for in the form of university extension, 48 institutes being held during the year, with an attendance in the neighborhood of 15,000 peơple.

The regents of the university have made provision for the substantial enlargement of the quarters for agricultural chemistry, and a separate laboratory on the agricultural experiment-station farm will be equipped during the coming summer. The course in dairying' will be greatly strengthened during the coming year by the purchase of apparatus and the erection of a separate dairy building. The new university library building has been completed, at a cost of $\$ 110,000$. The partial crop failures in Nebraska the past two seasons have turned the attention of the farmers to the importance of scientific farming, and as a consequence the attendance in the college has increased, and a general interest in its work has deepened.

President J. E. Stubbs, Nevada State University: The college of agriculture and mechanic arts has laboratory exercises in all scientific and technical subjects, shopwork in mechanics, and research in history, literature, and political science. This species of work occupies the afternoon of each college day, while class exercises occupy the forenoon. There is military drill four days in the week, from $11.45 \mathrm{a} . \mathrm{m}$. to $12.30 \mathrm{p} . \mathrm{m}$.

To eliminate an element of weakness from the college courses of study and to insure a better entrance preparation, the university has organized a preparatory department of three years, which requires, for example, two years of French and mathematics to solid geometry for admission to any of the schools of science or of agriculture. Increased attention is given to English and history in the preparatory school. The thought of the faculty continues to be directed to the improvement of the college courses of study, and the attendance of students shows most gratifying increase. In the way of new buildings there has been erected an annex to the mechanical building, 50 by 60 feet, one story, containing foundry and blacksmith shop, costing $\$ 3,000$. The main portion of this annex, however, is to be erected when the legislature has made the appropriation. The old mechanical building, the only wooden one on the campus, was destroyed by fire during October, 1895. A dormitory of brick and stone, three stories high, with basement, containing rooms for 100 boys and apartments for the head master and his family and for the assistant masters, has also been erected at a cost of $\$ 27,699$. For the accommodation of the young ladies in attendance a structure of brick and stone, three stories in height, with basement, has been built at a cost of $\$ 14,348$. A gymnasium and drill hall, 60 by 120 feet, costing $\$ 7,000$, was built wholly by voluntary subscription. In addition to these buildings the experiment station building has had an addition built to it, 21 by 29 feet, two stories, of stone and brick, costing $\$ 1,101$. The basement is a laboratory for anatomy, physiology, and bacteriology; the second story a laboratory for agriculture and the results of farm experiments. The regents have leased a valuable tract of 80 acres of land near the campus for farming purposes, the organization of a model farm under the conditions of irrigation forming a part of the plans of the university.

President Charles S. Murkland, New Hampshire College of Agriculture and Mechanic Arts: In accordance with an act of the legislature of 1895, a department of horticulture and a two-years course in agriculture were established during the year, to which students are admitted who can pass a fair and reasonable examination in reading, spelling, writing, arithmetic, English grammar, and the history of the United States. In this course the student must devote not fewer than ten hours a week during the year to practical instruction and manual training in branches of agriculture that require special knowledge and skill, one-third of which time may be devoted to suitable practical instruction and manual training
in shop work in food and iron, butany student may be excused from some or any of these exercises. To carry the act into effect $\$ 25,000$ was appropriated for $1895-96$, and the same amount for 1896-97. The provisional programme for this course is given below. The dairy school and institute have been carried on, as well as the correspondence course.

Provisional schedule for two years' course.

| Subject. | First year. |  |  | Second year. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | First term (15 weeks). | Second term (10 weeks). | Third term (10 weeks). | First term (15 weeks). | Second term ( 10 weeks). | Third term (10 weeks). |
| Agriculture | Live stock: Theory 3. Practice. | Tools and $\operatorname{imple} 1-$ ments: Theory 3. Practice. | Soils,drains, and fertilizers: Theory 4. Practice. | Crops, markets, and accounts: Lectures 2. Practice | Dairying: Theory 2. Practice. | Breeding and feeding: Theory 3. Practice. |
| Botany and horticulture. | Botany: Theory 3. Practice. | Botany: Theory 2. Practice. | Botany: Economic 2. Gardening. | Nursery and orchard: <br> Theory 2. Practice. | Propagation and greenhouse work: Practice. | Small Pruits, spraying, ete.: <br> Theory 2. Practice. |
| Chemistry and physics. <br> Zoology, etc | Elementary physics 2. | Elementary chemistry 3. | Chemistry laboratory 4. | Chemistry of the farm 4. | Agricultural, chomical analysis: Laboratory. | Physics 2. |
| English | English 3... | E |  | Englis | English 3 |  |
| Mathematics | Arithmetic and algebra 4. | Algebra $4 .-$ | $\begin{aligned} & \text { Geometry } \\ & \text { flane. } \end{aligned}$ | Geometry: Solid 2. | Trigonometrỳ. | Surveying <br> 6. |
| Drawing |  | Drawing 2. Free-hand. |  | Drawing: <br> Industrial 2. | Drawing: Mechanical 4. |  |
| Shop work .-.... | Wo | Wood ...... | Wood ......- | Metal ...... | Metal |  |

President Austin Scott, Rutger's Scientific School, New Jersey State College for the Benefit of Agriculture and the Mechanic Arts: The courses in electricity and in biology are growing in value to the undergraduates, both in class-room work and in laboratory practice, by the constant additions of needed apparatus. The course in agriculture is now on a firm basis, the teaching of the subject in an elementary way to each member of the freshman class by the professor of agriculture and the assumption of the duties of superintendent of the college farm by the same officer affording unusual facilities for instruction in the theory and practice of agriculture. No notable changes in the buildings of the institution have been made during the year, theaccommodations and equipment being adequate for the present. In the general work of the extension department three full courses of twelve lectures each, four half courses of six lectures each, and one special course of two lectures have been given, as follows: Two full courses in history and one in astronomy; one half course each in history, electricity, English statesmen, and art, and one special course of two lectures in art. The total attendance at the 62 lectures was 2,011 persons, and the average attendance 1,525. The total attendance at the class hours following each lecture was 675 persons, and the average attendance 554. Ordinary full-course certificates were awarded to 11 persons and honor certificates to 6 . Ordinary half-course pass cards were awarded to 11 persons and honor pass cards to 2. Attention has also been given in the extension department during the year to agricultural work. Two
courses in agriculture and one course in botany, each course of six lectures, have been given. The total attendance ${ }^{1}$ at the 18 lectures was 130 persons, and the average attendance 119. The total attendance at the class hours was 126 persons, and the average attendance 107. Ordinary pass cards were awarded to 3 persons.

President Samuel P. McCrea, New Mexico College of Agriculture and Mechanic Arts: The college has a very complete wood shop and blacksmith shop in successful operation. In the way of buildings there has been added during the year an extensive college shop, costing $\$ 4,000$, which has an engine room, foundry, machine shop, drafting room, and physical laboratory. To equip this building $\$ 5,000$ has been set aside by the board of regents, and when it has been completely fitted up $\$ 12,000$ will have been spent in buildings and equipment for the department of mechanical engineering alone. Continued effort has been made in the direction of establishing a higher standard of admission and broader and deeper courses of study.

President J. G. Schurman, Cornell University: The buildings for the State Veterinary College are seven in number, as follows: The main building, 142 by 42 feet and three stories high, overlooks East avenue and an intervening park of 220 by 300 feet. The walls are of dull yellowish-buff pressed brick, on a base of Gouverneur marble; window and door facings of Indiana limestone and terra-cotta ornamentation. On the first floor are the museum and rooms for the dean and the professors of anatomy and physiology. The second floor is devoted to the upper part of the museum, a lecture room, reading room, library, and rooms for professors. The third floor is devoted to laboratories of histology, pathology, and bacteriology, and the necessary subsidiary offices. Connected with the main building and forming its east wing is a structure 90 by 40 feet and one story high. This contains the laboratories, lecture rooms, and other offices of anatomy and physiology. Its floors are impermeable granolithic cement, the walls lined by enameled white brick, and the ceilings covered with sheet steel. A second extension from the main building is the boiler and engine room, where power is gencrated for heating, ventilation, lighting, and the elevators.

The surgical operating theater is a separate building in the rear of the main building, and is furnished with rooms for forge, instruments, water heater, etc. The lighting and equipment and the facilities for demonstration have been specially attended to. The general patients' ward, 100 by 31 feet, is furnished with box and other stalls, leating apparatus, baths, and all necessary appliances. The floor is of impermeable granolithic cement, and the ceilings of painted sheet steel. There is also a fodder room of 20 by 30 feet. The isolation ward, 54 by 15 feet, has its stalls absolutely separated from one another and each opening by its own outer door. It has the usual granolithic floor, with walls of vitrified brick, and painted sheet-steel ceilings. The mortuary building has an impermeable floor, walls of enameled brick, and painted steel-plate ceilings, and is fitted with every convenience for conducting post-mortem examinations and preparing pathological specimens. Another building of 51 by 20 feet will be devoted to clinical uses. These, with a cottage for the stud groom, complete the list of State buildings erected for veterinary college. The equipment will be made as complete as possible for both educational uses and original research.

The addition to Sage College consists of a main part 40 by 100 feet, and a wing 38 by 40 feet, four stories high, with walls of brick to correspond with the original building, and slated roofs. The first story is 14 feet high, the second 10, the third and fourth each 9 . The first story contains a gymnasium 37 by 63 feet, two bathrooms, a swimming tank, three dressing rooms, a drying room, the instructor's room, an examination room, a waiting room, and a janitor's room. In the second story are ten students'rooms, a bathroom, a loggia, 10 by 36 feet, opening to

[^48]the east, and a suite of rooms, consisting of parlor, bedroom, and bathroom, for guests. The third and fourth stories have each 17 students' rooms, a bathroom; storeroom, and linen closets. The rooms are nearly all single, each 10 by 15 feet, with closet $2 \frac{1}{2}$ by 7 . They will accommodate 50 persons. There is a staircase in a hallway 10 feet wide at the western end where the addition joins the main building, and another in the south end of the wing, each 4 feet wide and running from the first floor to the fourth. There is a standpipe with 60 feet of 2 -inch hose on each floor for use in case of fire. The western hallway on each floor is connected by an opening with the main building. All rooms and halls are to be heated by steam and lighted by electricity. There is no display of ornament about the building, but the materials and workmanship are thoroughly good. Considerable alterations, additions, and improvements have also been made in the original building. The room formerly used as a gymnasium, 25 by 40 feet, is now occupied by the kitchen, baking room, pantry, storeroom, and servants' dining room. Above it two stories have been added, containing servants' bedrooms. The former litchen, pantry, and storeroom have been converted into dining rooms, and in the upper stories rooms that were occupied by servants are refitted and prepared for use by students.
[The changes lately made by Cornell University in regard to the degree to be hereafter conferred and to the admission requirements are given in another chapter of this report.]
President J. H. Worst, North Dakota Agricultural College:' No material changes were made during the past year in courses of study or methods of instruction, though the largely increased number of students made it necessary to enlarge the corps of instruction and to pròvide additional facilities.
President James H. Canfield, Ohio State University: The university has been divided into six distinct colleges: (1) Agriculturé and domestic sciences; (2) arts, philosophy, and science; (3) engineering; (4) law; (5) pharmacy; (6) veterinary medicine. Each college is under its own dean and faculty and has entire control of its students and its own affairs. The general faculty considers those matters of common interest to all colleges. All preparatory work has been dropped. The following new courses have been established: In the college of agriculture and domestic science, a full four years' course and a short two years' course in domestic science; in the college of arts, philosophy, and science, a two years' course preparatory to law and journalism; in the college of engineering, a three years' course in architecture and a full four years' course in ceramics and clayworking; in the college of pharmacy, a full four years' and a short (two years') course, preparing for State examination for registered pharmacist. A new astronomical observatory has been erected and equipped by the generosity of Mr. Emerson McMillin, of Now Yoriz City, at an expense of nearly $\$ 16,000$. The last legislature advanced the annual levy from one-twentieth to one-tenth of a mill, and gave the university permission to anticipate $\$ 200,000$ of this levy for the immediate erection of much-needed buildings and fór additions to equipment.
President G. E. Morrow, Oklahoma Agricultural and Mechanical College: The college has but one regular course of study. This may be classed as an agricultural or a general science course, with special adaptation to agriculture. This course, which requires four years to complete, leads to the degree of bachelor of science, and students are admitted to it on passing a satisfactory examination in the common-school branches. A preparatory class is maintained for students not fully prepared for the regular course. Two additional instructors have been engaged, and for the first time all four of the regular college classes have been represented. Considerable additions to the libraries and apparatus for teaching science have been made during the year.
President John M. Bloss, State Agricultural College of Oregon: The methods of
instruction have been gradually improved during the past four years by requiring more laboratory work in every department and by methods of instruction requiring original research on the part of the student. These methods are becoming more and more characteristic of the institution. A dairy building was erected during the year. All students in the agricultural and household economy courses are required to take a complete course in the theory of dairying as well as to do the work in the dairy. The purpose is to encourage farmers to enter into a work "new" in Oregon, and thus to add to the prosperity of the State. It is producing the result desired. The buildings and outfit cost $\$ 750$. The new boiler house (brick) was made as an addition to the mechanical building; çost, $\$ 400$. A well 12 feet in diameter and 36 feet deep was added to our water supply; cost, $\$ 550$. We now have an abundance of water to supply the college plant.

President George W. Atherton, Pennsylvania State College: With regard to the condition of the college during the academic year 1895-96, there is very little to say, except that there has been the same regular increase of numbers as for several years preceding and a steady and systematic toning up of the work in all departments, a more rigid enforcement of the requirements for admission, and, in general, a sound and wholesome internal growth. The year has been characterized, however, by two changes to which we attachvery great importance. The first is the dropping of the lower class of the preparatory department, so as to leave only a single or subfreshman class, the work of which is directed wholly with reference to preparation for the freshman class. This has resulted, practically, in abolishing the preparatory department as such, and the work of the subfreshman class has been brought into closer correlation with the work of the college classes than was previously possible. The second change referred to is the organization and grouping of all the work of the college into schools. The gradual enlargement of the field of instruction covered by the college within the last few years has been provided for from time to time by the establishment of additional courses of study. By a process of natural growth several of these courses have come into close relations with each other and the work of all has been adjusted, as far as was practicable, to a common standard. It seemed to the trustees and faculty, however, that it would be a decided gain in concentration and effectiveness of work if all related subjects and courses were brought together in groups, so that all members of a group might give and receive mutual support and stimulus. Accordingly the following schools were established at the opening of the fall session in September, 1895:

1. A school of agriculture, including technical agriculture, agricultural chemistry, horticulture, dairying, veterinary science, and such other subjects or departments as may from time to time be assigned by the trustees to that school.
2. A school of natural science, including the departments of botany, chemistry, geology, zoology, and kindred branches.
3. A school of mathematics and physics, including the departments of physics, mathematics, and kindred branches.
4. A school of engineering, including the departments of civil engineering, electrical engineering, mechanical engineering, and such other engineering departments as may from time to time be established.
5. A school of mines.
6. A school of language and literature, including the departments of ancient languages and Iiteratures, modern languages and literatures (except English), the English language and literature, and such other departments as may from time to time be added.
7. A school of history, political science, and philosophy, including the departments of history, psychology, ethics and pedagogics, political and economic sclence, and such other departments as may from time to time be added.

Deans of the several schools were appointed, as follows: Of the school of agriculture, D. H. P. Armsby; of the school of natural science, Dr. G. G. Pond; of the school of mathematics and physics, Prof. I. T. Osmond; of the school of engineering, Prof. L. E. Reber; of the school of minee, Prof. M. C. Thlseng; of the school of language and literature, Prof. Benjamin Gill; of the school of history, political science, and philosophy, the president.

This system has not been long enough in operation with us to justify a conclusion as to its ultimate results, but there is every reason to believe that they will be most wholeseme and invigorating to the entire system. Students will obtain a more distinct view of the range and relations of their special work. Groups of the faculty and instructors will counsel together more freely than is possible where each one regards himself merely as an individual member of the teaching force, and the board ef trustees will be able to gain a more exact knowledge of the efficiency and relative importance of the different branches of work by having their attention thus fixed on individual groups than is possible when they are required to survey the whole field.

The schools thus established are not all equally well equipped and manned, but the board has made increased provision for the teaching of such general subjects as history, language, political science, psychology, and ethics, and has thus done much to meet the demands of students who come to us in increasing numbers year by year from all sections of the State, desiring to pursue some other than a strictly technical course of study. We hope that it will be possible each year to offer enlarged facilities for the pursuit of these liberalizing and stimulating studies, not merely for the sake of those who choose such lines of work, but for the sake of giving to technical students the benefit of doing their special work in the midst of such an atmosphere.

The organization of the college allows a wide range of election by courses and schools, but very little by special subjects. If a student wishes to take up electrical engineering, for example, he finds a course in that subject carefully arranged, based on extended inquiry and observation, tested by experience, containing, as far as practicable, everything that is essential and nothing unessential, and at the same time providing a considerable amount of general and liberalizing studies of which every educated man may properly be expected to have at least an elementary knowledge. He also finds himself, as a member of a school, following his special line of work in close and sympathetic relatiomwith dow-students engaged in allied but distinct portions of the same genert field, and his conceptions are thus made more definite as to the proper limits of his own specialty at the same time that they are broadened by association with those who are studying collateral branches of the same great department of knowledge.

It is believed that such a course, systematically pursued, is far more useful to the great majority of undergraduate students than any permissible election by subjects could possibly be. Some cases occur, however, where a student before entering college has satisfactorily completed a portion of the prescribed work, or where he wishes for particular reasons to specialize in some direction more fully than is provided for in the established course. In such cases a selection of some other branch of work is allowed, but only on condition that the substitute chosen shall be fully equal both in educational and technical value to the subject omitted. The course in electrical engineering has been taken merely as an example, the same remarks applying to each of the regular courses.

The number of four-year courses now organized is twelve, as follows:

1. A classical course.
2. General courses: A general science course, a latin scientific course.
3. Technical courses: A course in agriculture, a course in biology, a course in chemistry, a course in civil engineering, a course in electrical engineering, a course in mathematics, a course in mechanical engineering, a course in mining engineering, a course in physics.

Besides these regular courses there are seven short courses-three in agriculture, one in chemistry, an elementary course in mechanics, and two in mining.

The increase in the number of students for a few years past, and in the number of counties of Pennsylvania represented, shows that the college now, whatever may have been true in the past, is meeting the wants and securing the confidence of the people of the State. The total attendance has increased from 92 in 1882-83
to 318 in 1895-96, and the number of counties represented has increased from 22 to 52 . It is believed that no other institution of its kind is doing anything like the same extent and range of work on so small resources, and the success of so many of our recent graduates in securing responsible and lucrative positions furnishes the best possible evidence of its efficiency.

President J. H. Washburn, Rhode Island College of Agriculture and Mechanic Arts: The dormitory, which was burned during the year 1894,-was replaced and several temporary buildings erected.

President E. B. Craighead, Clemson Agricultural College: There are two courses, the agricultural and the mechanical, each requiring four years for completion, The aim is to make the work both scientific and practical. Each student is required to work about two hours daily in the chemical laboratory, the foundry, the wood shops, the machine shops, at the dairy, in the veterinary department, on the farm, or in the garden-strietly eaucational work for which the student recieves no pay. The forge and foundry have been enlarged, at a cost of $\$ 500$; the mechanical department has been more fully equipped, at a cost of $\$ 8,500$; the veterinary department, at a cost of $\$ 1,300$; the mineralogical and geological department, at a cost of $\$ 750$, and the greenhouse has been enlarged, at a cost of $\$ 500$.

President John W. Heston, South Dakota Agricultural Gollege: Our courses of study have been thoroughly rewised, technical lines have been strengthened, the study of the sciences is now begun in the freshman year, and irrigation and agriculture engineering introduced. The sciences in this institration are articulated differently from that obtaining in other scientific institutions, in that we run botany, chemistry, zoology, and physics through a longer period of time. A business course has also been introduced, having a duration of two years.

President Charles W. Dabney,.jr., University of Tennessee: The most important improvement in the course of instruction has been the development of the work in history and civil government, which has been separated from another chair and made an independent subject, in charge for the present of an acting professor. It now requires three years to complete this course, the last two being elective. Improvements have also been made in the course of philosophy and pedagogics and in those of botany and zoology. Practically a new building has been erected upon the site of old North College, using only a portion of its walls and floors. This gives the university an elegant dormitory building of forty rooms, constructed from the general fund of the university.

President L. S. Ross, Agricultural and Mechanical College of Texas: I am able to report favorably of the present condition and hopefully of the future work of the college. The liberality of the legislature in appropriating money for improvements has greatly increased the methods and appointments of the institution. The-labor fund especially has proven a most wise provision by aiding a considerable number of deserving young men to pay a large part of their expenses, as well as cultivating in them a manly pride and spirit of self-reliance. The course of instruction has in some respects been made more flexible and better adapted to the wants of students who have a definite object in view and who wish to specialize their work in the varied industrial attainments. The large attendance at our annual commencement exercises has served to bring the college into closer relations with the people of all classes and diffuse a wider knowledge of what is being accomplished and the aim and facilities afforded for practical instruction. A new infirmary, costing $\$ 4,060$, has been erected during the year.

President J. H. Paul, Agrieultural College of Utah: I am gratified to say that we have had a very successful year and that the prospects for the ensuing year are still more encouraging. The aftendance of students for the year was 497, as compared with 360 for the preceding year. The students were of an average age of 19.7 years. Seven students were graduated with the degree of bachelor of science, as compared with two for the year previous. In general the courses as arranged
last year will be continued, as the results were satisfactory. The legislature has dealt generously with the institution, having given to it $\$ 23,500$ for the single year ensuing, as compared with a total of $\$ 15,000$ for the two preceding years for the same purposes.
President M. H. Buckram, University of Vermont and State Agricultural College: During the year a professorship of physics has been established independently of the chair of mathematics, and both elementary and advanced laboratory courses provided, for which a new science building, and large gifts for apparatus furnish facilities. There has been a continued advancement in the grade of students in the agricultural department, placing such students fully on a level with students in other scientific departments, which has resulted in an increase in attendance. The standard in examinations has been raised from 50 to 60 per cent in all departments. The Williams Science Hall, the gift of Edward H. Williams, of Philadelphia, provides lecture rooms, laboratories, and other facilities for the departments of chemistry, physics, biology, and electricity. The cost of this building was $\$ 150,000$, and of equipping it, including apparatus, $\$ 66,000$. The building has three stories, with basement and attic, has 43,000 square feet of available floor space, is built of brick, granite, and terra cotta, and is fireproof. There has also been erected the Converse Hall. which is a dormitory. It is built of blue marble, containing accommodations for 90 students. It cost $\$ 150,000$, and is the gift of John H. Converse, of Philadelphia.
President J. M. McBryde, Virginia Polytechnic Institute: The courses of instruction of four years each leading to the degree of B. S. are general science, agriculture, horticulture, applied chemistry, mechanical engineering, civil engineering, electrical engineering. There are also two shorter courses of two years each called practical agriculture and practical mechanical courses. In every course there is work in field, shop, laboratories, and drafting rooms. The policy of developing the college as a school of technology has been steadily followed, and recently a law was passed adding the words "polytednic institute" to its title, in order more clearly to define the character and scope of its work. A separate department of civil engineering was established at the beginning of the session. The policy of aiding needy students to help them in educating themselves has been continued, and nearly 100 were given work to assist them in paying their collegiate expenses. During the year 1895-96, 5 graduates and 1 undergraduate passed the examination for entrance into the United States Revenue-Cutter Service and others procured positions as chemists, engineers, etc. A new creamery and cheese factory has been thoroughly equipped and put into successful operation, as also a cider factory and an evaporating plant. The forge and foundry have been completely equipped with excellent outfits. A 53 -horsepower dynamo has been added to the electric department and a new water supply made available at a cost of $\$ 15,000$. A new dormitory accommodating 110 students and a new dining and a commencement hall have been completed and equipped. Six residences for professors have also been added to our buildings and $65 \frac{1}{2}$ acres to the farm.
President E. A. Bryan, Agricultural College, Experiment Station, and School of Science of the State of Washington: Few changes have been made in the essential features of the courses and methods of instruction during the year ending June 30, 1896, and these have been largely in the development of the industrial side of the education offered. A school of dairying was established in which there were enrolled 23 students. These students were for the most part mature men and women who had already engaged in the business of dairying. The organizing of the short course in agriculture and horticulture, hereafter to be known as the school of farming, was completed during the year and gives promise of rendering useful service to that class of students who come from the farm and, after a
brief period in school, return to the business of farming. One-half of the instruction to these students is laboratory work in agriculture and horticulture. The work of the commercial department, including shorthand, typewriting, and bookkeeping, has been enlarged and that part of the work will hereafter be classified as the school of business. The greater portion of the expenditure for this department has been from funds appropriated by the State. Provision has been made for a school of pharmacy and a school of veterinary science (the latter to supplement the work in agriculture). to begin with the beginning of the next college year. The courses in civil, mining, and mechanical engineering have proved very attractive to large numbers of students. The attendance in all departments has greatly increased during the past year, the increase being between 60 and 70 per cent. The internal development has been entirely satisfactory, and its popularity throughout the State with all classes of people has increased very materially. A dormitory for young women has been erected at a cost of $\$ 20,000$. This is a building composed of two stories besides attic and basement, the extreme measurements of which are 100 by 150 feet. It is built chiefly of stone and brick. A dairy building and equipment have been provided and a piggery has been built, costing in all about $\$ 4,000$. A new heat, light, and power plant has been constructed at a distance of from 800 to 1,200 feet from the buildings and located on the Northern Pacific Railway tracks. This plant is intended both for supplying heat, light and power, and for purposes of instruction. The building and stack are of brick. The total cost is about $\$ 15,000$. The steam from this plant is conveyed by underground pipes to the larger buildings on the college campus, and the electricity for lighting is carried by underground wires to the same buildings. The machinery of the mechanical engineering building is operated by an electric motor connected with the plant by underground wires.

President James L. Goodnight, West Virginia University: The university has been organized during the year into colleges, and into schools where not sufficient for a college. These are (1) the college of arts and sciences, (ఇ) the agricultural college, (3) the engineering college, (4) the law college, (5) the pedagogical school, (6) the commercial and business school, (7) the physical-culture school, (8) the school of military tactics and science, (9) the preparatory school. The colleges are divided up into schools, the schools into departments, when there is any definite line of differentiation. During the year there was a gain of 115 in attendance over the preceding year, which had the largest attendance that the university had had up to that year.

Dean W. A. Henry, University of Wisconsin: The college of agriculture embraces three lines of effort: (1) Experimentation, (2) instructional work at the university, (3) instruction to farmers through farmers' institutes. Though the colleges of agriculture and engineering are closely interwoven with the university, the funds of each are held distinct. The income of the college of agriculture consists of (1) one-third of the income from the land grant of 1862, (2) two-fifths of the Morrill income, (3) one-third of an increase in changing the State tax for the university from one-tenth of a mill to one-eighth of a mill, (4) all sales of farm and creamery products, ( 5 ) funds appropriated by the legislature from time to time, and (6) \$12,000 annually for farmers' institutes. The funds of the college of engineering consist of one-third of the income from the land grant of 1862, two-fifths of the Morrill income, 1 per cent of all taxes paid to the State by railway companies, etc., and direct State appropriations. The department of mechanic arts is a branch of the college of engineering, and so connected with other engineering departments that it is impossible to separate the data relating to it. The attendance of students in the college of agriculture numbered 190 for the year. Most of these were in the dairy course or short course in agriculture. During the year there have been sent out from the college of agriculture Farmers' Institute

Bulletin No. 9, 320 pages, 50,000 copies; also a Handbook for the Homesceker, 200 pages, 100 illustrations, 50,000 copies. This book was prepared by direction of the legislature. Both books are distributed gratuitously. From the experiment station there have been issued the Twelfth Annual Report, 350 pages, 15,000 copies, and 7 bulletins, aggregating 148 pages, in editions varying from 5,000 to 12,000 copies each, generally the latter figure. During the past year the college of agriculture has printed and distributed gratuitously to the people of our State $32,468,000$ pages of printed matter. During the past year 107 farmers' institutes, each lasting two days. have been held, with an aggregate attendance of about 50,000 different persons.

President A. A. Johnson, University of Wyoming: The College of Agriculture, State of Wyoming, was reorganized at the opening of the present university year, with additional buildings, laboratories, and instructors, and now offers to the youth of Wyoming the following courses of instruction in agriculture, mechanic arts, and military science: (1) A one-year course, which is for those whose time is limited, but who wish some practical instruction in farming and ranching. The studies are so arranged that students from the district schools can enter at the beginning of any term. The recitations and lectures are with the regular university classes, a certificate is given for work done, and the grades may be credited toward the longer courses. The fall term includes bookkeeping or physiology, drawing, English grammar or rhetoric, arithmetic or algebra, and woodworking. The winter term embraces bookkeeping or physical geography, history and principles of agriculture, botany or horticulture arithmetic or algebra, and metal working. The spring term is devoted to bookkeeping or civil government, the agriculture of soils and tillage, botany or horticultare, zoology or geometry, and field and laboratory work. (2) A two-years course, which includes the above and selected studies from the second and third years of the complete course. (3) A four-years graduating course, which is devoted to a thorough training in agriculture. (4) A graduate course, which is for graduate who wish to devote their time to special research in the fields and laboratories of the Agricultural Experiment Station. The chemical laboratory is fitted up wit a view to making it as useful as possible to the State at large, and good opportunitite are offered for carrying on special investigations or courses of study. Prospectors who wish to take a course in determinative mineralogy, pharmacists who desire to perfect themselves in chemistry before taking examinations or going away to a school of pharmacy, and especially those contemplating the establishment of some industry developing the natural resources of Wyoming, will be given every available facility for their work. The study being individual and not in classes, hours can generally be arranged to suit the student. The only requirement is sufficient previons knowledge to undertake the line of work desired. Tuition is free; apparatus broken and chemicals used are charged at cost.

President H. A. Hill, Southern University and Agricultural and Mechanical College: Practical agricultare in the fields or practical mechanics in the shops is compulsory with all males over 14 years of age, and optional with males 12 to 14 years of age; but with females it is as yet optional. Theoretical agrieniture and mechanics are begun earlier, when possible, in a primary way, and followed by higher works. The other subjects specified by the act of Congress of 1890 are taught to the whole school. The principal departments of the university are the literary, the scientific, the agricultural and mechanical, and the normal.

President Inman E. Page, Lincoln Institute: For several successive years it has been necessary to report that though the regents were able to employ competent persons to teach the mechanic arts, they were notable for want of funds to employ a suitable person to teach agriculture. I am glad to report that the legislature has made a small appropriation for instruction in agriculture, which hereafter
will be a part of the curriculum of this institution. - A new main building, costing $\$ 40,000$, has just been completed to furnish the facilities of the building destroyed by fire in 1894.

President L. M. Dunton, Claflin University Agricultural College and Mechanics'


Trade Schools, Hampton Normal Schools and Agricultural Institute, Hampton Va., to be dedicated November 19, 1898.

Institute: Special attention has been given to the further development and improvement of the department of agriculture. The farm and buildings have been placed in the best condition. Instruction has been given in the principles of agriculture, chemistry, biology, and mineralogy, accompanied with lectures. Practical appli-
cations of the principles taught have been made so far as the funds and equipment of the institution would warrant. The institution has been especially successful in the development of the mechanical department. The principal industries are woodworking, ironworking, masonry, house painting, printing, and the domestic arts. The principles of trades are taright without any attempt to manufacture articles for the market, and such instruction has been given as students are most likely to need after leaving the institution.
Principal H. B. Frissell, Hampton Normal and Agricultural Institute: The school has increased the work done for the students in the line of agriculture the past year. More ground bas been added for the experiment station, and 12 acres are now employed_in this way. Trees and shrubs have been planted for the purpose of showing what can be done in the raising of fruit. Regular instruction in agriculture is now given to every class in school, besides that given in the regular agricultural department. Variety and culture tests have been made, chiefly of sweet and Irish potatoes. Tests are being made of different methods of the preparation of the soil and of after cultivation of crops. The effect of fertilizers on soil and crop is being tested. A contiryous test of our dairy herd is being made by the Babcock method. In addition to the manual training which is carried on in connection with the academic work of the school and the trade teaching in the sixteen shops, a building is in process of erection on the school grounds, to cost $\$ 40,000$, to be known as the Armstrong and Slater Memorial Trade School Building, where a larger number of students can be taught trades than heretofore, and better work done. It is the design to allow only those to enter this school who have finished the academic course of the school. The work carried on will be more productive, and the sixteen shops already in operation will give to the graduates from this trade school an opportunity to put into actual operation the lessons they have learned. With the manual training continued through the entire academic course, the trade school following, and the productive industries of the school, it is hoped that well-trained mechanics may be sent out.
President J. H. Hill, West Virginia Colored Institute: Though our curriculum is that prescribed by the State for the normal schools, we shall organize during the coming year (1896-97) an academic course based upon the natural sciences, having in view the establishment of a pure agricultural course. During the year there has been completed a large two-story building 43 by 82 feet, at a cost of $\$ 8,000$, which is to be used for a machinery hall.

TABLE 1.-Statistics for 1895-96 of institutions endowed by the acts of Congress approved July 2, 1862, and August 30, 1890, with public lands or a part of the proceeds arising from the sale thereof, or both.

Name of institution and its post-office address.

Alabama Agricultural and Mechanical College, Auburn, Ala.
University of Arizona (agricultural and mechancal department), Tucson, Ariz
al University Feyettoville, Ark
University of California (agricultural and me-
Uivanical department) Berkeley, Cal.
Colorado A ericulturai College, Fort Collins, Colo.-
Colorado Agricurral Colle Storrs, Conn
Sorrs Agricula Delartment), Newark, Del.
partment), Newark, Del. Lake City
Nor............
(University of Georgia), Athens, Ga.
(University of Georgia), Athens, Ga
University of tllinois (agricultural and mechan
ical department), Urbana III
ical department), Urbana, III.
Iowa Agricultural College, Ames, Iowa
Kana Agricultural Agricultural Colle, Ames, Manhattan, Kans ---
Kansacky Agricultural and Mechanical College, Lexington Ky .
Louisiana State University (agricultural and mechanical department), Baton Rouge, La.
Maine Agricultural and Mechanical College
Maryland Agricultural College College Park, Md
Maryland Agricultural College, Conege Parst, Mass
Massachusetts Institute of Technology, Boston
Massacs.
Mass.

Table 1.-Statistics for 1895-96 of institutions endowed by the acts of Congress approved July 2, 1862, and August 30, 1990, with public lands or a part of the proceeds arising from the sale thereof, or both-Continued.


Clemson - wirnultural College, Fort, Hill, S. C-ak-
Stute ler ricultural College of Noutl Dakota, Brook-
111gs, S. Dak.
University of 「emnessee (acricultural and mechanical department), Inoxville, Tenn.
Agricultural and Mechanicall College of Texas, College Station, Tex.
Agricultural College, Logan, Utah -........................
University of Vermont ind Stato Agricultural Col lege, Burlington, Vt
Virginia Agrieultural College, Blacksburg, Va-...
Washington Agricultural Cullego and School of Scionce, Pullman, Wash.
West Virginia University (agrieultural and mochanical departinent), Morgintown, W, Va.
University of Wisconsin (agrieulturaland mechan-
ical clepartinent), Madison, Wis
University of Wyoming (agrieultural and mechanical department), Laramio, Wyo.
E. B. Craighead. Johin W. Heston.......
Chas. W. Dabney, jr.
L. S. Ross....................
J. H. Paul.

Nathew H. Buckham
J. M. McBryde
E. A. Bryan

James Lincoln Good knight.
W. A. Henry, dean...
A. A. Johnson
on-

$-$| 10 | 25 | 0 | $1 \sim 2$ | 0 |
| ---: | ---: | ---: | ---: | ---: |
| 9 | 16 | 3 | 24 | 9 |
| 8 | 23 | 0 | 0 | 0 |
| 10 | 23 | 0 | 0 | 0 |
| 7 | 18 | 3 | 208 | 103 |
| 11 | $\cdots 1$ | 0 | 1 | 0 |
| 8 | 27 | 0 | 33 | 0 |
| 8 | 19 | 2 | 101 | 63 |
| 9 | 15 | 0 | 145 | 0 |
| 9 | 40 | 0 | 0 | 0 |
| 7 | 9 | 2 | 4 | 0 |


| 0 | 200 | 0 |
| ---: | ---: | ---: |
| 9 | 142 | 60 |
| 0 | 236 | 00 |
| 0 | 851 | 0 |
| 103 | 121 | 62 |
| 0 | 81 | 0 |
| 0 | 279 | 0 |
| 63 | 97 | 4 |
| 0 | 129 | 35 |
| 0 | 380 | 0 |
| 0 | 3 | 0 | $\begin{array}{r}0 \\ 60 \\ 90 \\ 0 \\ 65 \\ 0 \\ 0 \\ 44 \\ 35 \\ 0 \\ 0 \\ \hline\end{array}$

## *NSTITUTIONS FOR THE COLORED RACE.

| Alabama Normal and Industrial School, Normal, Ala. | L. A. Houston, assistant secretary. |  | 12 3 | 0 | $1 \%$ 0 | 18 0 | 9 40 | 0 0 | 0 0 | 0 0 | 35 119 | 193 44 | 4,153 2,777 | 1,209 802 | 130 20 | 10,000 | 38,743 33,200 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Brameh Normal College of Arkansas Industrial | J. C. Carb |  | 3 | 0 | 0 | 0 | 40 | 0 | 0 | 0 | 119 | $4 \pm$ | 2,777 | 802 | 20 |  | 33,200 |
| University, Pineluluff, Ark. | W. C. Jason | 0 | 3 | 0 | 32 | 6 | 10 | 6 | 0 | 0 | 0 | 0 | 300 | 150 | 90 | 6,000 | 2,100 |
| State Collegu for Colored Studonts, Dover, Del-.... Florida Stito Normal and Iudustrial College for | T. De S. Tucke | 0 | 6 | 6 | 20 | $4 \pi$ | 0 | 0 | 0 | 0 | 0 | 0 | 636 | 300 | 91 | 7,105 | 19,300 |
| Colored Students, Tallahassee, Fla. | R. R. Wrigh | 0 | 10 | 0 | 46 | $47^{\prime \prime}$ | 102 | 0 | 0 | 0 | 0 | 0 | 300 | 100 | 20 | 5,000 | 9,500 |
| lege, Gia. | John | 0 |  | 2 | 6 | 0 | 9 | 0 | 0 | 0 | 33 | 63 | 717 | 166 | 5 | 1,000 | 12,565 |
| Stato Norinal School for Colored Persons, Fran fort, Ky. | H. A. | 0 0 | ${ }^{2}$ | \% | 134 | $19 \pm$ | 165 | 97 | 0 | 0 | 0 | 0 | 717 | 452 | 40 | 6,000 | 52,972 |
| Southern University and Agricultural and Mochanital (college, New Orleans, La. |  | 0 | 6 | 6 | 134 | 19 | 48 | 1 1 | 0 | 0 | 0 | 0 | 817 | 40\% | 40 80 | 2,000 2, 500 | 6\%, 100 |
| Aleorn Agricultural and Mechanical College, Wostside, Miss. |  | 0 | 13 | 0 | 266 118 | \% | 48 0 | 1 | 0 0 | 0 | 0 | 0 0 | 2,825 | ,250 | 80 15 | 2,500 | 1,100 |
| Lincoln Institute, Jefferson City, Mo.n.-............ | Inman E. Pag | 0 | 5 | 2 | 113 | 100 | 17 | 0 | 0 | 0 | 0 | 0 |  |  | 15 | 2,300 | 11, 000 |
| Agrienttural and Mechanical College for the Colored Race, Greenshoro, N. (". | James B. Dude | 0 | 7 | 0 | 34 | 16 | 17 | 0 | 0 | 0 | 0 | 0 | 600 | 300 | 20 | 8,000 | 42,500 |
| Claflin University, Asricultural College, and Mechanical Institute, Orangoburg, S. C. | L. M. Dunton | 0 | 10 | 2 | 61 | $6{ }^{3}$ | 7 | 4 | 0 | 0 | 245 | 207 | 1,800 | 1,000 | 120 | 15, 000 | 58,000 |
| Prairio Viow Stato Normal School, Prairio View, Tex. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Hampton Normal and Agricultural Institutc, | H. B. Fusse | 3 | ${ }^{6}$ | 32 | 195 | 156 |  |  | 0 | 0 | 194 | 8.2 | 1,768 | 716 | 503 | 32, 000 | 568, 000 |
| Hest Virsiniai Colored Institute, Farm, West Vir- | J. H. Hill | 0 | 3 | 2 | 27 | 39 | 21 | 29 | 0 | 0 | 0 | 0 | 600 | 200 | 10 | 27,500 | 34,580 |

[^49]Table 2.-Financial statistics for 1895-96 of institutions endowed by act of Congress in 1862 and 1890 with public lands or a part of the
proceeds arising from the sale thereof, or both.

Name of institution.



## $\begin{array}{r}83,869 \\ 10,238 \\ 6,606 \\ 3,430 \\ 493 \\ 1,906 \\ 1,509 \\ \hline 1,58\end{array}$

Ezen

$$
\begin{array}{r} 
\\
\$ 8, \\
8, \\
81 \\
126, \\
28, \\
37,
\end{array}
$$

$\begin{array}{r}31, \\ 128, \\ 37, \\ 37 \\ \hline\end{array}$
6

| $\$ 2$ |
| :---: |
| 1 |
| 43 |


| propria- | 2, 1862. | $\begin{aligned} & \text { gust } 30, \\ & 1890 \text {, } \end{aligned}$ |
| :---: | :---: | :---: |
| \$8,249 | \$20,280 | $\begin{array}{r} \$ 11,613 \\ 21,000 \end{array}$ |
| 81, 575 | 10,400 | 15,000 |
| 126, 466 | 43,807 | 21,000 |
| 28,852 | 4,717 | 21, 000 |
| 37,000 | [4, 4 468] | 16,800 |
| 7,500 | $\stackrel{4}{9}, 107$ | 10,500 |
|  | 18,954 | 14,000 |
| 21, 233 | 24,713 | 20,000 |
| 383,300 66,000 | 17,000 | 21,000 |
| -66,913 | 46,596 | 21,000 |
| 19,427 | 27,359 | 21,000 |
| 35,556 | $\stackrel{2}{2}, 190$ | 17,955 |
| 17,777 | 5,116 | 10,170 |
| 20,000 | 6,142 | 21,000 |
| $\begin{array}{r}6,000 \\ \mathbf{2 9} \\ \hline\end{array}$ | 7,200 | 14,000 |
| 29,214 | E,541 | 7, 0009 |
| 13,161 | 43,071 | 21,000 |
| 303, 432 | 22;977 | 21,000 |
| 27,500 | 5,915 | 9,685 |
| 17559 | 4,126 | 19,858 4,965 |
| a2, 500 |  | 21,000 |
| 123, 572 | (b) | 21,000 |
| 54,000 5,500 | c 4,800 | 21,000 |
| 5,500 | 5,854 | 21,000 |
| 7,200 |  | 21, 000 |
|  | 10,486 | 21,000 |

Expenditures.

| Instruc tion in the subjects specified in section 1. act of August $30,1890$. | Experiment station. | Instruction in, all other departments. |
| :---: | :---: | :---: |
| \$24,900 |  |  |
| 22,161 | 14, 887 | $\$ 3,800$ 400 |
| 11,942 | 14,128 | 48,863 |
| 75,238 | 16,37 | 76, 355 |
| 21,000 | 18,018 | 38,617 |
| 15,987 | 7,500 |  |
| 15,514 10,463 | 15,000 | ,807 |
| -90,900 | 15,000 | 3,85B |
| 21,444 | 15,000 | 2,350 |
| 208, 302 | 18,083 | 38,900 |
| 121,327 | 10,309 | 17,211 |
| 66, 798 | 14,088 | 73, 119 |
| 71,795 | 15,540 | 9,247 |
| 35, 714 | 21,605 | 23,275 |
| 14,469 | 15,000 | 26,461 |
| 24, 922 25,480 | 15,777 | 23,511 |
| 20,480 | 15,000 | 5,815 |
| 307, 247 | 15,000 | 1,438 |
| 45,911 | 17,592 |  |
| 31,043 | 26,254 | 6,500 |
| 22,030 | 15,000 |  |
| $\begin{aligned} & 25,577 \\ & 21,379 \\ & 21 \end{aligned}$ | 15,814 |  |
| 20,629 | 16,236 | 1,200 |
| 82,786 | 15, 000 | 68,786 |
| 19, 188 | 15,000 | 6,409 |
| 37, 883 | 15,000 | 2,005 |
| 19,650 | 15,000 | 19,504 |
| 368,344 | 15,198 | 3,682 89,301 |
| 82,575 | 150 | 8, ${ }_{0}$ |


a Not including $\$ 100,000$ from sale of bonds.
in 1893 reported as $\$ 48,652$ and estimated in 1894 as $\$ 25,875$, considering five-twelfths of the bond held by the university and agricul tural fund as belonging to latter.
$c$ This probably is about half of the t
d. Also $\$ 87,889$ for other expenditures.
e This is really a State appropriation to meet claims of negro citizens on the 1862 fund, which goes to University of Georgia.

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## CHAPTER XXVIII.

## THE BERTILLON SYSTEM AS A MEANS OF SUPPRESSING THE BUSINESS OF LIVING BY CRIME. ${ }^{1}$

Movement of crime in 1870; Ways in which crime as a business may be suppressed; Pauperism, its character and suppression; Ffforts to prevent vagabondage in England three hundred years before the introduction of the instruction of the peasantry; Failure of such legislation to accomplish its object; Comparison of the number of paupers in American almshouses with the number of prisoners in penitentiaries; The prevention of the education of youth in crime; The reformation of the criminal; The philosophy of the Bertillon system of identifying luabitual criminals; The superiority of the systen to photographic records in point of classification; Method of classification used in France; Accuracy of the system; The system in the United States; The text of State laus in regard to the system and illustrations of the apparatus it employs.

The number of prisoners in the United States in the year 1870 differed in a very marked way from the number reported in 1860. In 1870 the city States of Massachisetts, Rhode Island, Connecticut, and New York had far fewer prisoners in their custody than they had in 1860, while the agricultural States of Ohic, Indiana, Illinois, Kentucky, Iowa, and Kansas very largely or even enormously increased the inmates of their prisons at the close of the sixties. How far the civil war drew off the criminal element of the Northeastern cities and how far that element reappeared, if at all, in the prisons of the West after the disbanding of the armies, is a question that must be left to conjecture.

The deficit of criminal prisoners in the Northeastern States at the date of 1870 did not last long. Twenty years more than removed it. In the nonslaveholding States of the West the increase was also marked, though by no means so alarming as that following the close of the civil war. This constant increment to the class of persons called by the census "prisoners," and the ease with which a jackknife, or a mouthful of liquor will secure transportation for such persons, when free, over the many lines of railways that traverse the Republic, make it necessary that the police of towns and cities should-not be left isolatedly to prove before judges and juries, properly anxious to be just and merciful, the mischievous disposition of their unwelcome visitors.

There are three ways in which crime as a business may be more or less undermined: (1) By preventing the education of youth in crime; (2) by reforming the incarcerated criminal; (3) by so registering the criminal that he will fear to practice his vocation, knowing that if captured his lawyer will have some difficulty in explaining away the facts registered against him. The first and second methods have long been tried in this country, and now a plan known as the Bertillon system of identifying habitual criminals is championed as capable of registering the
captured criminal far more permanently than is done by photography. It is the object of this chapter, after recalling some elementary facts in regard to pauperism and reformation, to place the claims and mechanism of the scheme of M. Bertillon before the public.

PAUPERISM.
The word pauperism is here charged with a definite meaning. A pauper is one living upon public taxes. Universal poverty and much starvation may arise even in agricultural communities from the disease of a crop, as in Ireland in 1845, or from periodical drought, as in India, or from unmerciful taxation, as in the "age of Louis XIV," when the peasantry were compelled to starve themselves for fear of quickening the inventive, powers of the taxgatherer to create new forms of exaction. But the impounding the poor at the expense of the parish-the creation of a legal poor-is due to the poor laws of England, which have steadily elevated the cost of keeping the claimants for charity from $\$ 3,500,000$ in 1750 to $\$ 40,000,000$ in 1885, or about $\$ 50$ for each of the 800,000 paupers in England and Wales. If this burden had been equally distributed, the amount paid by each person of the population would have been nearly $\$ 1.75$ in 1885 , though but 55 cents in 1750. Yet the original motive of this effort to "relieve the poor "was not philanthropy. England was swarming with vagabonds, bēggars, or tramps, and to relieve the apprehensions of the stationary and self-supporting part of the population a series of coercive acts was passed during the reign of the family of Tudor compared to which the late compulsory school laws of our Eastern States in that particular are child's play. The preamble of the act of 1576 is expressed in these terms:


#### Abstract

To the intent that youth may be accustomed and brought up to labor, and then not like to grow up to be idle rogues, and to the intent also that such as be already grown up in idleness and are such rogues at this present may not have any just excuse in saying that they can not get any service or work, and that other poor and needy persons being willing to labor may be set to work, be it enacted, etc.


In the United States there were in 1890 73,045 paupers in almshouses, of whom 36,656 were native-born whites, 6,467 colored persons, and 27,648 were white foreigners. As the increase of criminals in the United States has been connected in one way or another with a public education which " permits children to grow up without a means of earning a living," it is proper to ask whether the growth of paupers in almshouses is proportional to the growth of criminals in prisons.

## Comparison.

(1) WITHOUT REGARD TO INCREASE IN POPULATION.

|  | 1870. | 1880. | 1890. |
| :---: | :---: | :---: | :---: |
| Prisoners | 32,901 | 58,609 | 82,329 |
| Paupers ${ }^{\text {a }}$ | 76,737 | 68,203 | 73,045 |

(2) RELATIVELY TO POPULATION (I IN EVERY $1,000,000$ ).


[^50]It is quite as logical to ascribe the great diminution in the number of paupers shown in this comparison to the influence of the public schools as to ascribe the smaller increase in the number of criminals to that cause. Both sets of figures are published in the last census, and therefore one set is as good as the other. But
outside of any statistical statement, how it is possible to reconcile any connection of education with increase in vagabondage and criminality if in times when even members of the English House of Lords could not read it was found necessary to establish an apprenticeship system and to employ the whipping post, stocks, and hanging to make people work? "By the act of 1536 ," says Mr. Froude in his History of England, "the 'sturdy (able-bodied) vagabond' who by the earlier statute was condemned on his second offense to lose the whole or a part of his right ear, was condemned for the third offense to be executed as an enemy to the commonwealth." "A further excellent but severe enactment," continues Mr. Froude, "empowered the parish officers to take up all idle children above the age of 5 and 'appoint them to masters of husbandry or other craft or labor to be taught,' and if such child ran away, he might be publicly whipped with rods." "This educative theory," Mr. Froude says, "was simple but effective, for the first condition of a worthy life is the ability to maintain it in independence," and though "varieties of inapplicable knowledge may be good, they are not essential." Under such a régime it might be supposed that vagabonds would have soon disappeared centuries before any variety of inapplicable knowledge was taught to the peasantry of England; but such was not the case, for after some forty years of this species of effective education it was necessary to pass the statute of 1576 , the preamble of which has been quoted above, and in 1601 the famous statute out of which, says Dr. Burn, the historian of the "poor laws," "have come more litigation and a greater amount of revenue, with consequences more extensive and more serious in their aspect than ever were identified with any other act of Parliament or system of legislation whatever." The first Tudor set property to supporting the Government, the last set property to pauperizing the poor, though intending to make them industrious.

THE PREVENTION OF THE EDUCATION OF YOUTH IN CRIME.
The bad policy of confining children arrested for some trivial offense with the criminals of a common prison early caused separate establishments to be created for "juvenile offenders." These establishments are variously called houses of refuge, reformatories, and industrial schools, and there are one or more of them for each sex in most of the States. In 1890 there were 14,846 inmates in these institutions, one-fifth of whom were girls. In 1880 the inmates were 11,468 , or 229 persons in every $1,000,000$ inhabitants, to 237 persons in the year 1890. Far the larger number of these 15,000 boys or girls are not criminals; many of them are vicious, but very many more are victims of an environment neither created nor improvable by any exertions of theirs. To these the State holds out a helping hand, and every decade sees an improvement in the methods and character of its management. To children who have done no illegal act, but have neither parents nor friends, a thousand orphan asylums open their doors.

## THE REFORMATION OF THE CRIMINAL.

In America, if not in the world, the earliest efforts to free the slave and reform the criminal were made by the Quakers of Pennsylvania. They were the first abolitionists, when abolition was opposed to their business interests; and they devised a scheme for reforming the criminal that was so terribly effective in theory as frequently in operation to unsettle the mind of the patient or drive him to selfdestruction. Their systein of prison régime was known to French and English investigators as the solitary-confinement plan, according to which reflection was only broken by religious instruction. But this early and successful effort to add a crowning terror to crime has Iong since passed out of existence, and during the
${ }^{1}$ Froude's History (of the Tudors) of England. Vol. 1, pp. 59, 88, and in fact the whole chapter.
last ten years another system, unique in its philosophy and social in its mechanism, has been introduced. This innovation is the Elmira plan, in which the household economy of the prison and the physical, moral, and intellectual instruction are conducted on a regenerative method. Into such prison it is even ventured to introduce the word honor, and prisoners are regularly dismissed on parole when they have learned a trade or are capable of taking care of themselves in a legitimate manner.

In these ways has society endeavored mercifully to exterminate crime as a business; that is to say, to exterminate the hardened or habitual criminal. Against those, however, who are recalcitrant to such treatment energetic measures are being taken, and all that has been wanting to effect the object contemplated by those measures is a method of identifying the confirmed criminal.

The Bertillon System of Anthropometrical Measurements.
The habitual criminal who successfully practices his vocation is characterized by two mental qualities-egotism and cunning. He looks upon himself as an educated man in the sense that Mr. Froude, the historian, uses the word "education," and probably disdains every " variety of inapplicable knowledge." He considers his professional adventures as in no way differing from any other business, except that his requires courage; and he receives complacently the homage of his fellows and the admiration of the crowd that fears the law which he despises.

It requires some ability to apprehend an artist of this description, enterprising not only as an individual marauder, but still more formidable as a teacher of his specialty. At first the idea was to "set a thief to catch a thief," and then police agents were expected to "impregnate their visual memory with the cast of the criminal's countenance," for " the eye sees in things only what it looks at in them and it looks only at that of which the idea is already present in the mind." ${ }^{1}$ But both of these methods have drawbacks. Judges and juries aro averse to paying off the "old scores" of one person against another, and are aware that the eye may see in things what is not there. Photography was thought capable of obviating this difficulty, but the collection of criminal portraits has become so large that it is a physical impossibility to discorer the portrait of a recaptured criminal unless he kindly tells the name he bore when the portrait was taken. Thus, vecause it was impossible to identify an arrested person with his past, and punish him accordingly, justice has been baflled and roguery nourished.
The use of anthropometry as a method of identification, says M. Bertillon, chief of the central bureau of identification of France since 1882, ${ }^{2}$ rests upon the three following data, which the experience of the ten years last past has shown to be unimpeachable, to wit:

1. The almost absolute immutability of the human frame after the twentieth year of age. The height only, or to be more exact, the thigh bone, often continues to grow for two or three years longer, but so little that it is easy to make allowance for it. Experience shows that this sinall increase is more than compensated for by the curving of the rertebral column (indicated on the descriptive card of the criminal by curre), which, commencing about the twentieth year, continues to accentuate itself by degrees until old age.
2. The extreme diversity of dimension which the human skeleton presents when compared in different subjects. This occurs to such an extent that it would be difficult, if not impossible, to find two individuals whose bony structure is, we

[^51]will not say exactly identical, but even sufficiently alike to make any confusion between them possible.
3. The facility and comparative precision with which certain dimensions of the skeleton may be measured in the living subject by means of calipers of very simple construction. And from among the innumerable measurements that it is possible to take of the human body, those to which we have, after minute criticism, given preference are as follows:
(The instruments used and the manner of taking these measurements are shown in Note A of the appendix to this chapter.)

| Body. | Head. | Limbs. |
| :---: | :---: | :---: |
| 1. Height (man stanđing). | 4. Length. | 8. Length left foot. |
| 2. Reach (finger tip to finger | 5. Width. | 9. Length left middle finger. |
| 3. tip) (man itting) | 6. Length right ear. | 10. Length left little finger. |
| 3. Trunk (man sitting). | 7. Width right ear. $a$ | 11. Length left forearm. |

$a$ Now given place to width across face between cheek bones.
But every card made is as cumbersome as a photograph, and the measurements, however scientifically made, are valueless for use unless classified. M. Bertillon reports his method to be as follows: During ten years 120,000 persons passed through the prisons of Paris, and their anthropometrical description (or signalment, as the French call it) were inscribed on as many slips of cardboard measuring 5.7 inches in length by 5.5 inches in width. These are assorted as they accumulate in this way: The cards for women (one-fifth of the whole) are placed by themselves; then the cards for male persons under 21 years of age are separated (one-tenth of the whole number of cards for that sex). The cards remaining $(90,000)$ are first broken up into three divisions, according to the length of the head, to wit: First division, short lengths of head; second division, medium lengths of head; third division, long lengths of head.

The meaning of the terms are rigorously defined by figures, but those figures are not an abstract definition of the terms short, medium, and long length of head, but they are fixed in such a way as to make one-third of the cards fall in each division. Thus the medium length of the Parisian police department has a range of only 6 mm . ( $185-190 \mathrm{~mm}$.), while the long length includes all over 190 mm . and the short length all under 185 mm . This artificial interpretation of the terms long, medium, and short lengths has been adopted because experience has justified it. It must not be forgotten, however, that the measurements inscribed on the card are scientifically true, even though the cards be assorted into groups having arbitrary limits.

Having divided the cards into three groups by the length of the head, each group is subdivided into three groups by the width of the head-narrow, medium, and broad widths. Thus three sets are subdivided into nine. Each of these nine groups is subdivided into three groups by the length of the middle finger-small, mediun, large; each of these twenty-seven groups is subdivided on the length of the forearm; each of these groups into three by the lieight; these into classes of sizty by the little finger, and finally the color of the eye forms a group of twelve out of a total of 30,000 cards.
The method of identification is obvious. A suspected person is arrested at Chicago. He denies everything, of course, and claims he is more sinned against by society than sinning. His anthropometric measurement is telegraphed, let us say, to Washington to a central bureau or library of the descriptions of criminals, at which all measurements have accumulated. The investigation proceeds from the identification of the length of the head to its width, from that to the length of the middle finger, from that to the foot, etc. Sometimes the measurement of the
length of the head falls on the limit of a subdivision, then a double search is required, "exactly as one looks in two places for a word that one does not know the spelling of." In this double search resides, it is said, the only difficulty of identification; but the results obtained in ten years of practice in France have demonstrated that this obstacle is very easily overcome. There are, nevertheless, some objections to the accuracy of the measurements in the way of finding "the equation of personal error" of the observer, as is said in astronomy, or as M. Bertillon calls it, "maximum of tolerable deviation," that can not be discussed here, but are fully treated in M. Bertillon's work, of which there are two translations before the American public. ${ }^{1}$
At the prefecture of police the measurements are taken and classified by special employees. All the subjects arrested during the day are measured and identified, each new card being made in duplicate at one writing. The copy is immediately classified in the anthropometrical file, while the original card is classified alphábetically according to the orthography (or, more exactly, according to the pronunciation) of the proper name as declared by the prisoner. The card put in the anthropometric file is slightly shorter than the one placed in the alphabetic file, so as to prevent confusion. This alphabetic file is indispensable to discovering a criminal at large, for when the criminal's name is known, the alphabetic card contains a description of any peculiar marks upon his person, which, it is unnecessary to say, are not ascertainable except when the name of the suspected person is the same as given by him when his card was made.
A singular feature of the operation of the Parisian system is that it has caused a marked decrease in the number of "international thieves" of the pickpocket class. It was the rule; says Bertillon, for individuals of this class to give a new name on each arrest, but recognizing the impossibility of concealing their identity, they have admitted personally that they prefer to remain in foreign capitals. In 1885 there were 65 arrested; in 1886, 52 ; then 39 , then 19, and finally, in 1890, 14. Indeed, this method is particularly valuable for the purpose of identifying foreign thieves, as among 15 French recidivists there will be only 1 giving a false name, while in the case of the foreigner 1 in 3 is the proportion.
The probability of recognizing the criminal by the measurements, says M. Bertillon, is equivalent to certainty, as the statistics of Paris show.

## THE GRADUAL $\triangle D O P T I O N ~ O F ~ T H E ~ B E R T I L L O N ~ S Y S T E M ~ I N ~ T H E ~ U N I T E D ~ S T A T E S . ~$

The Bertillon or "French" system of measuring persons convicted or arrested for crime, in order more surely to identify such persons (if rearrested) as habitual criminals or recidivists, has gone through three phases of development in the United States, as far as State legislatures have dealt with the subject. In the case of the State of Pennsylvania, for which a law was passed in 1889, the use of the Bertillơn system in her State and local prisons was permitted, but neither required nor recommended (Note B). In the case of the State of Massachusetts, for which a law was passed in 1890, the use of the Bertillon system was required in her prisons, jails, and houses of correction (certain prisoners excepted), but she failed to establish a central bureau for the custody and classification of the cards containing the measurements (Note C). In the case of the State of New York, the law lately passed (Note D) has not only required the use of the Bertillon system in her State prisons, but has established the central bureau so necessary to the efficiency of that system. The management of each of the prisons of Illinois has introduced the system of M. Bertillon, as has also the management of

[^52]the Detroit House of Correction. The governing board of the Ohio State Penitentiary has readopted the Bertillon system after an interval of suspension of six years, and this Bureau is informed by the warden of the Colorado State Penitentiary that the commissioners of that institution have "about concluded to adopt it in the near future." Finally, from Dr. Paul R. Brown, major and surgeon, United States Army, information is received that he has a "Bertillon" plant in his hospital at Fort Hamilton, New York Harbor, and that he hopes to be successful in persuading the military authorities of the United States to supersede by the Bertillon system the outline-card system now used to identify deserting or dishonorably discharged soldiers firom the United States Army.

Though the institutions directly or indirectly referred to above (the prisons of Pennsylvania excepted) have their records made according to the Bertillon system of anthropometric measurements, our nearest approach to a trial of the other great essential of the system, that is to say, its cooperative feature, is the tentative effort made by the Chicago police bureau, at the request of the Police Chiefs' Association of the United States and Canada, at a meeting held in the city of Chicago during 1893. The police department of Chicago was selected on account of its having had since 1888 a "bureau of identification" operated on M. Bertillon's system. The result of this experiment is thus described by Major McClaughry, general superintendent of the Pontiac (Ill.) State Reformatory:
" In 1890 (1888, according to Superintendent Badenoch) a bureau of identification was established in Chicago in connection with the police department of that city. Officers were sent out and many thousand descriptions (not necessarily after the Bertillon system) of habitual criminals were obtained from the different prisons and police departments of the United States, which were classified in said bureau during the World's Fair, for which the city was then preparing. Its value was thoroughly demonstrated during the fair, when Chicago was visited by many professional and habitual criminals from different parts of the country whose descriptions had been obtained."

At present the cities of Cincinnati, State of Ohio; Detroit, State of Michigan; Philadelphia, State of Pennsylvania; Milwaukee, State of Wisconsin; Elgin, State of Illinois, and Washington, in the District of Columbia, "frequently send a description (after the Bertillon system) to the Chicago bureau." It is expected that the city of New York will soon be added to the list, and probably the cities of Pittsburg, State of Pennsylvania, and Omaha, State of Nebraska. These cities will complete the list as far as known.

The value of the measurements and the necessity of a national central bureau in this country are readily inferred from the statement by Superintendent of Police Deitsch, of Cincinnati, made in a communication to this Bureau, which reads as follows:
"The malefactors of a city where this (the Bertillon) system is in use are the first to realize the impossibility of escaping its records, and as it is but logical to assume that no more powerful motive exists in human nature for not committing a crime than the assurance that one will be recognized and that punishment will follow, the criminal naturally seeks other territory. He fears the measurement. Since this service was inaugurated here in 1891, upward of 400 criminals have been recognized by means of it, and over 100 of the habitual and persistent offenders have been deported for long terms under our 'habitual criminal laws.' Many have left for other parts."
The Bertillon system has filled a want long felt by prison wardens and superintendents. As early as 1879 or 1830 the wardens of ten prisons made an arrangement among themselves to cooperate in registering facts calculated to serve in identifying habitual criminals, and each sent a representative to the penitentiary at Joliet to attend the school of instruction established in that prison. This system failed,
it is said, from extraneous causes; but the organization of the Prison Wardens' Association in 1887 for the identification of criminals led naturally to the indorsement given by that association in 1888, and again in 1891, and in 1894, of the Bertillon system, which possessed two great elements of vitality, that is to say, seientific accuracy in identification and methodical cooperation through a central bureau laving the custody and classification of the cards containing the measurements. This central bureau is thought to be absolutely necessary to secure the highest results of which the Bertillon system is capable, but its establishment in this country, composed as it is of forty-five judicial systems which are independent of the Federal system, except upon constitutional questions, has to contend with difficulties not felt in a centralized government or in one of the States of the Federal Union. It should be remarked also, in passing, that Canadian prison and police authorities are cooperating with those within our-borders in urging the establishment of a central office, as the common language of both countries removes a valuable though superficial means of identifying habitual criminals who wish to hide their antecedents by assuming an air of innocence or misfortune or are wholly noncommittal.
Though the wardens and superintendents have inaugurated the system in this country, a review of the information before the Bureau suggests the fact that the poliee departments are particularly active in advocating its adoption and in employing it. In 1893 it was adopted in Chicago at the suggestion of the Police Association, and the same association at its meeting at Atlanta during the month of May, 1896, urged the adoption and took measures looking to the immediate establishment of a central bureau at the national capital, either by means of such aid as Congress might grant or through the cooperation of the police department of the various cities. The law of Massachusetts (Note B) confines the measurements to convicts probably under three years' sentence, but the police department deals with a larger class, the, so to speak, possibly habitual criminal. Thus, in Philadelphia, of 531 persons arrested in 1894 by the detective force, 292, or 55 per cent, were measured by the Bertillon system, 47 of the 292 being accased of committing burglary, 91 larceny, and 24 picking pockets. Superintendent of Police Linden quotes from the report of the department of public safety of Philadelphia, as follows: "The usefulness of the work from a police standpoint is evidenced by the number of requests we have had from other cities for accurate measurements and photographs of men apprehended in those cities and thought to have been in custody here." And in his letter adds: "Our Bertillon measurements have aided the service very much in determining who the prisoners are, and have aided others in the same way."
Reference has been made to the system of identification adopted about 1879 or 1880 by ten institutions situated in the contiguous States of Illinois, Michigan, Wisconsin, Iowa, Indiana, Ohio, Pennsylvania, and New Jersey. It will be seen that this system is a method of registration based on photography, a few physical and many social facts (Note E). This method, though found competent to answer the demands made upon it, will probably give way to the higher accuracy of a system based upon what are said to be constants in the physical stature of each individual, and thus serve to identify professional criminals, who ever desire to be considered "first offenders," for reasons given by Superintendent Deitsch, who remarks:
"In manyStates and cities laws have been passed which are known as 'habitual criminal acts' (see Note F), increasing the punishment of recidivous characters, which have made the success or failure of these attempts more and more important to the criminal class. This has correspondingly increased the interest and importance of the identification branch of police departments."

NOTEA A.
The summary description that follows, while insufincient for practice, will serve to impress the signification of each measurement.
The total height (see fig. 1) is projected by means of a wooden square of special form (see fig. 2 for profle view of this instrument) upon a graduated meter placed vertically against the wall

## THE ANTHROPOMETRICAL SIGNAINENT



1. Height.
2. Length of head.
3. Left foot.
4. Reach.
5. Width of head.
6. Trunk.
7. Right ear.
8. Left middle finger.
(ii)

Measuring Furniture.
[Showing arrangement of mural graduations.]

H. - Vertical rule 1 meter long for measuring the height.
E.-Graduations on paper or oilcloth for measuring the reach.
B.-Rule half a meter long for measuring the trunk or height of a man seated.
Q.-Portable square with double projection, used in measuring the height and the trunk.
E.-Stool used in measuring the trunk.
T.-Movable footstool, to facilitate the measuring of the foot, of the cranial diameters, and of the ear.
M.-Trestle specially intended for the measuring of the forearm, and affording a point of support $(P)$ to the subject during the measuring of the foot.

## Caliper Compass.

[For measuring the length and width of the head.]


To read the indications of the instrument, turn to the point directly opposite the zero mark drawn on the upper edge of the bolt. For example, the opening of the branches in the above drawing is in the actual instrument about 14 cm 3 mm .

The subject, barefooted, is placed with his back to the wall, his vertical column about 15 centimeters to the left of the scale. The more rapidly the operation is performed the more accurate it will be.
The reach, or length of the arms extended in the shape of a cross, is taken immediately afterwards, almost without moving the subject, by means of a scale on the wall, the vertical lines of which scale are adapted to all heights.
The measurement of the height of the trunk (see fig. 3) is then effected by the aid of instruments analogous to those employed for the full height.
The two cranial diameters (length and width of skull) are both maximum dimensions. They should be taken by means of a special compass, commonly called a "caliper compass" (see special illustration). The length of the head is measured from the hollow at the root of the nose, taken as the fixed point, to the most prominent part of the back of the head (see fig. 4). The measurement of the width of the head is a somewhat more delicate operation. It differs principally from the other head measurement in that there is no fixed point, and that the extremities of the two branches of the instrument should in this case be removed together horizontally and symmetrically from each side of the head. Both of these head measurements must be verified by fixing the compasses at the distance recorded and then applying them to the head for verification of the record.

The two diameters of the right ear (fig. 6) are measured on their maximum axis by means of a small caliper rule of special make, taking care not to depress in any manner the soft parts of the ear.

The naked left foot should be measured after the whole weight of the body has beeu thrown unon it, as shown in Fig. 7, the stem of the large caliper rule being applied on the side next the great toe, as the aim is not to make a shoe for the foot but to get its measure so exactly that a shoe made on such measurements could not be worn.

The middle and little fingers of the left hand are measured at right angles from the joint at the back of the hand by means of the caliper rule (fig. 8).
The left forearm is measured from the point of the elbow to the extremity of the middle finger, the forearm being bent at an acute angle with the arm above the elbow and the hand extended flat upon the table, nails upward (fig. 9).

## NOTE B.

## [From Public Laws of 1889 of the State of Pennsylvania.]

No. 109.-AN ACT for the identification of habitual criminals.
Secrion 1. Be it enacted, etc., That in every prison in this State to which persons convicted of any felonious offense are or may be committed by the courts of this State, the warden, or other officer in charge, shall record, or canse to be recorded, in a register to be kept for that purpose, a description of every person committed to such prison under sentence for a felony, and also the criminal history of every person so committed, so far as the same may appear from the records of the courts of this State, or of any other State, or otherwise, as full and complete may be attainable, and shall attach thereto a photograph or photographs of such person so recorded.
SEc. 2. That for the purpose mentioned in section 1 of this act, the district attorney of the district in which a criminal has been convicted and sentenced to prison for a felony shall forward to the warden or other officer, at the request of such warden or other officer in charge, and upon blanks furnished by him, a criminal history of such criminal as full as is known or can be ascertained by such district attorney.
Sec. 3. The register herein provided for shall not be made public, except as may be necessary in the identification of persons accused of crime, and in their trial for offenses committed after having been imprisoned for a prior offense. The record shall be accessible, however, to any officer of any court having criminal jurisdiction in this State upon the order of the judge of the court or of the district attorney of the district in which the person is being held for a crime, which said order shall be attested by the seal of the court, and such record may be offered in evidence upon any trial of an offender for the purpose of proving a former imprisonment or imprisonments and the offense or offenses for which imprisoned.
SEC. 4. For the purpose of obtaining accurate descriptions of conviets, the wardens or other officers in charge of the several prisons in the State are hereby authorized to adopt what is known as the Bertillon method of measurements and registration, or such other method as shall minutely describe convicts.
SEC. 5. A cony of the description, of the history, and the photograph or photographs of any convict entered upon such register shall be furnished upon request of any warden or other officer in charge of a prison for felons in any other State of the United States to such warden or other officer in charge: Provided, Such State has made provision by law for recording the descriptions to the authorities of such other States as have made provisions by law for the keep$i_{\mathrm{ing}}$ of registers of descriptions and histories of their conviets.

SEc. 6. And that a copy of the description, history, and photograph or photographs of any
convict entered upon such records shall be furnished to any officer of the bureau of police in cities where State penitentiaries are located upon the order of the superintendent of police thereof．Also that on or before the 28th day of each and every month the warden of said State penitentiaries located in said cities shall furnish the superintendent of police of said cities the names of the convicts whose sentences expire the following month，together with the date when sentences commenced，the county from which committed，the crime for which convicted，and the exact day when convict will be discharged．
Approved 7th day of May， 1889.
James A．B Baver．

## NOTE $C$.

## The Massachusetty Laff Introducing tha Bertillon System．

## Chapter \＄16，acts 1890.

Every convict now under imprisonment in the State prison or who is hereafter committed thereto upon sentence for felony，every convict now under imprisonment in the Massachusetts reformatory upon sentence for felony or who is hereafter committed thereto upon such sentence， and every convict now under imprisonment in any jail or house of correction upon a sentence of not less than three years for felony or who is hereafter committed thereto upon such sentence shall be measured and described in accordance with the system commonly known as the Bertillon method for the identification of criminals．

## NOTE D．

## An Act to Facilitate the Identipication of Criminals．

［Became a law May 9，1896，with the approval of the governor．Passed，three－ffths being present．］

The people of the State of New York，represented in senate and assembly，do enact as follows：
Section 1．The superintendent of State prisons shall cause the prisoners in the State prisons therein confined at the time this act takes effect，and all prisoners thereinafter received under sentence to be measured and described in accordance with the system commonly known as the Bertillon method for the identification of criminals．The said superintendent shall cause such measurements to be made by a person or persons in the official service of the State，and shall prescribe rules and regulations for keeping accurate records of such measurements at such prisons and in duplicate at his office in Albany and for classifying and indexing the same．It shall also be the duty of the officials having charge of the New York State Reformatory at Elmira，and of the penitentiaries in which prisoners shall be conflned，or shall be hereafter－ received under sentence，to canse said prisoners to be measured and described in accordance with said Bertillon system by such person or persons in the official service of the State or of any such county or institution as may be designated by the superintendent of State prisons for the purpose，which measurements shall be made according to the rules and methods prescribed by the superintendent of State prisons．And it shall be the duty of the officials in charge of said New York State Reformatory at Elmira，and of such penitentiaries，to cause duplicate records of such measurements to be transmitted to the superintendent of State prisons，to be by him indexed and classified according to said Bertillon system．

SEC．2．The necessary expenses incurred by the superintendent of State prisons in indexing and classifying prisoners，as provided in this act，shall be payable by the treasurer from the moneys appropriated for the maintenance and support of the several State prisons on the war－ rant of the controller and on bills approved by the superintendent of State prisons；but such expenses shall not exceed $\$ 1,200$ in any one year．

SEC．3．This act shall take effect immodiately．

## NOTE E．

## Reception Description of Convicts at the Eastern State Penitentiary at Phila－ DELPHIA．

| Number． | Name． | $\begin{aligned} & \dot{8} \\ & \text { 80 } \end{aligned}$ | Color and sex． |  |  |  | Crime． | Date of recep－ tion． | Date of sen－ terre． | Sentence． |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | White． |  | Bluck． |  |  |  |  |  |  |  |  |
|  |  |  | 帯 |  | 呂 |  |  |  |  | 号 | 等 | 㐌 | 管 |
| $\begin{aligned} & \text { A } 1234 \\ & \text { A } 1235 \\ & \hline \end{aligned}$ | Samuel Samuels．．．． Thomas Nothing．．． | $\begin{aligned} & 96 \\ & 36 \end{aligned}$ | 1 |  | 1 |  | Larceny ：－ <br> Assault and battery． | 12－24－90 | $\begin{array}{r} 12-20-90 \\ 1-2-91 \end{array}$ | $\stackrel{3}{2}$ | 6 |  | 1 |



NOTE F.

## Laf of Ohio Against Habitual Criminals.

Every person who, after having been twice convicted, sentenced, and imprisoned in some penal institution for felony within the limits of the United States, shall be convicted, sentenced, and imprisoned in the Ohio penitentiary for felony, shall be considered an habitual criminal, and on the expiration of the term for which he shall be so sentenced he shall not be discharged from imprisonment in the penitentiary, but shall be detained therein for and during his natural life, unless pardoned by the governor, or, in the discretion of the board of managers, he may beallowed to go upon parole outside of the buildings and inclosures, but remaining in the legal custody of the board.

## CHAPTER XXIX.

## CURRENT DISCUSSIONS.


#### Abstract

Contents.-I. What knowledge is of most worth? By Nicholas Murray Butler. II. Relation of manual training and art education. III. The Olympic games. IV. Ideals of educational work. By W, R. Harper.


## I.

# WHAT KNOWLEDGE IS OF MOST WORTH? 

## By Nicholas Murray Butler, Professor of Philosophy and Education in Columbia University.

The student of history is struck with the complexity of modern thought. From the dawn of philosophy to the great revival of learning, the lines of development are comparatively simple and direct. During that period one may trace, step by step, the evolution of the main problems of thought and action, and discover readily how the theories of the seers stood the test of application by the men of deeds. At Athens during the great fifth century the inner life was the chief part of life itself. In that age of the world life was simple; and often, because of its refinement and independence, more reflective than with us. Men's ideals were more sharply defined and more easily realizable. They did not doubt that the world existed for them and their enjoyment. Even that advanced stage of human culture of which Dante is the immortal exponent believed, as Mr. John Fiske says, ${ }^{2}$ that "this earth, the fair home of man, was placed in the center of a universe wherein all things were ordained for his sole behoof: the sun to give him light and warmth, the stars in their courses to preside over his strangely checkered destinies, the winds to blow, the floods to rise, or the fiend of pestilence to stalk abroad over the land-all for the blessing, or the warning, or the chiding, of the chief among God's creatures, man." With such a conception as this, theory and practice could be closely related. In the ancient world it was not unusual to find the thought of the disciple guided implicitly by the maxim of the master.
 confident belief that they could be practiced by him who would.

In these modern days all this is changed. Man has come to doubt not only his supremacy in the universe, but even his importance. He finds that, far from dwelling at the center of things, he is but "the denizen of an obscure and tiny speck of cosmical matter, quite invisible amid the innumerable throng of flaming suns that make up our galaxy." A host of new knowledges has appealed to human sympathy and interest, and has taxed them to the utmost. Galileo with his telescope has revealed to us the infinitely great, and the compound microscope of Jansen has created, as out of nothing, the world of the infinitely small. Within

[^53]a generation or two biology has been created, and physics, chemistry, and geology have been born again. The first wave of astonishment and delight at these great revelations has been suceeeded by one of perplexity and doubt in the presence of the wholly new problems that they raise. The old self-assurance is lost. Men first stumble, blinded by the new and unaccustomed light, and then despair. The age of the faith and assured conviction of Aquinas was followed by the bold and cynical skepticism of Montaigne; and this in turn-for skepticism has never afforded a resting place for the human spirit for more than a moment-has yielded to the philosophy of disenchantment and despair of a Schopenhauer and the morbidly acute and unsatisfying self-analysis of an Amiel. Already it is proclaimed by Nordatu and his school that we are in an age of decadence, and that many of our contemporary interpreters of life and thought-Wagner, Tolstoi, Ibsen, Zola, the pre-Raphaelites-are fit subjects for an insane asylum. Mankind is divided into warring camps, and while electricity and steam have bound the nations of the earth together, questions of knowledge and of belief have split up every nation into sects. From all this tumult it is difficult to catch the sound of the dominant note. Each suggested interpretation seems to lead us further into the tangled maze, where we can not see the wood for the trees. Standards of truth are more definite than ever before, but standards of worth are strangely confused, and at times even their existence is denied.
Amid all this confusion, however, a light has been growing steadily brighter for those who have eyes to see. In our own century two great masters of thought have come forward, offering, like Ariadne of old, to place in our hands the guiding thread that shall lead us through the labyrinth-the German, Hegel, and the Englishman, Herbert Spencer. And as the century closes, amid the din of other and lesser voices, we seem to hear the deeper tones of these two interpreters swelling forth as representative of the best and most earnest endeavors, from two totally different points of view of our human seekers after light. Each has taken the whole of knowledge for his province, each has spread out before us a connected view of man and his environment, and each would

## Assert Eternal Providence And Justify the ways of God to men.

These great teachers typify the catholicity and the scientific method that are so characteristic of the best expressions of our modern civilization: Whatever of insight we have gained into history, into philosophy, into art, and into nature they have incorporated in their systematic thinking and have endeavored to illumine with the light of their controlling principles. Hegel, schooled in the teachings of Kant and Fichte, and coming early to an appreciation of the seed thought of Plato and Aristotle, Bruno and Spinoza, has taught us in unmistakable language that independent, self-active being is the father of all things. Spencer, feeling the thrill of that unity which makes the cosmos one, and receiving from Lamarck and Von Baer the hint that led him to see that the life of the individual furnishes the clew to the understanding of the life of the aggregate, whether natural or social, has formulated into a single and irrefutable law of progress the terms of that development or evolution which has been more or less dimly before the mind of man since thought began. The German, with his principle of self-activity, and the Englishman, with his law of evolution, offer us a foothold for our knowledge and our faith, and assure us that it will safely support them. From the one we learn the eternal reasonableness of all that is or can be, while the other teaches us the character of the process by which the visible universe, that every day presents new wonders to our gaze, has been builded out of the primeval star dust. At their hands the two sublime and awe-inspiring verities of Kant-the starry heavens above and the moral law within-find their places in the life of the spirit, and together testify to its eternity and its beauty.

Despite the fact that our age is one of tinexampled scientific and industrial progress, yet nothing in all our modern scientific activity is more striking than the undisputed primacy of thought-thought not in antagonism to sense, but interpretative of the data of sense. Idealism, shorn of its crudities and its extravagances, and based on reason rather than on Berkeley's analysis of sense perception, is conquering the world, What Plato saw, Descartes, Leibniz, Kant, and Hegel have demonstrated. The once dreaded materialism has lost all its terrors. Science itself has analyzed matter into an aggregate of dynamical systems, and speaks of energy in terms of will. The seemingly inert stone that we grasp in our hand is in reality an aggregate of an infinite number of rapidly moving centers of energy. Our own will is the only energy of whose direct action we are immediately conscious, and we use our experience of it to explain other manifestations of energy to ourselves. Modern mathematics, that most astounding of intellectual creation, has projected the mind's eye through infinite time and the mind's hand into boundless space. The very instants of the beginnings of the sun's eclipses are predicted for centuries and æons to come. Sirius, so distant that the light from its surface, traveling at a rate of speed that vies with the lightning, requires more than eight and one-half years to reach us, is weighed and its constituents are counted almost as accurately as are the bones of our bodies. Yet in 1842 Comte declared that it was forever impossible to hope to determine the chemical composition or the mineralogical structure of the stars. An unexpected aberration in the motions of ${ }^{\circ}$ Uranus foretold the existence of an undiscovered planet at a given spot in the sky, and the telescope of Galle, turned to that precise point, revealed to the astonished senses what was certain to thought. A discrepancy in the weight of nitrogen extracted from the air we breathe but yesterday led Lord Rayleigh, by an inexorable logic, to the discovery of a new atmospheric constituent, argon. The analytical geometry of Descartes and the calculus of Newton and Leibniz have expanded into the marvelous mathematical method-more daring in its speculations than anything that the history of philosophy records-of Lobachevsky and Riemann, Gauss and Sylvester. Indeed, mathematics, the indispensable tool of the sciences, defying the senses to follow its splendid flights, is demonstrating to-day, as it has never been demonstrated before, the supremacy of the pure reason.

The great Cayley, who has been given the proud title of the Darwin of the English school of mathematicians, said a few years ago: ${ }^{1}$
"I would myself say that the purely imaginary objects are the only realities, the "̈v $v \omega \omega^{\circ} \circ \gamma \tau \alpha$, in regard to which the corresponding physical objects are as the shadows in the cave; and it is only by means of them that we are able to deny the existence of a corresponding physical object; and if there is no conception of straightness, then it is meaningless to deny the conception of a perfectly straight line."

The physicist, also, is coming to see that his principle of the conservation of energy in its various manifestations is a new and startling proof of the fundamental philosophical principle of self-activity. Energy manifests itself as motion, heat, light, electricity, chemical action, sound. Each form of its manifestation is transmutable into others. The self-active cycle is complete.

But it is not from the domain of natural science alone that illustrations of the all-conquering power of thought can be drawn. The genius of Champollion has called to life the thoughts and deeds of Amenotep and Rameses, and what appeared to sense as rude decorative sketches on the walls of temple and of tomb are seen by the understanding to be the recorded history of a great civilization in the valley of the Nile. The inscrutable Sphinx, that watchdog of the Pyramids, "unchangeable in the midst of change," which sat facing the coming dawn for

[^54]centuries before the storied siege of Troy, now looks down on modern men who write the very words of its builders in the language of Shakespeare and of Milton. The cries of savageman, the language symbols of the early Aryans, and the multiform and complicated tongues of modern Europe, all so seemingly diverse to the ear and to the eye, have been the foundation for the sure laws of comparative philology that the labors and insight of Bopp and Grimm and Verner have built upon them. All these, and the many triumphs like them, are victories of insight; each marks a new stage in the conquering progress of the reason, by which it finds itself in every part and phase of the cosmos and its life.
I regard this insight as to self-activity and the primacy of reflective thought as the profoundest that philosophy has to offer; and, instead of being urged, as in centuries past, in antagonism to the teachings of science, it is now becoming the joint cenclusion of philosophy and science together. It pulsates, too, in the world's grandest poetry and mostexquisite art. It is the very soul of the verse of Homer and of Dante, of Shakespeare and of Goethe. It makes the marble of Phidias glow with life, and it guides the hand of Raphael and Michael Angelo as they trace their wondrous figures with the brush. It gives immortality to the most beautiful of temples, the Parthenon, that

> Friend to man, to whom thou sayest,
> "Beauty is truth, truth beauty, -that is all
> Ye know on earth, and all ye need to know."

It is also the inspiration or that superb mediæval architecture that bears the name of the conquerors of Rome, which has given to northern Europe its grandest monuments to the religious aspiration and devotion of the Middle Ages.
What, then, does this insight signify, and what is its bearing upon our edncational ideals? Obviously, the possession of an insight such as this, wrested from nature by the hand of science and from history by that of philosophy, must serve in many ways to guide us in estimating the importance of human institutions and educational instruments. We can not accept either of these without question from the hands of a tradition to which our modern philosophy and our modern science were wholly unknown; nor can we blindly follow those believers in a crude psychology who would present us with so many mental faculties to be trained, each by its appropriate formal exercise, as if they were sticks of wood to beshaped and reduced to symmetry and order. Mental life, as Wundt so forcibly says, " does not consist in the connection of unalterable objects and varying conditions; in all its phases it is process-an active, not a passive existence; development, not stagnation." ${ }^{1}$ Herein is the mental life true to nature. Like nature, it is not fixed, but ever changing. This unceasing change, necessary to both growth and development, gives to life its reality and its pathos. It gives also to education its unending character and the clew to its wisest processes.
The question that I am asking, "What knowledge is of most worth?" is a very old one, and the answers to it that have been handed down through the centuries are many and various. It is a question that each age must put to itself, and answer from the standpoint of its deepest and widest knowledge. The wisest philosophers have always seen more or less clearly the far-reaching character of the question and the great importance of the answer. Socrates and Plato, Augustine and Aquinas, were under no illusions as to it; but often in later years the deeper questions relating to educational values have been either lost sight of entirely or very superficially dealt with. Bacon clothes in attractive axiomatic form some very crude judgments as to the relative worth of studies. Rousseau risks his reputation for sobriety of jadgment in outlining an educational programme. Herbert Spencer turns aside for a moment from his life work to apotheosize science in education, although science is, by his own definition, only partially unified knowl-
edge. Whewell exalts mathematics in language only less extravagant than that in which Sir William Hamilton decries it. In similar fashion, others, holding a brief for some particular phase or department of knowledge, have come forward crying Eureka! and proclaiming that the value of all studies must be measured in terms of their newly-discovered standard. The very latest cry is that studies and intellectual exercises are valuable in proportion as they stimulate enlarged brain areas, thus making the appreciation of Shakespeare, of Beethoven, and of Leonardo da Vinci solely a function of the circulation of the blood.

But to sciolists of this type pbilosophy and science can now make common answer. If it be true that spirit and reason rule the universe, then the highest and most enduring knowledge is of the things of the spirit. That subtle sense of the beautiful and the sublime which accompanies spiritual insight, and is part of it , is the highest achievement of which humanity is capable. This sense is typified, in various forms, in the verse of Dante and the prose outpourings of Thomas à Kempis, in the Sistine Madonna of Raphael and in Mozart's Requiem. To develop this sense in education is the task of art and literature, to interpret it is the work of philosophy, and to nourish it the function of religion. Because it most fully represents the higher nature of man, it is man's highest possession, and those studies that directly appeal to it and instruct it are beyond compare the most valuable. This has been eloquently and beautifully illustrated by Brother Azarias, that profound scholar who was taken from us all too soon. "Take a Raphael or a Murillo," he says. ${ }^{1}$ "We gaze upon the painted canvas till its beauty has entered our soul. The splendor of the beauty lights up within us depths unrevealed, and far down in our inner consciousness we discover something that responds to the beauty on which we have been gazing. It is as though a former friend revealed himself to us. There is here a recognition. The more careful has been our sense culture, the more delicately have our feelings been attuned to respond to a thing of beauty and find in it a joy forever, all the sooner and the more intensely do we experience this recognition. And therewith comes a vague yearning, a longing as for something. What does it all mean? The recognition is of the ideal." Toward the full recognition and appreciation of this insight into the great works of the spirit, whether recorded in literature, in art, or in institutional life, higher education should bend all its energies. The study of philosophy itself, or the truly philosophic study of any department of knowledge-however remote its beginnings may seem to be-will accomplish this end. The ways of approach to this goal are as many as there are human interests, for they are all bound together in the bonds of a common origin and a common purpose. The attainment of it is true culture, as Mr. Matthew Arnold has defined it: "The acquainting ourselves with the best that has been known and said in the world, and thus with the history of the human spirit." ${ }^{2}$
We now come in sight of the element of truth and permanence in that humanism which Petrarch and Erasmus spread over Europe with such high hopes and excellent intentions; but which Sturm, the Strassburg schoolmaster, reduced to the dead, mechanical forms and the crude verbalism that bound the schools in fetters for centuries. Of humanism itself we may say, as Mr. Pater says of the Renaissance of the fifteenth century, that "it was great rather by what it designed than by what it achieved. Much which it aspired to do, and did but imperfectly or mistakenly, was accomplished in what is called the éclairissement of the eighteenth century, or in our own generation; and what really belongs to the revival of the fifteenth century is but the leading instinct, the curiosity, the initiatory idea." ${ }^{3}$

[^55]Many of the representative humanists were broad-minded men whose sympathies were with learning of every kind. Erasmus himself writes with enthusiasm of other branches of knowledge than literature. "Learning," he says, "is springing up all around out of the soil; languages, physics, mathematics, each department thriving. Even theology is showing signs of improvement," ${ }^{1}$ But, unfortunately, this broad sympathy with every field of knowledge was not yet widespread. The wonders and splendor of nature that had brought into existence the earliest religions and the earliest philosophies were now feared and despised as the basis of paganism; and on wholly false grounds a controversy was precipitated as to the relative worth of literature and of science that in one form or another has continued down to our own day. The bitterness with which the controversy has been carried on and the extreme positions assumed by the partisans of the one side or the other have concealed from view the truth that we are now able to perceive clearly-the truth that the indwelling reason, by whom all things are made, is as truly present, though in a different order of manifestation, in the world of nature as in the world of spirit. One side of this truth was expressed by Schelling when he taught that nature is the embryonic life of spirit, and by Froebel when he wrote, "The spirit of God rests in nature, lives and reigns in nature, is expressed in nature, is communicated by nature, is developed and cultivated in nature."2 The controversy as to the educational value of science, so far, at least, as it concerns educational standards and ideals, is,-then, an illusory one. It is a mimic war, with words alone as weapons, that is fought either to expel nature from education or to subordinate all else in education to it. We should rather say, in the stately verse of Milton:

Accuse not nature: she hath done her part; Do thou lut thine.
And that part is surely to study nature joyfully, earnestly, reverently, as a mighty manifestation of the power and grandeur of the same spirit that finds expression in human achievement. We must enlarge, then, our conception of the humanities, for humanity is broader and deeper than we have hitherto suspected. It touches the universe at many more points than one; and, properly interpreted, the study of nature may be classed among the humanities as truly as the study of language itself.

This conclusion, which would welcome science with open arms into the school - and utilize its opportunities and adventages at every stage of education, does not mean that all studies are of equal educational value, or that they are mutually and indifferently interchangeable, as are the parts of some machines. It means, rather, that the study of nature is entitled to recognition on grounds similar to those put forward for the study of literature, of art, and of history. But among themselves these divisions of knowledge fall into an order of excellence as educational material that is determined by their respective relations to the development of the reflective reason. The application of this test must inevitably lead us, while honoring science and insisting upon its study, to place above it the study of history, of literature, of art, and of institutional life. But these studies may not for a moment be carried on without the study of nature or in neglect of it. They are all hamanities in the truest sense, and it is a false philosophy of education that would cut us off from any one of them or that would deny the common ground on which they rest. In every field of knowledge which we are studying is some law or phase of energy, and the original as well as the highest energy is will. In the world of nature it is exhibited in one series of forms that produce the results known to us as chemical, physical, biological; in the history of mankind it is manifested in the forms of feelings, thoughts, deeds, institutions. Because the elements

[^56]of self-consciousness and reflection are present in the latter series and absent in the former, it is to these and the knowledge of them that we must accord the first place in any table of educational values.

But education, as Mr. Froude has reminded us, ${ }^{1}$ has two aspects. "On one side it is the cultivation of man's reason, the development of his spiritual nature. It elevates him above the pressure of material interests. It makes him superior to the pleasures and pains of a world whicll is but his temporary home, in filling his mind with higher subjects than the occupations of life would themselves provide him with." It is this aspect of education that I have been considering, for it is from this aspect that we derive our inspiration and our ideals. "But," continues Mr. Froude, "a life of speculation to the multitude would be a life of idleness and uselessness. They have to maintain themselves in industrious independence in a world in which it has been said there are but three possible modes of existencebegging, stealing, and working; and education means also the equipping a man with means to earn his own living." It is this latter and very practical aspect of education that causes us to feel at times the full force of the question of educational values. Immediate utility makes demands upon the school which it is unable wholly to neglect. If the school is to be the training ground for citizenship, its products must be usefully and soundly equipped as well as well disciplined and well informed. An educated proletariat-to use the forcible paradox of Bis-marck-is a continual source of disturbance and danger to any nation. Acting upon this conviction, the great modern democracies-and the time seems to have come when a democracy may be defined as a government, of any form, in which public opinion habitually rules-are everywhere having a care that provision be made for the practical or immediately useful in education. This is as it should be, but it exposes the school to a new series of dangers against which it must guard. Utility is a term that may be given either a very broad or a very narrow meaning. There are utilities higher and utilities lower, and under no circumstances will the true teacher ever permit the former to be sacrificed to the latter. This would be done if, in its zeal for fitting the child for self-support, the school were to neglect to lay the foundation for that higher intellectual and spiritual life which constitutes humanity's full stature. This foundation is made ready only if proper emphasis be laid, from the kindergarten to the college, on those studies whose subject-matter is the direct product of intelligence and will, and which can therefore make direct appeal to man's higher nature. The sciences and their applications are capable of use, even from the standpoint of this higher order of utilities, because of the reason they exhibit and reveal. Man's rational freedom is the goal, and the sciences are the lower steps on the ladder that reaches to it.

Splendid confirmation of this view of science is found in the great Belfast address in which Professor Tyndall stormed the strongholds of prejudice one and twenty years ago. Said Professor Tyndall: ${ }^{2}$
"Science itself not unfrequently derives motive power from an ultrascientific source. Some of its greatest discoveries have been made under the stimulus of a nonscientific ideal. This was the case amongst the ancients, and it has been so amongst ourselves. Mayer, Joule, and Colding, whose names are associated with the greatest of modern generalizations, were thus influenced. With his usual insight, Lange at one place remarks that 'it is not always the objectively correct and intelligible that helps man most or leads most quickly to the fullest and truest knowledge. As the sliding body upon the brachystochrone reaches its end sooner than by the straighter road of the inclined plane, so through the swing of the ideal we often arrive at the naked truth more rapidly than by the more direct processes of the understanding.' Whewell speaks of enthusiasm of temper as a hindrance

[^57]to science; but he means the enthusiasm of weak heads. There is a strong and resolate enthusiasm in which science finds an ally; and it is to the lowering of this fire rather than to the diminution of intellectual insight that the lessening productiveness of mun of science in their mature years is to be ascribed. Mr. Buckle sought to detach intellectual achievement from moral force. He gravely erred, for without moral foree to whip it into action the achievements of the intellect would be poor indeed.
"It has been said that science divorces itself from literature, but the statement, like so many others, arises from lack of knowledge. A glance at the less technical writings of its leaders-of its Helmholtz, its Huxley, and its Du Bois-Reymondwould show what breadth of literary culture they command. Where among modern writers can you find their superiors in clearness and vigor of literary style? Science desires not isolation, but freely combines with every effort toward the bettering of man's estate. Single handed, and supported not by outward sympathy, but by inward force, it has built at least one great wing of the manymansioned home which man in his totality demands. And if rough walls and protruding rafter ends indicate that on one side the edifice is still incomplete, it is only by wise combination of the parts required with those already irrevocably built that we can hope for completeness. There is no necessary incongruity between what has been accomplished and what remains to be done. The moral glow of Socrates, which we all feel byightion, has in it nothing incompatible with the physics of Anaxagoras which he so much scorned, but which he would hardly scorn to-day. * * *
"The world embraces not only a Newton, but a Shakespeare; not only a Boyle, but a Raphael; not only a Kant, but a Beethoven; not only a Darwin, but a Carlyle. Not in each of these, but in all, is human nature whole. They are not opposed, but supplementary; not mutually exclusive, but reconcilable. And if, unsatisfied with them all, the human mind, with the yearning of a pilgrim for his distant home, will still turn to the mystery from which it has emerged, seeking so to fashion it as to give unity to thought and faith, so long as this is done, not only without intolerance or bigotry of any kind, but with the enlightened recognition that ultimate fixity of conception is here unattainable, and that each succeeding age must be held free to fashion the mystery in accordance with its own needs-then, casting aside all the restrictions of materialism, I would affirm this to be a field for the noblest exercise of what, in contrast with the knowing faculties, may be called the creative faculties of man."

The actions of the lower animals are conditioned by sensations and momentary impulses. Man, on the other hand, is enabled to raise himself above fleeting sensations to the realm of ideas, and in that realm he finds his real life. Similarly man's will gradually frees itself from bondage to a chain of causes determined for it from without, and attains to a power of independent self-determination according to durable and continuing ends of action. This constitutes character, which, in Mr. Emerson's fine phrase, is the moral order seen through the medium of an individual nature. Freedom of the will is not, then, a metaphysical notion, nor is it obtained from nature or seen in nature. It is a development in the life of the human soal. Freedom and rationality are two names for the same thing, and their highest development is the end of human life. This development is not, as Locke thought, a process arising without the mind and acting upon it, a passive and pliable recipient. Much less is it one that could be induced in the statue of Condillac and Bonnet. It is the very life of the soul itself.

There is astriking passage in The Marble Faun in which Hawthorne suggests the idea that the task of the sculptor is not, by carving, to impress a figure upon the marble, but rather, by the touch of genius, to set free the glorious form that
the cold grasp of the stone imprisons. With similar insight, Browning puts these words into the mouth of his Paracelsus:

> Truth is within ourselves; it takes no rise From outward things, whate'er you may believe. There is an inmost center in us all, Where truth abides in fuliness; and around, Wall upon wall, the gross flesh hems it in, This perfect, clear perception. $* * *$
> $\quad * * *$ And, to know,
> Rather consists in opening out a way
> Whence the imprisoned splendor may escape, Than in effecting entry for a light Supposed to be without.

This is the poetical form of the truth that I believe is pointed to by both philosophy and science. It offers us a sure standing ground for our educational theory. It reveals to us, not as a hypothesis but as a fact, education as spiritual growth toward intellectual and moral perfection, and saves us from the peril of viewing it as an artificial process according to mechanical formulas. Finally, it assures us that while no knowledge is worthless, for it all leads us back to the common cause and ground of all, yet that knowledge is of most worth which stands in closest relation to the highest forms of the activity of that spirit which is created in the image of Him who holds nature and man alike in the hollow of His hand.

## II.

## THE RELATION OF MANUAL TRAINING AND ART BDUCATION. ${ }^{1}$

## Introductory Address.

## By C. A. Bennett, Professor of Manual Training, Teachers' College.

Not very long ago I heard the president of a Southern college deliver an address on educational work among the negroes. In the course of his address, in order to point out clearly the progress of the work in his own college.and to show the aptness of the negro to learn and his tendency to adopt the customs and ideas of the white man, he said: "When we began to teach sewing to our girls we taught them, among other things, to make plain aprons. It was not long before they wanted to put pockets on their aprons, and now they want to put ruffles around the bottoms."

This illustration may be used to suggest the steps of progress in other fields of education than the missionary work among the negroes of the South. Surely the negro has no monopoly on these progressive steps. They are the same that all civilized peoples have taken-first, the necessities; second, the conveniences; third, the luxuries. The thought suggested in this illustration, it seems to me, might be applied to the evolution of a course of instruction or the development of a subject in the school curriculum. May we not apply. it to the development of manual training work?

When manual training work began in this country, the courses of instruction consisted chiefly of exercises, pure and simple-exercises planned to teach the use of a given tool, or to teach a joint or some such element of construction. Soon the courses began to contain a few completed useful articles. The immediate application of some of the exercises or elements of construction were found to be advantageous. It became evident to many teachers that although teaching a principle as a principle was a good thing, it was also a good thing to emphasize

[^58]and fix the principle by applying it. The useful article as a manual training exercise, especially in classes of elementary school grade, was found to be justifiable not only on economic grounds but on pedagogic as well. The result is that many teachers have so modified their courses that they now contain not only the individual joint, but also its application in a useful article.
Meanwhile the teachers of drawing have been teaching the children to draw graceful lines, and under the name "art education" are now helping them to appreciate beauty of form and proportion and encouraging them to study the principles of decorative art.

This is influencing the manual training work in many places to an extent that we hear something like the requests of the negro girl who wanted to put the ruffle around the bottom of her apron. The children wish to decorate the models they make. Whether we manual training teachers encourage it or not, we are sure to meet with this demand if we are so fortunate as to have pupils who have been taught by a competent teacher of free-hand drawing. The teachers of drawing are taking advantage of that instinct in the child which leads him to decorate the things he makes; children like to make things that are beautiful. If we do not follow the example of the drawing teacher in this, we shall not only fail to reenforce their work but we shall be liable to counteract the beneficial effects of it.
So long as we confined our work to joints and simple èxercises there was little danger of either reenforcing or counteracting the work of the teacher of art work, but now that we have introduced the completed useful article into our courses we are in that danger. Certainly we are not willing to drop the useful article entirely out of our courses; neither are we willing to allow our work to counteract the work of the teacher of drawing. Our only alternative is to see that the useful articles in our courses are so well adapted to their intended use, so excellent in form and proportion, so appropriately decorated, if decorated at all, that they will meet an artist's criticism.
The fact that many manual training models, even some of those published in -books, would not now bear such criticism is one of the principal reasons for our choice of subject for the conference to-day. Since this subject-the relation of manual training and art education-suggested itself, many questions have arisen in my mind upon which more light is needed: To what extent should decoration be introduced into manual training courses? Should manual training teachers make it a point to use those materials that lend themselves most readily to decorationclay and strips of iron, for example? Should we strive to make our models perfect in form and proportion and entirely omit decoration? What is the value of wood carving and what are its limitations? Should we endeavor to enrich our woodturning courses by introducing vase forms and the like involving subtle curves? How large a place should be given to ornamental ironwork in the forging course? Would a little work in stained glass be desirable after the work in soldering? Is it true that the beautiful interests the children before the useful? If so, how should this fact influence our manual-training work in the lower grades? How can the teacher of manual training get the most help from the teacher of free-hand drawing, and how can the free-hand drawing teacher's work be most helped by the teacher of manual training?
These are but a few of the questions that have arisen in the mind of a teacher of manual training. An entirely different list might suggest itself to a director of art education, and still another to a psychologist or a superintendent of public schools. It is for the discussion of all such questions that this conference is intended.

The Asthetic Element in Manual Training.
By Walter S. Goodnough, Director of Art Education, Public Schools, Brooklyn, N. Y.
All who are familiar with the history and progress of manual training in this country since the days when the Institute of Technology in Boston inaugurated the movement, through the efforts of Dr. Runkle, and made its first exhibition at the Centennial Exposition of $18 \% 6$, are painfully aware that until very recently the æsthetic element has been largely wanting.
Just as drawing or so-called art instruction in public schools was introduced and continued for years almost entirely on a utilitarian basis of the narrowest kind, with little or no attempt at real art culture, so manual training has been too largely mechanical in its aim and methods. Manual-training schools and courses were planned with the mechanical processes largely in view. The mechanical drawing room was well provided. Though there may have been more or less free-hand drawing, there was comparatively little real art training, such as would enable pupils to put art into their shopwork, and there was little provision for the artistic forms of manual training.

It has been well said that art values are the only permanent values; that is, looking back over the history of the world, all that we most cherish of that which has been left to us from the past is the art in one or another tangible form. It may be architecture, sculpture, painting, music, literature, or industrial art.

It is the amount of art in most works produced by man that chiefly affects their value. Art is one of the greatest creators of value.

It is not the mere imitation of art forms that we should have in our manual training school courses, but such training as will make possible the creation of art forms and the best intellectual and spiritual development. We must develop an art sense, a feeling and appreciation for the beautiful in form, proportion, and color, seeking continually to give it expression. We must surround the pupil with or give him easy access to good art in various forms; then aim constantly to train the imagination and the creative power, and to give plenty of free expression.
I should commence with the kindergarten to bring æsthetic influences to bear. Kindergartners need, as a rule, more art training. The drawing and modeling of the kindergarten should be freer. The sewing, weaving, and other colored work can be more artistic. Bad combinations of color are often permitted.

Manual training in primary and grammar grades is usually limited to paper folding, cardboard work, knife work with thin wood, sloyd and elementary joining, with perhaps a slight amount of modeling, and with the girls sewing and cooking. There should be more modeling. It should continue from the kindergarten through the high-school course. Here the student has the best possible opportunity for the study and creation of form. The work should not all be from object or copy, but accompanying these exercises there should be regular practice in design. Modeling is one of the most inexpensive forms of manual work, both for material and equipment, and one in which every impress of hand and mind is shown.

Venetian or bent-iron work is another form of manual training which should receive greater attention in grammar grades. With the proper art instruction and study of design as a foundation, much free, beautiful, and artistic work is possible. This work gives excellent training in subtlety of line and curve. Most good will be lost if pupils simply copy designs. They should study good designs, observe, and draw enough of such work to be imbued with its spirit sufficiently to produce their own designs, from which they should work.

The woodwork usually occurring in grammar grades should include, in the last year or two, considerable wood carving. Such work gives opportunity for most artistic production.

In the manual training, high, or special school, or in the scientific or technical school, about half as much time should be given to free-hand drawing and pure art study as to mechanical drawing. The art study should include much sketching and drawing from models, still life, nature, casts, and perhaps some life sketching, imaginative or creative work, composition, color study, design, and modeling. Something of æsthetics or principles of art and of the history of art should be included, and pupils should constantly study good art in the shape of acceptable industrial examples, photographs, and pictures.

Wherever a public art museum is available, as is the case in most of the larger cities and many small ones, there should be intimate relations between the schools and the museum. Pupils should visit regularly for study under the guidance of a teacher, and the museum ought to have collections that could be loaned to the schools and changed from time to time. Reproductions if not originals of good art should hang upnn the schoolroom walls.

It would be worth the while of artists of standing to loan some of their work to hang upon the schoolroom wall, or place in cabinets; not alone drawings or paintings, but stained glass, beautiful metal work, carving, pottery, etc.

The art instruction should aim to develop the art sense, an appreciation and love of the beautiful in form and color, a knowledge of the fundamental principles of 'art and design, an ability to distinguish good work from bad, and a considerable degree of technical skill. It should be related to or be such as to be serviceable in the study of literature, history, and language, as well as in science or shop work. It should make possible shop work of a far higher grade than could be possible without it. It should give a much greater intellectual development.

The shop work in many schools should be modified so as to permit more artistic work. The training of a skilled mechanic is an easy matter in comparison with the making of an artistic artisan. In most courses there is sufficient work to train to precision and to the mastery of tools and mechanical processes, but there is too little that trains to a refined, subtle skill, and that exercises creative power. We should aim to send our pupils out producers as far as possible; leaders, not followers; young men and women with ideas and power to express or execute them.
As has been intimated, clay modeling should be a more important element, and I believe the potter's wheel could be introduced into the manual training school to good advantage. A beauty and refinement of form would be acquired, a delicacy of touch that wood turning does not give.

With right art training more artistic results are possible in wood turning and. inlaying, as well as in wrought-iron work. In wood turning, pupils too frequently work from a drawing or blue print which has been prepared for them instead of froin their own designs. Class after class work the same exercises. Such work is dry, uninteresting, and less educational than it should be. The pupil who has designed the piece he is to turn, be it a spindle or vase form, has had the study in proportion and beauty of outline or form that will result in better work. His interest in working out the form he has created is away beyond that of the pupil who works from a blue print or a model.

Wood carving of an artistic kind should occupy a more important place in the manual training course. Much that is done is purely mechanical, crude, uninteresting. It shows a sad lack of art training on the part of the pupil and teacher. Very artistic results are feasible. Of this I am positive, as for a dozen years I had this work under my charge and direction as director of the Columbus Art School. We had classes of boys and girls from the public schools on Saturdays who did most excellent work.

To summarize: I should say that manual training is in need of enrichment by bringing in more of the æsthetic element. This will not only give more worthy material results, but a greater culture and more valuable training to the pupils.

To accomplish it more and better art training is required, and some more artistic forms of work should be provided. Better art training of the teachers of shop work in manual training schools is necessary, but this will come when its necessity is felt by them and by the school authorities. Then will the manual training school be able to accomplish more fully that which has been called the supreme purpose of education, the development of the capacity for unselfish creative activity, and for the highest enjoyment.

## Limitations to Artistic Manual Training.

By C. R. Richards, Director of the Department of Science and Technology, Pratt Institute, Brooklyn, N. Y.

It seems to me that this conference affords us an opportunity not only to weigh the relation between art education and manual training, but also to acknowledge the debt that manual training owes to art education. Our friends, the art teachers, have always been a sort of foster brothers to us of the manual-training movement. We were all of the new tendency in education, and when the manualtraining movement began, the art people, who by that time had gained a fairly firm foothold for themselves, lent us a cordial support and most sympathetic assistance, and I do not think that we can ever sufficiently repay them for their cooperation at that time.

The purely mechanical character of much of our work, however, has always been a great distress to our friends, and from the first they have used all their influence to make our work assume a more attractive appearance. The results of this influence are to a large extent most happily illustrated by the work brought together by this conference, and for this again I think we owe a large debt to our friends. I feel most emphatically that our work will continue to be extended in this direction, and that we shall be able in the future to accomplish more and better results having a distinct artistic value.

There are, however, limitations in this direction, and it is upon the subject of these limitations that I wish to say a few words. It seems to me that at the outset we must accept the principle that manual training is not primarily art training. In its vital essence, manual training is an instrument that through certain processes of tool work servies to train the student in patience, carefulness, neatness, and accuracy of doing. I do not offer this as a complete definition of manual training, but this, it seems to me, is the basis of its educational value.

The above influences are important elements of character building, but they do not in themselves make toward an art training. In this direction our work in the public schools must be largely confined to teaching students to appreciate form and proportion and fitness of design. In order to gain this appreciation most naturally and most effectively, a medium is needed in which the student can most easily express and most easily correct his imperfect conceptions. This medium is presented by the processes of drawing and modeling. The exacting and laborious processes of tool work are, compared with these, but awkward instruments for the development of these ideas. When, after long training, a strong appreciation of form and the principles of design have been obtained, wood and iron and stone offer the natural opportunities for artistic expression, but during the developing period, while the problem is the gaining of form appreciation, it seems to me that drawing and modeling must always be the natural vehicles for such training.

Do not understand me as suggesting that we should not endeavor to bring in models of an artistic character in our manual-training work. I merely mean that we should not attempt to model in wood or to draw in iron, but should for certain ends seek the natural and legitimate means. I believe most emphatically that we should endeavor to make every exercise in our manual training so good in form
and proportion that it will have in itself an æsthetic influence. I believe also most strongly that we must give larger importance to the element of interest and make more frequent use of the finished piece, not at the end of our courses, buE interspersed in simple forms throughout the work, By this direct appeal to the pupil's interest we place in the work its own natural stimulant and secure the application of the pupil through the nature of the task.
I returned a few days ago from what was to me a most interesting and valuable trip to some eight of our largest cities, and I found in every one of the manualtraining people with whom I came in contact the feeling that we must give more of a place to this element of interest. We must put in the work those elements which make a direct appeal to the pupil's imagination and his moral senses. I found this feeling even in places where manual training formerly meant a purely formal course of exercises. That stage, however, has gone by. We are not going back to it. The manual training of the future will recognize that its highest results can only be obtained when the imagination and interest of the pupil are sufficiently aroused to make of the work indeed a labor of love.
It is, of course, through this use of the finished project that the opportunities, and they are certainly broad ones, come of bringing in an artistic influence; but it seems to me that we should not in this matter sacrifice our manual-training principles to our artistic results. In other words, we should not start with the aim of artistic or decorative models as the end of manual training, but should rather make of each piece, first, a well-considered exercise in manual training, and then endeavor by all in our power to make it good in form and proportion, and perhaps in decoration. Manual training is a subject with its own value and with its own principles of development, and it seems to me that perhaps the true relation between art education and manual training will be obtained when, through all our work, we hold securely to our manual-training base and endeavor to build upon this all that we can of use and beauty.

Some Principles of Decorative Art.
By W. H. Goodyear, Lecturer on the History of Art at Cooper Institute, New Yorld City.
[Abstract.]
The proverb which says that there is no disputing about tastes has suggested to me the historic method as the best one to follow in treating of my subject. To avoid the imputation of presenting individual views or theories, as to principles in taste, must be the first effort of the teacher of such principles. The same reasons which suggest the appeal to historic examples in fixing the standard of taste in music or in literature apply to art.
Even in speaking of the decorative-art movement of recent years the historic method is available, for I am able to say that the principles which I shall explain are those of a definite movement which has had widespread influence and a defined history, although this history is of recent date. The genesis of the deco-rative-art movement and of the art revival of the last fifty years dates back to the first studies of art history as made by John Winckelmann in the eighteenth century. His ideas were developed by Lessing, Goethe, and other Germans, and thus became the intellectual property of Europe. It was, however, especially reserved for England and the United States to make practical application of the results of such studies to modern decorative art. These last-named countries have lagged behind the European continental countries in art, historic, and archæologicstudies, but they have, in my opinion, gone beyond them in the matter of modern, practical results.
The new movement in England is probably known to you as dating from the Crystal Palace Exhibition of 1851 and the friendship then cemented between the

Prince Consort and Owen Jones, author of the Grammar of Ornament. Hence the founding of the South Kensington Museum and its various branches, and the later spread of the clecorative-art movement to the United States. The ideas of this movement are best explained by Mr. Eastlake's book on Household Taste. From its great popularity resulted what is known as the Eastlake style of furniture. Mr. Eastlake himself did not, however, contemplate the creation of a style, nor were his designs proposed as the sole feasible notions of taste, in view of the flimsy and dishonest carpentry construction prevalent in modern furniture about and after 1850.
Mr. Eastlake's idea was to show that good taste was compatible with economy, simplicity, and good carpentry. The bare simplicity of his designs was caused by economic conditions and the necessary expense, even of the plainest articles, made in a time when glue had taken the place of joints and when machine-made carving had ruined the trade of hand carving. The "Eastlake " pieces of furniture herewith may, however, be regarded as goodillustrations of the principle of "constructive truth." Still more important examples of this law may, however, be found in all good historic architecture. All objects of large size in furniture should be designed on architectural principles. As regards the frank exhibition of the carpentry construction and framework and the preference for the natural-wood surface and graining as against the use of artificial veneers, what may be called the skeleton of construction should generally determine the main lines of the piece.

We may here mention the principles controlling the proper use of ornament in architecture, furniture, utensils, and dress. Ornament should emphasize the points of support and pressure, the terminal points, joints, seams, outlines, and borders. "All-over" surface ornament is also a phase of constructive use.

As the object becomes more humble in use or smaller in size, the strictness with which the architectural idea is applied should naturally be modified, but the Pompeian survivals of Greek taste in utensils are excellent illustrations of the wide applicability of the principle of constructive emphasis in the use of ornament. We find this principle in the bronze vases, lamps, and even in the kitchen and cooking utensils of Pompeii. The handle of the bronze vase is the first point of departure in its ornamental idea; next come the joints of the handle.

The principle of constructive truth in decorative art is simply one phase of a larger principle which applies to many objects in which a definite type of constructive form is not to be expected-for instance, an inkstand, a saltcellar, a match box, a comb, a pair of bellows, a pair of nutcrackers, an andiron, a lamp, etc. This larger principle is that of uniting utility and beauty to make the ornamental useful and to make the useful ornamental. In all historic periods down to the eighteenth century this principle has been applied to all the humble objects named and to many others. It is seen, for instance, in the Pompeian weight used in ordinary grocery scales, which takes the shape of a human head.

Whenever the use of ornament becomes general, according to principles so far far specified, it is clear that the rules controlling the treatment of life forms in ornament become fundamentally important.
If the nineteenth century had made a wider use of ornamental carving, it would be more accustomed to the treatment known as the conventional, one of whose phases is that of the grotesque. Contrary to widespread preconceived ideas natural to modern thought, the realistic or naturalistic treatment of life forms is generally improper in decoration.

One of the reasons for this principle relates to the unnatural appearance of a natural animal or human form which forms one portion of an object of use. Take the leg of an Italian trousseau chest as example. It has the imaginary and grotesque form of a griffin. As joined to the rest of the piece of furniture and
forming a necessary part of it, a real animal or human form would be an absurd-ity-in such a place. We are not dealing with a piece of sculpture, with a work of art having an independent mission. Under the given circumstances to demand the realistic treatment is to ask that the legs should cost more money and effort than the whole piece besides. It would be to ask the genius and science of a great sculptor from the trade of the cabinetmaker. The principle of subordination-that the part is less than the whole and less important than the whole-is one principle at stake. Another is the unnatural appearance of a natural form forming only one part of a constructive form. Still another is the principle requiring pronounced visibility in ornamental forms. The angular, the rigid, the sharply defined forms necessary to the effect of decorative carving are rarely compatible with realistic rendering of nature. In the Pompeiian survivals of Greek art we find the drunken Silenus and the fawn with legs of a goat confined to decorative objects, lamps, and the like. The full-size Greek statue avoids the intoxicated Silenus or the fawn with goat's legs. This brings us back to the principle of subordination under another guise, i. e., the distinction between ideal art, or art for art's sake, and art for the sake of decoration. The field of the sublime and ideally beautiful is not, generally speaking, that of decorating utensils and objects of daily use, but in these the play of the imagination may generally have its share in the guise of the grotesque. We find the Gorgon head, but never the head of Minerva, on the handles of a Greek vase.

Illustrations of conventional or grotesque treatment may be found in this Mexican stirrup, having the form of a human head, and in nutcrackers of the seventeenth century Renaissance.

The use of the reptilian form in ornament as seen in Palissy ware, in ancient jewelry, and in the faïence of the Renaissance reflects the fact that the reptilian form verges on the grotesque, and here we find not only the idea of subordination but also the fact that the reptile form is more striking to the eye and therefore most available among animal forms for decorative use. The use of the dramatic mask in place of the human face in antique and Renaissance art is another apt illustration. It may be also noted that the periods most fertile in grotesque decorative art have been also those in which spiritual and ideal beauty were most highly appreciated and most successfully represented in their own appropriate sphere. The periods of Phidias and of Raphael are those most fertile in the creation of the grotesque in ornamental art.
We may next consider some points relating to appropriate treatment of a given material. Highly arbitrary forms due to the momentary and necessarily arbitrary impulse of the glass blower are beautiful in Venetian glass, but wholly improper in pottery, metal, or wood. A jar handle wholly beautiful in metal may be wholly improper in pottery. The sense of weight, the feeling that an object is becoming cumbersome, would forbid copying the form of a lamp with a cylindrical porcelain body in the same dimension in metal. In metal the treatment should be that befitting the appearance of a material that is ductile and pliable during manufacture. Angular and heavy designs should be avoided in this material. The contrasts here offered are those between recent American chandeliers, some of better and some of inferior taste.
Finaily we notice the general inadvisability of direct copying of historic forms for modern decorative art, however valuable may be the lessons to be learned from them. Such copies generally overlook the principles observed by the originals. A Pompeian lamp designed for oil and wick is an inappropriate form for a chandelier using gas. An Ionic capital is hardly appropriate as the support of a cruet stand. The Parthenon frieze is out of place on a cake casket. The illustrations show these mistakes in recent designs of American silverware.

In closing my remarks let me say that I know them to be largely of a character
not directly related to the elementary teaching work in manual training; but as long as we confine the education of teachers to the points necessary to the elementary teachers' work in the direct education of children we shall never achieve great educational results. It is the atmosphere surrounding children which we should consider as more important than direct teaching. What they learn directly is not so important as the infiuence of the teachers taste exerted insensibly and unconsciously. Thisis the taste to be created and developed first-the taste of the teacher and the parent. It is undeniable that this taste has been generally lacking in the civilized nations of the nineteenth century, excepting in so far as the art revival of the last forty years has striven to create it, and it is equally undeniable that this art revival was inspired by the continental interest in historic examples.

## III.

## THE OLYMPIC GAMES OF 1896.

The revival of the Olympic games, one of the most notable events of 1896, is due to the enthusiasm and persistence of Baron Pierre de Coubertin. This gentleman traveled extensively in Europe and in the United States to rouse interest in the project, and at a meeting of the delegates of the athletic associations of all countries, assembled at Paris in $1894,{ }^{1}$ it was agreed that the games should be instituted.

For the execution of the purpose, an international committee was appointed. The first presidency was assigned to M. Bikelas, a Greek, since in his country the revival of the games was to be first celebrated. The presidency will fall in succession to a representative of the country in which the next games are to be held. Under this arrangement, Baron de Coubertin, the founder, has become the second president, the next contest having been appointed to take place at Paris during the exposition of 1900 .

The first celebration opened at Athens, April 6, 1896. The scene and the spirit of the occasion are happily reproduced in the following letters, penned on the spot by Baron de Coubertin, and reproduced, with his permission, from the Journal des Débats, in which they originally appeared.

The roll of the victors is quoted from an article by the same author published in the Century Magazine for November, 1896.
"The Athenians enjoy this year a twofold spring; it warms at the same time the illuminated atmosphere and the popular spirit; it gives life to the small, fragrant flowers that force their way between the marble slabs of the Parthenon and imparts a smile of satisfaction to the lips of the proud 'Palakares' (champions of the people). The sun shines and the Olympic games are at hand. Nothing remains of the irony and fears of the last year. The skeptics are silent and the Olympic games have no more enemies. French, Russian, American, German, Swedish, and English flags are for sale on every hand. The Attic breeze joyously raises its light folds, and men in 'fustanellas,' who lounge before the picturesque show windows of the rue d' Hennes, rejoice at the spectacle. They know that the whole world is coming ('l'univers va venir') and approve of the preparations made for their appropriate reception. These preparations are manifold. Everywhere the marbles are scraped, new plaster and fresh paints are put on, the pavers are at work, and people are busy cleaning and decorating. The street of the stadion is a fine sight, with its triumphal arch and Venetian masts. Its

[^59]usual whiteness is exaggerated to a dazzling brilliancy. But it is no longer the favorite promenade. The interest is centered elsewhere upon the banks of the formerly disdained Illissus. Every evening, toward. 5 o'clock, the citizens pass in long procession, observing the work on the stadion with the eye of connoisseurs. The Illissus has no water; as usual; 'but no one notices this any more. A monumental bridge now spans the celebrated river and gives access to the level plain, upon which opens the restored stadion. There to morrow, Easter Monday, April 6, King George will proclaim the reestablishment of the Olympic games, which fifteen hundred and two years ago the Emperor Theodosius declared suppressed forever.
"The inclosure of the stadion produces an intense impression, which becomes even more vivid in reflection. Behold the spectacle that the ancients have so often contemplated! It rises again before our eyes. Up to this time we have not been accustomed to such a plan, and the unfamiliar lines at first sight surprise and confuse us. The silhouette of the Greek temple has never been lost; the porticos and the colonnades have known twenty renaissances. But the stadia died at the same time as the athletic games. Their architectural features were known, but they have never been restored. A living stadion (stade vivant) has not been seen for centuries. Yet a few hours, and this one will be alive with the collective life imparted to the monuments by the crowds that throng them. A crowd will ascend the staircases, fill the benches that rise one above another, and mass themselves in the passages. A very different crowd, no doubt, from that which last entered a similar stadion, animated, however, by like sentiments, by the same sympathy for youth, and by the same desire for human harmony.
"There will be room for about 50,000 spectators. Part of the benches are of wood, time having failed for hewing a sufficient number of marble blocks and putting them in place. After the games the construction will be finished, thanks to the inexhaustible liberality of M. Averoff. Bronze chariots, statues, and columns will break the somewhat severe monotony, and this generous citizen will have endowed his fatherland with a monument worthy of it. The central rink is not dusty as formerly; the track has been made of cinders by an English workman, and according to the latest rules of moden art.
"Everything tends to show that henceforth the stadion will be jealously maintained by the Greeks, for-and this is an interesting fact-in this country where bodily exercises count no more adepts, where fencing and gymnastic societies of recent formation have had much trouble in recruiting a few members, the mention of Olympic games has sufficed to create athletes. The young people have suddenly become conscious of the vigor and suppleness stored away in the race; their ardor has been so great, their enthusiasm so persistent, that foreign competitors will here meet improvised rivals as formidable as veterans.
"The Hungarians have already arrived under the leadership of our amiable representative in Hungary-M. Kemény, director of the Royal School of Budapest. They have met with an enthusiastic reception; speeches have been interchanged; the band has played. Within a few days the Russians are expected; after them the Americans, the Swedes, etc. The news that the municipal council of Paris has voted an appropriation to the French delegates reached us during a session of the committee on games at the palace of the Royal Prince. The Prince was delighted to know that the participation of France was henceforth assured. Our representatives do not yet pronounce Greek in the modern way; M. Combes ${ }^{1}$ has come too late. But they will learn many things during their short sojourn at the foot of the Acropolis. How amazed they will be the first day in the presence of the reality of those places associated in their memories with the idea of antiquity, but which they

[^60]will find so young and full of life. How they will wonder at the easy freedom with which resuscitated Athens surrounds the Parthenon without being dwarfed by the majestic beauty of the monument and without diminishing in the least its tranquil serenity. Then suddenly will come to their minds a double revelation. They wiil recognize that antique Greece has been deformed by unskillful teaching and that there exists a modern Greece of which they know nothing. They will perceive that the one is connected with the other by the closest bonds of resemblance and heredity. And the history of the world will take, in their eyes, a new sense and different coloring, because henceforth they will know that a nation may be walled in a tomb and yet not be dead."-[Journal des Débats, April 6, 1896.]
"The programme of the 'Great Week' has been definitely arranged. At this moment it is in press and will appear to-morrow. Easter Monday, April 6, is the day announced for the inauguration of the Stadion, the beginning of the Olympian games. The King will preside, surrounded by his ministers, members of the Greek Parliament, and the diplomatic corps. Foot races will begin on that day and continue during the several days following. The city is to be illuminated in the evening. On Tuesday, rith, there will be fencing at the palace of the Zappeion, and at nightfall the Acropolis will be illuminated. On Wednesday, 8th, the shooting 'stand' and the 'Velodrome' will be officially opened. The stand is constructed at Calitthera, on the road from Athens to Phalerum. The committee on shooting, presided over by His Royal Highness Prince Nicolas, desired to do a great thing. They have erected a magnificent building that will also remain after the games. It contains vast halls, luxurious dressing rooms, and a terrace which serves as a gallery, from which the view extends beyond Salamis to the steep shores of the Peloponnesus. The Velodrome is erected in the plain of New Phalerum; it has been copied from that of Copenhagen and seems to satisfy the requirements of the cyclists. The Athenian Society has already tried it, and the royal family on this occasion occupied a pretty gallery reserved for them. This is a raised platform, surrounded by a balustrade and ornamented with mosaic flooring. From this can be seen the Parnassus, the Pentelicus, and the Hymettus. The Acropolis appears above the villas of the Phalerum, and in the midst of this classic scene, surrounded by classical decoration, the most modern (fin de siècle) of sports taizes the first place. A striking contrast in truth-the bicycle at the foot of the Parthenon! How many times have these words been thrown at me with a scornful accent as a supreme argument against the modernization of the Olympic games! Very well; to-day it shocks no one. To play lawn tennis before the Colosseum or to ride a bicycle under the Arch of Titus would indeed cause a disagreeable impression. The Roman monuments are dated; they belong to an age. The Parthenon has none; it belongs to all times; no manifestations of popular life can disfigure it. On Easter Thursday the competition between gymnasts will take place at the Stadion; Swedes, Germans, Greeks, and Englishmen will take part. The violent opposition of the president of the Belgian Federation to the admission of gymnasts to the Olympian games has not been successful; what little opposition remains will no doubt vanish before the hour strikes for the second Olympiad. Friday will witness a race at Marathon and celebrations at night in the harbor of the Piræus.
"Saturday is given to swimming competition. It will take place in the charming little Bay of Zea, toward whose shores descend the closely built houses of modern Piræus, adorned with balconies and terraces covered with fruitful vines. Rustic seats surround the shore, the lowest reaching to the blue waters of the beautiful bay. Never had swimmers for the display of their strength a more charming inclosure. The last two days, Sunday, the 12th, and Monday, the 13th, are devoted to other nautical sports-yachting and rowing. A pavilion has keen constructed in the Bay of Naunichie to shelter the boats and give to the rowers
the comfort of an English club. The pavilion is elegant. It is built of difeerent colored wood, and near it are the ruins of an antique temple, while back of the hill can yet be seen, half buried in the sand, some remains of the long walls which connect Athens with the Piræus. Upon a promontory rises the villa of 'Coumoundouros,' the favorite residence of this great minister. Thus is repeated in epitome on the shores of this bay the wonderful history of the Greek nation in spite of opposition; here athletics become historic; but here the past is so intimately interwoven with the present that only strangers are surprised by the relation.
"The international committee will hold a session on Saturday. Six of its members have arrived-M. Bikelas, Greek delegate; General Bontowski, Russian delegate; Dr. Gebhart, German; Messrs. Kemény and Jiri Guth, Hungarian and Tcheqne representatives; Commandant Balck, Swedish representative, and your obedient servant. This international committee represents the permanency of the institution. To this committee falls the difficult task of making the various national committees cooperate in this unique work. There are some rivalries existing among them; some misunderstandings; some opposed tendencies. The presidency of the committee belongs to the nation in which the games will be celebrated. M. Bikelas has presided until now. For four years it will pass into French hands. Tuesday, the 14th, the close of the Olympian games for 1896 will take place in the stadion. The King will distribute prizes to the victors, which consist of a diploma and a medal, the work of Chaplain. This celebrated artist has engraved upon one side the silhouette of the rock of the Acropolis, with the Propylæa and the Parthenon; on the other side the head of Jupiter Olympus. It is no more the symbolic branch of antiquity, but neither is it the 'venal prize' which is so dearly beloved by modern sportsmen. It is a simple souvenir associating art with athletism, and thus maintaining traditions of the disinterestedness which ought to be the very base of sports. Amateurism will never have had a grander mnanifestation in its favor. Even those who are used to accept without embarrassment gold pieces earned by their endurance or their agility would blush to even touch the coin here. In this unrivaled scene, in the presence of overwhelming glories, a money prize would seem unbearable. This sentiment proves better than anything else that the principle is itself wrong."-[Journal des Débats, April 8, 1896.]
"The triumph of the 'barbarians' in the Olympic competition has in general been very gracefully aocepted by the audience. At the entrance of the stadion, in full view of the audience, there is a mast, at the foot of which, after each test, the 'order number' of the conqueror is fastened, while at the peak of the mast the flag of his country is displayed. This is an ingenious device for announcing the victors to the audience and for distinguishing the international character of the games. From this place of honor have been seen, waving by turns, the colors of the great European nations; but the flag that has been seen most frequently is the Star-Spangled Banner of the United States. This was just, as Americans were the first to become interested in our work, and the only people who have never doubted our success. The two teams that were equipped and sent out by the Americans have shown from the beginning their athletic valor and surpassing enthusiasm. Already the astonished Athenians proclaim them professional; they can not believe that these handsome young men, with such flexible muscles, are students in a hurry to return to their studies, but modestly satisfied to have in this manner increased the prestige of their universities.
"Whenever the American flag unfolds on the stadion, it excites wild enthusiasm. High up, crowded together on the last tiers, some sailors rise, swinging their caps and uttering loud hurrahs. It is the crew of the Federal cruiser San Francisco, at this time anchored in the harbor of the Piræus. Below, near the famous subterranean passage from which to-day, as formerly, the athletes enter
and go out, there is standing a group, from which frantic acclamations arise. They are those entered as competitors and their friends from the American School of Athens, who salute the champion with the rallying cry of his club or college. Each transatlantic association has a distinct yell, in most cases formed of the syllables of the name, or of the initials which one utters in pronouncing them. Sailors and students, agitated by the same patriotism, answer each other with growing enthusiasm, over the heads of the crowd. The audience commences by laughing. Then they applaud, because they feel the sincerity of the joy manifested; the juvenile ardor animating these inharmonious manifestations.
"The Olympic games are not by any means the first contact between America and Greece; other ties exist between them than 'Cook's tickets,' other interests than those of tourists from widely separated countries. The educated American, perhaps more than the European, considers a pilgrimage to the Acropolis a supreme satisfaction that every enlightened mind should secure to himself as the greatest source of mental cultare. He is not, as we are, imprisoned under the ruins of the Roman Empire, that is so heavy and complicated; he understands more readily the ethereal organization of this antique democracy, with which his own has more than one resemblance. It is this feeling that has prompted Americans to found a school of archæology at Athens. This fact is little known outside of Athens. Even here people do not appreciate its importance, which is, however, considerable. This American colony, established on the slopes of Lycabettus, supported by the voluntary contributions of citizens, solely devoted to the culture of science, opens up to the future of the United States an endless perspective.
"The Greeks, who love the Americans, and know that the love is returned, have therefore heartily applauded their success; they have even smiled at that student of Princeton, a self-made (improvisé) discobolus, who won a prize which they believed to be theirs by hereditary rights. But their chagrin would have been intense had the cup offered by M. Michel Bréal to the 'Marathon runner' escaped them. They were not compelled to undergo that strain. It was a Greek who first entered the stadion, having accomplished in two hours and fifty minutes those 42 kilometers which separate Athens from Marathon. His arrival created great excitement. The stadion was completely filled. The picturesque hill that overhangs it from the side of the sea was covered with people; there were at least 60,000 spectators. In the 'hemicycle were the King of Greece, the King of Servia, the Grand Duke George, the Grand Duchess Theresa, the prince royal of Greece, the Grecian ministers, and the diplomatic corps. In a moment, as the approach of the victor was signaled, the whole multitude arose as if moved by an electric current. The thunder of applause rolled across the plain toward the foot of Parnassus, as if to awaken in their subterranean abodes the manes of their ancestors; it was, in fact, not simply the accomplished act which provoked these transports, but rather the pent-up remembrance of the whole glorious past manifested, in that runner, to the vision of the Greek. Then, in order to withdraw him from the dangerous effusion of a delirious crowd, the prince royal and his brother, Prince George, carried him away in their arms to the dressing room, and then the enthusiasm arose anew, like an irresistible wave, before that superb picture, which placed side by side, in so graphic a manner, the past and the future.
"It was long before quiet was restored. Just beside me I saw a lady unfasten her watch and send it as a present to the young hero of the day. A patriotic landlord of a hotel signed an order for 365 good repasts, and one of the bootblacks at the corner of a street offered to take care of his boots in future gratuitously. There is a comic touch in this, but it is impressive if one considers the sentiment that prompted these offerings. All those seen by me on that eventful evening, even the greatest sneerers, had participated in the general emotion, and our distinguished countryman, M. Charles Maurras, who had opposed me formerly for
wanting to 'internationalize' the games, deciared himself converted. He said to me: ${ }^{+I}$ see'-and this is profoundly just- ${ }^{\text {T}}$ I see that this internationalism will not destroy the fatherlands, but will fortify them.' "- [Jour. des Débats, April 22, 1896.]
"Roll of the victors, prizes, etc. -When the roll of the victors was called, it became evident, after all, that the international character of the institution was well guarded by the results of the contests. America had won nine prizes for athletic sports alone (flat races for 100 and 400 meters; 110 -meter hurdle race; high jump; broad jump; pole vault; hop, step, and jump; putting the shot; throwing the discus) and two prizes for shooting (revolver, 25 and 30 meters); but France had the prizes for foil fencing and for four bicycle races; England scored highest in the one-handed weight-lifting contest and in single lawn tennis; Greece won the run from Marathon, two gymnastic contests (rings; climbing the smooth rope), three prizes for shooting (carbine, 200 and 300 meters; pistol, 20 meters), a prize for fencing with sabers, and a bicycle race; Germany won in wrestling, in gymnastics (parallel bars; fixed bar; horse leaping) and in double lawn tennis; Australia, the 800 -meter and 1,500-meter foot races on the flat; Hungary, swimming matches of 100 and 1,200 meters; Austria, the 500 -meter swimming match and the twelve-hour bicycle race; Switzerland, a gymnastic prize; Denmark, the two-handed weight-lifting contest.
"The prizes were an olive branch from the very spot at Olympia where stood the ancient Altis, a diploma drawn by a Greek artist, and a silver medal chiseled by the celebrated French engraver Chaplain. On one side of the medal is the Acropolis, with the Parthenon and the Propylæa; on the other, a colossal. head of the Olympian Zeus, after the type created by Phidias. The head of the god is blurred, as if by distance and the lapse of centuries, while in the foreground, in clear relief, is the victory, which Zeus holds on his hand. It is a striking and original conception. After the distribution of the prizes, the athletes formed for the traditional procession around the stadion. Lonës, the victor of Marathon, came first, bearing the Greek flag; then the Americans, the Hungarians, the French, the Germans. The ceremony, moreover, was made more memorable by a charming incident. One of the contestants, Mr. Robertson, an Oxford student, recited an ode which he had composed, in ancient Greek and in the Pindaric mode, in honor of the games. Music had opened them, and poetry was present at their close; and thus was the bond once more renewed which in the past united the muses with feats of physical strength, the mind with the well-trained body. The King announced that the first Olympiad was at an end, and left the stadion, the band playing the Greek national hymn and the crowd cheering."-(Century Magazine, November, 1896.)

## IV.

## IDEALS OF EDUCATIONAL WORK. ${ }^{1}$

By President Willyam R. Harper, University of Chicago.
$\int$ I doubt if even the professional educator has a full conception of the intense educational activity which in a multitude of forms exists among us. With kindergartens, private schools, primary and grammar schools, high schools, normal schools and academies, boys' schools and young ladies' seminaries, schools of music, schools of art, schools of engineering, schools of architecture, schools of law, schools of medicine, colleges and universities, with the many special efforts which are being made to bring the results of educational work into the possession of the people, efforts which have assumed the most definite and rounded forms in that
work, the rery name of which to-day is a household word-university extension; with that educational work of an indirect though real character carried on through the powerful agency of the press, as seen in journals and magazines, and which constitutes one of the most effective agencies of our manifold educational activities, with all these, I say, there is at the same time a diversity and complexity which bewilder and confound us, and it is only in a few cases that the educational expert has shown any adequate realization of the amount and variety of American educational work.

It does not require the knowledge of an expert to see that in this great multiplicity of plan and method, purpose and scope, there is no such thing as system. Thiswork consists of a hundred thousand disconnected parts, without adjustment to each other and entirely devoid of relationship to any general scheme. These parts can not be said to be even loosely connected. The same thing is repeated in a thousand ways, each way, however, being sufficiently distinct and different to make void every effort looking toward adjustment or connection. Germany may be said to have a system of education; France likewise; but in America, as a whole, there is no trace of anything that might be rightly called a system. It is true that there is a so-called public school system; but this is at best partial, covering only a small portion of the field, and in effective operation only in certain portions of the country. There is in certain States-for example, Michigan and Minnesotasomething which looks like a system in the relationship that exists between grammar schools and high schools and between high schools and the State university; but this also is only partial and of questionable efficiency, even in the States in which it has been most fully developed.

It is possible to go even further, and to say that there is no such thing as order. Whatever phase of this activity we study, there is discovered chaos and confusionno order or plan. It will be granted that a work may be carried on systematically, even if it does not constitute a system; but we look in vain to the country at large, to a single State, to the best of all States, or to a single county, or even to a city, for an organization which may reasonably be called systematic. It can not be found.

It is possible that the results of our work as at present conducted may justify the lack of a system; and, indeed, the lack of system. There are those who praise unduly these results. They are in most cases, however, persons unfamiliar witl the results obtained from other countries; for it is beyond dispute that the average boy of 18 or 19 who has finished the grammar and high school courses has had no such advancement as the boy of corresponding age in Germany. It is beyond dispute that whatever advantages the average American college possesses, whatever it may do for its students in discipline and in real effectiveness, it by no means ranks with a gymnasium or the lycée. The results do not justify either the amount of money expended or the amount of work given to the cause of education in America. The introduction of order and system would double the efficiency of the work done, save two to four years in the life of every student, and secure a thoroughness which would revolutionize American methods in politics, business, and letters. No one who has intelligently considered the question will fail to realize the disastrous consequences which liave attended the utter lack of system in all our educational work. But it is the question, however, not of system in educational work, for concerning this there is no question, but of a system in educational work that I would speak.

The question is, Have we waited long enough, and has the time come when effort of a most vigorous character should be put forth to do that which hitherto we have expected to be done of itself? The difficulties attending the adoption of any general plan which could be denominated a system have not been overlooked. (a) We are still a young and undeveloped nation. Has the proper time arrived
for a national system which shall not only include all that has thus far grown up, but at the same time organize the whole into an organic and systematic unity? (b) We are not as yet a people. The term peoples is more appropriate. Many and discordant are the elements of which we are composed. Is it possible to develop a system which shall be pleasing to all? (c) Will not better results be achieved if we move along independent lines, each investigator watching the results of all and adopting from time to time that which commends itself to him? These and many other objections present themselves in opposition to the advocacy of a system. But I would answer: (1) We have at our command the wisdom and experience of all the ages, and if we are not in a position to-day to take the necessary steps to formulate a system, we shall never be. (2) The very fact that as a people we have among us representatives of so many nationalities; the very fact that our great purpose in reference to all foreign nationalities is the purpose to Americanize them-in other words, the very circumstances of our situation-should incite us to provide a system of education which, like our American system of government, should be unique and worthy the name American. (3) The adoption of a system does not shut out experiment and investigation, but rather encourages them. A system is not necessarily rigid and mechanical, but may be most flexible. Nor is it supposed that any system will continue to be used without modification, The very fact that it is a system carries with it the idea of growth, and growth means change.

It would be an audacious thing for me to propose to you a system of education for America. I have no such thing in mind. Such a proposition, when it comes, must come from one wiser and more experienced than I shall ever be. The truth is the system, when it is once evolved, will prove to be the outcome of the wisdom and experience of hundreds of men. In order that such a system may come, however, every man who has at heart the highest interest of education should seek to make his contribution, however small and insignificant, for consideration in the counsels of those to whom this great trust will some time be committed. Besides, each one of us engaged to-day in educational work owes to himself and to his work to present as frequently and as forcibly as circumstances and ability will permit his conceptions of the educational principles which should operate, whether with or without a system. Situated as we are, each in his way is working out a system more or less comprehensive, more or less local; each is engaged in an experiment the result of which will be of interest to all. I venture, therefore, to present a few of the ideas which, in my opinion, will characterize the educational work of the future, whether we are to have in mind the needs of a single institution or those of a district, or whether it be our plan to cover as years go by broader territory and include many institutions of many grades.

First of all, and, if I mistake not, most fundamental of all, is the principle of individualism, a principle capable of application alike to students, instructors, and institutions. Every man born into the world comes into it with the limitations of his work clearly defined by nature. The man who succeeds in life is simply the man who is fortunate enough to discover the thing nature intended him to do. In some cases nature has seen fit to indicate early and definitely the line of work in which success may be attained. In others, the discovery is made, if at all, late in life. In the growth and development of the body and mind, each man or woman is to be treated as if he or she were the one person in existence. The individual, not the mass, is to be cared for. From the beginning the student should receive such treatment as will enable those who are watching his development to learn what he can do only with difficulty. But this is not to be limited to the beginning; it should be continued to the very end of what would be called the preliminary peried, a period in which the case of every individual continues until the clearest evidence has been secured of the discovery of the prin-
cipal work which the individual can do to advantage. When once the discovery has been made, the pupil should be allowed to devote himself, with certain qualifications, uninterruptedly to that for which, as experiment has shown, nature fitted him. The next aim will be to develop those functions which are capable of development. It will not be forgotten that the culture shall be as broad as possible; but it is true that the possible fields of mental culture are multitudinous, and that, after all, no man, however broadly cultivated, comes into contact with many of the fields. It must be admitted that a large part of educational work fails utterly of accomplishing the thing in view. Men pass through all the grades of primary and secondary work, enter college and also do university work, and yet are reckoned by the world at large, and even by those most intimately associated with them, as failures. And as far as adding anything to the life of themselves or others, they are failures. Why is this so? Because the idea has prevailed so extensively that men might be educated en masse; that one after another they might be ground through the curriculum of study without reference to special taste and predilection.

A class of 50 men enter college, no two of them alike in equipment, natural taste, mental aptitude, or intellectual ability, and yet they have been required to take the same studies, within the same number of hours, in the same way and with a sameness throughout that makes college life for most of them a distasteful thing and an injury. I stand ready to assume the responsibility for the statement that many men are injured by college training, and that cause of the injury in nine cases out of ten has been the inflexible cast-iron rontine of the college curriculum, which, let us congratulate ourselves, is fast becoming a thing of the past. Less harm has been done than would otherwise have been the case, because as a matter of fact only men of a certain disposition in days past have received an education. A great change has taken place among us to-day. Men of different types of mind, men who have no idea of becoming scholars, men who would be artists, mechanics, business men, as well as who have in mind the ministry or the law, may receive an education adapted to their needs and capabilities. That the doctrine of individualism is beginning to be respected is evident from the establishment of scientific schools, technological schools, and from the high position which these schools occupy now side by side with the college, a position to which they could not lay claim even so short a time as ten years ago. But the same sin (for it is a sin against God and against man) is still committed in most of our institutions, even in those to which reference has been made. The individual is forgotten in the mass. In how many colleges is it the custom to take, as it were, a diagnosis of the mental constitution of each student similar to that which the physician makes of the body? It is not unusual in these days in connection with the work of the department of physical culture to have each man examined, the weak points of his body pointed out, and the principal exercises indicated which will help him. Is such a thing done for the mental constitution? The present college methods too often compel failures, and it is more or less accidental that a man receives real and genuine help in his development. Why is it that so many men achieve marked success in life, in their profession, and in every line of business, who have never seen the inside of college halls? Because contact with men does for them what technical education is supposed to do for those who avail themselves of its advantages. The feeling against higher education which has existed is not without some justification. A radical change is demanded-a change which shall shake to the foundations the educational structures that have been erected.
Outside of a very few of our highest institutions of learning the cause of education in this country has been cursed by the failure of those in authority to recognize the principle of individualism in the work of instructors. I select two familiar examples. In the high schools, which are gaining rapidly in numbers and in
efficiency, no attempt has been made to assign to teachers the work in which they are particularly interested. The man whose mind by nature is mathematical in its tendency is ordinarily asked to teach language or history. The woman whose whole soul is afire with interest in literature is compelled to do work in science or mathematics. Or worse yet, as happens in nine cases out of ten of our colleges, the same person is required to teach in three or more departments, to a greater or less degree distinct from each other, the chances being that in no one of the three has the instructor been afforded opportunity to do special work. Until within a short time this sin has been committed even in larger institutions. It is at this point that individualism passes into specialism and the connection between the two is close. The multiplication of the fields of knowledge makes necessary the cultivation of individuality, and it must be conceded that the very marked changes which have taken piace in the college field are due to the rapidly increasing recognition of this great principle.
Progiess in this particular has been slowest in the case of institutions themselves. It has been a common idea that every newly founded institution should duplicate the work of those which have preceded it, and, as a consequence, with one or two notable exceptions, the higher institutions of our country are institutions of a single type. This means of necessity narrowness. It means more, inasmuch as each institution tries to cover the same ground, and all the ground; the result is that no effort has anywhere been undertaken to establish a school which will allow thoroughness or depth. The college with no endowment, or endowment of $\$ 100,000$, seeks to do the same thing which the institution with an endowment of millions finds it difficult to do. The technical school with no endowment, or $\$ 100,000$ of endowment, seeks to cover every field of technological work. How much better it would be if institutions would cultivate individualism, the academy doing the work of an academy, and not that of a college; this institution devoting its strength and energy, so far as university work goes, to the development of departments of history and politics, this to the development of physics and chemistry, this to the development of the biological sciences, this one to throwing all its efforts into the great field of electricity. But no; the lowest tenth-rate college announces courses in every department of human knowledge, and students are compelled in self-defense to dabble in everything rather than to work in a few things. Leaving individuality of curriculum, it is also true that almost nowhere is there cultivated individuality of spirit. There are perhaps four or five institutions in America in which there may be said to exist after years of culture an individual spirit. There is a Harvard spirit, a Yale spirit, a Princeton spirit, a Johns Hopkins spirit, a University of Virginia spirit. Where is there another institation individual in its character? Of young institutions much may not be expected; but that institution which has done work fifty years without exhibiting to the world in the character of its men a distinctive individuality has, in one important respect at least, failed to accomplish that for which it was founded.

> COORDINATION-THE ADJUSTMENT OF PARTS.

In every scheme there are parts; and that these parts shall make a scheme or system, they must be adjusted to each other; they must be coordinated. I use the word now in its broader sense. Our educational work has divided itself into sections. Each section must be so arranged as to fit into that which is above and below it as well as into that which is on each side of it. The arrangement, therefore, is a complicated one, and perhaps we are not to be surprised that no satisfactory adjustment has yet been made. Both of the adjustments referred to are needed in the educational development of every individual as well as in the organization of every institution.

In the case of an individual, we seem to-day to be in utter confusion so far as
concerns the arrangement of the definite steps in his education. Omitting, for the sake of brevity, any consideration of the earliest periods, it is evident that the grammar school, the grade preceding the high school or academy grade, is organized in most of our State systems with special reference to making provision for teachers and finding a market for text-books rather than for developing children. Bewildered by the multiplicity of subjects taught, subjects making a curriculum without unity of any kind, the pupil reaches the end of this period discouraged and distressed. Why do not more children proceed to the higher grades of study? Partly, it is true, because of poverty, but in large measure, I maintain, because of the inefficiency of the organization of the grammar grade.

A few, comparatively, proceed higher, in spite of difficulties almost insurmountable, compelled by parental authority or impelled by a desire for study which even the most disadvantageous circumstances will not destroy. Here, again, the same confusion reigns, not only in the high school, but in academies and preparatory schools. The connection between the work of this grade and that which precedes is not a logical one, and the various elements which ought together to form a plan at once unified and complete are thrown together in a most promiscuous manner. The higher we go, the worse becomes the condition of things. Academies and high schools stand in no direct or indirect relation, except in individual instances, to the college work which follows. In the majority of schools the student finds upon graduation that he has not met the requirements for admission to college, and unable to go back and take up the work again in another form, he loses courage and gives up the effort. Still further, no connection of any kind exists between the college work and the professional. As a matter of fact, our professional schools are made up.for the most part of men who could not gain admission to the freshman class of the colleges. The man who has by dint of hard work carried himself through college finds himself in the professional school side by side with men who have never been inside of college, or, in many cases, of high school or academy. Yet these men work together, and some edrcators tell us that it is profitable for both. What utter nonsense! The weakness of the situation is acknowledged openly by certain leading institutions, which have within recent years made strong effort in some way to adjust professional work to college work. But the adjustments can not be said to have proved satisfactory. So far as it concerns the individual, there is needed such an adjustment of parts as will allow him from the earliest age to the completion of his professional course to move forward without interruption and without the loss which invariably follows transfer from one scheme to another, neither of which stands related to the other. The beginning of real university work is in the kindergarten. The day will come when this fact will be recognized. With a proper adjustment in the unity of arrangement, the time of at least three years could be saved to every individual who contemplates a college or professional course of study. When we consider the terrible cost of the present lack of adjustment, we are the more ready to consider propositions looking to the readjustment of the various disconnected parts. It is here that Germany forges ahead of us, because of the close connection of the pupil's work from the very beginning until he is ready to enter the university. Results are obtained which, from our point of view, seem almost incredible.

It is here, also, that adjustment of the parts is just as essential for the sake of the institution. It is difficult to show what is meant without a chart. The difference between the present situation and the ideal may be described roughly under the figure of a tree. We see before us the stump. Brauches of different length and thickness are strewn about the stump. This material is, to be sure, most valuable and is available for use. But imagine, if you please, each branch assuming its former place in connection with the trunk of the tree; the sap once more flowing from the roots to the topmost limb; the foliage restored, and the fruitage. This is a fair representation of a system of education with its
parts adjusted to each other. Or, better yet, since every institution should be in a proper sense such a tree, the assemblage of institutions forming the great system would be a magnificently planted grove, made up of a variety of trees, each the best of its kind, each contributing to the happiness and maintenance of mankind. The educational grove of America to-day consists for the most part of dismembered trunks, and these largely of the same species; most of them stunted in growth, a few here and there giving evidence of what might be under a different condition of things.

A vital mistake in the history of education in New England has been the isolation of the academy from the college. A vital mistake in the histodry of education in the West and South has been the too close identification of the preparatory school and the college. The New England schools have been right in not permitting the academy to be joined closely with the college. They have erred in not securing direct control of the academjes, in order that the step from the academy to the college might be taken without embarrassment and loss. Western and Southern institutions have done the right thing in recognizing the necessity of a close connection between the preparatory schools and the college, but have made the mistake of bringing the life of the preparatory school into too close connection with that of the college. There can not be a university without colleges. Nor can there be colleges without academies. The ideal institution will, therefore, cultivate the academic work as assiduously as any other, and will see to it that the connection between it and the college work is close and that the step from one to the other may be taken easily. The same principle would apply to the higher work. The future will see an adjustment made by which, after the first two years of a college course, the remaining work of the college shall be so closely connected with that of the professional school that the line between them will be drawn only with difficulty. Such an adjustment will be attended with two advantages. It will make all the more difficult any attempt to do professional work without an adequate training, and it will do much toward lessening the friction and loss of time which now invariably attend the passing from the college to the university. The more my mind dwells upon it the more adequately do I find the figure of the tree to express my conception of our educational work. The roots running out in the various directions constitute the earlier and preparatory stage of work. Students of every condition of life and mental attainments are brought together in this period. The stock of the tree is the central or college period. The work of all students in this stage runs along much the same lines. It is here that the final testing takes place. Typical subjects are brought forward and the student led to grapple with them. The variety here is not great, nor should it be; but where this process has been complete, selection begins and division takes place. These divisions, as they move forward in a multitude of departments, make the branches of the great tree. Here is infinite variety, infinite possibility of development, yet everywhere the same characteristics. Because of the infinite variety, and because of the 'sameness of characteristics, adjustment of the parts is all the more necessary.

## ASSOCLATION.

Finally, with your permission, I desire to present as an important characteristic of any adequate system, as a leading feature of the future work, the principle of association. This is a necessary concomitant of individualism and coordination. Association or combination is possible in case the student or instructor is treated as an individual, and in case an institution, of whatever grade, has aimed to develop individuality. It is a remark of frequent occurrence that one of the common features of our present civilization is the emphasis laid upon specialism in every line of work. It is also to be noted that, side by side with specialism,
and because of specialism, another prominent feature of our modern civilization exists, namely, that of combinations and trusts, for it is only the specialists who combine. It was not until the day of specialism that combinations could occur. It is true that until individualism prevails association to any considerable extent must be postponed. Association implies coordination in both senses of the word. In order that men, either as students or professors, may come together, in order that institutions may cooperate, there must be a rigid classification according to the purpose, scope, and rank. It is here, probably, that the first radical steps in any educational reform must be taken. So long as institutions doing really the work of high schools call themselves colleges and universities there can be no association other than a merely nominal one. The high schools of some of our Northern and Western States do a work vastly superior in quality and greater in quantity than many of the so-called colleges and universities.
Granting that these two principles have begun to operate at least slightly (and I think that every forward step taken during the past twenty-five years has been taken in accordance with these principles), there is opportunity-I may say there is necessity-for the working out of the principles of association or union of effort or combination, by whatever name we may decide to designate. Naturally it must first come in the form of institutional association.
The applications of this principle are so numerous that time will permit the mention of but a very few examples taken from a narrow field. As before, I pass over the lower grades.
The association of academies in relation to a college: Each college should have in the district tributary to it as many academies as the constituency will support. These academies should be under a local management distinct from that of the college, and yet there should be such a connection as would permit the college in large measure to direct the work of the academy. This is what has actually taken place between the high schools and the State university in certain States. But it must be recognized sooner or later that the high schools do not make preparation for college their chief work. It must be remembered that only 10 per cent of those who,finish the high-school course ever enter college. The high school, therefore, has other work to do. The time will come when two-thirds of the present colleges and universities should, for lack of funds to do properly the work they are now trying to do, be made colleges of this same rank.
When additional funds are secured, higher work may be undertaken; but not till then. The larger the number of colleges we can have, the better, so long as they are equipped to do the work of a college; but to make students believe that they are receiving a college education, to give them the degree which is supposed to stand for such an education, is a species of dishonesty and imposture for which there is no excuse and which our legislatures should take in hand. There will be, then, the academies and high schools, brought into vital relationship with the colleges which are nearest to them; the colleges of lower rank and of higher rank-the two classes sharply distinguished. These in turn will be associated in relation to the university. The university of the future will make a clear distinction between its college work and its university work. There is room to-day for ten or fifteen universities. The colleges, remaining colleges and doing college work, will sustain to the university the relation sustained by the academies to the colleges. The association of colleges may be either that of a State, as is already true of the State of New York, or that of a denomination (the bond in this case being very close), or that of a district, such as New England, or the valley of the Mississippi. No one can fail to see the immense advantages of such an association. I may be permitted to go one step further. The universities, supposing ${ }^{\bullet}$ the number to be ten, fifteen, or twenty, should, let me say, unite in a federation. This federation will be like that of the States of the Union. Through this federation of universi-
ties will come the crowning feature of our American system-a national university. We do not need a national university as an institution, distinct from other institutions and their rival. The existing universities will never consent to a national university organized upon such a basis. The history of the movement since the days of Washington demonstrates this.

Let the institutions doing real university work unite, and let great scholars and investigators be delegated by each university to go to Washington, and, with governmental assistance, make-proper use of the great scientific treasures of all kinds which have been there collected; these professors all the while being members of the university which has thus delegated them, and yet, as a body, constituting the faculty of the national university. Let the students of all universities study at Washington whenever it is to their advantage to do so, remaining, however, students of their own university. This plan is simple; it removes the whole matter from the field of politics; it can be introduced at a minimum of expense; it will lead to unity of effort; it will secure a system in our work, the lack of which all concede; it will not excite the rivalry of universities already established; it will permit the students to move about; it will set a standard by which institutions may judge themselves; it will secure an association of interests and a recognition of scientific work which will lift the work of education in this country to the place it occupies in Germany.
Individualism, coordination, and association are the keynotes to future progress along educational lines.

## CHAPTER XXX.

## CURRENT QUESTIONS.

Contents.-Teachers' mutual benefit associations and pension laws-CoeducationCompulsory school attendance-Transportation of children to school-Temperance instruction.

## TEACHERS' MUTUAL-DENEFIT ASSOCIATIONS AND PENSION LAWS.

This subject was treated extensively in the Annual Report of 1894-95, in an article entitled "Pensions to teachers." The pension laws passed by some State legislatures, and the provisions made by municipal authorities for annuities, as well as the results of some mutual-benefit associations among the teachers in the large cities of this country, were quoted in that article. Since the printing of the report, Prof. John M. Pierce, of Boston, has published a summary of what is being done in this direction, which summary contains tables of interest to teachers in search of such information. That article appeared in the New England Journal of Education and is here reprinted:
"The beginnings of this institution lie farther back than any organization, beyond the reach of statistical inquiry. Members of the same vocation, while so often competitors for place and power, are at the same time most ready to sympathize with and aid each other. What begins as brotherly charity, where the material benefit is all on one side and the spiritual benefit all on the other, develops into a business organization, where the benefits are mutual.
"One of the least systematic and organized ways of giving aid is through associations formed for other purposes. Teachers' clubs and societies for general professional purposes sometimes apply a part of their funds to the aid of sick and needy teachers, and, in case of death, to bury them. Louisville, Ky., has no aid association. Two-thirds of the teachers belong to the Louisville Educational Association; the annual fee is $\$ 1$; this furnishes a fund of $\$ 300$ annually, with which assistance is given to such teachers as may be confined to their homes by serious illness when they have no other means and call for aid. This work is managed by a board of control, who report in a general way, without giving names. The teachers of Louisville have discussed many plans for a better system, but have reached nothing definite.
"While such a method is commendable from a charitable point of view, it puts the giving of aid on such a basis that it must often defeat its purpose. Many teachers would suffer the most extreme need rather than call for assistance under such circumstances.
"The Teachers' Club of Jersey City, N. J., maintains a fiund out of which members who are incapacitated through illness receive a weekly benefit.
"The Teachers' Aid Association of Chicago, which was organized after the great fire, aids those who through sickness or other causes become needy and without the means of support; whenever necessary, the teachers have voluntarily contributed a certain fractional percentage of their salaries for one month to this
relief fund. It is four years since any contribution has been made to this fund, and during that time $\$ 1,000$ has been paid out to teachers in need.
"There are doubtless other cities where work like this is done; these things are not always considered worthy of being reported. But in most of our large cities there is some more elaborate and systematic method of teachers' aid.
"Table I embraces the associations that pay sick and death benefits to members without waiting for them to plead inability. The beneficiary receives aid as insurance for which he has paid.
"The tendency in this kind of association is to furnish a number of benefits, and to multiply the dues accordingly. The oldest of these, that of Baltimore, is a good illustration of this. Besides the sick benefit, a stipend is paid to the family or heirs; if there is no one to claim this, it is to be applied in paying the funeral expenses. To raise this amount, a special assessment of $\$ 1.10$, besides the initiation and annual dues, is made upon each member, the 10 cents to cover expense of notification. When the amount in the treasury falls below $\$ 500$, an extra assessment of $\$ 1$ is levied on each member.
"These associations for sick and death benefits do not usually accumulate large funds, since they pay out frequently in small sums. They generally aim to pay about $\$ 1$ per day to teachers who are sick long enough to lose their salary. Managed as they are, these associations could not afford to have a large, continuous list of beneficiaries, and so the time during which sick benefits will be paid, or the amount of benefit, is limited.
"The idea of retiring teachers on an annuity is a later thought. It arises only where the profession is more fixed. In some cities, both kinds of associations exist side by side. But where an association for temporary aid only already exists, it is more common for the teachers in such city to apply to the State legislature to have a retirement fund established by law. Experience with a voluntary association is likely to lead to the demand for something more uniform and universal.
"Of Table II the Boston association was incited by the example of New York, and was in general modeled after this. The Teachers' Annuity Guild of Massachusetts was in turn copied in essentials from the Boston plan. The guild is in some features an improvement over the other associations, having their experience to begin with. The guild is composed of teachers in cities and towns near Boston. Cambridge, Haverhill, Lowell, and Somerville are the cities having the largest numbers of members.
"When an association is organized, it is found advisable for a few well-known and reliable persons to associate themselves, make their plan, and then invite members on that basis. In this way the Boston association and the annuity guild were formed. In Providence the matter was discussed in town-meeting style, and so many were the wants to be satisfied that several years were lost in coming to any agreement.
"The chief diversity of object is between temporary aid or sick benefits, and permanent aid or annuity. The difference is a relative one, for a spell of sickness may be prolonged into permanent incapacity. Most of the associations in Table II might be pat into Table III, since they permit one who has been retired on account of disability to be taken off the list of annuitants when restored to health, and to become an annuitant again if again incapacitated. The annuity system could be worked to cover sick benefits, but in most cases this is not the intention of its promoters. In Cincinnati and Philadelphia the annuity may be enjoyed temporarily during prolonged sickness. New York, Boston, and Baltimore have not been put into this table, not because their organization is essentially different from that of Cincinnati and Philadelphia, but rather on account of a difference in the spirit of working. Those in Table II do not appear to favor the use of annuities to include sick benefits.
"The Brooklyn association pays in cases of sickness at the discretion of the board of trustees.
"The association of the District of Columbia, including Washington, has a unique way of giving both temporary and permanent aid. There are two classes of members, Class A and Class B. The funds are kept in three separate accounts; the permanent and the annuity fund are administered for the benefit of Class $\mathbf{A}$ exclusively; the temporary disability fund for Class B exclusively. Teachers may thus enjoy either the temporary or the permanent benefits, or both, in the one organization.
"These associations, included in Tables I, II, and III, are, from their nature, necessarily voluntary. They thus lack an element of strength and stability which some of the organizations authorized by law possess. Table IV shows the extent to which the State pension fund has been established. In St. Louis, California, and New Jersey membership is not compulsory; in Detroit, Chicago, and Cincinnati it is compulsory; in Brooklyn and New York City, compulsory only on teachers appointed in the future. One of the chief advantages of an association established by law is lost when membership is not binding upon all teachers. Whether the Illinois or the New York plan is better must depend on the stand taken by the teachers; the latter is practicable, where opposition would defeat the former." ED $96-43$

Table I.-Mutual benefit associations for temporary aid only.

or is levied on each member
$b$ Paid by special fee on death of a member.
cany teacher in the public schools of Cincinnati may be a member, but business meetings must be carried on in German.
d 10 age of 25 years, $\$ 1$; for each additional year, $\$ 1$; none admitted above 50. $e$ In $1895-96$; 45 persons received sick beneflts amounting to $\$ 1,871.10$; since its organizations $\$ 15,328$ has been disbursed.
$f$ Since its organization $\$ 3,000$ has been paid out; balance at end of last fiscal -
mom teachers have shown much interest in this association the tendency is for those only who are in uncertain health to join.
$h$ The object of this association is the payment of life insurance and total disadeatt claims. The special assessment of $\$ 1$ is made on etch member upon the death of any member or the allowance of a total-disability claim. This claim is satisfied by one payment and terminates the membership of the benefliciary. Allome office at Swarthmore, Pa.; a council or branch has been formed at Allegheny; $\$ 2,500$ has been paid out to teachers.
Has in bank about 810,000 .
amount of $\$ 396$. Fear benefits paid to 21 teachers in sums from $\$ 5$ to $\$ 60$ to the

TABLE II.-Mutual benefit associations for annuity or retirement fund only.

| Name. | Incor porated. | Dues. |  | Annuity. |  | Minimum service. |  | Annuítants. | Members. | Funds. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Initiation. | Annual. | Minimum. | Maximum. | $\begin{gathered} \text { With } \\ \text { disa- } \\ \text { bility. } \end{gathered}$ | Without disability. |  |  | Annuity. | Perma, | Bazaar. |
| Teachers' Mutual Benefit Associa- tion of the city of | -1885 |  | 1 per cent of |  |  | 5 years | 35 years...- | 93 | 2,076 | \$22,232.97 | \$134,099.75 |  |
| on the city of New York. The Boston Teachers ${ }^{2}$ Mutual Benefit Association. | 1889 | \$3.00 | salary. <br> 1 per cent of salary up | 60 per cent of salary. | \$600 | 2 years | do | 49 | 933 | 16,411.60 | 76,207.35 | \$56,000.00 |
| The Teachers' Annuity Guild (Massachusetts). | 1893 |  | to \$20. | The annuity fund is divided among the annuitants. | 60 per cent ot sala $x ; y$ un to | 3 years | do |  | 1,280 | 4,000.00 | $42,500.00$ |  |
| The Teachers' Mutual Beneft Association of the city of Baltimore. | 1896 | 5.00 | 13 per cent of salary up to $\$ 18$. | 60 per cent of salary. |  | 5 years | 40 years, males; 35 years, females. | (a) | 691 | (b) | 19,497.07 |  |

[^61]Table III.-Mutual beneft associations for both temporary aid and annuity.

| Name. |  | Dues. |  | Annuity. |  | Temporary aid. | Minimum service. |  | Annuitants. | Members. | Funds. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Initiation. | Annual. | Minimum. | Maximum. |  | With disability. | Without disability. |  |  | $\begin{gathered} \text { Annu- } \\ \text { ity. } \end{gathered}$ | Permanent. | Bazaar or fair. |
| The Teachers' Annuity and Aid Association of Hamilton County, Ohio (includiag Cincinnati). | 1880 | \$5.00 | \$10.00 |  | $\$ 500$ (now $\$ 250$ ) toward funeral ex. | (a) | 5 years | 40 years, males; 35 years, females. | 12 | 300 | \$1,812.96 | \$38, 958.91 |  |
| The Teachers' Annuity and Aid Association of phia. <br> city | 1890 | 5.00 | 2 per cent of salary up to \$40. | 60 per cent of sel. | $\begin{aligned} & \text { penses. } \\ & \$ 000 \text { and } \$ 100 \\ & \text { toward fun } \\ & \text { er a } 1 \text { ex. } \end{aligned}$ | (a) | 3 years |  | 26 | 886 | 13,622. 83 | 113,608.15 | \$63,897. 92 |
| Brooklyn Teachers' Aid Association. |  | $\$ 1$ to $\$ 10$, accor ding | One-half of 1 per cent | \$5 per week. | penses. <br> One-third of salary (now | $\$ 5$ or $\$ 6$ per week. |  |  | 4 | 700 | 1,067.18 | 49, 432.82 | 30,193.35 |
| Teachers' Annuity and Aid Association of the Uistrict of Columbia (in cluding Washington). | 1894 | tosalary: <br> Class A, 83; Class B, $\$ 1$. | of salary. $1 \frac{1}{1}$ per cent of salary; $\$ 5$. | Threefifths of sal- ary. ary | $\$ 8$ per week). $\$ 800$ | $\$ 1$ per day, if sick 5 consecuup to $\$ 50$ in 1 year. $b$ | 5 years | 35 years.- | 1 | c353 | b2, 500.00 | 36,000.00 | 23,500.00 |

a Annuity may be enjoyed temporarily during prolonged sickness.
B receive aid for temporary disability only. Teachers may be is a temporary disability fund. Members are in two classes: Class A may become annuitants; Class one and the same time.
$c$ About one-half of teachers who are eligible.

Table IV.-Pension or retirement fund authorized by State legislature.


COEDUCATION.
The report of the Commissioner for 1891-95 summarized the latest information respecting the policy of educating the youth of both sexes in the same classes. (Report 1894-95, Vol. I, pp. 115-118.) No material change has since taken place in respect to this policy either in the United States or in foreign countries; but from constant inquiries received at this office touching the effect of cceducation in superior institutions, inquiries emanating chiefly from the Southern States, it is evident that there is a disposition to extend the practice in this country. Foreign educators also show great interest in the effects of this system as practiced among us. The actual state of the schools of the United States in this respect remains as stated in the previous report. In the elementary or public schools boys and girls are educated together. The only exceptions to this rule are found in a few cities, less, apparently, than 6 per cent of the total number. Even in these cities separation seldom takes place below the high school. Considering private schools, it appears that coeducation is the policy in nearly two-thirds of the number, and that these enroll a little more than two-thirds of all the pupils in private schools. As to higher institutions-i. e., colleges and universities-65 per cent of the number reporting to the Bureau are coeducational.
The most important event of the year, which has at least an indirect bearing upon the progress of coeducation in universities, is the appointment of a syndicate by Cambridge University (England) to consider the proposition of admitting women to degrees. It is seventeen years since the question of granting degrees to women was first brought formally before the university, although the equivalent examinations were informally opened to women as early as 1872. The application of 1880 resulted in the certificate system, and the question rested until the present year. In March, 1896, the senate, in answer to a largely signed memorial, resolved to appoint a "syndicate" to consider anew the question of admitting women to degrees. The syndicate accordingly nominated by the council was rejected on the ground that it contained too large a proportion of persons favorable to the contemplated change. In May a new syndicate was nominated, which was accepted by the senate. This action has renewed the discussion of the higher education of women in England, and particularly of the attitude of the older universities toward the problem. London, Victoria, and Durham universities admit women to degrees, and a majority of their affiliated colleges are coeducational. Under the law of 1892, authorizing the admission of women, the Scotch universities have become virtually coeducational. Edinburgh, St. Andrew's, and Aberdeen have opened their science and art classes to women. At Glasgow, Queen Margaret College has been transferred to the university, which appoints professors and lecturers. Some of the classes are mixed, and are held in the university; the remainder are held separately in Queen Margaret College.

## COMPULSORY SCHOOL ATTENDANCE.

The year under review is made memorable in the history of school legislation by the passage of the first compulsory law in the Southern division of the country, Kentucky having taken the initiative in this important movement.

As this matter goes to press similar action is reported from West Virginia and Indiana, whose laws are dated, respectively, February 20, 1897, and March 8, 1897. Thns thirty-one States have made legal provision for enforcing school attendance.
The Kentucky law makes 7 to 14 years the age for compulsion, agreeing in this respect with the laws of Ilinois and Wisconsin. The minimum annual term is eight consecutive weeks, the lowest recognized under any State law. The penalty for violation of the law is a fine of "not less than five dollars nor more than
twenty dollars for the first offense, nor less than ten dollars nor more than fifty dollars for the second and every subsequent offense, and costs of suit."

It is further provided that "Any person having control of a child, who, with intent to evade the provisions of this act, shall make a willfully false statement concerning the age of such child, or the time such child has attended school, shall forfeit for each offense a sum not less than five dollars nor more than twenty dollars, for the use of public schools for such city, town, or district."

All fines imposed under the law are to be placed to the credit of the public schools in the respective city, town, or district. It is specifically stated that the provisions of the act "apply to any parent, guardian, or person having control of any colored child or children."

In addition to the usual conditions exempting parents and guardians from the operations of the law on the ground of the physical or mental disability of a child, the lack of school provision, adequate private instruction, etc., is that of satisfactory evidence that "the parent, gtrardian, or person having control is not able, by reason of poverty, to clothe such child properly."

Under the law of West Virginia, the compulsory age is 8 to 14 years, making thirteen States in which these are the limits. The annual term of compulsory atteudance is sixteen weeks, as it is in six other States. An offense under the law consists "in failure to send to school any child or children for five consecutive days, except in case of the sickness of such child or children, or other reasonable excuse," and the penalty is a fine not exceeding $\$ 5$. A local-option feature is introduced in the following clause: "If sixty per cent of the legal voters of any city, independent district, or subdistrict shall petition the board of education against the enforcement of this act, the said act, so far as that subdistrict is concerned, shall be null and void until the beginning of the next school year." Fines imposed under this law are to be placed to the credit of the building funds of the respective districts.

The Indiana law creates a truant service, without which a compulsory law is little more than a dead letter, and as a logical sequence to this service makes explicit provision for the care and restraint of incorrigible children. In respect to this and several other provisions the law may be regarded as the embodiment of an advanced conception of public responsibility in respect to the young, and as such is here cited in full:

> AN ACT concerning the education of children.
[H. 10. Approved March 8, 1897.]
Section 1. Be it enacted by the General Assembly of the State of Indiana, That every parent, guardian or other person in the State of Indiana, having control or charge of any child or children between the ages of eight and fourteen years, shall be required to send such child or children to a public, private or parochial school, or to two or more of these schools, each school year for a period of at least twelve (12) consecutive weeks in each school year: Provided, That any and all children that have completed the first eight years of work of the common schools of the State of Indiana and have received certificates of graduation from the common schools shall be exempt from the provision of this act: Provided, That children who are physically or mentally incapacitated for the work of the common schools are exempt from the provisions of this act; but the school authoritiés shall have the right and duty where such exemption from the provisjons of this act is claimed by any parent, guardian, custodian or child, to cause an examination of such child by a physician or physicans employed for such purpose by such officers, and if such physician, or physicians, hold that such child is capable of doing the work in the common schools, then such child shall not be exempt from the provisions of this act.

SEC. 2. It shall be the duty of the County Superintendent of Schools for township, and of the City Superintendent of Schools in a city or town, together with the Secretary of the State Board of Charities and one member of the State Board of Education designated for such purpose by said Board, to appoint one or more
truant officers, not exceeding five in number in any county, who shall be assigned to duty by districts composed of townships. The truant officer shall see that the provisions of this act are complied with, and, when from personal knowledge or by report or complaint from any resident of the township or townships under his supervision, he believes that any child subject to the provisions of this act, is habitually absent from school, he shall immediately give written notice to the parent, guardian or custodian of such child that the attendance of such child at school is required, and if within five days such parent, guardian or custodian of child does not comply with the provisions of this section, then such truant officer shall make complaint against such parent, guardian or custodian of such child, in any court of record, for violation of the provisions of this act, and any such parent, guardian or custodian of child who shall violate the provisions of this act, shall be adjudged guilty of a misdemeanor, and upon conviction thereof shall be fined in any sum not less than ten nor more than fifty dollars, to which may be added, in the discretion of the court, imprisonment in the county jail not less than two nor more than ninety days.
SEC. 3. For every city or incorporated town it shall be the duty of the Superintendent of Schools of such city or town, together with the Secretary of the State Board of Charities and one member of the State Board of Education designated for such purpose by the said. Board, to appoint one or more truant officers for the enforcement of the provisions of this act in such city or incorporated town in the manner and under such penalties as are prescribed by section 2 of this act.

SEC. 4. The truant officers provided for in this act shall receive from the County Treasury two dollars for each day of actual service, to be paid by the County Treasurer upon warrant drawn by the County Auditor.

SEC. 5. The truant officers provided for by this act, shall serve one year from the date of their appointment unless sooner discharged by the Board which is by this act provided for their appointment.

SEC. 6. All school officers are hereby required to make and furnish all reports that may be required by the Superintendent of Public Instruction or by the Board for the appointment of truant officers with reference to the workings of this act.

SEC. 7. If any parent, guardian or custodian of any child or children is too poor to furnish such child or children with the necessary books and clothing with which to attend school, then the School Trustee of the Township or the Board of School Trustees or Commissioners of the city or incorporated town where such parent, guardian or custodian resides; shall furnish temporary aid for such purpose to such child or children, which aid shall be allowed and paid upon the certificate of said officers by the Board of County Commissioners of said county. Such Township Trustee or Board of School Trustees shall at once make out and file with the Auditor of the county a full list of the children so aided, and the Board of County Commissioners, at their next regular or special meeting, shall investigate such cases and make such provisions for such children as will enable them to continue in school as intended by this act.
SEC. 8. School Commissioners, Trustees, and Boards of Trustees, are empowered to maintain either within or without the corporate limits of their corporations a "Parental Home" for incorrigible and truant children. Any child not being over 12 years of age, who shall be truant or incorrigible, may, with the common consent of the School Trustee, or Boards of School Trustees or Commissioners and parent, guardian or person having charge of such child, be compelled to attend such "Parental Home" for an indeterminate time. If, the parent, guardian or person having charge of such incorrigible or truant child, shall refuse his consent to the attendance of such incorrigible or truant child at such "Parental Home," the Superintendent of Schools, or the Principal, Supervisor or teacher of any school, may file complaint in the Circuit or Superior Court of the county, and such court shall have the power, upon the hearing of the case, to order the compulsory attendance of such incorrigible or truant in such "Parental Home" for an indeterminate time, not longer than 120 days.

SEC. 9. For the purpose of defraying the increased expenditure necessary for the carrying out of the purposes of this act, Irustees of school townships, Boards of School Trustees, or Commissioners of cities and towns and Boards of School Commissioners, are hereby empowered to levy, in addition to any and all sums heretofore provided by law, any amount of special school revenue not exceeding ten cents on the hundred dollars of taxable property; such taxes to be levied and collected as all other special school revenue.
SEC. 10. If any child live more than two miles from the nearest public school, he shall not be subject to the provisions of this act.

THE TRANSPORTATION OF CHILDREN TO SCHOOL.
This subject was treated in a chapter of the preceding report of this office, ${ }^{1}$ in which were given the laws of the States which had provided for the transportation of pupils, the experience of the States and communities that had adopted the practice, especially Massachusetts, and statements respecting its advantages and disadvantages.

## Legislation.

In the chapter referred to Massachusetts, New Hampshire, Vermont, and Connecticut were given as the States that had made definite legal provision regarding the matter in question. To these may now be added New York, Maine, New Jersey, and Nebraska.

The New York law (1896) is as follows: ${ }^{2}$
Whenever any district shall have contracted with the school authorities of any city or village or other school district for the education therein of the pupils residing in such common-school district, the inhabitants thereof entitled to vote are authorized to provide, by tax or otherwise, for the conveyance of the pupils residing therein to the schools of.such city, village, or district with which such contract shall have been made, and the trustees thereof may contract for such conveyance when so authorized in accordance with such rules and regulations as they may establish.

The provision of the Maine law (approved March 26, 1897), after reciting the conditions under which schools may or must be discontinued (the latter when the average attendance falls below eight), goes on to say:

The superintendent of schools in each town shall procure the conveyance of all public-school pupils residing in his town to and from the nearest suitable school for the number of weeks for which schools are maintained in each year, when such pupils reside at such a distance from the said school as to render such conveyance necessary.

A New Jersey law of 1894 provides as follows: ${ }^{3}$
When in any district there are children living remote from the schoolhouse, and who are unable on that account to attend such school, such district may order raised by special district tax an amount of money sufficient to enable the board of education to transport such children to and from the school, under such rules and regulations as may be deemed necessary by the board of education of such district; * * * the total sum expended for the purpose of transporting such children shall not exceed the amount ordered to be raised for said purpose.

By a Nebraska law, approved April 14, 1897, it is enacted:
SECTION 1. That a board of education of a city, or a board of trustees of a highschool district, by a two-thirds vote of the entire board, or a district board of any school district in this State, when authorized by a two-thirds vote of those present at any annual or special meeting, is hereby empowered to make provision for the transportation of pupils residing within said district to any other school [within said district] to which said pupils may lawfully attend, whenever the distance from such school shall render it impracticable for said pupils to attend without transportation.

SEC. 2. That a board of trustees of a high-school district, or a district board of a school district in this State, when authorized by a two-thirds vote of those present at any annual or special meeting, is hereby empowered to contract with the district board of any neighboring district for the instruction of [all] pupils residing in the first-named district in schools maintained by the neighboring district, and to make provisions for the transportation of said pupils to the above-named school of the neighboring district, under the conditions named in the preceding section.

Other States.-The State superintendents of Rhode Island and Wisconsin have declared that the existing provisions of the school laws of their respective States are sufficient to authorize the conveyance of pupils at the public expense, though

[^62]ED 96
the former intimates the desirability of more specific legislation upon the subject; as a matter of fact, some progress has already been made in Rhode Island in this direction. Certain counties in Obio are authorized by special laws to establish central schools and convey pupils to and from them. Some beginnings have been made in Pennsylvania, South Dakota, and perhaps other States, where there already exists, as in Pennsylvania, "law enough. to cover the case."

The following extracts will serve to exhibit the status of the transportation question in a number of States:

## Pennsylvania.

## [From report of State Superintendent Nathan C. Schaeffer, 1896.]

At the first State director's' convention held in Harrisburg during the month of January, one of the leading topics discussed was the transportation of pupils to graded schools at central points, the saving of money, and the improvement of the instruction effected thereby. At a few places the experiment has been tried with marked success. Public sentiment, bad roads, and geographical obstacles render impossible at this time any general adoption of the plan. But under the agitation now going on at farmers' institutes, the public roads will be improved. In enlightened communities public opinion is soon changed in favor of any plan which either saves money or improves the schools. From the province of Victoria in Australia comes the report that 158 schools were closed by thisplan, and that after deducting the cost of conveyance the saving amounted to $\$ 50,000$ per annum. The minister of education says that the system is a marked success, and if there is one feature as to its working that stands out more prominently than another, it is the remarkable regularity of the attendance of the children conveyed. * * * In several of the New England States which have tried the same experiment, the land in remote districts is said to have risen in valne instead of depreciating in the market, as had been predicted by those opposed to the closing of the schools near their own farms. The whole question, however, is leset with many difficulties insomuch that directors will do well to weigh most earefully all the considerations involved before they decide to abandon any of the schools now in operation.

## Ohio.

[From report of State Commissioner Oscar T. Gorson, 1896.]
As the State grows older the country-school problem increases in both importance and difficulty of solution. In some localities the sparseness of the population becomes a very importait factor in its consideration, and in such localities, provided the roads are good, the true solution is no doubt found in the conveyance of the children to and from a central school. Special laws, authorizing boards of education to establish such schools in Lake and Geauga, Cuyahoga, Ashtabula, Stark, and Portage counties, already exist, and the plan is no longer an experiment.

One of the first schools established under this special legislation is located at Kingsville, Ashtabula County. The schools in that locality, under the old plan, were very small, and therefore necessarily very expensive from the standpoint of either the per capita cost or the results attained. Under the new plan of consolidation, which has been in operation nearly four years, several of the outlying districts were abandoned and the pupils conveyed to the school at the center of the town in wagons specially provided for the purpose. The expense of schooling the children has thus been reduced nearly one-half, the daily attendance has been very largely increased, and the quality of the work done has been greatly improved.

What is true of Kingsville is in a large measure true of other localities in Lake, Geauga, and other counties to which the special legislation is applicable, and the plan is worthy of the earnest attention and study of all who are interested in the welfare of the country schools. In other localities different hindrances, such as the lack of educational sentiment, neighborhood quarrels, no organization, selfishness of directors, etc., make the problem a difficult one. Such hindrances can be overcome only by developing in such communities a better school sentiment.

## [From report of Committee of Twelve on Rural Schools, Appendix F.]

 interest and promise as to warrant extracts from the annual reports of 1895-96 ofthe two superintendents who have been most prominent in the work. This recent movement may have an interest for some minds that earlier movements would not possess.
I. Extracts from the report of Mr. F. E. Morrison, superintendent of Kingsville, Ashtabula County:
The new school system, which is known as the Kingsville system of edacation, has been formulated and introduced with marked success.

By this system the pupils of the subdistricts are given the same advantages for obtaining an education as the village pupils, and this result has been obtained without working any disadvantage to the village pupils, for we have been enabled to open a new room and supply another teacher in the village echools, thus redueing the number of grades in each-room and giving all the pupils better school advantages. We have sufficient room yet for severil more pupils without crowding the rooms.

The pupils of the subdistricts have not only been given the advantage of more extended associations and larger classes with which to recite, but they have also the advantages of a sehool where the teacher has fewer recitations and can give more time and attention to each recitation. Thus the papil's progress is much more rapid than is possible in a school where there are three times as many classes and one-sixth the number of pupils. It is a fact that the work of the teacher depends more upon the number of classes to recite than the namber of pupils in attendance. It is a pleasure indeed to note that the attendance in the subdistricts that have availed themselves of the new system has increased from 50 to 150 per cent in some cases and a larger increase in all cases; the daily attendance in the same subdistricts has increased from 50 or 60 per cent to 90 or 95 per cent, thus increasing greatly the returns from the school fund invested. This has been accomplished at a saving of more than $\$ 1,000$ to the taxpayers in the three years.

The board of education and eitizens of Kingsville are to be congratulated for their progressive and energetic spirit in being pioneers in formulating and placing in operation a system of education superior to any in the State of Olaio, and which is to be the system of the future. The board of education has been enabled, under the new school law, to conduct its financial matters by better business methods, buýing its supplies in quantities and letting its contracts on competitive bids, and by centralizing the schools, thus saving many needless expenses.

Since the schools were centralized the incidental expenses have decreased from $\$ 800$ to $\$ 1,100$ per year to from $\$ 400$ to $\$ 600$ per year. All other expenses have also decreased, which may be seen from the following table, compiled from the clerk's records:

> Expenditunes of the board of ectucation of Kingsville, Ohio.

| 1889-90 | \$3, 248.05 |
| :---: | :---: |
| 1890-91 | 3,716. 23 |
| 1891-92 | 3,183. 54 |
| Total for three years. | 10,147.82 |
| 1892-93 | 3,153.44 |
| 1893-94 | 3, 0 '72.73 |
| 1894-95 | 2,831.20 |
| Total for three years. | 9, 057.37 |

In giving these figures we have deducted the $\$ 600$, with interest, which was borrowed in 1889 and has been paid during the past three years.

It should be mentioned also that the permanent improvements made by the board of education during the past three years are nearly double the amount made during the preceding three years.
2. Extracts from the report of Mr. J. R. Adams, superintendent of Madison Township, Lake County:

In my report to the board one year ago I called attention to the very low average attendance in some of our schools, the great expense per capita of educating the pupils in those small schools, and to the fact that, on account of the lack of interest and enthusiasm therein, good results could not be obtained, and suggested the plan of consolidation as the proper solution of the difficulties.

Acting upon my suggestion, the board, having in view only the best interest of the children for whom our schools exist, voted to consolidate three subdistricts
at North Madison, No. 16 and No. 3 with No. 12, and also three at Unionville, No. 10 and No. 11 with No. 4, arrangements being made with the school board of Harpersfield Township whereby the pupils of subdistrict No. 1 of said township might attend the school at Unionville upon payment by the board of education of Harpersfield to the board of education of Madison Township the sum of $\$ 140$ tuition.

Our school opened with 2 teachers and with an attendanse of 93 pupils. This was certainly more than the number for which we had planned, and was a great surprise to me, for from No. 10, in which subdistrict there had been the previous year an attendance of only 10 pupils, there came 18 ; from No. 11, in which there had been an attendance of only 8 pupils, there came 18, and from the Harpersfield district, in which there had been an attendance of 14 pupils, there came 23. The number of pupils enrolled in this school was 107, with an average attendance of 73.

Having tried the new plan for a year it is no longer an experiment, but an experience with us. Therefore let us now candidly look at the results. First, I wish you to know what the patrons of the consolidated school think of the plan, and then to give you, as briefly as I can, some of my own observations. All the patrons in the school of subdistrict No. 10 of Madison and in subdistrict No. 1 of Harpersfield have signed a paper stating that they are well pleased with the plan and its results, and asking their respective boards to continue the plan another year. While there has been no canvass at Unionville, subdistrict No. 4, to ascertain what the people there think of the plan, yet, from what I have heard, I am confident that they are unanimous in its support. The foregoing represents the opinion of patrons who send 89 of the 107 pupils to this school. A large majority of the patrons in subdistrict No. 11, who send 18 of the 107 pupils to the school in question, have publicly expressed themselves as being dissatisfied with the plan, and that under it their children have not received the educational advantages which they ought to have received. Further comment is unnecessary.

Following are some of the good results which have come under my personal observation:

1. A much larger per cent of enumerated pupils enrolled.
2. No tardiness among the transported pupils.
3. Irregular attendance reduced, the per cent of attendance of transported pupils from two subdistricts being each 94 per cent, the highest in the township.
4. Pupils can be better classified and graded.
5. No wet feet or clothing, nor colds resulting therefrom.
6. No quarreling, improper language, or improper conduct on the way to and from school.
7. Pupils under the care of responsible persons from the time they leave home in the morning until they return at night.
8. Pupils can have the advantage of better schoolrooms, better heated, better ventilated, and better supplied with apparatus, etc.
9. Pupils have the advantage of that interest, enthusiasm, and confidence which large classes always bring.
10. Better teachers can be employed, hence better schools.
11. The plan insures more thorough and complete supervision.
12. It is more economical. Under'the new plan the cost of tuition per pupil on the basis of total enrollment has been reduced from $\$ 16$ to $\$ 10.48$; on the basis of average daily attendance, from $\$ 26.66$ to $\$ 16.07$. This statement is for the pupils in said subdistricts Nos. 10 and 11.
13. A trial of this plan of consolidating our schools has satisfied me that it is a step in the direction toward whatever advantages a well-graded and well-classified school of three or four teachers has over a school of one teacher with five to eight grades. and with about as much time for each recitation as is needed to properly assign the next lesson.

I ann now more thoroughly convinced than ever before that consolidation, or centralization, as it is sometimes called, is the true solution to the country-school problem.

In a private letter of recent date Mr. Adams says since his report was made consolidated schools have been established at two other points in Marlison-at one place four schools, at the other three, each with two teachers. This makes five in the township (which is a very large one, owing to the "gore" on the lake). Five teams are employed to transport pupils. at a cost of about $\$ 1$ a day for a team. Every conveyance carries about 18 pupils. There is no trouble in transporting the pupils, even the youngest, $3 \frac{1}{2}$ miles, which is the greatest distance. In 189.) there were 18 schools in Madison, with an average attendance of 217 ; in 1896 the number was 14 , with an average of 260 ; this year there are 10 schools, with an average that will reach over 300 . The total expense will be about the
same in this township as under the old plan, but the cost per pupil will be much less. Mr . Adams adds that the new plan is rapidly growing in the neighborhood, and the belief is spreading that the new system is sure to prevail generally in northeastern Ohio.
3. The following advertisement well illustrates the care that is taken in Madison township to secure suitable transportation for school children:

NOTICE TO BIDDERS FOR TRANSPORTATION OF PUPILS OF THE TOWNSHIP SCHOOLS.
Bids for the transportation of pupils of, the Madison Township schools over the following routes will be received at the office of the township clerk until Friday, July 24, at 12 m.:

Route A. Beginning at county line on the North Riajge road and running west on said road to schoolhouse in district No. 12.

Route B. Beginning at Perry line on the North Ridge road and running east to schoolhouse in district No. 12.

Route C. Beginning on Middle Ridge road at residence of N. Badger, running thence west on said road to the residence of Rev. J. Sandford, thence north to schoolhouse in district No. 12.

Route D. Beginning at Perry line on River road and running thence east on said road to schoolhouse in district No. 6.

Route E. Beginning at the Hartman farm, thence by Bennett road to Chapel road, thence east to A. R. Monroe's, thence west on Chapel road to schoolhouse in district No. 13.

Route F. Beginning at residence of J. H. Clark and running east on Chapel road to schoolhouse in district No. 13.

All whose bids are accepted will be required to sign a contract by which they agree-

1. To furnish a suitable vehicle with sufficient seating capacity to convey all the pupils properly belonging to their route, and acceptable to the committee on transportation.
2. To furnish all necessary robes, blankets, etc., to keep the children comfortable; and in severe weather the conveyance must be properly heated by oil stoves or soapstones.
3. To provide a good and reliable team of horses and a driver who is trustworthy, and who shall have control of all the pupils while under his charge, and shall be responsible for their conduct, said driver and team to be acceptable to the said committee on transportation.
4. To deliver the pupils at their respective stations not earlier than $8.30 \mathrm{a} . \mathrm{m}$. nor later than 8.50 a. m., and to leave at $4.05 \mathrm{p} . \mathrm{m}$. (sun time).

Each contractor shall give bond for the faithful discharge of his contract in the sum of $\$ 100$, with sureties approved by the president and clerk of the board.

The commitee reserves the right to reject any and all bids.
By order of the committee. C. G. Ensign, clerk.
Statistics relating to transportation of pupils in Vermont.

|  |  | 1895. | 1896. |
| :--- | ---: | ---: | ---: | | Increase |
| :--- |
| or |
| decrease. |

Maine. -There were paid in Maine in 1895-96 for the transportation of scholars $\$ 47,739$.

## Amount expended in Massachusetts for transporting children to school for the past eight years.



The expense for the transportation of pupils is $\$ 91,186.11$, or $\$ 14,52 \% .82$ more than last year. This indicates that the process of consolidating feeble schools-a process that is in the interest both of economy and of efficiency-is still going on. It costs $\$ 576$ to pay the teachers, let us suppase, of three rural schools $\$ 8$ a week for six months, or twenty-four weeks-the minimum legal period. If these three sehools have but 8 pupils each, they can be united into a single school of 24 pupils. A teacher of higher qualifications can be secured for from $\$ 12$ to $\$ 15$ per week The cost of the school for six months will be from $\$ 288$ to $\$ 360$, and there will be margin of from $\$ 288$ to $\$ 216$ for transportation. The building, the janitor service, the grading of the pupils, the teaching, the school spirit-nearly all those things that contribute to a good school-should be distinctly better, and, in gemeral; are better, as a result of such consolidation. (Mass. Sch. Rep., 1895-96, p. 87.)

## TEMPERANCE INSTRUCTION.

Legislative provisions relating to scientific temperance instruction in the various States.

## EXPLANATION OF MARKS

$\times$ The crass signifies that scientific *emperance is a mandatory study in public schools.

* The star signifies that this is a mandatory study, and that a penalty is attached to the enforcing clause of this statute in the State or Territory to which it is ammed.
+ The dagger signifies that the study is not only mandatory but is required of all pupils in all schools.
t The double dagger signifies that the study is reqnired of all pupils in all schools, and is to be pursued with text-books in the hands of pupils able to read:
| The parallel indicates that the study is to be taught in the same manner and as thoroughly as other required branches.
§The section indicates that text-books on this topic used in primary and intermediate schools must give one-fourth or one-fifth their space to temperance matter, and those used in high schools not less than 20 pages.
The paragraph indicates that no teacher who has not passed a satisfactory examination in this subject is granted a certificate or anthorized to teach.
a The alpha indicates that text-books on this topic sball give full and adequate space to the temperance matter.
$\beta$ The beta signifies that a definite number of lessons for each school year has been made compulsory.
The letter a indicates assent or "yes," referring to the conditions signifled by the mark at the head of the column.

| States and Territories. | $\times$ |  |  | $\dagger$ | $\ddagger$ | 1 | § | ๆ | a | $\beta$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alabama | a |  |  |  |  |  |  |  |  |  |
| Arizona-.. |  | a |  |  | a | a |  | a |  |  |
| California | a |  |  | a |  |  |  |  |  |  |
| Colorado- |  | a |  |  | ${ }^{\text {a }}$ | ${ }^{2}$ |  |  |  |  |
| Delaware |  |  |  | a |  |  | a | a |  |  |
| District of Columbia | a | a |  |  | a | a |  | a | --7 |  |
| Georgia- |  |  |  |  |  |  |  |  |  |  |
| Idaho-- | a |  |  |  |  |  |  |  |  |  |
| Indiana. | a |  |  |  | a |  | a | a |  | a |
| Yowa, |  | a |  | a | -- | a |  | a |  |  |
| Kentucky | a |  |  |  |  |  |  | a |  |  |
| Lonisiana. |  | 8 |  |  | a | ${ }_{3}$ | a | a |  |  |
| Maryland--- |  |  |  |  | a |  |  | a |  |  |
| Maysichuse tts |  |  |  | a | a | ${ }_{\text {a }}$ | a | a |  |  |
| Minnesota, |  | - |  |  |  |  |  |  |  |  |
| , | a |  |  |  |  | a |  | a |  |  |


| States and Territories. | $\times$ | $*$ | + | $\ddagger$ | 1 | 8 |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |

Reports showing the extent to which temperance-instruction laws are enforced, the trend of opinion, etc.
[State Agent George A. Walton, in Massachusetts School Report, 1895-96.]
Physiology and hygiene.-In his sixth ānnual report, for 1841-42, Horace Mann made an extended and forcible plea for the teaching of physiology in the schools. His early institute addresses put emphasis upon this as an essential branch of instruction. The study was pursued in all the normal schools-in earlier years for a knowledge of the subject, in later years both for this and the method of teaching it. It has lent itself especially to the objective or laboratory method.
The subject had been taught only to a limited extent in elementary schools under a permissive act of 1872 , till the enactment of the law of 1885, which made it a compulsory study.
This law was advocated especially to give an increased knowledge about the evil effects of alcoholic drinks, stimulants, and narcotics on the human-system. Since the passage of the act increased attention has been given to the teaching of the subject in all grades of the schools, as required, but it has failed to enlist that hearty interest on the part of either pupils or teachers to which it is entitled. This is owing to many circumstances which environ the subject: There are real friends of temperance who doubt the wisdom of directing the attention of young children to the structure and functions of their bodily organs; they question, too, the utility, if not the possibility, of making critical analyses of alcohol or of narcotics with young pupils, to show their effect upon the blood and nerves and tissues of the living human organism. They believe that the whole subject, in its more technical aspects, should be deferred till after the pupil has received some instruction in chemistry and kindred sciences and has attained considerable power of forming independent judgments through his own reflection. An effort to compel instruction to be given by means of text-books, and to have these used from the earliest grades, has met with opposition on pedagogical grounds; no subject, it is said, can be properly taught in this way.
On the other hand, the advocates claim that no instruction would be received by the mass of the children leaving school at an early age if the study was deferred to an advanced grade, and that the teachers generally are not qualified to give instruction in this subject without text-books, There are real difficulties to be overcome, as there have been in teaching other branches. The remedy will be found in giving to all teachers proper professional training for teaching all branches and by inspiring them with the vital importance of this.
By such means as have been brought to bear upon the teachers by the law compelling them to qualify themselves for the teaching, and upon the children by the kind of instruction hitherto given, there is a growing interest in it and an increase of knowledge which must be of lasting benefit to the coming generation. I believe
the subject is really receiving as much attention in the schools as any subject ever receives in so brief a time as has elapsed since the passage of the compulsory law for teaching this branch.

## [State Superintendent Charles R. Skinner, of New York, 1895-96.]

Instruction in physiology and hygiene.-The legislature of 1896 amended the act of 1895 providing for instruction in " the nature of alcoholic drinks and other narcotics" for four lessons per week for ten weeks in each year, by reducing the amount of instruction to three lessons per week for ten weeks "or its equivalent." By this amendment, thirty lessons given during a.school year comply with the requirements of the law. TheState superintendent of public instruction is required by the act of 1896 to include in his annual report a statement showing every school, city or district, which has failed to comply with all the provisions of the act during the preceding school year.- All reports made to this department by local officers contain affidavits showing that the law has been complied with. While difficulties have been found in complying with the strict letter of the statute, it is very evident that teachers and school officers throughout the State are cheerfully endeavoring to meet the spirit of the law. No complaint or appeal has reached the department that the law has been violated. It is gratifying to note that during the year much misunderstanding and misrepresentation have been removed, and it seems to be generally understood that the attitude of the department has never been antagonistic to instruction which teaches the importance of temperance as a personal virtue and a social benefit.
Mr. F. P. Peirce, one of the school commissioners of Oneida County, reports: "Physiology has been taught, according to the provisions of the statute, in all schools. To say that its effect is either good or bad, would presume a too intimate acquaintance with each individual. There are, however, startling and widely known examples of bad results from the present method of teaching the subject."
[State Superintendent Henry Sabin, in Iowa School Report, 1894-95.]
Every county superintendent reports that in the county institute he gave the subject the consideration which the law requires. The secretaries for the different school boards report that the law is generally complied with in the graded schools of the State, as well as in all the schools in the country districts.

As far as the letter of the law is concerned there is a general compliance with its provisions. Not that there are no exceptions. There are some districts in which the most conscientious teacher, owing to complications beyond her control, finds it difficult to decide what course should be pursued. In regard to what precise method the teacher is to employ, the law is silent, as it should be. The term scientific temperance instruction is misleading. The aim should not be alone to implant in the mind of the child a vivid idea of the evils of intemperance, lest that which we hold up as a warning may become, first, an impression, and afterwards a hideous growth. There must be something more than this.
The chief aim in temperance instruction should be to convince the child that the only path to happiness or success lies through a life of temperance and sobriety. A high ideal of a noble life, like a beautiful picture on the wall of a room, is an ever-present, all-powerful influence for good.
The law itself is one in which the spirit far overshadovs the letter. Unless the instruction given reaches the heart and convinces the judgment, it fails of its purpose. The boy is not greatly benefited by the instruction given in the school if, after reciting his lesson tupon the ruinous effects of tobacco upon his system, and perhaps before he leaves the schoolhouse yard, he lights his cigarette and smokes it on his way home.

This law, as well as the one forbidding the sale of tobacco to minors under 16, is very wholesome in its tendency. Such laws, however, add new and grave responsibilities to the teachers office. That some teachers fail to appreciate this is due simply to human nature. That others fail to appreciate the fact that precept is futile when not supported by practice is pitiable. On the whole, we believe the teachers in our schools are anxious to do their duty in ohserving this law. If parents, in many cases, were as watchful as the teachers, and as willing to make sacrifices, if necessary, in order that their children might be tanght habits of soberness and temperance, the work of temperance instruction would be much more effective.
[State Superintendent H. R. Corbett, of Nebraska, 189.-96.]
Tomperance instruction. -The subject of physiology and hygiene, with special reference to the effects of alcohol and narcotics. receives special attention in the new course of study.

The teachers of Nebraska are heartily in sympathy with the spirit of the law providing for such instruction. Whenever such teaching is neglected, it has usually been due to a lack of definite outlines and directions. Great care has been taken to supply this need in the new course.

## [State Superintendent W. W. Pendergast, of Minnesota, 1895-96.]

Stimulants and narcotics.-That the law providing for regular and systematic instruction in physiology with special reference to the effect of stimulants and narcotics upon the human system has been generally observed, is evidenced by the fact that but one complaint has been made to the department during the past year. It is nevertheless true that in many districts it is honored "more in the breach than in the observance." The attention of teachers is called to their duties in the matter at institutes and summer training schools and in teachers' associations and examinations held by county superintendents. Most of them are in cordial sympathy with the object of the law, and enter into the work with alacrity and a sincere desire to carry out its provisions conscientiously and faithfully. Much good has already been done, and there is apparently no opposition to it.

> [State Superintendent Emma F. Bates, of North Dakota, 1895-96.]

Scientific temperance. -There are some, but not many, exceptions to compliance with the provisions of this law in the letter: The spirit of the law is not always fulfilled as it might be.

The child may be taught scientific facts about alcohol and narcotics and be no more helped thereby in his conduct in life than by the knowledge he has of scientific facts in geology. The aim should be to so teach him that he will desire to refrain from all injurious habits. Next, having the right desire, he must have the properly disciplined will power to execute his desires.

We believe that the teachers as a rule do the best they can with the knowledge and appliances and conditions at their command to fulfill this law in letter and spirit. We urge, however, a greater effort on their part to inculcate the principles that will lead the child to a life of temperance and pure living. School directors might well supply needed aids in the line of literature for instruction on this subject.
[From the report of the Committee of Twelve on Rural Schools-Appendix M, by A. P. Marble.]
Physiology is now required by law to be taught in the schools of nearly all the States. As too frequently taught, it concerns itself about the chemical effects of certain substances upon various parts or processes of the hody. Such a treatment of the subject is too abstruse for children in the schools; it goes beyond their knowledge and their experience. They need to be taught the effect of green apples upon the stomach before they are taught the effect of alcohol upon the brain. We ought to learn wisdom from the concrete teaching of nature about eating green apples in her monitory pains. People mean well when they teach the evil effect of alcohol to little boys and girls who do not know what alcohol is. It would be better to teach these children the good effect of wholesome food and drink, and especially to teach them that the whole alimentary canal should be kept in healthy, regular, and daily movement throughout, and to teach this and all that relates to the necessary bodily functions with delicacy and propriety and without any squeamishness. Is any teacher too delicate, cultured, and refined a lady or gentleman to give this instruction concerning the bodies of the children? Then let them be relegated to the land of spirits, to teach where the mortal coil has been shuffled off. It is high time to inaugurate a campaign of hygiene, and not the least important branch of child study is the study of their bodies, and how those bodies may be made in school to grow strong, robust, healthy, natural, at ease"the temple of the living God."
[From Bulletin of the Department of Labor, No. 8-January, 1897.]
Crime.-During the twelve months covered by the investigation, there were 26,672 convictions for various offenses, of which 17,575, or 65.89 per cent, were for drunkenness, and 657 , or 2.46 per cent, for drunkenness in combination with other offenses. In 21,863 cases, or 81.97 per cent, the offender was in liquor at the time of committing the offense. Taking only the cases in which drunkenness did not form part of the offense, or 8,440 , there were still 3,640 cases, or 43.13 per cent, in which the offender was in liquor at the time the offense was committed, and 4,852 cases, or 57.49 per cent, where the offender was in liquor at the time the intent was formed to commit the offense.

In response to the inquiry whether the intemperate habits of the criminal led to a condition which induced crime, an affirmative reply was made in 22,514 and a negative reply in 4,142 cases, the facts being unknown in sixteen instances. Disregarding the cases in which drunkenness was a factor, there remain 4,294 out of 8,440 cases of conviction for other crimes, or 50.88 per cent, in which the intemperate habits of the criminal led to a condition which induced the crime. In 16,115 out of 26,672 cases of conviction for crimes, including drunkenness, the criminals reported that the intemperate habits of others were influential in leading them to a condition which induced crime. In $21^{77}$ cases this information was lacking. Taking only the 8,440 cases of conviction for crimes other than drunkenness, it is found that 3,611 , or 42.78 per cent, attributed their condition to the influence of the intemperate habits of others.

## CHAPTER XXXI.

## ART DECORATIONS IN SCHOOLROOMS. ${ }^{1}$

The first notable effort to encourage the decoration of schoolrooms seems to have been made in Boston, Mass., in 1870. Charles C. Perkins and Prof. John D. Philbrick were the prominent leaders in the movement. They began their experiment by placing casts of antique seulpture in the girls' normal and high school building in West Newton street, Boston. The suggestion had been made two years before by a member of the educational committee of the American Social Science Association, and had been approved "as a simple but efficient, means of introducing an æsthetic element into the educational system of the United States." The hall of the new building had been arranged with reference to this purpose, and with the concurrence of the school committee the plan was successfully carried out. The casts, in addition to most of those of the frieze of the Parthenon, which were arranged as a frieze of the hall, comprised ten statues. Among them were the Venus of Milo, the Demosthenes, the Diana of Gabii, and the Pudicita of the Vatican. Eleven antique busts were put in position around the hall. These casts were bought in London, Paris, Rome, and Boston. The total cost, including importation, was about $\$ 1,500$, which was met by private subscriptions. The significance of this movement is emphasized by the fact that it was only in $18 \% 0$ that the Boston Museum of Fine Arts was incorporated, while its collections were not opened to the public until some years later. Besides a few casts of antique sculpture possessed by the Athenæum, there was then no similar collection open to the people of Boston.

The French and English have made similar efforts. In 1881 a report on the subject of art in schools was presented to the French minister of public instruction. About that time a similar report was made to an English institution in London, of which Mr. John Ruskin was president, and Mr. Matthew Arnold, Sir Frederick Leighton, and other eminent men, vice-presidents. The object of this association was "to bring within the reach of boys and girls in our board and other schools such a measure of art culture as is compatible with their age and studies." They proposed, therefore: (1) to negotiate with art publishers for the purchase of prints, photographs, etchings, chromo-lithographs, etc., and to supply them at the lowest possible price to schools; (2) to reproduce carefully selected examples that were likely to have a large circulation; (3) to print a descriptive catalogue and price list of the examples which the committee were prepared to recommend to the notice of schools; (4) to present to schools, as the funds of the association would allow, small collections and books explanatory of them; (5) to arrange loan collections to be placed at the disposal of schools on such terms as might prove convenient; (6) to bring together a number of examples to be exhibited in a suitable place as a tentative model of a standard collection. This model collection was to consist of: (1) Pictures of the simplest natural objects-birds and their nests and eggs, trees, wild flowers, and scenes of rural life, such as town
children seldom see and country children often fail to enjoy consciously until their attention is specially. called to them; (2) pictures of animals in friendly relation with human beings, especially children; (3) pictures of the peasant and artisan life of our own and foreign countries, incidents of heroic adventure, etc.; (4) pictures of architectural works of historic or artistic interest; (5) landscapes and sea pieces; (6) historical portraits; (7) scenes from history; (8) such reproductions as were available of suitable subjects among the numerous works of Italian, Dutch, and modern schools. The report of this committee as outlined is comprehensive and practical. It includes both elementary and superior instruction and proposes to use pictorial illustrations for the purpose of familiarizing town and city bred children with country scenes as well as to attract the attention of children to the direct observation of nature. ${ }^{1}$

In America, although the proposal of 1870 by Professor Philbrick and Mr. Perkins brought no immediate results, the subject was not forgotten. In a report of the committee on drawing of the Boston school board for 1883 Mr . Perkins, the writer of the report, makes reference to the desirability of forming an "art for schools association" based on the French idea of 1881. The committee goes on to say that " although we can not ask the cooperation of the school board in our proposed effort to found an art for schools association in Boston, yet we believe that the decoration of schoolhouse walls with good prints and photographs will not only bring good influences to bear upon the pupils, but will also materially aid teachers of drawing, history, geography, and natural history as objects of reference."

It was not until May 20, 1892, however, that the organization of the Boston Public School Art League was actually accomplished. Its creed is love of art; that it may be more widely known and more highly appreciated, "believing that art refines the mind, enriches the heart, elevates the soul, that art is one of the essentials of the perfect life, and that the refinement which comes from the presence of an association with works of art is an important element and aid in the development of character, both mentally and morally."

Its aim is "(1) by daily contact with objects of art to bend, educate, and elevate the mind of the young to familiarity with, liking for, and due appreciation of things beautiful (not necessarily useful) and correct standards in the art of architecture, painting, and sculpture, and the lives of those who have made the arts noble, to the end that children of the present generation may, when they come to man's estate, reject the false, deniand the true, and so raise the art of our time and country to a plane which will, in ages yet to come, reflect true greatness and not material aggrandizement; (2) to place upon the walls of schoolrooms objects of art in the shape of casts, photographs, engravings of statuary, buildings, and paintings, illustrating recognized standards in art; also art centers, as Athens, Rome, Florence, Venice; also portraits of the old masters; also original worlss by leading artists, foreign and American. We believe this movement to decorate our schoolrooms is worthy the sympathy and support of all our cities. The end can be gained through legacies and gifts of worthy objects of art by individuals for general distribution or special use, and by donations of money for specific purposes, such as the decoration of rooms marked for memorial or historical interest."

The league, although restricted by the lack of means, began its work of decoration with two rooms. Room No. 4 of the English High School was made a Roman room, and there were placed in it photographs of the Arch of Constantine, the Temple of Vesta, the Coliseum, St. Peter's, exterior and interior; casts of the busts of Cæsar, Virgil, Marble Faun, Eros, Cicero; consoles supporting casts of

[^63]the same design as those for a similar purpose in the Vatican; the national flag; the State flag. In Miss Biglow's room in the Rice Primary School were placed portraits (prints) of Longfellow, Whittier, Bryant; engraving of Columbus at the Court of Ferdinand and Isabella; engraving of Pharaoh's horses; casts of boys' heads, by Donatello; cast (panel) of dancing boys, by Della Robia; cast of Houdon's bust of Washington; the national flag; the State flag. ${ }^{1}$ This good beginning has met with favor from others. In 1893 the head master of the Girls' High and Latin schools was authorized to accept for these schools in behalf of the city eighteen framed photographs representing ancient Greek monuments and works of art, presented by Mr. J. M. Rodocanachi. ${ }^{2}$ There are now two "memorial" rooms in Boston. One is a room in the Latin school, dedicated to the memory of John Witt Randall, a great-grandson of Samuel Adams, and very appropriately the photographs and casts illustrate the period of the Revolution. The other memorial room is the hall of the Horace Mann School.

The school report of Cambridge, Mass., for 1892 enumerates a long list of pictures, portraits, views, and statuary given to the various schools of that city by friends (pp. 214-227). The list will be of value to others who desire to make up lists of pictures for the adornment of schoolrooms.

It has also called the attention of the yarious graduating classes to the value of gifts which they may be able to make to the schools. Thus the class of 1894 of the Roxbury High School presented to that institution a framed photograph of the Castle of St. Angelo, at Rome, a bust of Hermes, colossal size, and a cast of the Trojan shield. The committee of the board said it gave them "great pleasure to commend the excellent taste and judgment displayed in the selection of these gifts,and to recommend their acceptance by this board." ${ }^{3}$. In the same way the alumni association of the public schools of Haverhill, Mass., made a gift of three casts and two photographs to their school in 1895. ${ }^{4}$ The ninth grade of the Barnum School, of Bridgeport, Conn., placed in the south corridor of that building in 1894 an heroic size plaster cast of the statue of Minerva Giustiniana, at a cost of $\$ 57 .{ }^{5}$

Brookline, Mass., reported in 1895 works of art placed in the Lawrence School by the ladies' art committee. Mr. William H. Lincoln also provided for the hall of the Lincoln School a number of reliefs and casts as follows: Frieze of the Parthenon; bas-relief from the Greek temple at Pergamos, representing the battle of Minerva with the giants; statue of Minerva, Augustus, Urania, bust of Marcus Aurelius, Julius Cæsar, Cicero, Demosthenes, Homer.' Again, in 1896, Brookline reported a gifti of $\$ 1,000$ from Mr. George W. Armstrong which was to be expended for works of art for the high school, besides various gifts of pictures, photographs, and busts (p. 6). The superintendent of city schools, Mr. Samuel T. Dutton, says:
"The work of placing works of art in the schoolrooms of this town has been in progress now [1896] for nearly four years. About four years ago a public day was held at the Lawrence School, and at the close of the exercises the parents and friends were invited to meet in the hall, when the subject of art decoration was proposed to them. A committee was at once formed, and money was raised by means of entertainments and contributions until nearly $\$ 1,000$ was available for the purpose. * * * [These pictures are arranged in different rooms according to the subject, and a list of the whole has been published.] About one year ago our new high school was opened, and we have already had donated to that school pictures and casts to the value of more than $\$ 2,000$. The most important feature of this collection is, perhaps, the Armstrong collection of casts. These are all placed in a large room which is exclusively devoted to the subject of art. Com-

[^64]mittees have been appointed, in connection with two other schools, to continue this work. We have also a committee on art, in connection with our education society, which will probably undertake to place art works in those schools so siturated that the patrons are unable to do anything. In this way we hope within a reasonable time to have a good representation of masterpieces in all our schools. I may add that we have gone far enough in this undertaking to satisfy ourselves that the presence of beautiful pictures and impressive statues in our schools is a distinctive educational factor. They help to elevate and ennoble the atmosphere of the school, give dignity to the place, inspire the teachers, and react impressively upon all who enter the room. When it comes to be understood that the schoolroom is to be made as pleasant and well furnished as the model home, then the school is likely to take the place it should hold as a social factor." * * *

The Medford High School has done work along the same line. Some 8,000 has been raised by súbscription for the interior decoration of the new school building, and a fund of $\$ 5,000$ was given for its exterior decoration. This school recently published [1896] a catalogre of 172 pictures, busts, bas-reliefas, poritraits, and transparencies, with their location in the building and descriptive notes. The list includes classical busts and pictures, views of buildings and natural scenery, portraits of eminent men, and historical pictnres, American and Wrropean.

Over 200 works of art have been presented to the Faulknex School, of Malden, Mass., by nearly as many persons. The same work is being promoted in Springfield, Mass. According to the report of the Springtield Repriblican of November 2, 1896, a scheme was on foot to advance the interesta of art decoration by a series of lectures.

Efforts are being made also in Chicago, Denver, San Francisco, and in Milwaukee, where the Public School Art.Association is at work raising $\$ 5,000$ for thir purpose. Oakland, Cal., New York, Brooklyn, Provilence, New Hawen, and Philadelphia have collections of photographs and casts.

At Quincy, Mass., Mr. W. G. Corthell, acting on the principle that "it is poor economy to pat before the accustomed view of children what is poor, mean, and paltry;" furnished at his own expense one of the rooms of the Wollaston School. At Thanksgiving the friends of the school were invited to inspect the room. His motives were expressed in the invitation, as follows:
"First, to inspire the scholars to a greater love of the beautiful, withont which life at its best is only a drudgery. We are all more or less molded by our environment. Pictures of the noble men of history and the stately works of art wrought by the world's great masters stimulate the youth to the highest achievement in patriotic and faithful work. The scholars, by becoming accustomed to see what is high and pure in art, will unconsciously absorb its influence and learn to appreciate that which elevates and ennobles our lives. The result will be better work at their hands all through life, whether that work be at the bench, in the mart, or in the formm."

So well was Mr. Corthell pleased with the reception of his venture that he took it upon himself to find forty-three others who individually would make at least one contribation from a list that had received the sanction of Ross Turner, the artist, who has devoted his energies to the movement. The forty-three have been found, and soon the room will be ready for public inspection. ${ }^{1}$

The following extracts from the reports of various citios show that there is a general interest in the subject under discussion, and that towns and cities are reaching out after something more than they have now.
[From School Report of Salem, Mass., 1892, pages 68-70.]
Our respected townsman, Mr. Ross Turner, the artist, may well be called the apostle of public school art decoration. With the aid of a number of our foremost citizens and the approbation of the school board, Mr. Turner has started in the public schools of Salem a movement destined to be generally introduced into the schoolhouses throughout the country and to exert an important influence upon our systems of public education. The movement began in the Phillips schoolhouse, where at first one room was properly fitted up, the walls tinted in a quiet, grayish tone, soft and agreeable to the eye, thas forming a good background, where were hung engrawings, photographs, and solar jorints of some of the most famous pictures of the world. A circular was issted, prepared by Mr. Turner and signed by a committee of five gentlemen, calling for contributions to extend the work thus begun. Meantime the matter was brought to the attention of the school bard, who gave it their formal sanction and eneoraragement, and Mayor Rantoul cordially commended it in his annalal address,

From this beginning in one room the work has been gradually extending until new decorations are found in nearly all the schoolhouses of the city. The walls are tinted and lang with engravings and prints, while over the doors and above the blackboards are bracket shelves, upon which and mpon pedestals by the side of the teachers' desks are casts and busts of famous men, representations of bas-relief groups, and such like sculptures. The plan contemplates the ornamentation in this way of the schoolrooms of all grades in the city. These works of art are selected and grouped simply upon artistic principles. It is proposed to have portraits of statesmen, heroes, authors, and men otherwise illustrions in history and setting great examples for yonth; pictures of buildings representing notable arehitectural work and structures celebrated in history. Pictures of kindred associations are brought together as much as possible in the same room. Thus in one room will be pictures of Venice, in another of Rome, and in another Florence. A picture of Sir Walter Scott will have one accompanying it of Melrose Abbey. A large photograph of the Mansion House at Mount Vernon, 6 or 7 feet long, will have near it a fine full-length fignre of Wa\&hington. * * *

The portraits are usually glazed, but the other pictures, such as are 5 or 6 feet long or more, are not covered with glass, becanse it would be cheaper to replace them when soiled than to go to the expense of glazing. Accompanying each picture is a placard, plainly printed in large letters, giving its title and a few important facts concerning the subject.

We may all well agree with Mr. Tarner when he says that he "believes that the futare of art in this country depends not so much upon the patronage and appreciation of the comparatively few who have means and leisure as upon the cultivation of good taste among the great mass of the peopie, made possible through a familiarity with beautiful and artistic things." By beautifying the surrounding of the children in the schoolroom, they would thas become accustomed to what is good and true in art; they would unconscionsly absorb its influence, and they would inevitably learn to appreciate true art almost intuitively. The result necessarily must be better architecture both in public buildings and in the homes of the people, and the exercise of a better taste in the embellishments of the same. The infuence of these pictures and this statuary will inevitably tend to broaden the knowledge the children will acquire in their geography and history, stimulate their love for these studies, and in a marked degree influence their patriotic appreciation of our own country.

The supervisor of drawing in Salem says on this subject in the report for 1894:
"It is to be earnestly hoped that the good work of schoolroom adornment so successfully begun by Mr. Turner will be continued in the city. There are still too many bare walls and unattractive surroundings. The silentteaching of beau-
tiful forms and colors is of inestimable value in education. The schoolroom should be a place where the tired teacher finds it not unrestful to sit even when her duties do not hold her there. We want more color, more cheerfulness; not many things in the room, but harmony" (p. 23).
[From School Report of Somerville, Mass., 1892, pages 26-28.]
There is a great movement in New England, and other sections also, in the direction of art education by means of the decorative and artistic finish of school buildings. The architect and artist are exercising their silent but potent influence upon the minds of the public-school pupils. The Journal of Education thus describes the work of Mr. Ross Turner and the Public School Art League:
"The first step was to place in the schoolroom-after explaining his desire and plans to the school officials, whose consent was gladly given-a number of his private paintings and works in plaster, whatever, in effect, would add beauty and an artistic atmosphere to the school home. When this had been done, it was an easy matter to interest others, especially those whose children were in the public schools. * * * A circular was issued January, 1892, inviting citizens to its inspection. As a result of the interest thus created, the committee has been enabled to adorn several other rooms in this building and to make a beginning in other schools.
"The Public School Art League of America was formed in the hope of unifying this movement, giving it strength, and aiding those who might otherwise have to undertake the work alone.
"The purpose of this movement is to place school children during their formative years among beautified surroundings, so that while at their studies they may unconsciously absorb the influence of what is good in art and learn to distinguish the good from the bad. With the growth of a generation whose taste had been thus developed, we would have a public holding higher standards for all their surroundings. * * *
"The artists have already gone much more than halfway in giving an impetus to this movement. It is for the teachers to meet them and do all that can be done to help it on. To no one can it possibly mean so much as it will to the teachers. Others are working for succeeding generations, for humanity embodied in young America."

> [From Report of School Committee of Lawrence, Mass., 1893, pages 8-10.]

We hold that a love for the beautiful is, perhaps, second only to religion as a protection against the grosser forms of self-indulgence, and that it can best be kindled at an age when the mind is especially susceptible to the influence of habitual surroundings.

The decoration of schoolhouse walls with good prints and photographs will bring good influences to bear upon the pupils, and will also materially aid the teachers of history, geography, and natural history, as objects of reference. * * *

Brookline, Milton, Salem, and Quincy have school buildings that have been so beautified, adorned, and enriched by photographs, engravings, and casts that the whole life of teachers and the taught has been made broader and sweeter. By the help of these things they have been living on the heights, and, having lived together there for a season, having formed a taste for works of art that treat of great historical events, or of nature in her sublimity and grandeur, they have been silently the recipients of an educational infinence that is good, and only good.

It costs but little to place these things where the children may see them every day. Pictures with which well-educated children should be as familiar as they are with the multiplication table can now be obtained at so little expense that
they will come into our schools in greatly increasing numbers as soon as we are more fully persuaded that they are most powerful helps toward that refining influence and that strong character building that are among the chief functions of the public school.

Parents have a right to expect that along with increase of knowledge in arithmetic and history, in addition to better penmanship and greater power in oral reading, there shall be increase in refinement and growth in good conduct.

The teacher who is obliged to instruct surrounded by four barren walls is at a tremendous disadvantage in all these higher lines of influence.

Some of our schools are supplied with a limited number of good pictures. In the hall of-the Oliver School, besides the portrait of General Oliver and the painting of the Landing of the Pilgrims, there are two large pictures that were purchased more than twenty years ago by Mr. Walton with the proceeds of an entertainment given by his school.

For a score of years these have made the Oliver hall more attractive to the thousands who, as pupils, parents, and friends, have been drawn thither by educational duties or interest. Every room through the whole Oliver Building ought to be made more attractive by a supply of good pictures.

The hall of the Packard School has been made cheerful and homelike by the pictures received from prizes, by gifts from the graduating classes, and from friends of the school. * * *

At the Essex School the cooperation of teachers and pupils has provided some excellent works of art. At this school the rooms are designated as the Greek room, the Roman room, the Venetian room, etc., and the pictures have been placed in accord with the assignment of names.
[From Annual Report of School Committee of Pittsfleld, Mass., 1895, pages 55,56.]
The desirability of making schoolrooms attractive has long been recognized, and most schoolrooms have on their walls pictures and other decorations of more or less value, according to the ability of the donors and the standard of taste prevailing in the school. While all of these evidences of a regard for better things are to be respected for the motive that has prompted them, the results sometimes show the importance of art education. The indiscriminate use of cheap mottoes, clippings from illustrated newspapers, drawing exercises, advertising cards, posters, and the like for wall decorations is to be commended only as an evidence of good intentions. So far as the appearance of the room is concerned, bare walls are to be preferred. I am glad that very little of this sort of decoration is to be found in Pittsfield, and that any that may exist is not of recent date. On the contrary, some of our schoolrooms are fairly supplied with reasonably good pictures, and there is a desire on the part of teachers and pupils for more and better works of art in our schools. During the past year we have added to our desirable pictures The Court of the Lions in the Alhambra, at the Center School; The Tiber and the Church of St. Peter at Rome, in the Orchard Street School, and a copy of the Sistine Mother and Child, at the Pontoosuc School. There was also placed in the Linden Street School a cast of The Winged Victory. These were procured by the efforts of the teachers and pupils, and plans are on foot for other acquisitions of the same sort. The beautiful gift to the Pontoosuc School was in memory of Miss Kelly, the late principal, and was largely due to the generosity of the patrons of that school.

I have encouraged the desire for works of art of a higher order not merely for the sake of having the schoolrooms more attractive, but because it is a very effective means of refining and elevating the character, the taste, and the manners of the pupils. More than this, each child has an influonce in the home and in the community, and in due time this influence will determine the character of the
city. This view of the matter would seem to justify some expenditure for this $\dot{p}$ urpose from the annual appropriation. The teaching of drawing and music in our schools and the expenditure for music and decorations as a feature of graduation exercises must be justified largely on the same grounds. In view of the general interest shown by our teachers and pupils in maintaining a good record of attendance, I believe that a small appropriation for desirable pictures to be distributed to the schools and schoolrooms making the best attendance records for each month or for the entire year would be one of the best possible educational investments of the small amount required.

> [From Taunton, Mass., School Report for 1895, pages 35-36.]

There should be in every room, to relieve the too staring blankness of the walls, something to please the eye, to cultivate the taste, to stimulate and to satisfy the mind's many and many-sided needs. There could be typical examples of natural animal, vegetable, and mineral products-specimens of manufactured articles. There could be portraits of the men who have made our history, men distinguished in every field of usefulness. There could be photographs of wonderful natural features and phenomena; of historic places and buildings; of masterpieces in arehitecture, painting, and sculpture, and of the mighty achievements of mechanical skill and engineering. There could be drawings to show the elements of beauty in form, and to illustrate harmony in color combination. With such, the whole atmosphere of the schoolroom would be changed. Stimulated by such, the pupil would breathe in more easily the spiritof patriotism, would the better understand himself and his environment. Becoming more familiar with the good, the beautiful, and the true in man and in nature, he would unconsciously imitate. There would be a wakened within him truer and higher standards of life and living, and he would thereby be the better enabled to judge between the true and the false in circumstance, between the right and the wrong in conduct. The foundation of error has for its corner stone ignorance. Error easily becomes criminal through unenlightened will. Such surroundings as these would awaken and cultivate admiration-admiration for that which is worthy of it. "It is by admiration only of what is beautiful and sublime that we mount up a few steps toward the likeness of what we admire."

> [From Report of Board of Education of Omaha, Nebr., Public Schools, 1895, page 12.]

I wish particularly to commend the efforts of teachers and principals who have made their rooms and buildings attractive by means of handsome classic pictures and pieces of statuary. The effect on the children must be elevating and refining. The introduction of cheap chromos and pictures of a poor, indifferent character is to be condemned. They should have no place in the schools. The education of the mind by articles of grace and beauty kept constantly in view is quite as useful and helpful as the education derived from books.

## Ruskin on the Decoration of Schoolrooms.

Before this question had been agitated by Mr. Perkins and Professor Philbrick, John Ruskin had written as follows on the subject:
Hitherto, as far as I know, it has either been so difficult to give all the education we wanted to our lads that we have been obliged to do it with cheap furniture in bare walls, or else we have considered that cheap furniture and bare walls are a proper part of the means of education, and supposed that boys learned best when they sat on hard forms and had nothing but blank plaster about and above them whereupon to employ their spare attention; also that it was as well they should be accustomed to rough and ugly conditions of things, partly by way of preparing them for the hardships of life and partly that there might be the least possible
damage done to floors and forms in the event of their becoming during the master's absence the fields or instruments of battle. All this is so far well and necessary as it relates to the training of countrylads and the first training-of boys in general. But there certainly comes a period in the life of a well-educated youth in which one of the principal elements of his education is, or ought to be, to give him refinement of habits; and not only to teach him the strong exercises of which his frame is capable, but also to increase his bodily sensibility and refinement and show him such small matters as the way of handling things properly and treating them considerately. Not only so, but I believe the notion of fixing the attention by keeping the room empty is a wholly mistaken one. I think it-is just in the emptiest room that the mind wanders most; for it gets restless like a bird for want of a perch, and casts about for any possible means for getting out and away. And even if it be fixed, by an effort, on the business in hand, that business becomes itself repulsive, more than it need be, by the vileness of its associations; and many a study appears dull or painful to a boy when it is pursued on a blotted deal desk under a wall with nothing on it but. scratches and pegs which would have been pursued pleasantly enough in a curtained corner of his father's library or at the latticed window of his cottage. Nay, my own belief is that the best study of all is the most beautiful, and that a quiet glade of a forest, or the nook of a lake shore, is worth all the schoolrooms in Christendom when once you are past the multiplication table; but be that as it may, there is no question at all but that a time ought to come in the life of a well-trained youth when he can sit at a writing table without wanting to throw the inkstand at his neighbor, and when also he will feel more capable of certain efforts of mind with beautiful and refined forms about him than with ugly ones. When that time comes, he ought to be advanced into the decorated schools, and this advance ought to be one of the important and honorable epochs of his life.

I have not time, however, to insist on the mere serviceableness to our youth of refined architectural decorations as such; for I want you to consider the profitable influence of the particular kind of decoration which I want you to get for them, namely, historical painting. You know we have hitherto been in the habit of conveying all our historical knowledge, such as it is, by the ear only, never by the eye; all our notions of things being ostensibly derived from verbal description, not from sight. Now, I have no doubt that as we grow gradually wiser-and we are doing so every day-we shall discover at last that the eye is a nobler organ than the ear; and that through the eye we must in reality obtain or put into form nearly all the useful information we have about this world. Even as the matter stands, you will find that the knowledge which a boy is supposed to receive from verbal description is only available to him so far as in any underhand way he gets a sight of the thing you are talking about. I remember well that for many years of my life the only notion I had of the look of a Greek knight was complicated between recollection of a small engraving in my pocket Pope's Homer and a reverent study of the Horse Guards. And though I believe that most boys collect their ideas from more varied sources, and arrange them more carefully than I did, still, whatever sources they seek must always be ocular. If they are clever boys, they will go and look at the Greek rases and sculptures in the British Museum and at the weapons in our armories; they will see what real armor is like in luster and what Greek armor was like in form, and so put a fairly true image together, but still not, in ordinary cases, a very living or interesting one.

Now, the use of our decorative painting would be, in myriads of ways, to animate their history for them, and to put the living aspect of past things before their eyes as faithfully as intelligent invention can, so that the master shall have nothing to do but once to point to the schoolroom walls, and forever afterwards the meaning of the word would be fixed in the boy*s mind in the best possible way.

It is a question of classical dress-what a tunic was like, or a chlamys, or a peplus. At this day you have to point to some vile woodcut in the middle of a dictionary page, representing the thing hung upon a stick; but then you would point to a hundred figures, wearing the actual dress, in its fiery colors, in all actions of various stateliness or strength; you would understand at once how it fell around the people's limbs as they stood, how it drifted from their shoulders as they" went, how it veiled their faces as they wept, and how it covered their heads in the day of battle. Now if you want to see what a weapon is like, you refer, in like manner, to a numbered page, in which there are spearheads in rows, and sword hilts in symmetrical groups; and gradually the boy gets a dim mathematical notion how one scimiter is hung to the right and another to the left, and one javelin has a knob to it and another none, while one glance at your good picture would show hin, and the first rainy afternoon in the schoolroom would forever fix in his mind the look of the sword and spear as they fell or flew, and how they pierced, or bent, or shattered-how men wielded them and how men died by them.

But far more than all this is it a question not of clothes or weapons, but of men? How can we sufficiently estimate the effect on the mind of a noble youth, at the time when the world opens to him, of having faithful and touching representations put before him of the acts and presences of great men? How many a resolution which would alter and exalt the whole course of his inner life might be formed when, in some dreamy twilight, he met, through his own tears, the fixed eyes of those shadows of the great dead, unescapable and calm, piercing to his soul, or fancied that their lips moved in dread reproof or soundless exhortation. And if for but one out of many this were true; if yet in a few you could be sure that such influence had indeed changed their thoughts and destinies, and turned the eager and reckless youth, who would have cast away his energies on the race horse or the gaming table, to that noble life race, that holy life hazard, which should win all glory to himself and all good to his country, would not that, to some purpose, be 'political economy of art?'

## Work of the Manchester Art Museum:

At a session of the International Conference on Education held in London in August, 1884, a paper on this subject was read by Mr. T. C. Horsfall, from which extracts are presented herewith. This address confirms the observations already made by teachers, that in many cases the children of the poorer classes in cities, who live in small and cramped tenements, or in narrow, filthy streets, have no conception of the common everyday scenes and events of the life of the country child. This ignorance is confined to no one city or country. Thus, Mr. Horsfall illustrates his plea for pictures by saying that in English cities some of the children scarcely know what a flower is like or have ever seen a primrose or a violet; some thought a squirrel was a lird; others that the berries of the mountain ash were roses; others that a dragon fly was a bird or a serpent; and some did not know what a lamb was like. Mr. Horsfall says:
"I believe that the right use of works of art in elementary schools will effect an improvement in the taste of English work people and employers, which all persons conversant with English manufactures know to be very desirable; that it will reveal to many children who live in the crowded parts of large towns some of the highest qualities of their own nature and that of their fellow-creatures, of the existence of which most such children, and many also of those who live in pleasanter places, are not aware; that it will soon make the homes of many work people more attractive than work peoples homes generally are now, and will do much toward creating a fuller and happier family life amongst the work people of towns, by opening to them many pleasant occupations and amusements which parents and children can enjoy together, and which will therefore create between parents
and children the bonds of common interests and pleasures; that it will make schools more attractive for children, and add to the brighter side of the culture of teachers, and, while making their work pleasanter, increase their influence over their pupils.
"Two conditions are needed for the development of good taste in a person who has the qualities needed for its acquisition. One of these conditions is that from childhood onward he shall habitually see beautiful things; and the second condition is that in childhood and youth people whose opinions he respects shall make him notice the difference between beautiful and ugly things, and make him feel that they regard beauty as a thing of great value.
"It is impossible to insist too strongly on the dependence of good taste on the existence of these two conditions. The coexistence of both is quite necessary. The second can not, of course, exist, unless the first does also; but the first exists for many persons without the second, and then exists for most of them in vain, so far, at least, as development of taste is concerned. All children in the country habitually see beautiful natural forms and colors, but this does not suffice to make most of them even perceive the difference between good and bad form and color.
"It is only in schools that we can hope that most children can be enabled at present to habitually see beautiful things and feel the influence of persons respected by them, who, perceiving the difference between beautiful and ugly things, can lead the children to feel that beauty is a thing of great importance. Pictures are amongst the beautiful things needed for this purpose in schools. * * *
"As the committee of the Manchester Art Museum have lately been taking the course which seems to me to be that needed for gaining all the advantages obtainable by the use of pictures in schools, I will describe their system. First, I must speak of the system of their central collection, that of the art museum, to which as many references as possible are made in labels attached to the pictures lent to schools.
"The art museum which was opened last month by Mr. Mundella, contains as many pictures as we can find room for of beautiful scenery and interesting places in the neighborhood of Manchester. Some of these pictures are in oil colors, some are water color of drawings, etchings, engravings, photographs.
"There is a collection of pictures of common wild and garden flowers; one of pictures of common wild birds; one of pictures of other animals; one of pictures of well-known places in different parts of the world; one of beautiful landscapes; one of seascapes; one of war scenes; one of religious subjects; one of portraits; one of copies of works by Turner, chiefly illustrating English scenery. In some of these groups of pictures, representations of the same subject by different kinds of art-etchings, engravings, water-color drawings-are placed side by side, in order to facilitate careful comparison of the effects obtained by different processes.
"Many of the pictures-the plates of the Liber Studiorum and those of the Harbours of England, for instance-have full descriptions and criticisms hung by them. Each of the other pictures has, or will have, a label containing a short explanation of the subject and a statement as to whether it is an engraving or etching, or whatever it may be. One set of pictures illustrates the development of architecture and sculpture; one that of Italian painting. In cases there are sets of the tools, etc., used in the various art-reproducing processes, plates etched and prepared for etching, engraved plates with impressions from the plates, wood blocks for wood engraving, the stones used for lithography, the blocks used for color printing, and a brief explanation of each of the processes. Short lectures on the processes and on many other subjects will be given. A band of explainers is being formed. There are also cases of examples of well-shaped, pleasantly colored pottery and glass, metal work, and textile fabrics, many of them of the commonest
kinds, fitted for common use. There is, too, a model small house, fitted up with the well-shaped, well-made things by Mr. W. Morris and Mr. W. A. S. Benson, and there are some casts of Greek sculpture, shown to advantage by having richly colored stuffs hung behind and on each side of them.
"It is intended that each of the collections lent to schools shall eventually contain a few examples of beautiful textile fabrics, beautiful common pottery and glass, and casts from sculpture, but at present they consist of pictures only. We lend pictures of beautiful scenery and interesting buildings near Manchesterthese pictures are chiefly photographs-chromolithographs and engravings of other beautiful landscapes and sea scenes, pictures of scenes in the Holy Land and Egypt, of bistorical scenes, of beautiful wild and garden flowers, of trees, of common birds and butterflies, of fairy tales-good examples, in short, of almost every kind of picture. Many of the pictures are-all are to be-provided with labels to tell what the subject is and of what process the picture is a product; if it is cheap, what its price is and that of its frame. The labels also make as many references as possible to the Art Musenm, to books, to our local botanical gardens, and other pleasant places open to work people. Thus one of the labels to a picture of a swallow gives a little information about the habits of the bird; another tells that the picture is a lithograph, colored by hand, that an explanation of lithography and the things used in it can be seen in the Art Museum; that pleasant information about and good pictures of birds are found in White's Selborne, a copy of which can be bought for sixpence, and in John's English Birds in their Haunts, which costs 6 s .3 d . The label to a frame containing pictures of garden flowers tells that the pictures are chromolithographs, speaks of the imperfections of this process of representation, and recommends that the pictures be compared with water-color drawings of the same flowers in the Art Museum. It tells also that some of the flowers will grow in houses in Manchester, and that they are to be seen in the botanical gardens and in some of the public parks. The label to a set of photographs of Greek sculpture tells that casts of the sculpture are in the Art Museum and praises their beauty.
"After what I have already said, I hardly need add that we do not expect that pictures of beautiful places and things can at first have much meaning for those children who know nothing, or almost nothing, about the things represented. The child for whom real buttercups and daisies, the flight of swallows, and the song of larks have no happy associations, who has never felt gladness in fields or on hills, will see very little in pictures of flowers and birds, fields and hills. But still pictures of these things will be of great value even for such children. Some natural beauty is within reach of almost every child; most children hare some of it sometimes before their eyes. Ignorance of it is so common, partly because their eyes have not gained from heart and mind the power to see these things, partly because 'what the eye never sees the heart never longs for,' and opportunities of seeing natural beauty at a little distance from home, and of bringing it into homes, are not used or sought for.
"The words now so often quoted, which Mr. Browning puts into the mouth of Fra Lippo Lippi, are, I believe, perfectly true:
> "'We're made so that we lore
> First when we see them painted, things we have passed Porhaps a hundred times, nor cared to soc; And so they are better, painted-lotter to us, Which is the same thing. Art was given for thatGod uses us to help earch other so, lending our minds out.'

"If a chili is led in school, as he easily may be by a few words spoken by his teacher, to motice the form and color of a flower in a picture, or the forms and colors in a picture of landscape, and to find a little pleasantness in them, he will
besure to notice with pleasure the next flower or place of the kind he meets with; and pleasure in the thing will make him care more for the picture, and will give meaning to the name when he next reads it in a book; and thus will begin for him that interaction of art, literature, and nature, to which each of the three owes. most of its power to give us ennobling pleasure.
"I must say a few words respecting the success which has already been obtained by the use of pictures in schools. We have as yet lent pictures only to twenty schools, and the Art Museum has only been open a few weeks. We have not, therefore, had time to ascertain if a considerable number of children will be led by our school pictures to study the collection in the museum. But we know that in other ways the pictures lent have been very useful. I will give some evidence, which has come to me without my seeking it. Mr. Godolphin Rooper, Her Majesty's inspector of schools at Bradford, visited on a Saturday some of the schools in Manchester to which we have lent pictures. He told me that he found some children playing in the street near one of the schools and talked to them about the pictures. They told him that they liked having them and that some of the children brought theîr dinners to school in order to see them. I asked a boy who, a few weeks ago, was sent to guide me from one board school to another if he and his schoolfellows liked our pictures. He said, 'Some of us come half an hour earlier to see them, especially when there are any fresh ones.' Mr. Mellor, the master of the Manchester Free Elementary School, told me that our pictures not only brighten the schoolrooms and make them pleasanter for teachers and children, but also enable him to give the children, in a way which is pleasant for both sides, clear ideas about many things-ideas which, thus given, he says, are never forgotten. He pointed to one chromolithograph which has taught many children the meaning of 'plain' and of 'river' and 'group,' and to another which has given clear ideas of 'a glade' 'tree trunks,' ' foliage,' etc. * * *
"I can not use here the arguments which seem to me to prove that public gardens and art galleries ought to be open on Sundays, but at least I must say that it is of such immense importance that children shall gain familiarity with beautiful things, and that parents and children of the working classes in towns shall be enabled to have pleasures in common, that, if gardens and art galleries are not to be opened on Sundays, we ought to lose no time in transferring their contents to those places which are open on Sundays-to Sunday schools, churches, and chapels." ${ }^{1}$

## Work of the Brooklyn Institute.

In the spring of 1896 the section on art education of the Brooklyn Institute of Arts and Sciences inaugurated an exhibition of "works of art suitable for the decoration of schoolrooms," which was held at 174 Montague street, Brooklyn, March 21 to April 4, 1896. A catalogue of the exhibition has been published, and is preliminary to a report on the subject to be made later by the institute. The catalogue contains 412 entries, including photographic reproductions, engravings, etchings, original drawings, statuary, and pottery suitable for schoolroom decoration. Prices attached range from 25 cents to $\$ 70$. In his introduction to the catalogue Prof. Walter S. Goodnough, chairman of the section on art education, says:
"The purpose of this exhibition is to bring to the attention of educational authorities and the public of this city and vicinity a most important educational movement, destined to have great influence. It originated in England in 1883, under the leadership of John Ruskin, and extending to this country, has been taken up enthusiastically in many cities. A fuller report of this movement will be made

[^65]in print later, by the section on art education of the Brooklyn Institute. This exhibition is intended to be suggestive, not complete or exhaustive, of works of art suitable for public schoolrooms of all grades.
"In other cities public funds have not been drawn upon, excepts to the extent of providing picture moldings and suitable colored walls, ceilings, and woodwork. Works of art have been loaned or presented to the schools by alumni associations, graduating classes, friends, or patrons; also by civic or educational societies, art clubs or associations, and other organizations interested in the social progress and well-being of the city through the proper education of its future citizens.
"In Boston the Public School Art League, with the consent and cooperation of the board of education, decorated several schools. In Philadelphia the Civic Club purchased works of art for and decorated a school selected by the board of education.
"In Chicago, St. Louis, Cambridge, Salem, Brookline, New Haven, and numerous other places much has been done. It is hoped that public-spirited citizens and organizations will aid and support this movement in Brooklyn.
"The day is not far distant when all bare, white walls in the schoolroom will be replaced by pleasing tints and works of art. Originals or acceptable reproductions will hang upon the walls or find place in cabinets or cases provided for this purpose.
"A recent writer asks, 'How shall our life, public and private, be raised to a higher plane? What better means can be used to inspire patriotism and chasten private life than the influence of those arts which embody the ideal? Where can this influence be exerted so well as in the public school? In youth the mind is most open to the nobler influences; impressions then formed are most lasting.' 'Surround young people during school hours with pictures and statuary, set off by tinted walls and decorated ceilings, and the silent beauty irradiating therefrom will quicken and purify the taste without encroaching upon school time.' 'Art in daily contact with life is a silent but all-powerful and ever-constant and undying influence in the shaping and molding of character. It will do more for refining, elevating, broadening, and even tempering of character than all other forces combined, except religion, and when art and religion have both been true, the one lias helped the other. Without true art no nation has been, can be, or will be great, and as the twig is more easily bent than the trunk, the process will best begin with the young.'
"، The public school is the place to which we should turn chief attention in our effort to promote a more beautiful public life in America. The schoolhouse and grounds should be beautiful, and the child should be surrounded by bearty in the schoolroom from first to last.'
"Art education is a primary part of true industrial and of spiritual education. Every school should teach the pupils, and through them the people, that everything that man uses of wood or metal or stone, of wool or silk, printed, woven, or wrought, should be beautiful; and it should provide means for the development and exercise of the creative faculty with which all are endowed, and which brings man into his highest estate. 'If we can once give beauty its rights in the schools, we shall have done the greatest thing which we can do toward securing for our people a more beautiful public life.'
" 'The good, the true. the beautiful," were words the Greeks loved to use. Is we open our eyes to see the beanty of God's earth, and sea, and sky, so let us be content only when we see beauty, too, in all the works of our hands-in the home, the school, the shop, the street.
"The school wall should speak of the ideal to the eyes of the child. The drawing, engraving, etching, photograph, photogravure, the cast, the product of the potter:s skill, and of the art worker in stained glass and in metal, will play a larger part in elementary education in the public school of the future.
"As a means of making more real the great events and facts of history, literature, science, and art, as well as for the purpose of bringing greater culture, refinement, and more civilizing influences into the schoolroom, of cultivating an appreciation and love of the beautiful, and of educating the æsthetic and emotional nature of the child, good art works have an untold value. We endeavor to acquaint the pupil with the great masters and masterpieces in history and literature. Should we not do the same in art, when photographs and other reproductions can be had at so small a cost? Should we not bring beautiful form and color into the schoolroom, when good art in the form of pottery is so plentiful and inexpensive?
"The section on art education will receive contributions of funds or art works for this purpose, and will endeavor to carry out the desires of donors. Works in this exhibition, with some exceptions, may be bought and presented to any particular school, or be placed in the hands of the section on art education, to be placed in some school, either as a loan or a gift. Receipts from the sale of the catalogues will be used to purchase works from this exhibition, to place in Brooklyn public schools.

> "All passes; Art alone Enduring stays to us; The bust outlasts the throne, The coin, Tiberius."

## Interior Decoration of Schoolhouses. ${ }^{1}$

In the autumn of 1896 Mr . Walter Gilman Page, artist and member of the Boston school committee, published a little pamphlet on the Interior Decoration of Schoolhouses. It contains lists of photographs and casts suitable for decoration, and is intended "to answer the questions: What is best for schoolroom decoration? Where can photographs and casts be obtained? What are the sizes and what are the prices!"

Mr. Page says, in part:
I think it is pretty generally conceded that to decorate a schoolroom is a good thing to do. I shall consider it unnecessary to enlarge upon this point, though the names of those who have advocated the plan would include those best known in the artistic and educational worlds, and facts adduced from what has already been accomplished would give interesting information to those who need encouragement in their attitude toward this question. I would rather turn your attention to a few practical points, based upon actual work in the schools of Boston.

The very first item for consideration is the tinting of the walls. It is only very recently that schoolroom walls have been anything but the bare white plaster, so far as Boston is concerned, and this condition prevails in other cities and towns at present; but Boston has happily outgrown this period, and now all class rooms are tinted some sort of color, but usually far from the right one.

My experience has directed me, first, to select colors which will not alsorb the light, and to lay them on the wall so as to give a flat and dead surface, that there may be no reflection; next, to select colors which are harmonious and artistic in effect; and lastly, to select colors which are soothing, not irritating, to the optic nerve.
Upon this latter item a celebrated specialist has given me his professional opinion, and as I have followed his ideas so far as his point of view is concerned, it would be well for me to quote the following from his report:
"The walls of all schoolrooms should have some color, for I have often seen children immediately and permanently recover from a persistent recurring diseased condition oí the eyes when removed from a schoolroom with white walls, and sent elsewhere to school, or kept at home, where the walls are tinted. The

[^66]principal color of the walls should be of an even tone, so that the amount of light reflected will be the same from all parts of the surface, as waving or clouded effects are very trying to sensitive eyes. Any color may be placed in its proper position with regards to its safety for schoolroom walls by remembering the general rule with regard to the sensitiveness of the eye to the colors of the spectrum, which is, that the nearer the color is to the red end of the spoctrum, the more irritating it is to the eyes; and the nearer the color is to the blue end of the spectrum, the easier it is to the eyes, with the single-exception that the extreme violet rays are also irritating.
"From this it will be seen that red and all its derivatives should be rigidly excluded, and orange also is nearly as bad, while yellow should never be taken by preference, but may be justifiable in an otherwise dark and badly lighted room. Greens and blues are absolutely safe colors, and it is not at all necessary that the colors should be pronounced. The depth of color should be made dependent upon the amount of light coming into the windows and upon its quality, as, for instance, whether the windows have a northern or southern exposure, whether the sun's direct rays can come directly into the room when the sun sinks low in the heavens in the middle of a winter afternoon, and other surrounding cireumstances of each individual room.
"The color of the ceiling of a schoolroom is fully as important as the color of the walls, particularly when there is any amount of reflected light.
"All I have said with regard to the color on the walls is doubly true when applied to the color of the window shades, and this fact should always be taken into consideration in furnishing and decorating a schoolroom." ${ }^{1}$

In November, 1894, under the auspices of the Public School Art League, the New England Conference of Educational Workers, and the Boston Art Students' Association, there was held in Boston an exhibition of photographs, reproductions of standard works of art suitable for schoolroom decoration. Also in Brooklyn, during the months of March and April of the present year, there was held a similar exhibition, under the direction of the section on art education of the Brooklyn Institute of Arts and Sciences.

These two events are the most important connected with the subject of schoolhouse decoration since the movement first began in this country, but there is yet to be held an exhibition which shall give a clear idea of the proper order and grade of pictures perfectly suited to the age and understanding of the child from the kindergarten through the high school.
In these two exhibitions I refer to, nearly if not quite all the photographs belonged to the highest grades of the grammar schools, and more particularly to the high schools. While, on general primciples, assaciation with works of the highest order can not begin too soon, yet we want more than association, or mere contact and environment; we want interest, and, in consequence, understanding.
To explain myself something more in detail, I will give a rough outline, merely suggestive of how I would distribute works of art through the different grades.
For kindergarten and primary grades I would suggest pictures of the simplest natural objects, such as birds, their nests and eggs, wild flowers, trees, and scenes . of rural life, such as town children seldom see and country children often fail to enjoy; pictures of animals in friendly relation with human beings, especially with children; landscapes and marine views; some of these various subjects to be illustrated in color, proper attention being paid to artistic merit.

For grammar grades I would use historical portraits and scenes from history, with particular and speoial reference to the men and events connected with the life of our own country; pictures of architectural works of historic or artistic interest; such reproductions as are available from the numerous works of the old

[^67]and modern schools of painting, and, as many of our boys and girls do not go beyond the grammar school, a judicious selection of casts from the antique should be included.

For the high schools you have simply to choose from the best, the product of all the ages, the art of Greece and Rome, the Renaissance, down to the present day. The field is broad and the task the easier.

All these subjects I have so briefly outlined have their practical uses in the schoolroom, in correlation with drawing, history, geography, and natural history. Certainly the æsthetic sense is pleased and the daily routine made pleasanter amid such surroundings, for nothing, to my mind, is more depressing than bare walls.

The present generation can not do better than to inform itself somewhat as to what constitutes American art, and particularly that portion which belongs to the period of the war of the Revolution, illustrated through the masterly portraits by that prince of portrait painters, Gilbert Stuart, and the historical pictures by John Trumbuli. I trust the day is not far distant when their names and their works will be known to all the children of the land.

In addition to selecting photographs and casts with reference to their character and suitability to age and comprehension, I would advise that they bear a relation to one another. In order to accomplish this it will be necessary to fix upon what it is desired to illustrate upon the walls of some particular schoolroom.
Let it be a Greek room, Roman room, Egyptian room, or let it illustrate English literature or French history; different sections of the country through photographs representative of characteristic features, birds, and animals, etc.; but let all these different subjects be placed by themselves. To mix them up in one room, no matter how good in itself each particular object may be, will make the result discordant, though there may exist certain conditions which might render it necessary to include a variety of objects in one room.

It is always best to give a good frame to every photograph, and it is always desirable to frame under glass. It is not usual or customary for us to use cheap frames and no glass in our homes. Why shou'd we do less for the schoolroom?

The very best form of reproduction is none too good. To be sure, it is the most expensive, and financial conditions are not always such that it is feasible to carry out the plan of obtaining the best. Nevertheless, the best is the thing to ain at, and attain if possible, for in no country to-day does there exist so broad a field for good as the opportunity of bringing the best art has to offer into our schoolrooms.

In the Old World the æsthetic sense is constantly stimulated by what is offered on every side, while in our own land, where art is to have her future throne, at present we have barely made a beginning.
The next generation is to witness an immense advance in all that relates to the fine arts. Therefore it is important that we prepare the way. "Though the amount of time given to æsthetic subjects in the public schools is small, and to increase it is entirely out of the question, yet all the more for this reason does the plan of decorating schoolrooms deserve, as it is now receiving, favorable consideration. Surround young people during school hours with pictures and statuary, set off by tinted walls, and the silent beauty irradiating therefrom will quicken and purify the taste without encroaching upon school time or interfering with school work." But while we agree to this, and while we welcome all that can be accomplished in this direction, let it be remembered by those who can aid the most in this work of interior decoration of schoolhouses that primarily schoolhouses are for practicail ends, toward whose fulfillment the introduction of objects of art must serve as a valuable aid, and not as an impediment. In fact, I sincerely trust that the school committee of the future will consider the furnishing
of the walls of a schoolroom as much a part of its duty as furnishing desks and books; for as Americans we have developed too much on one side, considering nothing but that which appeals to us as practical and ignoring that through which the glory of the past has been handed down to us.

Art for the Schoolroom.
By Berr Ferree, in Education.
There are few healthier indications of a genuine interest in art or a better indication of its value in general education than the movement which has for its object the providing of artistic decorations for schoolrooms. A good deal has been done in this direction in England, and in America interest in it has found fruit in at least three general exhibitions in Boston, Philadelphia, and Brooklyn. In several other cities and some of the lesser towns considerable progress has been made, and individual schools in various parts of the country possess veritable miniature art galleries, so numerous are their photographic treasures. No more important work in introducing art into the general life of Americans has been undertaken, for it nreans bringing it directly before children, many of whom are without artistic home influence, who do not know the value of a picture even as a decoration, or only in a limited way, certainly not in an artistic sense. It is too much to suppose that every child will be interested, that the life of every pupil will be brightened in this way, but it would be equally foolish to set a limit upon the good that may be accomplished by it. The good that can be done, however, must not blind us to the fact that it must be done with the most elementary materials.

In attempting to answer the question, In what shall the artistic decoration of the schoolroom consist? we must keep in mind the elementary conditions at the outset. The object of the decorations is to create an interest in art and an appreciation of it; and the people it is proposed to benefit are, in large part, quite devoid of any artistic knowledge. "The less tax put upon the brains of the children the more satisfactory will be the result. A concrete idea is more easily grasped than an abstract one; familiar objects are comprehended quicker than strange ones; the lesser is mastered before the greater. In other wordsy we can not have "high art," we can not concern ourselves with "schools" and "values" and "tones" and all the literary and artistic paraphernalia of the modern painter. We are trying to instill some knowledge of art into the minds of the multitude, and we must get down to the level of the multitude ourselves before we can lift it up. We can not clean out the gutter by sweeping cobwebs from the roof cornices. * * *
The utmost care is required in the selection of subjects; we must not shoot above the comprehension of the children; we must not set a standard so high that only a few can come up to it. We must, in a measure, be commonplace, and trust to time for greater work and more enduring results. In a sense, all sorts of subjects are suitable for schoolroom decoration, but experience will show that only a limited range of topics is available. Taking the whole field of possible subjects, I would arrange them in the following order of availability: (1) Patriotic, (2) historical, (3) pictures of places, (4) photographs of famous people, (5) architecture, (6) paintings, (7) sculpture. To these may be added plaster casts under the last head, pieces of pottery, and other inexpensive forms of room decoration.

We have to deal with American children and to interest them in a form of decoration for the walls of which they know almost nothing. The simplest range of subjects therefore would appear to be those of a patriotic nature. All children have some sort of a notion of the history of their own country, even before they begin its serious study. The great names in American history are familiar to all, while Christopher Columbus is as familiar as the name of the parent of each child.

Scenes in the lives of American worthies may not in themselves be familiar to the children, nor' may their bearing on American history be understood, but any picture which embraces, for the sake of illustration, the figure of George Washington is something all can understand, or about which information can usually be had for the asking. It is the same with Lincoln, or with any of the great names that adorn the pages of Arnerican history. * * *

Next in elementary value to patriotic illustrations are pictures of historic events. The two subjects are, in fact, so closely related that little difference can be distinguished between them. Here also are subjects easily understood and naturally included within the scope of the common-school curriculum and håving, therefore, a positive value that more artistic pictures can not have. It must be remembered that the children must not only see the pictures but be interested in them. Questions will be asked and explanations demanded that the teacher, in the most unexpected moments, will be called upon to reply to. Corps of lecturers can not be supplied to make our illustrations useful, and the movement must be carried out on such lines as will be productive of the best results. The teacher must know the pictures on his walls and understand their significance, and patriotic and historical subjects have a utility from this point of view that no other group possesses.

Pictures illustrative of great events in the history of the world may be placed after those touching on American topics. Here the field is almost inexhaustible, yet the utmost care must always be taken to choose only subjects of general interest and great familiarity. The Conversion of Clovis is an event which has frequently been illustrated in French art, and in not a few notable pictures; yet while it was an event of the first importance, it does not begin to have the practical availability that characterizes any event in the life of Napoleon. A series of pictures illustrative of the world's history could be made of the utmost value educationally; yet for its use in American schools it would probably be found that many notable events would have to be omitted. Availability is of more value than completeness. Portraits form another important class. Portraits of eminent Americans must be considered before the portraits of eminent foreigners, living or dead. Here, again, are subjects more or less familiar. * * * Familiar subjects have many advantages over unfamiliar ones, be their relative artistic merits what they may. A child will take a greater interest in a picture that represents something he himself knows of or has heard about than one utterly strange. Views of one's own town, or of notable streets, places, or buildings within it, have, therefore, a utility of a very high order. From such pictures children will learn something of the value of a photograph; they will discuss its resemblance to the actual object and learn to understand that a picture has a real value apart from being something to hang on the wall. From photographs of familiar places it is not more than a step to photographs of notable places the world over, of pictures of fine bits of scenery or of famous towns. * * * Pictures of places open up a field of great extent in schoolroom decoration. It is a general suloject that, in many different ways and on many different points, touches directly upon the course of study. Geography and history can be made of living interest with the aid of pictures in the hands of an interested teacher. In geography alone the help wonld be enormous. Eren the best of illustrated geographies fail in giving adequate illustration of foreign lands, of climates different from our own, of people of other nationalities. Place a series of carefully selecterl photographs illustrating such topics in the hands of a competent teacher and it would be easy to forecast the good that might be done with them. The general topic is so broad and its applicalility so varied that it may not be necessary to limit it: yet it may not be unimpor'tant to point out its value in American subjects for patriotic purposes. In no other way can a clearer inpression be made of the vast resources of our
cóuntry and its extent than through a series of photographs of its riches in natural scenery.
After architecture come paintings; and if we judge from the exhibitions of suggested decorations, this is the form of art it is most desired to introduce into the schools. Here, at last, we have the form of art through which it is hoped to quicken the imagination and broaden the intellect, to throw open to the child a new field of thought and to lay the foundation of a lifelong appreciation of the beautiful and the artistic. Yet we must not let our theories carry us too far over the heads of those we are seeking to benefit; the grandest painting may be too great for any appreciable quantity of good to be derived from it. Once more we must be careful in our selections; whatever pictures are used must be comprehensible. * * * With sculpture, which I would place last in order of availability, we have a subject that can be illustrated both in photographs and in actual form by casts. Casts are less open to criticism than photographs, for the cheaper sorts; which are the most likely to be used, are of comparatively ordinary types that require no guide books to their meaning. With photographs we would be apt to use idealistic types and abstract conceptions quite beyond the range of children's minds. A cast of one of Barye's animals, for example, is cheap and good. The children may not understand the perfection of its art, but they will see it as an animal and many of them can appreciate its naturalness. The fact that casts are much less familiar as objects of decoration than photographs or prints gives them a special interest apart from their artistic qualities. There are other phases of artistic decoration fully as available for schooiroom decoration as those already noted and possibly more intelligible. Cheap bits of pottery, especially of Japanese manufacture, are of the greatest value and give an unnsual and muchneeded note of color as well as of decoration. It is as important to teach the artistic effect of well-harmonized colors as the grouping and arrangement on the flat which we have in photographs. Japanese ware, even of the commonest sorts, will le found eminently suitable for this purpose, and the low price at which really excellent pieces can be had render it especially desirable. * * *
All things considered, cheap decorations are preferalle to costly ones. Thirty photographs at 50 cents each, supposing a suitable artistic standard were maintained throughout the series, are surely more desirable than one costing $\$ 15$. In the latter instance we have only one object that can be placed in but one room; in the former we have a series that may be distributed among several rooms and perhaps among several schools. The work to be done now is educational in a double sense, since it not only introduces a new element into school life, but it must interest people in this work. It would be a grand good thing if all our schoolrooms could have two or three photographs, each costing \$15 or more, upon their walls, but there is much missionary work to be done before that happy time can arrive. And meanwhile we must do the best we can with the many inexpensive forms of art reproductions. Under the direction of the French Government, for example, many thousands of photographs of buildings in France have been made that cost in this country about 50 cents each. Italian photographs are likewise astonishingly cheap, and if not to be had in the shops can be imported through the mails at small expense. Illustrated books can be taken apart and the plates framed, furnishing the best of decorations at relatively small cost per plate. This is especially true of many continental art publications, of which, unfortunately, we see too little in this country. Then there are the plates published in the artistic and architectural journals. Not all of these are available for this work, but much useful material may be obtained from them at very small cost. Finally, not to extend the list too far, there are the colored supplements printed by the art papers. published in the interests of amateurs, many of which are admirably reprodaced and entirely suitable, framed or unframed, for schoolroom decoration. tion to the instruction, 越ough for any sort of decoration to bo successful it is imperative that this be earefully heeded. * * *

For the upper sclools the question is much less difficult than for the lower. The older the papils; the more advanoed their studies, the better able will they be to appreciate such artistic adornments as may be provided for them. If the graduating clasies of our grammar and laigh schools were to adopt the custom of presenting something to their school on leawing it, really valuable collections might be formed in such institntions within a wery short time. Once started; such a custom would doubtless be gladly carried out by each succeeding class, but it might be a matter of some difficulty to inadgurate it among children to whom it wonld be new and whose parents might look upon it as a tax upon them by the teachaers. * * *

If the pictures are the actual property of the schools, they are likely to remain permanently on the same walls. Better restalts may be obtained from movable collections which, after being showa in one schood, are removed to make room for another collection, and so on, until an extended rotation may bring the first series back again. If the material is ample, this may not oceur until the children have either changed or have thoroughly forgotien the earlier series. With such a series of collections, a very large number of subjects may be brought before the children, stimalading their intenest and autckening their power of comparison, and certainly creating an increased appreciation of art. That, indeed, is the object those who base inferested themaselves in this matter have most at heart. Yet it should not be forgotten that very many schoolnoora decorations can lhave an educational value and can be usefully employed in actual study. Their utility should not be forgotten in their lbeauty.

Art in the Schoolkoom Thiequh Decoration ánd Works of Att.
Miss Stella Skinner and Miss M. Rachel Webster, of New 畀aven, Conn, have published "A list of casts and pictunes suggested for the first eight years of school, with special reference to the general course of stady in these grades." The list was prepared with special reference to the schools of New Haven, and contains lists of casts and pictures classified by years and minder the headings of general art culture, literature, history, language, geography, and historic art. The names of painters are added in most cases.

Miss Skinner delivered a paper before the Buffailo menting of the National Educational Association on this subject, which may be considered an illumanation of her list. It is here reproduced from Art ELducation, October-November, 1896:
"Many of our primary teachers responded to a suggestion, made several years ago, that a picture of the Madonna be hang in the schoolroom in connection with the Christmas idea. This gave rise to a discussion in a subsequent teachers' meeting as to how the picture should be interpreted to the children. Some felt that its religious significance should be given, but the consensus of opinion was that it should stand as the type of motherhood and the love which surrounds all children.
"We were much interested to learn what madonnas appealed most to the children, and found that their choice centered upon thanee: Raphael's 'Madonpa of the Chair' and 'Sistine Madonna,' and the Bodenhausen 'Madonna.' Even the little children are impressed with the majesty of the Sistine; but I think they love most the 'Madonna of the Chair,' in which brother love is added to parental.
"Many touching incidents are recalled connected with the pictures. The children were eager to tell of home babies; that was the way their mother loved their baby; and we came to realize that some of the poorest homes were rich in affection. The primary children of one of our Sizaday schools commemorated the

Christmas season by giving a Bodenhausen Madonna to one of the mission kindergartens. The picture was placed against the wall, while the teacher told the Christmas story to the children clustered about it. As they turned to go to their tables, one little waif asked if he might 'kiss the baby,' and straightway every little urchin in turn bent over and reverently kissed the Christ-child as he turned to go to his work.
"A few weeks ago I asked a thoughtful primary teacher, who is in close sympathy with the best kindergarten ideas, for her experience in interpreting the madonna idea to her children. After relating the various plans she had tried, she gave as the result of her experience the opinion that the most satisfactory way was to let the picture greet the children when they first entered school in September and become familiar to them, but to defer its interpretation until the Christmas season. One little fellow confided to her that the picture ' made him think of his mother; she was awful nice.'
" With the madonnas was told something of the life of Raphael, his unselfish character, his eagerness to learn, and his being a countryman of Columbus, living in sunny Italy at about the same time. In many instances the beautiful boyish portrait of Raphael was shown.
" We were agreed at the outset that pictures in a schoolroom should serve two purposes-primarily, that of general art culture or spiritual uplifting, and secondarily, the strengthening of other school subjects. While a picture might serve both purposes, it need not necessarily do so. * * *
"Aside from pictures expressing a religious idea, other illustrations of childhood are needed, and of animal and plant life, such as 'Feeding the Chickens,' by Jacques, and Lambert's ' Family of Cats.'
"Van Dyck's 'Children of Charles I' is always a favorite; the pupils note the family resemblance in the children; they think they must have a kind mother, because they look so happy and neatly dressed. They decide that the children have their 'Sunday clothes' on because they are having their picture taken; and they enjoy the little spaniel at the brother's feet. Other artists suggested for study in the primary grades are Michael Angelo, Murillo, Dupré, and Millet. While the work of Michael Angelo, the man, requires maturity of thought for comprehension, the boy Michael carving the faun's head out of a piece of marble interests children very much, and the story connected with it delights them. Even tiny children speak of the laughing expression on the faun's face. Michael Angelo, the stern, serious, lonely man, has little attraction for children, but they can he told of his devotion to his work, how he 'wrought with a sad sincerity' to express the great thoughts which came to him, and how his life was gladdened by having the sunny-natured Raphael for a friend.
"Cattle and sheep being subjects for special study in language and science in the second and third years, Dupré and Millet were chosen as representative artists. The children enjoy Duprés cheerful episodes of farm life. His 'Escaped Cow, and the frantic efforts of the farm boy to catch her, delight them: while 'The White Cow,' with the young girl milking, and her mother watching from the doorway, is a charming pastoral scene. In sheep pictures we have an embarrassment of riches -Millet's 'Shepherdess:' • The Sheepfold,' by Jac!ues: Le Rolle's 'In the Meadow, Monk's •Hillside, 'and many others; while • David the Shepherd Boy, by Elizaiseth Gardner. is full of inspiration.
" Other choice pictures for primary grades are Bouguereau's 'At the Fountain;' a young girl in the dewy freshness of childhood, looking at you with wistful, appealing eyes. her hands clasping the handle of a quaint pitcher. or teapot as the children called it, until one little Italian remembered having scen similar water ressels in his native land. Also. Madan Le Brınn's portrait of herself and daughter; Von Bremen's 'By the Brook,' and Reynolds's 'Augel IIeads.' Une little
girl liked the 'Angel Heads' because ' if she was good she would be like them some day.' Another 'because they were in the sky,' and yet another because 'it helped her to be good and kind.' * * *
"It has been my experience that little children manifest most interest in pictures containing some human element. Pictures of animals rank next, while landscapes, marine views, etc., come last on the list. When this human element is lacking, the children's imagination always hastens to invest the picture with some suggestion of life. * * *
"In the intermediate grades, Landseer as the painter of dogs, Rosa Bonheur of horses, and F. S. Church of lions, have been chosen for special study.
"Also Thomas Moran, the painter of Western scenery; Jules Breton, who gives us such happy illustrations of out-of-door labor, and Boughton, for his artistic interpretation of incidents in the lives of the Pilgrims. Then, too, in these grades, where the children are passing from the happy unconsciousness of childhood ta the 'long, long thoughts of youth,' casts and pictures of ideal grace and beauty have been suggested as a constant influence in shaping their ideals. Thorwaldsen's seated ' Mercury;' the beautiful bust of the ' Maiden of Lille;' Burne-Jones's 'Hope,' and 'Temperance;' Max's 'Nydia;' the 'Viking's Daughter,' by Church, and Thayer's 'Brother and Sister.'
"In the grammar grades, the masters of landscape and marine are studiedCorot, Innes, Edward Moran, and Turner; and in addition, such pictures as 'Queen Louise,' Tadema's 'Reading from Homer,' Mason's 'Harvest Moon,' and BurneJones's 'Golden Stair' have been selected, the aim being to give variety both as to subject and cost, but to 'hold fast to that which is good.'
"In casts we have tried to follow the same sequence of thought as in the pictures, madonnas, and cherubs, with miniature animals for language lessons in the primary grades. In the intermediate, choir boys, animals, and mythological subjects related to literature and examples of historic art, while in the grammar grades the choicest of Greek and Roman sculpture, busts of great men, and typsical examples of historic art are chosen.
" Realizing the great desire for color on the part of children, and the need of it in our schoolrooms, a diligent search has been made for suitable pictures to meet this want. Many flower and fruit pieces have been found, and assigned to grades in harmony with the plans for nature study and drawing. Some good reproductions of landscape and marines also, and a few historical pictures, besides dainty little color sketches of children, birds, and animals for primary grades. Some interesting suggestions of simple, conventional colored pictures of the seasons and of Mother Goose incidents were shown at the recent Brooklyn exhibit of works of art and warmly advocated by one who had given the matter careful thonght, and $\pm$ hope soon to test their value in the schoolroom.
"It is not easy nor perhaps necessary to decide what pictures should be considared under the head of art culture, and what ones classified under literature, United States history, geography, and historic art. Some minister to many needs, nearly all tell a story which may be utilized in language, literature, or history.
"Those for primary grades, in which the story claims the attention, such as Pandora's Box, Duprés Balloon, Rosenthal's Home from a First Voyage, or Hardy's Ulysses Ploughing the Seashore, would be classified as language pictures, while portraits of anthors, with views of their homes and pictures illustrative of their writings, would come under literature.
"In this connection, and also in geography and history, not only pictures to hang on the walls, but portfolio collections and note-book illustrations, should be borne in mind.
"We find that the children are very fond of the portraits of authors. I was surprised the other day to learn how many pupils in a first year primary room

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preferred a picture of Longfellow in his Study to anything else in the room and greatly pleased with their explanations of the picture. In very broken English, for the most of the children were Russians and Italians, one boy told me the story of the school children presenting Longfellow with his study chair, while the others listened delightedly.
"But above everything else, the children love the portraits of our national heroes. Recently, in a class of children 11 and 12 years old, 24 out of 30 chose a portrait of Washington from the half dozen or more pictures hanging on the walls. All statements as to choice were made in writing, so as to have them unbiased. Various reasons for their preference were given-his bravery, honesty, and kindness to animals--but the three which predominated were that he was the 'Father of his country,' our 'First President,' and that 'He never told a lie.' One pupil, a boy of 12 , writes in answer to my inquiries: 'I like the picture of George Washington because he was so brave, and that he didn't tell lies. If I bought a picture I would buy one of George Washington. Of all the pictures I ever saw, I like George Washington's the best. I could live with it for all my lifetime, because I love it so well.' Another boy of 16 years, so pitifully crippled that he could scarcely write, says: 'He was the finest Christian, and we want to follow his example. I am trying to do it.'
"History is full of incidents for illustration. Beginning with early local history, we have a picture of the 'First Meeting House of the New Haven Colony' and the 'Charter Oak at Hartford.' Enlarging the circle of experiences, we learn of the adventures of Columbus, of which there are some good illustrations in color. Incidents in the lives of the Pilgrims have been most delightfully pictured by Boughton and Bayes, as well as immortalized in verse by Longfellow.
"I wish, however, to enter an earnest protest against placing pictures of war and carnage upon schoolroom walls. If we must teach the horrors of war through pictures, let them be in the form of portfolio illustrations for incidental use. Let us teach our children that our wars have resulted from a difference in principle; that men have fought because true to their convictions, but that universal brotherhood never dies. It has been truly said that we teach our children the England of George III rather than the England of to-day, which fact is doubtless largely responsible for the distrust and resentment which many Americans feel toward their mother country. We, the victors, can afford to be generous; let us banish from our walls and from our memories pictures of men mad with the insanity of war, and put in their stead such ones as Hovenden's 'In the Hands of the Enemy,' where all difference of opinion is forgotten in the care of a young wounded Confederate in a Union home. To live for our country, rather than to die for it, is the lesson for to-day. Let us teach our children that they live in a country made free and upon soil consecrated by the blood of patriots; that their duty is to preserve these blood-bought privileges by brave and unselfish living; that, in the words of Carl Schurz, 'To live for a good cause honestly, unselfishly, laborionsly, is at least as noble and heroic as to die for it, and usually far more difficult.' I would not be understood as decrying hero worship. Let us establish as high inleals as possible; but let us teach that it is as heroic to lead a campaign against filth. corruption, and vice in a modern city as to direct an army on the battlefield.
"In geography the aim has been to select typical illustrations of the various sub,jects for portfolios, and to call attention to pictures by good artists which might be utilized, as Turners 'Approach to Venice,' Moran's 'New York from the Bay; •()n the Coast Near Scheveningen, loy Mesday, and Schreyers • Halt on the Oacis.' Elwin D. Mearl says: 'A bright boy would without effort, and almost, by the by learn ten times as much about the aspect, the industries, and resources of the United States if a series of great photographs, now so accessible and so chetry, of the White Mountains, the New England coast, the beauties of the Hud-
son; scenes in New York, the metropolis of the country; in Washington, its capital; the Great Lakes, the Mississippi, the prairies, the Rocky Mowntains, the Pennsylvania coal mine, the Southern cotton field, and the cornfields of Dakota were. on the walls of the school or in portfolios as he could learn by weeks of study in the books.'
"In historic art illustrations the way is comparatively clear. Having a welldefined course of study in art education, such examples of architecture, sculpture, and ornament as best illustráte this course should be assigned to each grade, correlating geography and, later, general history with it as closely as possible.
"Modern and local examples of the different styles should be studied and compared with the originals. For instance, with Egyptian art we show the gateway to Grove Street Cemetery as a beautiful example of the pylon. Our old statehouse on the green, of which pictures have been preserved, is a good example of the Greek; the 'Scroll and Key' Society building of the Saracenic, and Osborn Hall of the Romanesque.
"Sometimes, art features being equal, there is a choice in object as to the story embodied. One would, therefore, select the arch of Constantine rather than that of Titus, one celebrating, as it does, the victory of-Christian over pagan beliefs, the other the downfall of Jerusalem.
"So, too, one would choose 'Orphems, Erurydice, and Hermes' in preference to 'Aphrodite Persuading Helen." ${ }^{\text {" }}$

As the teaching of art in the pribic school is closely related to the art decoration of sehool rooms, the following articies, by Mr. John §. Clark, of Boston, are added: The first, on the "Creative power in art," was delivered before the annnal meeting of the Western Drawing Teachers' Association, in Aurora, Ill., March 28, 1895. The second, on the "Place of art in general education," is part of a discussion at the Denver meeting of the National Educational Association, July, 1895.

Creative Power in Art.
This gathering of enthusiastic workers in the cause of art education, and these exhibits that ine the walls, showing what a practical, helpful outcome your work has reached in the schools, move me involuntarily to retrospection. It is now twenty-five years since the American movement for art education began in Massacbusetts, and it has been my good fortane to be identified with it almost ever since its inauguration. You all know it was Fogun by Dr. Philbrick, then the superintendent of the Boston schools and a member of the (Massachusetts) State board of education; Mr. Charles C. Perkins, of the Boston school board, and Mr. Walter Smith, the first state director of drawing for Massachusetts. I became identified with the movement almost at the first, and perhaps have done not a little in carrying the work beyond Massachusetts. All three of the persons named have pacsed away, and to me alone of the four who took up the brunt of the work has it been given to see the growth of the undertaking to its present development.

There are among you some who can remember the early days of this great movement, and who can recall how, notwithstanding the initial work was so great an advance upon previous instruction, it yet embodied only a partial understanding of what art might and should be in education, and only the most meager notion of its relations to the rest of the school instruction. The exhibits on the walls here in this building to day stand for the truest and most advanced progress that has yet been made in this country; and what a contrast they present to the earlier work. Massaehusetts herself, the birthplace of the movement, with all her State direction of thestudy, can not produce results as significàntas these in their showing of the development of children's observation, thought, æsthetic feeling, and creative power.

But great as has been the progress in the past, still greater progress lies before us through the larger opportunities for still more important work. We are now facing new demands upon art education arising from the enlarging ideals of general education that surpass everything in the past. Those of you who were present at the superintendents' meeting in Cleveland a few weeks ago, or who have read the report of the committee of fifteen which was then submitted and discussed, know that the greatest of all educational questions was there made an issue. The question which was discussed by Dr. Harris on the one hand and by the representatives of experimental psychology and Herbartian pedagogy on the other hand amounted really to this: Is the essential being of the child-the soul of the child-an inborn entity, or is it a gradual synthesis of sense activities? It was stoutly insisted upon by Dr. Harris that, before discussing how to correlate the studies in the curriculum of which we hear so much in current educational discussions, we must consider what the essential values are which have to be correlated; that before we can intelligently discuss the question of concentration in the instruction, we must first determine where the true pivotal point in human education is upon which to concentrate.

In this meeting to-day the subject assigned me is " Representative drawing," but instead of speaking on any detailed points of technique, which will be ably and sufficiently treated by others, I wish rather to remind you of some of the larger implications of the subject as involved in the current discussions of education as a whole, and of the true relation of art education to the discussed question.

To come directly to the point, let me ask, first, What is art? What is its significance in the social life of man? Briefly we may say it is the sign and product of the creative activity of the individual. Now, creative activity is something different from and more than the mere expression or reflection of seuse impressions received from surrounding nature. It is different from and more than any mere report or repetition of what has been found in nature through the study of natural science. We hear much in these days about science study and nature study. They are often championed as if they in themselves constituted the only true and sufficient education. Now, I realize their undeniable importance in education, I would not say a disparaging word of natural science or nature study in the schools. In fact, I would be glad to help enforce the thought of their importance. But shall we not be making a great mistake if we undertake and claim to find in nature all that children need?

I have. been a careful student of the works of those who are directly ocecupied with physiological psychology, and also of the doctrines of those educators whose pedagogical theories are professedly based on this laboratory psychology. I feel the greatest interest in the experimental researches that are going on. It certainly is of immense importance for us all. to know as much as we can learn about how body conditions mind and soul and how sense experiences influence mental activities. Many of these researches into physical conditions and tendencies are full of suggestiveness to both the educator and the philanthropist. But they can not of themselves rightly constitute or produce any new philosophy of education. They only emphasize the great need and opportunity for the practical exercise of some philosophy that shall be sane and sound. The mistake made by some of the educators of the day in dediucing theories of education from this modern laboratory psychology is that they forget that such investigations have to do and can have to do with only one side of the child's life, $i$. $\theta$., his sense contact with his material environment. Of course if one takes the frankly materialistic ground that what we call spiritual life is only a specialized form of molecular movement, another link in the circle of natural forces, then it would be perfectly logical and consistent to make the observed effects of sense contact with the material world the exclusive basis of educational theory and practice. But if we believe in the reality of spiritual forces and spiritual powers which are not derived from matter
nor from the forces playing through matter, then it becomes conceivable, even inevitable, that a good part of the child's life should be recognized as all the time going on in a manner everlastingly its own manner, influenced by but not entirely dependent upon the sense impressions received from the outside world.
Without attempting to argue the question in detail, the broad and beautiful inner life of a girl like Helen Keller, almost cut off as she is from the world of sense, wholly deprived of sight and of hearing, yet with a mind and soul so alive and so exquisitely responsive to what is best in human experience, would certainly seem to indicate the limited relevancy of sense susceptibility to soul activity.
The physiological psychologists are rendering a great service in the cause of education through their studies into the physical conditions of mental action. They do not profess to measure, weigh, and tabulate the element of individuality or personality in the child. The educational mistakes made in the name of physiological psychology are usually made not by the laboratory students themselves, but by those educators who quote and use their recorded experiments as a complete statement of what teachers have to work with, instead of seeing that it is only a partial statement.

The attack made by some of the new school of educators upon all educational theories as worthless is a curious inconsistency, for this attack in itself implies a theory that the natural instincts and tendencies of the child are invariably good, or at least good enough, and that the entire absence of constraint or coercion will secure the best general development.

## The Senses

Fig. 1.
It seems sometimes as if some of the educators of the new school assume the child to be something like an æolian harp, whose destiny is simply to vibrate according to the determinable laws of acoustics in response to the impulse of moving air. They seem to advocate that all we need to do as teachers is to study the composition and growth of the wood and strings in the æolian harp, study the laws of tension, study the atmospheric composition and meteorology, and then place the harp, as well made as possible, where the wind will blow over it under the most promising conditions, and accept with reverence whatever sounds are produced. They overlook the main spiritual fact of the child's life. They forget that there is an invisible and unmeasurable something born in the child which also enters into the problem, and actually counts for more than any of these visible and measurable material elements in determining the nature and quality of his activities and the character of the product of those activities.

Let me illustrate what I mean by a diagram which I know is familiar to many of you.

You teachers know that you never really see the little child who is before you. You see the externals of him, you see the manifestation of his activities, but the real child himself you can only infer from those activities. How does the outside world reach the child's inward self? Through his senses. And how does he manifest or express to the outside world his inward states and activities? Chiefly through the tongue and the hand; through what he says and does or makes. Now, is everything that he makes an art product? That is the question that we must
answer first of all in the face of the general problem. If a certain object in his environment makes an impression on him through his sense of sight and his hand at once registers or records that impression ly drawing, is the drawing a work of art? Not necessarily. To a large extent that would be a purely mechanical process by which undulatory movements of the all-pervading ether induce muscular movements in the fingers. The child's personality may scarcely enter it at all. If it does not enter into it, the product is not art. But see what else may take place. If the impression appeals to the child's personality, if he thinks about it, absorbs it, and digests it in a spiritual sense, it becomes transformed, somewhat as bodily food is transformed; it becomes an organic part of himself. Then, when lis hand moves in obedience to his will to create forth an embodiment of his new experience, the drawing is a great deal more than the sign of delicately correlated physical forces. It is the manifestation of the childs spiritual life; and being this, it is, in an elementary way, true art.

This bit of practical psychology leads us to an important educational consideration. While giving due place to nature study, we need also to place great emphasis upon whatever tends to develop the essentially spiritual nature of the child. It is true we do not know where the consciousness of the child comes from or just what it is. We know no more about it to-day than the Greeks did in Plato's time,


Fig. 2.
for all the intervening centuries of study and speculation. Here we are in the presence of the unknowable. But what we do know or may know is something abont the more effective ways of appealing to it through the intervening space and darkness. The gist of our whole educational discussion is here. Spirit is acted upon more through the contagion of what is itself spiritual than through the incentive of what is itself material. The true educational service rendered by the teaching of natural science is not the development of soul out of coordained sense impres.ions, but the nourishing of an already existing soul with sense impressions which shall be spiritually absorbed and assimilated so as to furnish the creative imagination with worthy and abundant material on which or by which to work. The bee, so Joln Burroughs tells us, does not "gather honey all the day" ready marle. He gathers flower nectar. Honey is the bees own product. It is the nectar plus the bee.

Is there any question as to the comparative value of the material and spiritual sides of human experience and social life: Look over the multitndinous occupations of civilized men to-day. Stand on some street corner in the busiest part of Chicago at the close of day, when the throng of home-going workers is proring by. To what end is the daily toil of those myriads directed? What is there of
permanent good in the outeome of this perpetual activity? More than nine-tenths of it all goes simply to sustain and continue the mere physical existenee of the race. Men and women work to-day to prodnce food and shelter and clothing so that they may be able to go to work again to-morrow and earn the means of subsisting another day so that they may go to work still another day, and so on and on. But is this all? Does human activity move only in this circle on the physical plane without ever producing anything of permanent value? Let us see. What becomes of the grain raised by the labor of the Iowa farmer? It goes all over the world. As food it is taken up into the physical systems of all sorts and conditions of men in different quarters of the globe. The larger part of it counts simply in strengthening other men-the carpenter, the mason, the machinist-to do other kinds of simple prosaic work, all on the same frankly physical level as the work of the farmer, and all alike productive of things consumable and perishable. But perhaps some portion of the farm product feeds the brain of a Tennyson or a Lowell, and helps make possible the composing of an "In Memoriam" or a "Commemoration Ode;" or a Millet, and helps him paint "The Angelus;" or a St. Gaudens, and helps him model a heroic Farragut or Lincoln; or a Richardson, and helps him build a church like Trinity in Boston. Then the humble material product has fulfilled a still higher destiny. It has helped loring into existence spiritual creations which do not die, but which, by spiritual induction and contagion, lead to still other spiritual activities in still other men. The perpetaally inspiring power of any truly great work of art is one of the best examples of the truth of George Eliot's saying, " Fruit is seed."

If we look back over the history of past times we find that all we have left of men's highest activities, i. e., their spiritual life, in any tangible form, is their arts-


Fig. 3.-The thistle of the scientist. their architecture and sculpture and painting, their music and literature. It has always been true that the labor which has devoted itself to externalizing the spiritual life and experience of man, and that labor only, has succeeded in producing imperishable values. That is to say, history teaches that art values are the only permanent values.

And education to-day in the search for the point of concentration ought not to be unmindful of the lesson of history. We hear a great deal about the necessity of making everything "practical," of giving boys and girls such training as will enable them to earn a living. True they must be equipped with a knowledge of matter and force, and with a command of their own minds and mascles, that they may be helpful and so self-respectful members of society; but, more than this, public education should see to it that every child, according to his ability, shall get some glimpse into that world of life and creative activity which exists above the
plane of mere physical existence, and whose products are the only permanently visible legacy which one generation leaves to the next as fruit of its own life experience. The child born at the close of the nineteenth century ought to come into a rich inheritance not only of physical luxuries and mechanical conveniences, but also of great thoughts and inspiring emotions.

Art, as we find it in the world, and as we agree to treat it in education, has a threefold aspect, or embraces three distinct yet closely interrelated phases of creating forth on the part of man. We have constructive art, with the shaping of the first rude hut and implement at one end of the scale and the building of the world's great temples and cathedrals at the other end. We have representative art, with the rudely scratched animal outlines on the walls of savage caves at one end of the scale and the Sistine Madonna at the other end. We have decorative art, with the zigzag ornament on prehistoric pottery at one end of the scale and the Parthenon frieze at the other end. We need to keep constantly before us as teachers that it is creative ac-


FIG. 4.-The thistle of the artist. tivity of mind in each of these divisions of study that we are to endeavor to bring out in the children in the public schools.

Now, the particular line of art work and art educational effort about which I have been asked to speak is that of representative art. What bearing have these thoughts about art which we have just been considering upon representative drawing as taught in the public schools? What really creative element can enter into representative work?

Now let me turn to a prolific field for creative art work-to the nature study and the natural science that are coming so generally into the schools.
I have here two different renderings of the common Canada thistle. Figure 3 is copied from a drawing by Professor Sprague, a generally recognized authority in the making of botanical plates. From the strictly scientific standpoint, the standpoint professedly assumed in the teaching of natural science in the schools, it is an excellent drawing. The scientific attitude toward plant life is aggressive and inquisitorial. To the scientific thought all facts, being facts, are in a certain sense equally important; hence in this representation of the thistle you see all the visible details of its structure delineated with absolute impartiality and so given equal prominence. The whole amounts to a strictly impersonal and statistical statement of observed facts. The leaves of the thistle are of such a shape, in such proportion, ranged in such an order on the vertical stem. Their outlines have sharp protuberances, as noted. The scales of the flower involucre are arranged in the manner shown, etc. The material facts of the plant are there. Except for our knowing that drawings do not grow but must be made by human hands, there is no suggestion here that
any human mind has been in the least concerned with that thistle. In short, it is a statement of nature's facts, with no evident human element in it. It serves its own special purpose well, but that purpose was not an artistic purpose, and the result is not art; for representation in art is the visible embodiment of inward spiritual experience.


Fig. 5.-The house that the carpenter built.
Figure 4 is an artistic treatment of the same plant, where we see not simply facts as facts, but facts as they are felt by a live human being with eyes and imagination, and so we have here the combined forbiddingness and delicate


Fig. 6.-The artist's thought of the poet's home.
attractiveness of this live, contradictory pasture weed. I remember that when I was a boy chasing anruly cows through fields grown over with this particular plant, the prickliness, which was meant for its natural defense from all such destructive elements as cows and boys, made much more impression upon my bare legs than the delicacy of its form and color made upon my eyes. But time has
averaged up the two impressions into a happy "composite" such as is expressed for you here. See how the silky tuft of clustered flowers that nurse the plant's young seeds is surrounded by the spiny leaves as if by a guard of grim soldiers.
Figure 5 shows you a drawing of the old Holmes House at Cambridge, a severely accurate outline, where the draftsman contined himself strictly to the facts in car-


Fig. 7.-A house and a barn.
pentry and perspective. It is merely the mechanical sum of a certain quantity of lumber and nails.
Figure 6 shows the same house as it looked to another person who thought of it not as a mere aggregate of wood and metal, but as a poet's old home, a center for happy reminiscence and beautiful thought. The lumber is all there and the perspective is rendered as correctly as before; no essential truth is slighted, buthuman


Fra. 8.-Home, sweet home.
feeling has entered into both the thought and the rendering, and the result, simple as it is, is a real creation, embodying forth a happy concoption of the old gambrelroofed house in the artist's mind.

Figures 7 and 8 show two modes (literal and imaginative) of treatment of the same bit of country landscape. Figure 7 sets down rosiway and house simply as
topographical facts. Figure 8 is the outcome of real interest in the house as being a little liome, a place for the affections to cluster about and for memory to return to.

- Figures 9 and 10 show you still another form of what I mean by the creative element in representative drawing. Figure 9 is the bare, impersonal statement of how the outlines of land and sea and sky presented themselves to the eye of an


Fra. 9.-Just as it happened.
observer at a given point on the shore. The statement is accurate, but the result is ugly and wninteresting. We will suppose our artist really loved the seashore and wished to make somebody else understand how he felt about it. He walked along the shore till he came to another point where the outlines of the same


Fig. 10.-The artist's creation, through selection and composition.
general features of the landscape could be made (as in fig. 10) to embody his inward conception of the real spirit of the place. Possibly he could not find any one spot where the shore line and the boats and the old mooring post all were in the position most helpful to his purpose; in that case he may have put the post in not just where he saw it with his physical eye, but where he saw it with his mind's
eye. The result is that that bit of characteristic detail stands not as a kodak would have left it, a great, ugly blemish on the scene, but a delicate indication of relative distances, making the passing boat seem farther away and suggesting at once to the imagination a broad level of smooth water stretching out toward the distant background.


Fig. 11.-Incongruous as to size and character.
Fig. 11, with its assemblage of objects incongruous both as to size and to character, shows that the mere assemblage of several things in close proximity is by no means the whole problem involved in the artistic grouping. These objects are all more or less interesting in themselves, but there is no natural association between them. They do not make each other more interesting or pleasing; their proximity would seem to be a meaningless accident with no idea behind it and


Fig. 12.-A scattered arrangement.
suggesting no idea to the observer. Good grouping is the creation of a new whole which embodies thought and feeling. This group is evidently bad.

Fig. 12 shows a number of objects that indeed might have interassociations of an attractive sort, but you feel uncertain whether the person who made the drawing had any definite conception and purpose or not. The outlines of the group are ugly because of the "scattered" arrangement of the separate members. In
fig. 13, on the contrary, we see the distinct pleasure that somebody has taken in the same pieces of fruit; we see now, as we did not see before, how those plump curves stand for firm pulp and sweet juice; now that one thing is shown as partially behind or above its neighbor, we see that the objects'really do occupy space, that they are solid and not merely flat images. The long, sleek lines of the banana make the chubbiness of the apple and the dimples of the pear all the pleasanter to the eye, and vice versa. Each item in the group is more beautiful and more suggestive to the fancy because of its associations with the other items, and the whole is not simply their sum, but their product. It not only gives us botanical information, but also gives us somebody's thought about this bit,of the vegetable kingdom and quietly reminds us what a pleasant way mother earth has of bringing forth her fruits in due season.

Look for a moment at this bit of mediæval architecture (Fig. 14), the old gate of Basle. This we shall all agree was a genuine creation. The builder had to meet a practical problem of ingress and egress and defense against enemies. His inward conception of what a city gate should be-solid, serious, dignified, at once protecting toward its own citizens and forbidding toward intruders-took this


FIG. 13.-A group showing relation and unity.
outward embodiment in stone. The gate is therefore an art creation in the true sense-the outward and visible expression of invisible spirit.

But let us see what there is in this old gate which art workers to-day have to work with (Fig. 15); cylinders; prisms, square and hexagonal; pyramids, square and hexagonal; the very same forms that we to-day are trying to lead the children to understand so that they also may use them in creating new forms of use and beauty. It was through the old-time builder's thorough knowledge of the essential characteristics of these common type forms that he was enabled to use them in a vigorous and beautiful way and make them embody his thought of dignity, strength, protection, and defiance. It must be through the child's understanding of these same eternal types, if at all, that he in turn will be enabled to use either these basal types, or things pesembling the types, in the creating forth of his own growing thoughts and ideals. In either fine art or industrial art the understanding of the type forms is absolutely necessary as a foundation upon which the creative imagination is to build.

It is a common experience to find educators agreeing that refined feeling for
composition (that is, for the delicate relations of part to part whereby each strengthens the best of the others and makes all into a single harmonious whole), while necessary to fine art, is entirelyirrelevant to such drawing as can be done in connection with nature study and with models and objects in the schoolroom. But is that quite true? I think the best answer to the claim that scientific drawings must be just bald, bare statements of fact is to be found in the drawings that Mr. William Hamilton Gibson actually does make. I earnestly commend his books and his articles in Harper's Magazine to your careful study. I have a few of his original drawings here to show you: "The Beetles" Orchestra," "The Bees Harvest," "The Brown Thrasher," and "The Harebells." Nothing could be more exquisitely accurate than these drawings. They tell us all the facts that can be told without dissecting the forms and mapping out their inward anatomy; and they tell us a great deal besides. They show us not simply the details of proportion and articulation, as these might be learned from specimens impaled on pins in a case sprinkled with corrosive sublimate, but also the life of the things, their happy, busy life, with all its associations of sunshine and soft winds and sweet odors and juices of blossoms in the field. This is, after all, the very best kind of "scientific" drawing; and it may well remind us that while this kind of bread for the spiritual life is possible and practicable, we ought not to turn our backs upon it and feed the children on stones.

This bit of verse, whose author I do not know, seems to me to embody the spirit of Mr. Gibson's drawings:

> Innocent eyes, no ours,
> Were made to look on flowers,
> Eyes of small birảs and insects small.
> Morı after summer morn
> The sweet rose on her thorn
> Opens her bosom to them all.
> The last and least of things
> That soar on quivering wings
> Or creep among the grasses, out of sight, Has just as clear a right
> Toits appointed portion of delight As queens or kings!

If we only rightly apprehend the matter, there is no need for any antagonism between science teaching and art teaching in the schools. There surely can be no such antagonism when it is once clearly understood that nature is the realm of the material and art the realm of the spiritual. The spiritual is largely conditioned by the material, but not evolved out of it. So art work is closely reiated to nature and yet is quite distinct from nature. You can never arrive at art, as some people rainly imagine, just through the incidental use of drawing as a means of graphic record of observatious in nature study and other school lessons. As art teachers and directors we want to stand by our faith in art in the schools, not as just the servant of the sciences of matter, but as the visible emboriment of the highest and best thought of the child who is studying about matter. There should, it is true, be the closest relation all tlirough the school course between the art instruction and the other lines of instruction; but let us sec clearly. and make others see clearly, that correlation between art and the other subjects should mean not so much the utilizing of what is spiritnal for the sake of greater gains in the matrrial, but rather the otilizing of all gains in the realm of the material for the nourishment and upbuitding of the spiritual in the individual child. For (as we have been reminded a few moments ago in nur glance over past history) it is just this spiritual element in individual men which hasin each generation kept human society in some degree abowe the mere animal level of eating and sleeping. It is this spiritual clement in individual men on which our whole hope of a higher race development in the future and a nobler human society must rest.

If we will only recognize thus clearly what art is and what art education means, we can bring about a perfect practical reconciliation-of what is essentially true in the two great schools of educational thought that so often meet in conflict as they did in Cleveland. Those edacators who plaoe their emphasis on the giving of access to the accumulated embodiments and products of the best life and thought of the ages are right in that omphasis. Those educators who demand that childhood shall be considered not vaguely in the mass, but intelligently and Bympathetically in each individual, are right in that demand. I believe it is through art education that it can best be demonstrated that these two educational essentials are not antagonistic, nor even inconsistent; rather that, taking each in its best sense, they are necessary to each other. The more the laboratory psychologists remind us of the ways in which spirit is fettered and tied down by material conditions, the more keenly we shall realize that the child's spirit needs to be brought


Fra. 14.-The old gate of Basle.


FIG. 15.-Theunderlying type forms.
into closer relationship to the very best of man's spiritual life which can be made accessible to him to lift him up higher. If it is our duty to give him a share of the material benefits derivable from centuries of mechanical invention and industrial skill, it can not be any less our duty to give him a share of the spiritual benefits derivable from centuries of noble thought, refinement of feeling, and happy enthusiasm for the beautiful. So we as art directors should cordially welcome the new movement for schoolroom decoration. We hope as a result of it that schoolrooms will more and more surround the impressionable young life of the children with immortal reminders of what noble men before them have found in life and made out of life.

In the olden days when the warrior in a good cause went forth to battle, he sometimes flung his spear into the midst of the opposing host, and then, with his strong right arm, bravely struggled forward until he stood over it.

We who are battling for art in education should, with equal courage, fling our shaft-our belief in the spiritual nature of man-into the thick of the opposing hosts that are now clamoring for the supremacy of the material forces in education, and with a sublime faith struggle forward through all misunderstanding, distrust, and antagonism, until we reach the goal of all true education, the point where the real shall be interpreted by the ideal, and the two be harmoniously blended in the education of every child.

## The Place of Art Education in General Education.

## Delivered by John S. Clark in Denver, July, 1895.

One of the greatest gains made during the half century now closing is the clearer insight of men into the meaning and the implications of evolution. There was a time when the newly discovered facts of the past history of the earth and its creatures, seen dimly and without much relation to other facts, staggered all but the most courageous minds with the vastness and ominousness of the problems they involved; but as years have gone by men have come to see the same gigantic and enigmatic facts in clearer mental perspective and under brighter light. Now the philosophy of evolution, as Dr. John Fiske and others clearly proclaimed it years ago, and as Henry Drummond has lately so admirably reaffirmed it in his work on the Ascent of Man, is the common possession of most thoughtful people. This evolutionary history of the world of man is only the scientific, detailed tracing out of the means and ways by which there has been brought about the stupendous fact of man's place in the scale of creation, which keen philosophic speculation had long ago made him conscious of, even while unable to understand or account for it. The theologian of three centuries ago meditated in the old Hebrew phrase: "When I consider the heavens, the work of Thy fingers, the moon, and the stars, which Thou hast ordained-what is man, that Thou art mindful of him?" But to-day, in the light of evolutionary science, the thought takes a different accent: "When I consider the heavens, the work of Thy fingers, the moon and the stars, which Thou hast ordained-what is man, that Thou art mindful of him? * * * Thou madest him to have dominion over the works of Thy hand; Thou hast put all things under his feet.".
Whichever road we travel-the old path of ontological speculation, or the new path of scientific investigation-we come out upon the same intellectual hilltop, namely, the thought that man, as a physical being, is the consummate product of material creation, while, as a spiritual being, he is the appointed master of material creation and the beginner of a new world of spiritual growth and spiritual creation.

The essential, distinguishing fact about him is his more direct relationship through his personal feelings and desires to the divine-that is, to the eternal spiritual reality of the universe-than exists in the world of matter around him, which can only passively reflect the divine.

I shall assume that we agree to start out from this standpoint in considering the question before us to-day; for, in order to think to any real purpose about the place of art education in general education, we should first obtain a clear idea of the relation of education itself to human development, and then the place which the arts of the race-literature, music, painting, sculpture, and architecture-hold in the development and training of spiritual man.
The first proposition that I have to offer you is one upon whose acceptance or rejection the general chaxacter of the whole scheme of public education must logically depend. It is as follows:

Proposition I.-That the human soul is a self-acting spiritual entity, which is more completely a revelation of the divine spirit behind all which is than
is shown in the material world; and that this soul or spiritual entity, when properly developed, dominates man's physical powers, making them and the material world subservient to itself.
We hear much in these days about the human soul as having no demonstrable existence per se, as being merely the sum of the material forces of the universe, and as possessing only such powers as are induced in it by the play of these material forces upon the bodily organism. This standpoint is practically assumed by that portion of modern empirical psychology which has been aptly described as "psychology without a soul." Ribot, in his work on German Psychology of To-day, accepts this phrase ("psychology without a soul") as fairly describing, in its negative aspect, that new psychology which confines itself to studying forms and conditions of mental action without any regard to the question of what the soul is or even whether there be a soul, and which treats psychic forces as merely differentiations from the material forces studied in physics, chemistry, and animal physiology.

Of course it can not be claimed that the mind or the soul is independent of the physical organism. We can not conceive of the human mind as being able to annul the laws of external matter. What I wish to claim is simply that the mind, being an entity in itself, has a certain power of control over that very matorial mechanism (the brain) whose conformation and functions condition it; and that it has also a certain original power of combining with and taking advantage of the forces of the material world so as to modify their actions and transform their applications.

Nor is it intended to deny that the senses are the appointed gateway through which we can come near to the things and the forces of the outside universe, or through which they can come near to us, and furnish our minds material to work with. What I do wish to remind you of is the fact that the spiritual entity belind and above all the man's sense-organs, that to which sense-impression appeals, is the thing of first and greatest importance.

You remember the famous aphorism of Leibnitz: "There is nothing in the intellect which was not previously in the senses-except the intellect itself!"

As a matter of fact, the stoutest champions of the theory of soul as a combination of differentiated physical energies can not keep their footing on its slippery ground. They can not explain, or indeed fully express, their own theory without falling back upon assumptions which are inconsistent with that theory.

The fact is, the whole scheme of experimental psychology or any dilutions of it-which aim to reduce mental phenomena to unmediated physical energies originating in the forces of the material world, and so to dispense with self-activity in the intellectual life of man-is (as Professor Ladd has pointed out with such clearness and vigor) based wholly on an assumption of the self-active intellect itself; that is, on the purely mental hypothesis of the existence of atoms and molecules, through which the primal energy can transmit and manifest itself. And this hypothesis is a pure synthesis of the mind. So we have the paradox of human being's denying that the human mind has any real essential existence as a selfactiug entity, and yet asserting that the ultimate basis of all so-called mental phenomena is t.:aceable to physical forces acting in certain minute units of matter, whose very existence is, after all, merely a convenient conjecture of this dependent physical mind itself!
We must remember that this question as to whether the soul is a self-acting entity or merely a higher differentiation of molecular energies is more than justa curious problem for the biologist and the metaphysician.

It has a distinct bearing on the problem of child education. If mind development is taken to be merely a matter of automatic transformation of physical force through sense activity into thought activity, the general spirit and plan of educa-
tion (which aims at mind development) will naturally be quite different from its spirit and plan when it is conceived of as an appeal to a spiritual entity, a selfdetermining ego, with powers both of assimilative and creative self-activity, capable of being indefinitely developed according to the individuality of that ego. ${ }^{1}$
Let me not be misunderstood as underestimating the value of contemporary physiological psychology to education: Understood in its rightretation to educational problems, it can be of great practical assistance in educational work. The actual effect of bodily conditions on' mental activities is nowadays being better understood than ever before. Our practical appreciation of this understanding is shown in improved systems of ventilating, heating, and lighting schoolrooms, and in thoughtfally planned courses of physical culture. The actual importance of individual sense experience, as basis anid material for mental activity, is nowadays better understood than ever before. And our practical appreciation of this understanding is shown in the great movements for form study, for manual training, and for the experimental study of natural science. The more we understand of the subtle intercelations between the physical and the mental, the more directly we can go to the point in class-room teaching without so much futile misdirection of effort as has often been inevitable in the past. But the danger involved in this new enthusiasm for ghysiological psychology, or the staudy of "consciousness content-wise," is the danger lest it be taken to cover the whole educational problem, when it really covers only the lesser half of the problem. Educators to-day are in danger of overlooking that larger factor, "consciousness function-wise," in the child, which, though it can not be measured or weighed or tabulated in any sort of psychological statistics, has more weight in the determination and direction of mental activity than all physical and material factors combined. Practical education should not be suffered to fall into the mistaken, exclusive extreme into which is seems to be drifting, where circumstance and environment, acting automatically on the brain, are reckoned as all effective, and the elements of personal effort and personal responsibility on the pupil's part are hardly recognized. This extreme is, of course, easily comprehensible as a reaction from the old-time formal teaching. But either extreme is bad. And as a safeguard against the current tendency to suppose that sense contact with the things of the natural world may be trusted to solve the whole problem of right spiritual development, I feel that a firm stand should be made for the recognition of the individual soul with its

[^68]self-activitiew, developed through and responding to, but rot derived from, the material force of nature, as of the first and greatest importance in educational psychology and in practical educational work.

My second proposition is:
Proposition II.-That man, by virtue of this self-acting souI, becomes, in his highest estate, not-emly a transformer of the material conditions which surround him, but also an actual creator of new spiritual values of an altruistic character; hence his arts.
I can take time merely to suggest in the briefest fashion how man is a transformer of the material conditions round about him, and how his activities are imbued with the altruistic character; how he, and he alone, in contrast to all other living creatures, sets to work with conscious and deliberate foresight to change those very material facts whick, to a certain extent, experimentally condition his range and mode of inward life; and how his activities, crystallized into arts, have changed the face of the earth and the semblance of many of its creatures into something quite unlike their original eatate, making nature immensely more contributory to his own well-being.

Man's activities may be classified into two divisions, the useful arts and the fine arts.

The useful arts exercise his creative powers chiefly on but one plane of his existence and that the lowestr; namely, the physical. While they mark a nation's upward growth to a certain limited extent, they do not of themselves embody all of our race experience, nor even the best of our race experience.

The fine arts (peetry, music, painting, enlptiure, and architecture) are the forms in. which the higher life of man embedies itself. It is to these fine arts that we always have to look in order to learn in what way and to what degree a people have climbed up above the level of mere animals, clever enough to secure good things to eat, effective shelters from the weather, and convenient coverings for their bodies.

In a certain sense it may be said that there is a large part of the beat of our race experience which never gets embodied in any tangible material form at all, but acts for the creation of new conditions rather than new things, refining and elevating the quality of personal character and daily life, buit never shaping itself into any explicit forms of art creation. It is not quite true that these particular spiritual energies are ummet with in the fine arts-for, in indirect ways, the most commonplace toil helps make the work of ant possible (we all remember our nursery stories of how the farmer and the miller help prepare the child's breakfast for him),-and, in a still higher sense, every noble inware life helps create a more healthy spiritual atmosphere for all other men to breathe.

But the factremains that if we would direct our thonght to the definite, tangible records of man'\% higher life, we mast look for those records in the various forms of the fine arts.

Creative activity which brings forth the useful arts is service readered in laying the foundation of material civilization. Creative activity which brings forth the fine arts is service rendered in building the superstructure of spiritual civilization. Man is so constituted, and human society is so constituted, that the higher powers and activities of the race naturally and necesearily ultimate in the fine arts as the very condition of ever-develowing charactes.

Now, if we accept the doctrine of evolution, man's soul or spiritual self is the latest and fullest revelation of the divine cause of all that is, As has been said, this spiritual self has been developed through, but not derived from, physical creation, and this spiritual self coexists with the animal frame and the animal nature which constitute physical man the climax of physical creation. A constant struggle is going on between his animal nature, which is inherited from his animal
ancestry, and which works for self, and his spiritual nature, which is altruistic and which is impelling him forward to work for others. Man's arts are at once the evidence and the result of this conflict.

This is the unanimous affirmation of science, history, and religion.
My next proposition is:
Proposition III.-The history of civilization is the record of man's progress in the creation of spiritual values through the subjection of his own animal nature and surrounding material nature to the service of his spiritual needs and ideals-hence the world of art. For the arts of man are not merely incidental to civilization. They are the supreme products of his creative spiritual activities, the condition and promise of higher civilization.
It can not be too strongly emphasized that art is not a mere incidental phase of the life of man. Some people have an idea that it is so; that it simply happened in successive ages that people spent their playtime in building with blocks on a large scale, making "stone dolls," and composing tunes, rhymes, and fantastic tales-occupations whose remains are well enough to interest the idler of to-day, but which have no solid significance for practical people.

This notion of art is as far as possible from the truth of the matter. The fact is that in every age man's creative energies have embodied themselves in art forms in order to satisfy the irresistible divine instinct of creation within him, and make a way in which to share with his fellows his inward personal experiences.

The fact that we ourselves stand to-day where we do stand in the progressive march of civilization is due in no small measure to the earlier fact that generations of men before us, who lived and loved and suffered and hoped, and who wrought their own wonderment and desires, their aspirations and their hopes, into art forms, have bequeathed to us their arts as their richest and most beneficent legacy. We hold this legacy now in the form of the world's great epic and lyric poems, and in its fiction and dramas, instinct with human passion and human aspiration, peopled with personalities of man's own imaginative creation, even more real in their influence to-day than the shadowy names of history. We hold it in the form of the great treatises on philosophy, government, and the sciences, the very condensation and crystallization, as it were, of the human intellect. We hold it in the world's bibles, the legacy of the religious thought of the race. We hold the legacy again in the form of the world's great music-the symphonies that still make our world palpitate with exquisite harmonies once conceived by human genius, the oratorios and operas, and the songs that, like unquenchable torches, kindle the souls of each successive generation of human kind with fires of joyousness, of patriotic ardor, of religious ecstasy.

And we hold the legacy yet again in the form of monuments and temples, cathedrals and majestic colossi, eloquent of the questionings and longings of souls facing the great mysteries of life and death. We hold it in the form of treasured remains of sculptures, eloquent of old-time insight into the divineness of beauty and old-time delight in such insight. We hold it in the form of the world's great paintings, eloquent of all man's widest range of interests and sympathies, of his love for the good and the right, of the gradually clearing vision which has enabled him to see the divine in nature and the still higher manifestations of the divine in humanity, and to make the vision manifest to all mankind.
On another occasion I shall discuss the bearings of art education upon the labor problems of the day, and through labor upon all the interests of social well-being. On this occasion I can only remind you of the immense significance of art from the economic point of view.
Now, standing as we do to-day in the possession of this art legacy from the men of the past, can we rationally minimize it, and consider the child merely as a particularly high differentiation of physical energies, the passive subject of nature, molded
and played upon at nature's mercy? I tell you nay. We must see and own and practically act upon a truer conception of the mind of man, and upon a larger vision of the place of man in creation's scale, such as Dr. John Fiske brought out at Harvard two weeks ago in his Phi Beta Kappa address. Dr. Fiske then gave utterance to words that are to be forever memorable in the great discussion upon which thinking men are now entering with reference to man and his destiny in the light of evolution, and he has kindly sent me his exact words for use on this occasion. In speaking of psychical man and contrasting him with all that preceded him, Dr. Fiske said:
"The physical variations by which man is distinguished from apes are not great. His physical relationship with the ape is closer than that between cat and dog, which belong to different families of the same order. It is like that between cat and leopard, or between dog and fox, different genera in the same family. But the moment we consider the minds of man and ape the gap between the two is immeasurable. Mr. Mivart has truly said that with regard to their total value in nature the difference between man and ape transcends the difference between ape and a blade of grass. I should be disposed to go further and say that while for zoological man you can not erect a distinct family from that of the chimpanzee and orang, on the other hand, for psychological man you must erect a distinct kingdom; nay, you must even dichotomize the universe, putting man on one side and all things else on the other."

It is this stupendous sense of the soul's reality-that is, its individuality and its self-activity-that we need to emphasize in these days of talk about the soul as a derivation from sense activities.

Let me ask all those who believe there is nothing in the mind but the product of the sonses, Whence came these arts of man? Can you assume for their existence anything less than the existence in the mind of man of a creative power superior to the physical forces that surround him, a power which appropriates through the action of the senses these physical forces and applies them to its own spiritual ends?

I desire to leave this point with emphasis on the fact that these arts of man are not mere incidents in his development; they are the sum of his existence, that "toward which the whole creation moves."

My next proposition is:
Proposition IV.-That every child is born heir to two world environments (the material world of nature and the spiritual world of man), and also the possessor of aptitudes for ever-expanding assimilative and creative activities of his own.
We have seen that man is surrounded by two great world environments. These two world environments act upon the child, each in its own way. The material world of nature, the world of cloud and rock, of multitudinous plant life and swarming animal life, makes constant appeal to the new human being, through his physical sensibilities and physical interests, as one who is the crowning product of its own marvelous cycles of evolutionary energy. On the other hand, the spiritual world of man, the world of his arts, makes constant appeal to the new human being, through his spiritual susceptibilities and spiritual interests, as one who is capable of all that the race is capable of and, as a new being, has endless future possibilities of personal creative activity. The upward growth of this new human being we find deientent upon the balance between his responses to the influences of these two world environments, and it is here that we, as educators, should take careful note of how these two environments affect the child. His animal nature, olwdient to the laws of natural evolution in the physical world, is absorptive, selfish. It grasps. It appropriates for the goor of self. This is nature's provision for the perpetuation of the race. His spiritual nature, on the
other hand, obedient to the laws of spiritual life, is creative, altruistic. It makes for the good of others. This is the divine provision for the development of humanity. In so far, and in so far alone, as his spiritual response to and utilization of the influences of his spiritual environment predominate over his submission to the influences of his material environment, he grows toward that high human destiny which we can but faintly begin to forecast.

If it were true that children were only little animals, subject to nature's laws and possessing minds that work merely automatically under the stimuli of natural phenomena, it would be well enough to do as some modern educators advocatesimply surround the child with pleasing natural objects, and trust that their sensuous attractiveness will insure attention and observation, and that these will somehow of themselves evolve desire for what is truly best and secure energetic action along right lines, toward high ends.

The unfortunate fact is, however, that unless we make a strong appeal to children through the spiritual side of their nature, they are liable to respond only in terms of the animal. As most practical teachers know, we are likely to be brought up standing by the child's frankly materialistic measures of the universe. Those of you who have read the recent autobiography of Frances Power Cobbe will recall her experience when, returning to her country home for a visit, after several years of absence, she met a grown-up young man, who had been a pupil in the little village school organized and enthusiastically taught by herself.
"Well, Andrew," said Miss Cobbe, "how much do you remember of all my lessons?"
"'Ah, ma'am, then, never a word!"
" O, Andrew, Andrew! And have you forgotten all about the sun, the moon and stars, the day and night, and the seasons?"

Andrew scratched his head and light dawned upon his countenance.
"Oh, no, ma'am!" he declared, "I do remember now. And you set them on the schoolroom table, and Mars was a red gooseberry, and I ate him."

It evidently will not do to trust too far or too implicitly to the "automatic" transformation of sense impressions into elevated thought.

Jacobi has truly said, "Nature conceals God; man reveals God."
Now, is there any provision in the universe for helping to insure the predominance of man's spiritual development and his consequent progressive mastership of the material world?

There is; and this leads to the next proposition, one of the most significant of all the great significant truths of evolution:

Proposition V.-The long period of infancy and youth, when the mind is especially susceptible to the influences of enviromments, and when the active powers are most easily directed, is a special provision for the unceasing derelopment of man's spiritual qualities and creative activities.
Dr. John Fiske was the first to point out clearly to contemporary thought the important fact that physical evolution had come to an end in the production of physical man; and that further play of the evolutionary process must be sought in psychical man. He also pointed out how this psychical development was conditioned upon psychical or spiritual man making his physical baing aud his physical environment subject to himself. Dr. Fiske has also supplemented these important contributions to evolutionary philosophy by another of no less impor-tance-one which can not be ignored in any attempt to place education upon a truly philosophical basis. I refer to his statement that the long period of dependent infancy and youth in the human child, as contrasted with the parental provisions for existence in the lower animals, is evidence of a distinct plan for the increasing develupment of psychic life in the human race, through a special provision in the life of every individual of a plastic condition of mind, whereby the
accumulations of ever-expanding human experience could be handed over from generation to generation through ever-expanding faculties for self-activity in receiving, and then for ever-expanding powers of self-activity in creating for the benefit of luman life.

I can not stop to discuss the immense significance of this evolutionary view of the psyehic developmeat of the race in its bearing upon education. If nature's provisions in this respect mean anything, I do not think it will be questioned but that they are intended for the ever-increasing development of the psychical or spiritual man rather than of the physicad or animal man.

And this leads to my final proposition:
Proposition VI.-Education should be the fullest possible utilization of the plastic period of infancy and youth, not only for cultivating a knowledge of the child's two-world environments, but also and emphatically for training to skill in the creative activities along art lines, as the highest contribution of the individual to social well-being.
The best education means simply the best utilization of this plastic period of the child's life for the development and training of that in him which most deserves to be dexeloped and trained.
I say "that which most deserves to be developed and trained," assuming that not everything in the child's inherited make-up is of the same value. I take it to be a part of the responsibility laid upon mature men to weigh the various elements of human nature as fairly as they can, and learn to put educational emphasis on the more worthy of those elements. In our lesser task of guiding the progressive development of plant and animal life, we have for a long time made some such selection. Man's effort has been, not simply to help the earth bring forth more flowers and fruit of precisely the same sort as would grow without help, but to put his intellect and his will in cooperation with the powers outside him, so as to transform existing conditions of growth, to the end that still more beautiful flowers and even more delicious fruits may be brought into existence. Look at our greenhouses, our orchards, and our market gardens for the result. When the task set us is to help work out the divine purpose in the higher development, not of vegetables or brute beasts, but of new human beings, there is not less but more need that we should consider deeply the animal nature of the child on the one hand and his spiritual nature on the other, and how the former can best be utilized in the full development of the latter.

The supreme purpose of edzeation, so far as that education lies within our control, should be the development of the child's capacity for unselfish creative activity and for spiritual enjoyment. The development of his other capacities should be treated with regard to the manner and degree of contributing toward this supreme end.

I intentionally use this term "creation" rather than "expression," when referring to the supreme form of human activity, because I believe we ought to keep in mind the thought that the highest activity goes beyond mere "expression"that is; the mere statement of what is-and becomes "creation;" that is to say, productive action-action productive of new things or new conditions. This is a point that I wish particularly to emphasize, the distinction between expression and creation. ${ }^{1}$

[^69]This idea of education as training for creative activity includes all that was best in our earlier notions of the purpose of education. It includes the acquirement of stores of knowledge, for, of course, it is only upon the basis of a knowledge of what is that man can proceed to make things or conditions better. It also includes the development of individual power, because, of course, the man who can command himself is the only one who can effectively command matter or force. But the mere "acquirement of knowledge" may be as worthless as the accumulation of gold pieces in a miser"s strong box, and the mere "development of power" may be as worthless as the development of power in a finished engine that stands unconnected with any sort of working machinery. The new ideal of education as training for creative activity includes both the effort after knowledge and the effort after power, and adds to these a purpose. That purpose is the active betterment of the world and the progressive elevation of human living.

And this view of education necessitates direct training not only for creative thought, but also for skill in creating the hest embodiments of such thought. It implies not simply keeping the child's senses tickled with a succession of novel and pleasant impressions, which he may express or record in any fashion that comes easiest, but also in giving him opportunity for and guidance in creative activities where he can utilize his impressions so that he may gradually attain to self-command in these activities; so that he may learn to respect positive standards of technical workmanship, and also learn to hold himself sturdily up toward them in his own endeavors; in other words, so that he may have power in creative work.

Now, I do not wish to be understood here as overlooking or as crushing out the element of the child's instinctive interest. I believe we ought to study very thoughtfully and very sympathetically the natural, instinctive interests and desires of the child in planning and conducting educational work. But I believe that we should study these interests and desires, not just for the sake of following their indications of "the line of least resistance," but also and much more for the sake of utilizing them as means whereby to lead the child out of his present animal self up to a still higher and better human self. As grown-up men and women ourselves, we simply must believe that our measures of life are, on the whole, juster and truer than the child's own measure of life; else life itself is a hopeless anticlimax, the dreariest of illusions. The child would naturally prefer to possess a juicy apple to-day rather than to be owner of

> "" * * * Plato's brain,
next week; but that is no proof that good things to eat are truly more worth while than wisdom and righteousness. No. What we have to do is neither to impose our own wills arbitrarily and absolutely upon the child's will, nor yet to fold our arms and indolently let him have his head in any direction and to any extent he likes. Ours should be the more difficult but much more honorable task of recognizing his feelings and impulses with ready sympathy; of bringing to bear upon those feelings and those impulses such spiritual influences as will combine with the influences of his natural environment; of developing right powers and habits, and encouraging right activities, and of giving him all the direct positive practice

[^70]and training that we can give in the typical creative activities, to the end that he may have not only desire to create but also power to create in terms of art; that, besides having good intentions, he may actually do good work.
The desirability of training a child's powers of appreciating and enjoying what is noble and beatitiful in both the world of nature and the world of art, which embodies so much of men's best thought and experience, hardly needs argument. Whether regarded by itself, as providing the child with an elevating mode of occupying leisure hours, or regarded as a step toward practical creative activity on his own part, such training, if wisely conducted by tactful guidance rather than by prescription and rule, may and should be a fruitful means of rounding out character in a wholesome, healthy fashion, and providing beforehand resources of true refreshment and lofty inspiration. Such resources of appreciative power are needed both by the artist and by his public; by the man of leisure and by the humblest workman. Indeed the balance of need lies with the one whose life is to be almost full of commonplace toil, if the improving industrial conditions which give him increasing hours of leisure are to actually make his leisure spiritually profitable to him.

We have hitherto spoken of art in its largest inclusive meaning, comprising literature, music, painting, sculpture, and architecture. What is true of art, as a whole, in its bearings upon the life of the race and the education of the individual, is true of the particular lines of art which are usually referred to when we speak of art in education. Art in this sense is understood as applying to modeling, drawing, and coloring with their special functions in decoration, illustration, and sculpture, painting, machinery, and building construction and architecture.

Now there are two great obstacles in the way of establishing true art education in our public schools:

First. The mistaken and belittling notions about art and art education, which prevail to so great an extent among professed leaders of educational work, as well as on the part of the public.

Second. The unfamiliarity of the rank and file of teachers with the subjectmatter and methods of true art instruction.

Now as to the first obstacle, many educators, when they speak of art, mean merely graphic expression, mere diagramming or imitating as a means of stating information. When they speak of art instruction, they mean merely encouraging children to make maps, diagrams, and sketches, or models in connection with their lessons in arithmetic, geography, physics, and natural history. These apostles of "free" art practically take the ground that the average child can drop into art, as Mr. Wegg dropped into poetry, "in a friendly sort of way," and that, if he is just given clay, a pencil or brush, and a piece of paper, and urged to draw or model whatever he happens to see, just as he happens to see it, the result is art. This is just like giving the untrained and illiterate child paper and pen, teiling him to write whatever he thinks, about whatever he pleases, in whatever way occurs to him, and calling the result literature. Now, everybody would recognize the absurdity and futility of this latter procedure. We all know that the child can not by himself erolve good literary taste and good literary style out of his own crude, desultory thoughts, plus a sheet of paper. There is no such short cut to literature. He must indeed write and write and keep on writing, but above all he must read and be taught what to read; his mind must be fed from the fruitful store of good literature, which already exists, the legacy of accumulated ages of human culture.

It can not possibly be our best plan to-day to ignore all the progress of the past, and make each child laboriously work out all over again the whole history of civilization, Dark Ages included, when he ought to be let into his birthright as "heir of all the ages." A broarder and clearer appreciation on the part of educational leaders as to what art itself means as a factor in developing the creative power of the child, and what it stands for in social life to-day, is the first requisite

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for the success of art education as a part of public education. As evidence of how this great subject is ignored, we have only to refer to the reports of the committee of ten and the committee of fifteen; and further I am not aware of any scheme of correlation of studies in which the subject is in any way adequately recognized.

But I believe a change is coming. Sooner or later it will be seen and practically recognized that what man has done in the arts is to a young mind in the formative stage what fertile soil is to a young plant. And when that time comes, men will no longer try either to cultivate rosebushes on a strictly primeval diet of granite, gravel, and rain, or to cultivate human souls on a strictly primeval diet of nature, study, and untrammeled frolic. ${ }^{1}$

They will accept for the children under their care the advantages that lie in being heir of preceding ages, and use these advantages as a means whereby the new life may grow up to still higher forms of personal development and productive activity.

The second obstacle to be surmounted (the imperfect equipment of public-school teachers for carrying on art instruction in the class rooms) will be done away as far and as fast as theleaders come to appreciate the true nature and importance of art as a fundamental feature of educational work; for the grade teachers of our American public schools are essentially capable and loyal; they are able and ready to learn whatever it is necessary for the good of the schools that they should learn; but they need definite assistance and guidance. Suitably planned courses of study will do much to help; courses arranged not hastily or perfunctorily by people with narrow views of the subject and with slight acquaintance with the experience of others in similar work, but thoughtfully and intelligently by persons who can comprehend both the physical nature and the spiritual nature of the child. Only those who are engaged in this work know how narrow are the limitations that surround them. The best that exists to-day is but a stepping-stone to what should be done and what can be done as soon as a better understanding of what art means exists among the teachers. Rightly planned courses of study, reenforced by suitable working materials and art examples̃ good and abundant, to which the children themselves may have ready access, the whole interpreted by a wise and sympathetic supervisor, who knows his subject and who understands child nature in hearty, affectionate fashion-I tell your, my friends, we have as yet seen only the beginning of what a power art education may and ought to be in the inward uplifting to useful and noble work of the successive generations of children who pass through the public schools of our land.

To summarize in a few words the points we have been considering, let us remind ourselves: That evolutionary science, ontological philosophy, and empirical psychology, in their truest interpretations, practically agree in declaring that man is the highest of all finite existences, from which proceed self-acting spiritual powers; that the arts of man are the embodiment of these spiritual self-activities of the rase exercised along creative lines; and that, being thus the highest activities of the highest of all finite existences, they should be constantly utilized in education, if education has for its distinct aim the development of what is

[^71]best in the child, both for himself and for the social life of which he is to form a part.

And now let me say in conclusion that, if I rightly apprehend current educational discussion, many of the schemes of correlation or of concentration that are being advocated are based mainly on the consideration of the physical environment of the child, the forces of which play upon the brain through the action of the senses, and hence are exterior to the child. The result of such schemes is to make the child largely the product of his physical environment. As opposed to these more or less materialistic views of education, I suggest that we take as our center of thought the child himself, with a full comprehension of his creative spiritual nature, and then measure the relative values of educational subjects, according as they contribute to the development of his highest possibilities as a creative spiritual being. By so doing we shall see that the creative activities of the child form the real educational objective, and that the arts of man as ministering to these activities should not be relegated to any incidental place in the arrangement of studies, but should be practically recognized as the most inclusive, the most vital, means we have for centering our educational effort aright; centering it with all its nourishment and all its inspiration upon the soul of the child-upon the child as the heir and the potential master of the world.

## CHAPTER XXXII.

## FOREIGN UNIVERSITIES.

I. Arranged according to date of founding.
II. Arranged according to number of students.
III. Arranged alphabetically.
IV. Arranged according to countries.
V. List of polytechnica.
VI. List of agricultural, forestry, and mining schools.

## INTRODUCTION.

The authors of "Minerva, Jahrbuch der Universitäten der Welt," which is the chief source of information offered in the following six lists, say that they have submitted their work at various stages of completion to different professors of the countries mentioned, so that they are assured that their decision as to which of the learned institutions of the world should be regarded as universities is upheld by the most trustworthy authority. They call their Jahrbuch a collection of names of teaching bodies, of universities, or similar institutions of the world. In the first edition the authors admitted that, despite the most rigorous search, a few of the smaller institutions of the Western Hemisphere escaped their notice. In subsequent editions these omissions have been corrected, and libraries, societies, and museums added, so that the fifth edition, that of 1895-96, is a remarkably valuable source of information. Since this report of the Bureau of Education contains direct information concerning the higher institutions of learning in the United States, they have been omitted from the following lists, which are devoted exclusively to foreign institutions.

## Foreign Universities.

[After" Minerva," by Kukula \& Trübner.]
I. Arranged according to age.

| Date of foundation. | Locality. | Date of foundation. | Locality. |
| :---: | :---: | :---: | :---: |
|  | Teuth mentury. |  | Fourteenth century. |
|  | Kairo, Egypt. | 1303 | Rome, Italy. |
|  | Turifth century. | 1339 1343 | Grenoble, France. Pisa, Italy. |
|  |  | 1346 | Valladolid, Spain. |
| 1119 | Bologna, Italy. | 1348 | Prague, Bohemia, Austria. |
| 1181 | Montpellier. France. | 1349 | Florence, Italy. |
| 1200 | Paris, France. | 1361 | Pavia, Italy. |
| 1200 | Oxford, England. | 1364 | Krakau, Galicia, Austria. |
|  | Thirteenth century. | 1367 | Fünfkirchen. Hungary. |
|  |  | 1386 | Heidelberg, Baden, Germany |
| 1219 | Valencia. Spain. | 1391 | Ferrara, Italy. |
| 1222 | Padua, Italy. Naples. Italy. |  |  |
| 1233 | Toulouse, France. |  | Fifleenth century. |
| 1243 | Salamanca, Spain. | 1402 | Würzburg, Bavaria, Germany. |
| $125 \%$ | Cambridge, Erigland. | 14199 | Leipzig, Saxony, Germany. |
| 1266 | Perugia, Italy. | 1419 | Aix, France. |
| 1288 | Coimbra, Portugal. | 1411 | St. Andrews, Scotland. |

## Foreigan Universities-Continued.

1. Arranged according to age-Continued.

| Date of foundation. | f Locality. | Date of foundation. | Locality. |
| :---: | :---: | :---: | :---: |
|  | Fifteenth century-Continued. |  | Eighteenth century-Contiaued. |
| 1412 | Turin, Italy. | 1737 | Göttingen, Prussia, Germany. |
| 1419 | Rostock, Mecklenburg, Germanÿ. | 1740 | Erlau, Hungary. |
| 1422 | Parma, Italy. | 1743 | Erlangen, Bavaria, Germany. |
| 1422 | Besançon, France. | 1743 | Santiago, Chile. |
| 1426 | Louvain, Belgium. | 1748 | Cadiz, Spain. |
| 1431 | Poitiers, France. | 1755 | Moscow, Russia. |
| 1437 | Caen, France. | 1771 | Münster, Prussia, Germany. |
| 1444 | Catania, Sicily, Italy. | 1772 | Klausenburg, \#ungary. |
| 1450 | Barcelonar, Spain. | 1777 | Siena, Italy. |
| 1451 | Glasgow, Scotland. | 1779 | Palermo, Sicily, Italy. |
| 1456 | Greifswald, Prussia, Germany. | 1784 | Lemberg, Galicia, Anstria. |
| 1457 | Freiburg, Baden, Germany. | 1785 | Pressburg, Hungary. |
| 1460 | Basel, Switzerland. | 1788 | Grosswardein, Hungary. |
| 1463 | Nantes, France. |  |  |
| 1465 | Budapest, Hungary. |  | Nineteenth century. |
| 1472 | Bordeaux, France (1441). |  |  |
| 1472 | Munich, Bavaria, Germany. | 1804 | Kasan, Russia. |
| 1474 | Saragossa, Spain. | 1804 | Charkow, Russia. |
| 1477 | Upsala, Sweden. | 1805 | Yaroslavl, Russia. |
| 1477 | Tübingen, Würtemberg, Germany. | 1808 | Clermont, France. |
| 1478 | Copenhagen, Denmark. | 1808 | Lille, France. |
| 1494 | Aberdeen, Scotland. | 1808 | Lyons, France. Rennes, France. |
|  | Sixteenth century. | 1809 | Berlin, Prussia, Germany. |
|  |  | 1811 | Christiania, Norway. |
| 1501 | Valencia, Spain. | 1812 | Genoa, Italy. |
| 1502 | Halle-Wittenberg, Prussiab, Germany. | 1816 | Ghent, Belgium. |
| 1502 | Sevilla, Spain. | 1816 | Warsa w, Poland, Russia. |
| 1504 | Santiago, Spain. | 1817 | Liege (Lüttich), Belgium. |
| 1506 | Breslau, Prussia, Germany. | 1818 | Bonn, Prussia, Germany. |
| 1508 | Madrid, Spain. | 1818 | Peters burg, Russia. |
| 1527 | Marburg, Prussia, Germany. . | 1821 | Montreal, Canada. |
| 1531 | Granada, Spain. | 1886 | London (University College), Eng- |
| 1581 | Sarospatak, Hungary. |  | land. |
| 1537 | Lausanne, Switzerland. | 1827 | Toronto, Canada. |
| 1540 | Macerata, Italy. | 1827 | Sheffield (Medical College), England. |
| 1544 | Königsberg, Prussia, Germany. | 1828 | Lampeter (St. David's College), Wales. |
| 1548 | Messina, Sicily, Italy. | 1832 | Durham, England. |
| 1556 | Sassari, Italy. | 1882 | Ziirich, Switzerlsnd. |
| 1558 | Jena, Thuringia, Germany. | 1834 | Brussels, Belgium. |
| 1559 | Geneva, Switzerland. | 1834 | Berne, S witzerland. |
| 1566 | Olmütz, Moravia, Austria. | 1836 | London (University), England. |
| 1567 | Strasburg, Alsace, Germany. | 1837 | Athens, Greece. |
| 1568 | Braunsberg, Prussia, Germany. | 1838 | Messina, Italy. |
| 1572 | Nancy, France. | 1845 | Cork, Ireland. |
| 1575 | Leiden, Holland. | 1845 | Belfast, Ireland. |
| 1580 | Oriedo, Spain. | 1845 | Galway, Ireland. |
| 1583 | Edinburgh. Scotland. | 1849 | Algiers, Algeria. |
| 1586 | Graz, Styria, Austria. | 1850 | Sydney, Australia. |
| 1588 | Kiew (Kieff), Russia. | 1851 | Manchester (Victoria University), |
| 1591 | Dublin, Ireland. |  | England. |
| 1596 | Cagliari, Italy. | 1851 | Newcastle, England. <br> Melbourne, Victoria, Australia. |
|  | Seventeenth century. | 1857 C | Calcutta, India. |
|  |  | 1857 M | Madras, India. |
| 1605 | Manila, Philippine Islands. | 1857 B | Bombay, India. |
| 1607 | Giessen, Hessia, Germany. | 1880 J | Jassy, Roumania. |
| 1614 | Groningen, Holland. | 1862 K | Kecskemet, Hungary. |
| 1632 | Salzburg, Austria. | 1884 B | Bucharest, Roumania |
| 1632 | Amsterdam, Holland. | 1865 | Odessa, Russia. |
| 1638 | Dorpat (Jurjev) Russia. | 1866 N | Neucha tel, Switzerland. |
| 1636 | Utrecht, Holland. | 1888 T | Tokyo, Japan. Now |
| 1640 | Felsingforg, Finland, Russia. | 1870 N | New Zealand, New Zealand. |
| 1657 | Kaschau, Hungary. | 1872 A | Aberystwith, Wales. |
| 1665 | Kiel, Prussia, Germasny. | 1872 A | Adelaide, Australia. |
| 1686 | Lund, Sweden. | 1873 C | Cape City, South Africa. |
| 1671 | Urbino, Italy. | 1874 A | Agram, Croatia, Hungary. |
| 1678 | Innspruck, Tyrol, Austris. | 1875 A | Angers, F'rance. |
| 1676 | Fperies, Hungary. | 1875 | Lille (Faculté Libre), France. |
| 1683 | Modona, Italy. <br> Ifighteenth century. | 1875 L | Ljons (Faculte Libre), France. |
|  |  | 1875 C | Czernowitz, Bukowins, Austris. |
|  |  | 1876 | Bristol, England. |
| 1710 | Barbados (Coarringdon College), West Indies. <br> Djan, France. <br> Camerina, Italy. | 1877 L | Leeds, England. |
|  |  | 1877 L | Liverpool, England. |
| 1722 |  | 1878 S | Stockholm, Sweden. |
| 1727 |  | 1879 S | Sheffield (Firth College), England. |

Foreign Universities-Continued.
I. Arranged according to age--Continued.

| Date of foundation. | Locality. | Date of foundation. | Locality. |
| :---: | :---: | :---: | :---: |
|  | Nineteenth century-Continued. |  | Date not known. |
| 1880 | Habana, Cuba, |  | Belgrade, Servia. |
| 1880 | Dublin, University of Ireland. |  | Allahabad, India. |
| 1880 1880 | Dundee, Scotland, |  | Limoges, France. |
| 1882 | Prague (Bohemian University), Aus- |  | Montevideo, Uruguay. |
|  | tria. Wales |  | Montauban, France. |
| 1888 | Tomsk, Siberia, Russia. |  | Bangor, Wales. |
| 1888 | Sophia, Bulgaria. |  |  |
| 1889 | Freiburg, Switzerland. |  |  |
| 1891 | Gothenburg, Sweden. |  |  |

## Foreign Universities.

II. Arranged according to number of students.
[The attendance stated is that of 1895.]

| Order. Locality. |  | Number of students. | Order. | Loculity. | Number of stuol stu. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Paris |  | 51 <br> 52 <br> 58 <br> 53 <br> 54 <br> 55 <br> 56 <br> 56 <br> 57 <br> 58 <br> 59 <br> 60 <br> 61 <br> 62 <br> 62 <br> 63 <br> 64 <br> 65 <br> 66 <br> 66 <br> 67 <br> 68 <br> 69 <br> 70 <br> 71 | Palermo Prague (German Úniversity) |  |
| $\stackrel{2}{2}$ | Berlin- |  |  |  |  |
| 4 | Vienna |  |  | Lille |  |
| 5 | Madrid |  |  | C |  |
| ${ }_{7}^{6}$ | Calcutta |  |  | Krakou | 1,304 |
| 8 | London, a |  |  |  | 1,2 |
| 10 | Moscow |  |  |  | 1,26 |
| 11 | Budapest |  |  |  | ,280 |
| 12 | Munich |  |  |  | 1,247 |
| 13 | Athens |  |  | Salamanca | ,241 |
| 15 | Bombay |  |  | Christiania <br> Rennes | ,20 |
| 16 | Leipsic. |  |  | Rennes <br> Erlangen | 1,185 |
| 17 | Manchester |  |  |  | ;124 |
| 18 19 | Cambridge |  |  |  |  |
| 20 | Petersburg |  |  | Genoa. <br> Innsbruck | 1,016 |
| 21 | Prague (Bohemian Univer- |  |  |  | 1,000 |
|  | ${ }_{\text {kiew }}^{\text {sity }}$ ) |  | $\begin{aligned} & 72 \\ & 73 \\ & 74 \\ & 74 \end{aligned}$ | Santiago, Chile, about Marburg |  |
| 23 | Turin | $\stackrel{2}{2,417}$ |  | Marburg | 972 |
| 24 | Bordoaux | 退 2,15989 | \% 78 |  |  |
| 26 | Allahabad | $\stackrel{2,075}{2,043}$ |  | Poitiers--..----------- |  |
|  | Lyons |  | 78 |  |  |
|  | Copenhag | 2,000 |  | Göttingen |  |
|  | Nottingham | 1, 1,802 |  |  |  |
|  | Barcelona. |  |  |  |  |
|  | Hesingiors | 1,861 | 83 84 |  |  |
|  | Toulouse | 1, 1,656 |  | Aberd |  |
|  | Dorpat | -1,555 |  | 8 Catan |  |
|  | Grazn. | 1, 1,539 |  |  |  |
| 38 | Grana |  |  |  | 759 |
| 39 | Halle-Wittenberg - | 1,531 |  |  | 58 |
| 40 | Freiburg, Germany | 1, 1,504 |  | Berne ......-.-...........-.--- | 755 |
| 41 | Upsala .-.- | 1,4850 |  | Petersburg (Medical Acad- |  |
| 43 | Louvain | 1,475 |  |  | ${ }_{726}$ |
| 44 | Bologna. |  | 94 | Caen-..... | 715 |
|  | Wurzburg | 1,456 |  |  | 706 |
| 46 | Lemberg | 1,429 | ${ }_{8}^{98}$ | Königsbe | 880 |
| 48 | Heidelbe | 1,428 |  | Ghent | ${ }^{660}$ |
|  | Tokyo <br> Bresla | 1,396 |  | Lind. <br> Utrecht <br> Klausenburg | 632 629 |

Foreign Universities-Continued.
II. Arranged according to number of students-Continued.

| Order. | Locality. | Number of students. | Order. | Locality. - | Number of students. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 101 | Dublin (University of Ireland) |  | 133 | Yaroslavl --.-....-.......... | 306 305 |
| 102 |  | 600 598 | 135 | Freiburg, Switzerland | 305 303 |
| 103 | Melbourne. | 594 | 136 | Oviedo | 269 |
| 104 | Sydney | 592 | 137 | Macerata | 264 |
| 105 | Bristol | 584 | 138 | Cork | 245 |
| 106 | Gothenburg | 568 | 139 | Olmütz | 235 |
| 107 | Lausanrie. | 516 | 140 | Toronto (Victoria Univer- |  |
| 108 | Florence | 511 |  | sity) .......---............ | 234 |
| 109 | Odessa | 503 | 141 | Siena. | 215 |
| 110 | Messina | 502 | 142 | Cagliari | 201 |
| 111 | Groningen. | 501 | 143 | St. Andrews. | 199 |
| 112 | Dijon | 484 | 144 | Besancon | 194 |
| 113 | Agram | 479 | 145 | Cardiff.. | 170 |
| 114 | Grenoble | 464 | 146 | Clermont | 163 |
| 115 | Basel | 459 | 147 | Camerino | 162 |
| 116 | Tomsk | 430 | 148 | Sassari. | 157 |
| 117 | Adelaide | 422 | 149 | Grosswardein. | 136 |
| 118 | Rostock | 420 | 150 | Lampeter | 122 |
| 119 | Belgrade | 414 | 151 | Neuchatel | 129 |
| 120 | Modena | 412 | 152 | Eperies | 124 |
| 121 | Münster | 409 | 153 | Sarospatak ... | 110 |
| 122 | Parma | 408 | 154 | Fünfkirchen. | 94 |
| 123 | Jassy | 407 | 155 | Ferrara. | 84 |
| 124 | Newcastle | 401 | 156 | Urbino .- | 76 |
| 125 | Montevideo | 400 | 157 | Kaschau | 75 |
| 126 | Durham | 400 | 158 | Salzburg | 72 |
| 127 | Sophia- | 380 | 159 | Dundee. | 41 |
| 128 | Algiers | 377 | 160 | Erlau | 61 |
| 129 | Czernowitz | 370 | 161 | Brarinsberg | ${ }_{5}^{53}$ |
| 130 | Aberystwith | 360 | 162 | Kecskemet | $\stackrel{52}{49}$ |
| 131 | Stockholm <br> Sheffield | 337 310 | 163 | Montauban |  |

Note.-The number of students in universities not mentioned had not been ascertained.

## Foreign Universities.

III. Arranced alphabetically, with faculties and number of students.

1. Aberdeen, Scotland: University of Aberdeen, 812 students. Philosophical, theological, law, and medical faculties; library.
2. Aberystwith, Wales: University College of Wales, with college at Bangor, 360 students.
3. Adelaide, Australia: University of Adelaide, 422 students. Observatory.
4. Agram, Croatia, Hungary: Königl. Universität Agram, 479 students. Theological, law, and philosophical faculties; library.
5. Aix-en-Provence, France: Facultés d'Aix, 680 students. Law and philosoph-- ical faculties; library.
6. Algiers, Algeria, Africa: Facultés d’Alger, 377 students. Law, medical, scientific, and philosophical faculties; library, observatory.
7. Allahabad, India: University of Allahabad. Examining board, 2,075 candidates.
8. Amsterdam, Netherlands: Universiteit te Amsterdam, 1,241 students. Law, medical, scientific, philosophical, and theological faculties; library and several institutes.
9. St. Andrews, Scotland: University of St. Andrews, 199 students. St. Salvador, St. Leonard's, and St. Mary's College.
10. Angers, France: Facultés Catholique Libres. Law, scientific, theologic, and philosophical faculties; library.
11. Athens, Greece: National University, 3,351 students. Theological, law, medical, and philosophical faculties; public library.
12. Bangor, Wates: University College of North Wales.
13. Barcelona, Spain: Universidad de Barcelona, 1,887 students. Philosophical, law, scientific, medical, and pharmaceutical faculties; library.
14. Basel, Switzerland: Universität Basel, 459 students. Theological, law, medical, and philosophical faculties; public library.
15. Belfast, Ireland: Queen's College.
16. Belgrade, Servia: Serpska Kraljevska Velika Škola, 414 students. Philosophical, law, and technological faculties; library.
17. Berlin, Prussia, Germany: Königl. Friedr.-Wilhelms-Universität, 9,203 students. Theological, law, medical, and philosophical faculties; seminary for oriental languages, and eleven other seminaries; library and thirty-six university institutes and museums.
18. Berne, Switzerland: Universität Bern, 755 students. Catholic and Protestant theology, law, medical, and philosophical faculties; city libraries.
19. Besançon, France: Facultés de Besançon, 194 students. Scientific, philosophical, and medical faculties; library.
20. Birmingham, England: Mason College, 914 students. Arts and science, medical, and dental faculty; library.
21. Bologna, Italy: Regia Università di Bologna, $1,45 \%$ students. Philosophical, scientific, law, medical, and pharmaceutical faculties; veterinary and engineers' schools; library.
22. Bombay, India: University of Bombay. Examining board, 3,209 candidates; five preparatory colleges.
23. Bonn, Prussia, Germany: Fheinische Friedr.-Wilhelms-Universität, 1,539 students. Protestant and Catholic theological, law, medical, and philosophical faculties; library and many institutes.
24. Bordeaux, France: Facultés de Bordeaux, 2,159 students. Law, medical, scientific, and philosophical faculties; library.
25. Braunsberg, Prussia, Germany: Königl. Lyceum Hosianum, 63 students. Theological and philosophical faculties; library.
26. Breslau, Prussia, Germany: Königl. Universität Breslau, 1,387 students. Catholic and Protestant theological, law, medical, and philosophical faculties; library.
27. Bristol, England: University College, 584 students (236 women). College faculty and medical school; library.
28. Brussels. Belgium: Université libre de Bruxelles, 1,309 students. Philosophical, law, scientific, medical, and pharmaceutical faculties; also polytechnical school; library.
29. Bucharest, Rommania: Universitatea din Bucuresti, 1,490 students. Scientific, philospohical, law, medical, and theological faculties; library.
30. Budrpest, Hungary: Királyi Magyar Tudomány-Egyetum, 3,892 students. Theological, law, medical, and philosophical faculties; library.
31. Cadiz, Spruin: Facultad de Medicina (belonging to Sevilla). Medical faculty; library.
32. C'aen, France: Facultés de Caen, 715 students. Law, scientific, and philosophical faculties; library.
33. Cagliari, Sardinia, Italy: Regia Università di Cagliari, 201 students. Law, medical, and scientific faculties; library.
34. Calcutta, Indiu: University of Calcutta, 5,308 candidates. Examining board; library.
35. Cambridge, England: University of Cambridge, 2,895 students. Schools of theology, law, oriental, classical, and modern philology, music, moral science, history and archæology, astronomy, physics, chemistry, mineralogy, biology, geology, and medicine; library.
36. C'amerino, Itcily: Libera Università degli Studi di Camerino, 162 students. Law, mertical, and pharmaceutical faculties, and veterinary school; communal library.
37. C'ape City, South Africa: University of the Cape of Good Hope.
38. Cardiff, Werles: University of South Wales, 170 students. Philosophical and scientific faculties and department of engineering; library.
39. C'retrnirr. S'irily. Itcely: Regia Università degli Studi di Catania, 806 students. Law, medical, scientific, and philosophical faculties; library.
40. Churkou: liussia: Imperatorskij Charkowskij Universitet, 1,313 sturlents. Philosophical, scientific, law, and medical faculties; library.
41. Christictui", Noru:ay: Knngelige Frederiks Universitet, 1,200 students. Theological, law, merlical, philnsophical, and scientific faculties; library.
42. C'lermont-Ferraiul. Firfuce: Facultés de Clermont, 163 students. Scientific and philosophical faculties: library.
43. Coimbra, Prorturgrl: Universidade de Coimbra, 1,429 students. Theological, law, and scientific faculties; library.
Copenhugen. (See Kjobenhavn.)
44. Corlk. Frelrurl: Qurens C'ollege, 245 students.

Cracour. (See Krakau.)
E1) 96-45*
45. Czernowitz, Buたowina, Austria: K. k. Franz-Josephs-Uñiversität, 370 students. Theological, law, and philosophical faculties; library.
40. Dijon, France: Facultés de Dijon, 484 students. Law, scientific, and philosophical facuilties; library.
47. Dorpat (Jurjew), Russia: Kaiserliche Universität, 1,555 students. Law, theological, medical, and philosophical faculties.
48. Dublin, Ireland: University of Dublin, 1,124 students.
49. Dublin, Ireland: Royal University of Ireland, about 600 candidates. Examining board.
50. Dundee, Scotland: University College, 71 students.
51. Durham, England: Durham University, 400 students. To this university belong the Codrington College, on the Island of Barbados, and the Fourah Bay College, in Sierra Leone; also the College of Science, at Newcastle-on-Tyne.
52. Edinburgh, Scotland: University of Edinburgh, 2,924 students. Philosophical, theological, law, and medical faculties; library.
53. Eperis, Hungary: Evangelische Rechtsakademie, 124 students. Law school.
54. Erlangen, Bavaria, Germany: K. Bayerische Friedr.-Alexander-Universitit, 1,135 students. Theological, law, medical, and philosophical faculties; library.
55. Erlau, Hungary: ErzDishöfliche Rechtsakademie, 61 students. Law school.
56. Ferrara, Italy: Libera Università di Ferrara, 84 students. Law, scientific, and medical faculties; library.
57. Florence, Italy: R. Instituto di Studi Superiori Practici e di Perfezionamento, 511 students. Philosophical, scientific, medical, and pharmaceutical faculties; library.
58. Freiburg, Baden, Germany: Badische Albert-Ludwigs-Universität, 1,504 students. Law, theological, medical, and philosophical faculties; library.
59. Freiburg, Switzerland: Katholische Universität, 305 students. Theological, law, and philosophical faculties; library.
60. Fünfkirchen, Hungary: Bischöflische Rechtsakademie. Law school.
61. Galucay, Ireland: Queen's College.
62. Geneva, Switzerland: Université de Genève, 824 students. Theological, law. medical, philosophical, and scientific faculties; five libraries.
63. Genoa, Italy: R. Universit̀̀ degli Studi di Genova, 1,010 students. Lawr, medical, scientific, and philosophical faculties and schools of engineering and pharmaceutics; library.
64. Ghent, Belgium: Université de Gand, 660 students. Philosophical, law, scientific, and medical faculties; library.
65. Giessen, Hessia, Germany: Hessische Ludwigs Universität, 598 students. Theological, law, medical, and philosophical faculties; library.
66. Glasgou, Scotland: University of Glasgow, 2,080 students.
67. Gothenturg, Sueden: Güteborgs Högskola, 568 hearers.
68. Göttingen, Prussia, Germany: Georg-Auguste-Universität, 904 students. Theological, law, medical, and philosophical faculties; library.
69. Granarlu, Spain: Universidad de Granada, 1,531 students. Philosophical. Iaw. scientific, medical, and pharmaceutical faculties; library.
ro. Graz, Styria, Austria: K. k. Karl-Franzens-Universität, 1,5ñ sturlents. Theological, law, medical, and philosnphical faculties; library.
\%1. Greifsucald, Prussir, Grimeny: Universität, s91 students. Theological. latr. medical, and philosophical faculties; library.
T~. Grenoble, Francr: Facultés de Grenoble, $46 t$ students. Law, scientific. and philosophical faculties; library.
73. Gromingen, Netherlanls: Rijks Universiteit te Groningen, not students. Thrological, law, medical, scientific, and philosophical faculties; librart.
ri. Grossurfrlfin, Hirngery: Jograkademia, 126 students. Law school.
75. IIclle, Prussia, Fermany: Friedr.-Universität Halle-Wittenberg, 1.s? :-tizdents. Theological, law, medical, and philosophical faculties: librarr.
76. Ifurana. C'uba: Universidad de la Habana. Philoserphical, scientific, medic:al. and law faculties: library.
\%~. Heidrlberof, Barlen, Germeny: Ruprecht-Karls-Universität, 1.408 itudents. Theological, law, merlical, philosophical, and scientific faculties: libnary.
Fr. Inclsingfors. Finlant. Renssia: Kejserliga Alexanders Universitet i Finlanl. 1,8ifi students. Theological, law, medical, and philosophical faculti-s: public library.
79. Innslmuck: Tyrol, iustria: K. k. Leopold-Franzens-Universität, 1 , 0us sturlent=. Theological, law, medical, and philosophical faculties: library.
80. Jaroslawl (or Yarostaul), Russia: Demidovskij juridiceskij Licej, 306 students. Law school.
81. Jassy, Roumania: Universitatea din Jassy, 407 students. Law, philosophical, scientific, and medical faculties; library.
82. Jena, Thuringia, Germany: Sächsische Gesammt-Universität, 768 students. Theological, law, medical, and philosophical faculties; library. Jurjew (see Dorpat).
83. Kairo, Egypt: Azhar University, 8,437 students and hearers.
84. Kasan, Russia: Imperatorskij Kazanskij Universitet, 759 students. Philosophical, scientific, law, and medical faculties; library.
85. Kaschau, Hungary: Rechts-Akademie, 75 students. Law school.
86. Kecskemet, Hungary: Rechts-Akademie, 52 students. Law school.
87. Kiel, Prussia, Germany: K. Christian-Albrechts-Universität, 767 stuđents. Theological, law, medical, and philosophical faculties; library.
88. Kiew or Kieff, Russia: Imperatorskij Universitet, 2,417 students Medical, law, and philosophical faculties; institutes and library.
89. Kjöbenhavn (Copenhagen), Denmark: Kjöbenhavns Universitet, 1,820 students. Theological, law, medical, philosophical, and scientific faculties and polytechnic institute; library.
90. Klausenburg, Siebenbürgen, Hungary: K. k. Klausenburger Universitàt, 629 students. Law, medical, philosophical, and scientific faculties; library.
91. Königsberg, Prussioa, Germany: K. AIbertus Universität, 706 students. Theological, law, medical, and philosophical faculties; royal and university library.
92. Krakau, Galieia, Austria: Jagellonische Universität, 1,304 students. Theological, law, medical, and philosophical faculties; library.
93. Lahore, Indio: The Panjab University, 1,449 candidates. Oriental languages, arts, law, medicine, science, and engineering departments.
94. Lampeter, Wales: St. Davids College, 132 students.
95. Lausanne, Switzertand: Université de Lausanne, 516 students. Theological, law, medical, philosophical, and scientific faculties.
96. Leeds (see Manchester), England: Yorkshire College, 1,116 students.
97. Leiden, Netherlands: Rijks-Universiteit, 815 students. Medical, scientific; philosophical, theological, and law faculties; library.
98. Leipzig, Saxony, Germany: Universität, 3,175 students. Theological, law, medical, and philosophical faculties; library.
99. Lemberg, Galicia, Austria: K. k. Franzen's Universität in Lemberg, 1,445 students. Theological, law, and philosophical faculties; library.
100. Lille, France: Facultés de Lille, 1,351 students. Law, medical, scientific,

- and philosophical faculties; library.

101. Lille, France: Facultés Libres. Theological, law, medical, scientific, and philosophical faculties; library.
102. Limoges, France: Ecole de Medicine et de Pharmacie. Medical and pharmacentical courses.
103. Liverpool (see Manchester), England: University College, about 1,000 students.
104. London, England: University of London, about 5,000 candidates. Examining board; library. To the university belong:
(1) University College, with philosophical, law, scientific, and medical faculties; library; about 1,500 students.
(2) King's College, with theological, philosophical, and medical faculties; library.
(3) School for Modern Oriental Languages.
105. Löwen (or Louvain), Belgium: Université Catholique de Louvain, 1,475 students. Theological, law, medical, philosophical, and scientific faculties; library.
106. Lund, Sweden: Kongl. Universitet i Lund, 645 students. Theological, law, medical, and philosophical faculties; library:
107. Lüttich (or Liège), Belgium: Université de Liège, 1,260 stuđents. Philosophical, law, scientific, and medical faculties; library.
108. Lyons, France: Facultés Libres, 1,514 students. Theological, law, scientific, and philosophical faculties.
109. Lyons, France: Facultés de Lyon, 2,043 students. Law, medical, scientific, and philosophical faculties; two libraries.
110. Macerata, Italy: Regia Università di Macerata, 264 students. Law faculty.
111. Madras, India: University of Madras, 4,224 candidates. Examining board.
112. Madrid, Spain: Universidad Central de España, 5,889 students. Philosophical, law, scientific, medical, and pharmaceutical faculties; libraries. students. This institution consists of:
(1) Owens College, Manchester, 928 students.
(2) University College, Liverpool, about 1,000 students.
(3) Yorkshire College, Leeds, 1,112 students.
113. Manila, Philippine Islands: Real y Pontificia Universidad de Santo Tomás de Manila, 758 students. Theological, law, medical, and pharmaceutical faculties; library.
114. Marburg, Hessia, Germany: Universität Marburg, 982 students. Theological, law, medical, philosophical, and scientific faculties; library.
115. Marseilles, France: Belongs to Facultés d'Aix. Scientific, medical, and law faculties; library.
116. Melbourne, Victoria, Australia: University of Melbourne, 594 students.
117. Messina, Italy: Regia Universitá degli Studi di Messina, 502 students. Law, medical, scientific, philosophical, and pharmaceutical faculties; library.
118. Modena, Italy: Regia Universitá degli Studi di Modena, 412 students. Law, medical, scientific, and pharmaceutical faculties; library.
119. Montauban, France: Belongs to Facultés de Toulouse, 49 students. Law, medical, scientific, and philosophical faculties; library.
120. Montevideo, Uruguay: University, about 400 students. Medical, law, and mathematical faculties; library.
121. Montpellier, France: Facultés de Montpellier, 1,322 students. Law, medical, scientific, and philosophical faculties; library.
122. Montreal, Canada: McGill College and University, 1,031 students.
123. Moscou, Russia: Imperatorskij Moskowskij Universitet, 4,118 students. Philosophical scientific, law, and medical faculties; library.
124. Moscou, Russia: Duchovnaja Akademija. Theological faculty; library.
125. Munich, Bavaria, Germany: K. Bayerische Ludwig-Maximilians Universität, 3,754 students. Theological, law, medical, and philosophical faculties; library.
126. Münster, Prussia, Germany: K. Preussische Theologische und Philosophische Akademie, 409 students. Theological and philosophical faculties; library.
127. Nancy, France: Facultés de Nancy, 942 students. Law, medical, scientific, and philosophical faculties, and pharmaceutical school; library.
128. Nantes, France: École de Médecine de Nantes.
129. Nantes, France: École Libre de Droit.
130. Naples, Italy: Regia Università degli Studi di Napoli, 5,040 students. Philosophical, law, mathematical, scientific, and medical faculties, and pharmaceutical school; library.
131. Neuchâtel, Switzerland: Académie de Neuchâtel, 129 students. Philosoph-' ical, scientific, theological, and law faculties; library.
132. Newcastle, England: The colleges belong to Durham University.
(1) College of Medicine, 201 students.
(2) College of Science, 200 students.
133. New Zeuland: University, consisting of six colleges.
134. Nottingham, Englamet: University College, 1,80\% students. Philology, law, and scientific faculties, and school of engineering; free public libraries.
135. Oclessa, Rinssicu: Noworossijskij Universitet, 505 students. Philosophical, scientific, and law faculties; library.
136. Olmütz, Moravia, Austria: Theologische Facultät, 285 students.
137. Oviedo, Spain: Universidad Literaria, 269 students. Law faculty; library.
138. Oxford, Englancl: University, 3,256 students. Theolosical, law, medical, scientific, and philosophical faculties: Borleian library.
139. Padua, Italy: Regia Università degli Studi di Padua, 1,fi.jf sturlents. Law, medical, scientific, and philosophical faculties, and schools of engineering and pharmacy: library.
140. Pulermo, Sicily, Ituly: Regia Università degli Studi di Palermo, 1.369 students. Law, medical, scientific, and philosophical faculties, and schools of engineering and pharmacy; library.
141. Proris, Frouce: (1) Facultès de Paris, 11,010) students. Protestant theological, law, medical, scientific, and philosophical faculties, and schools of engineering and pharmacy: libraries.
142. Poris, Fromee: (2) Facultes libres. Law and philosophical faculties: lihrary.
143. Paris, l'rance: (3) Collére de France.
144. Paris, Fronce: (4) Musi-mm dhistoire naturelle.
145. Poris. Fromer: (i) E.nlo pratique des hautesétudes en Sorbonne, $2: 33$ students. Philosophical an! theological faculties: library.
14\%. I'uris, l'rouce: (6) École nationale des beaux-arts.
146. Paris, France: (7) Ecole nationale des chartes.
147. Paris, France: (8) École du Louvre.
148. Paris, France: (9) École des langues orientales vivantes.
149. Parma, Italy: Regia Università degli Studi di Parma, 408 students. .Law, medical, and scientific faculties, and veterinary and pharmaceutical schools.
150. Pavia, Italy: Regia Università degli Studi di Pavia, 1,272 students. Law, medical, scientific, and philosophical faculties; pharmaceutical school and library.
151. Perugia, Italy: Università Libera degli Studi di Perugia, 303 students. Law and medical faculties, and pharmaceutical and veterinary schools: library.
152. Petersburg, Russia: Imperatorskij Universitet, 2,804 students. Philosophical, scientific, law, and oriental languages faculties; library.
153. Petersburg, Russia: Imperatorskij Wozensio-Medicineskaja Akademja, 750 students. Medical faculty; library.
154. Petersburg, Russia: Theological Academy, 239 students; also a law school, 300 students, independent of the university.
155. Pisa, Italy: Regia Università degli Studi di Pisa, 972 students. Law, philosophical, medical, and scientific faculties, and engineering, pharmaceutical, veterinary, and agricultural schools; library.
156. Poitiers, France: Facultés de Poitiers, 929 students. Law, scientific, and philosophical faculties; library.
157. Prague, Bohemia, Austria: K. k. Deatsche Carl-Ferdinands Universität, 1,369 students. Theological, law, medical, and philosophical faculties; library.
158. Prague, Bohemia, Austria: C. k. česk Universitet Karlo-Ferdinandovij, 2,519 students. Theological, law, medical, and philosophical faculties; library.
159. Presburg, Hungary: Jógakademia, 111 students. Law and philosophical faculties; library.
160. Rennes, France: Facultés de Rennes, 1,178 students. Law, scientific, and philosophical faculties; library.
161. Rome, Italy: Regia Università degli Studi di Roma, 1,916 students. Philosophical, scientific, law, and medical faculties; engineering and pharmaceutical schools; library.
162. Rostock, Mecklenburg, Germany: Grossherzogliche Universität, 371 students. Theological, law, medical, and philosophical faculties; library.
163. Salamanca, Spain: Universidad de Salamanca, 1,247 students. Philosophical and law faculties; library.
164. Salzburg, Austria: Theologische Fakultät, 72 students.
165. Santiago, Chile: University with 4 faculties and 1,000 students.
166. Santiago, Spain: Universidad de Santiago. Law, medical, and pharmaceutical faculties; library.
167. Saragossa, Spain: Universidad de Zaragoza, 966 students. Philosophical, law, medical, and scientific faculties; provincial library.
168. Sarospatak, Hungary: Theologische und Rechtsschule, 110 students.
169. Sassari, Italy: Regia Università degli Studi di Sassari, 157 students. Law, medical, and scientific faculties; library.
170. Sevilla, Spain: Universidad de Sevilla. Philosophical, law, and scientific faculties; library.
171. Sheffield, England: Firth College (belongs to Oxford University), 310 students. Also a medical school.
172. Siena, Italy: Regia Università degli Studi di Siena, 215 students. Law and medical faculties and pharmaceutical school; library.
173. Sophia, Bulgaria: Wische utschilische w Sophia, 380 students.
174. Stockholm, Sweden: Stockholms Högs Kola, 387 students.
175. Strassburg, Alsace, Germany: Kaiser Wilhelms Universität, 1,016 students. Theological, law, medical, philosophical, and scientific faculties; provincial library.
176. Sydney, New South Wales, Australia: University of Sydney, 592 students.
177. Tokyo, Japan: Teikoku Daigaku, 1,396 students. Law, medical, philosophical, and scientific faculties and school of engineering; library.
178. Tomsk, Siberia: Imperatorskij Tomskij Universitet, 430 students. Theological and medical faculties; library.
179. Toronto, Canada: University of Toronto, 1,269 students. Philosophical, law, and medical faculties; library.
180. Toronto, Canada: Victoria University, 234 students. Arts and theology; library.
181. Toulouse, France: Facultés de Toulouse, 1,561 students. Law, philosophical, scientific, and medical faculties; library.
182. Toulouse, France: Facultés Libres Catholiquès. Theological and philosophical faculties; library.
183. Tübingen Würtemberg, Germany: K. Eberhard Karls Universität, 1,262 students. Theological, law, medical, philosophical, and scientific faculties; library.
184. Turin, Italy: Regia Università degli Studi di Torino, 2,355 students. Law, medical, philosophical, and scientific faculties and pharmaceutical school; library.
185. Upsala, Šweden: Kongl. Universitet i Upsala, 1,495 students. Theological, law, medical, and philosophical faculties; library.
186. Urbino, Italy: Libera Università degli Studi di Urbino 76 students. Law and mathematical faculties and pharmaceutical and surgical schools; library.
187. Utrecht, Netherlands: Rijks Universität te Utrecht, 632 students. Philosophical, medical, theological, law, and scientific faculties; library.
188. Valencia, Spain:- Universidad de Valencia, 726 students. Law, scientific, and medical faculties; library.
189. Valladolid, Spain: Universidad de Valladolid. Law and medical faculties; library.
190. Vienna, Austria: K. k. Universität, 6,714 stuđents. Law, theological, medical, and philosophical faculties; library and numerous university institutes.
191. Tienna, Austria: Protestantische Theologische Fakultät, 1,186 students.
192. Vienna, Austria: K. k. Orientalische Akademie, 25 students; also Lehranstalt für Orientalische Sprachen, 120 students.
193. Warsaw, Poland, Russia: Imperatorskij Warschawskij Universitet, 884 students. Philosophical, scientific, law, and medical faculties; library.
194. Würzburg, Bavaria, Germany: K. Julius-Mazimilians Universität, 1,456 stuents. Theological, law, medical, and philosophical faculties; Tibrary.
195. Zürich, Switzerland: Schweizerische Hochschule, 822 students. Theological, law, medical, and philosophical faculties; cantonal and city libraries.

## Foreign Universities.

## IV. Arranged according to countries.

Argentina: (Universities not mentioned in "Minerva.")
Australia: Adelaide, Melbourne, Sydney.
Austria: Czernowitz, Graz, Innsbruck, Krakau, Lemberg, Olmütz, Prague (German), Prage (Bohemian), Salzburg, Vienna.
Belgium: Brussels, Ghent, Liege, Louvain.
Bolivia: (Universities not mentioned in "Minerva.")
Brazil: (Universities not mentioned in "Minerva.")
Bulgaria: Sophia.
Canada: Montreal, Toronto.
Cape Colony: Cape City.
Chile: Santiago.
China: (College of Foreign Knowledge.)
Colombia: (Universities not mentioned in "Minerva.")
Costa Rica: (None.)
Cuba: Habana.
Denmarlc: Copenhagen.
Ecuador: Quito.
Egypt: Kairo.
England: (See also Ireland, Scotland, and Wales below.) Birmingham, Bristol, Cambridge, Durham, Leeds, Liverpool, London, Manchester, Newcastle, Nottingham, Uxford, Sheffield.
France: Aix, Algiers, Angers, Besançon Bordeaux, Caen, Clermont, Dijon, Grenoble, Lille, Limoges, Marseilles, Montauban, Montpellier, Nancy, Nantes, Paris, Poitiers, Rennes, Toulouse.
Germany: Berlin, Bonn, Braunsberg, Breslan, Erlangen, Freiburg, Giessen, Grōttingen, Greifswald, Halle, Heidelberg, Jena, Kiel, Königsberg, Leipzig, Marburg, Munich, Münster, Rostock, Strassburg, Tübingen, Würzburg.
Greece: Athens.
Guatemala: (None.)
Haiti: (None.)
Hawaiz: (None.)
Honduras: (None.)

Huingary: Agram, Budapest, Eperies, Erlau, Fünfkirchen, Grosswardein, Kaschau, Kecskemet, Klausenburg, Presburg, Sarospatak.
India: Allahabad, Bombay, Calcutta, Lahore, Madras.
Ireland: Belfast, Cork, Dublin, Galway.
Italy: Bologna, Cagliari, Camerino, Catania, Ferrara, Florence, Genoa, Macerata, Messina, Modena, Naples, Padua, Palermo, Parma, Pavia, Perugia, Pisa, Rome, Sassari, Siena, Turin, Urbino.
Japan: Tokyo.
Korea: (None.)
Mexico: (Schools of law, medicine, engineering, etc., not mentioned in "Minerva.")
Montenegro: (Theological seminary, not mentioned in "Minerva.")
Morocco: (None.)
Netherlands: Amsterdam, Groningen, Leiden, Utrecht.
New Zealand: One university.
Nicaragua: (None.)
Norway: Christiania.
Orange Free State: (None.)
Paraguay: (National college, not mentioned in "Minerva.")
Persia: (Several colleges not mentioned in "Minerva.")
Feru: (Universidad di San Marcos, not mentioned, in "Minerva.")
Philippine Islands: Maniła.
Portugal: Coimbra.
Roumania: Bucharest, Jassy.
Russia: Charkow, Dorpat, Helsingfors, Jaroslav1, Kasan, Kiew, Moscow, Odessa, Petersburg, Warsaw.
Salvador: (One university, not mentioned in "Minerva.")
Santo Domingo: (None.)
Scotland: Aberdeen, St. Andrews, Dundee, Edinburg, Glasgow.
Servia: Belgrade.
Siam: (None.)
Siberia: Tomsk.
South African Republic: (None.)
Spain: Barcelona, Cadiz, Granada, Madrid, Oviedo, Salamanca, Santiago, Saragossa, Seville, Valencia, Valladolid.
Sweden: Gothenburg, Lund, Stockholm, Upsala.
Switzerland: Basel, Berne, Freiburg, Geneva, Lausanne, Neuchâtel, Zürich.
Turkey: (Several colleges not mentioned in "Minerva.")
Uruyuay: Montevideo.
Venezuela: (Universities not mentioned in "Minerva.")
Wales: Aberystwith, Bangor, Cardíff, Lampeter.

## B.-Technological Schoclis.

Aachen (Aix la;Chapelle), Prussia, Germany, founded 1870; 305 students.
Berlin, Prussia, Germany, founded 1779; 2,632 students.
Braunschweig, Germany, founded 1745; 371 students.
Brünn, Austria, founded 1850; 228 students.
Copenhagen, Denmark, founded 1829; 431 students.
Darmstadt, Hessia, Germany, founded 1868; 414 students.
Delft, Netherlands, founded 1864; 386 students.
Dresden, Saxony, Germany, founded 1828; 757 students.
Graz, Styria, Austria, founded 1811; 191 students.
Hanover, Prussia, Germany, founded 1879; 964 students.
Karlsruhe, Baden, Germany, founded 1825; 834 students.
Lemberg, Galicia, Austria, founded 1844; 261 students.
Moscow, Russia, founded 1832; 621 students.
Munich, Bavaria, Germany, founded 1827; 1,415 students.
Paris, France, founded 1794; - students.
Petersburg, Russia, founded 1828; 4 schools, with 1,651 students.
Porto, Portugal, founded 1877; 322 students.
Prague, Bohemia, Austria, founded 1806 and 1868; 2 schools, with 921 students.
Riga, Russia, founded 1832; 1,151 students.
Sáo Paulo, Brazil, founded 1894; - studen'ts.
Sheffield, England, founded 1885; 650 students.
Stuttgart, Würtemberg, Germany, founded 1829; '758 students.
Turin, Italy, founded -; 366 students.
Note-Several noted technological schools in Italy and in other countries are connected with universities, hence are not mentioned separately in this list.

## C.-Higher Agricultural, Forestry, and Mining Schools.

[Figures in brackets signify date of founding.]
Alfenburg, Hungary [1819], Agricultural Acadeny; 119 students.
Bonn, Prussia, Germany [1846], Agricultural Academy; 376 students.
Campinas, São Paulo, Brazil [1887], Agricultural Institution.
Clausthal, Prussia, Germany [1775], Mining Academy; 153 students.
Coopers Hill, England [1885], Forestry Academy.
Copenhagen, Denmark [1858], Veterinary and Agricultural Academy; 370 students.
Cordova, Spain, Veterinary School.
Debreczin, Hungary [1865], Agricultural Academy; 96 students.
Eberswalde, Prussia, Germany [1820], Forestry Academy; 55 students.
Eisenach, Saxe-Weimar, Germany [1830], Forestry Academy; 35 students.
Evois, Finland, Russia [1859], Forestry Academy; 11 students.
Freiberg, Saxony, Germany [1765], Mining Academy; 171 students.
Hohenheim, Würtemberg, Germany [1818], Agricultural Academy; 130 students.
Keszthely, Hungary [1865], Agricultural Academy; 120 students.
Kolozsmonoetor, Hungary [1869], Agricultural Academy; 103 students.
Leoben, Styria, Austria [1894], Mining Academy; 223 students.
Leon, Spain, Veterinary School; 99 students.
Madrid, Spain, Schools of Engineering, Agriculture, and Veterinary Science.
Moscow, Russia, Agricultural and Forestry Academy; 302 students.
Munich, Bavaria, Germany [1790], Veterinary School; 198 students.
Münden, Prussia, Germany [1868], Forestry Academy; 39 students.
Nowaja-Alexandria, Poland, Russia [1892], Agricultural and Forèstry Academy; 180 students.
Petersburg, Russia [1773], Mining and Forestry Institutes; two schools, with 970 students.
Pribraim, Bohemia, Austria [1849], Mining Academy; 24 students.
Schemnitz, Hungary, Forestry and Mining Academy; about 200 students.
Stockholm, Sweden [1823], Veterinary and Forestry Schools, also Agricultural Academy [1811].
Tharandt, Saxony, Germany [1811], Forestry Academy; 55 students.
Turin, Italy, Veterinary School; 91 students.
Vienna, Austria [1872], Agricultural Academy; 291 students.
Note-Other similar higher institutions of learning are connected with universities; hence they are not mentioned in this list of separate institutions.

## CHAPTER XXXIII.

## EDUCATIONAL MATTERS OF INTEREST IN VARIOUS STATES.

## MASSACHUSHTTS.

## Gifts to Northampton, Mass.-A Striking Record of Benefactions.

[The city of Northampton, Mass., which had in 1890 a population of less than 15,000 inhabitants, has been the recipient, mainly during the last half century, of donations for educational, religious, and charitable purposes amounting in all to nearly $\$ 4,500,000$. The following summary of these donations, and details regarding the more notable of them have been taken from an address by H. S. Gere, before the Community Club of Northampton, April 13, 1897.]
The first gift to the town was made in $1 \% 83$ by Maj. Joseph Hawley, the distinguished patriot and statesman, who gave certain lands for the benefit of the public schools. These lands have been sold and the income has been yearly devoted to the purpose for which they were given. The fund now amounts to $\$ 3,000$.
The second gift, in which the town has only a joint interest, was made in 1845, by Oliver Smith, of Hatfield, the founder of the Smith charities, of which further mention will be made later in this paper.
The third gift was made in 1852, by Jenny Lind Goldschmidt, who had spent her homeynoon here on Round Hill. Just previous to her return to Europe she gave a concert in the town hall, the proceeds of which were $\$ 936.93$. Of this sum she gave \$:00 to the Young Men's Institute, and that was the beginning of the present Clarke Library. The balance she gave to President William Allen, to be disposed of in charity.
Since then gifts to the town, or to public institutions within the town, have come in quick succession.
One of the most loyal citizens that Northampton ever had was John Clarke. He spent his entire life here and was from his boyhood a merchant on Shop Row until he became a banker. He was an old-time country storekeeper and had oldfashioned ways of living and doing business. He amassed a large fortune, which he bestowed upon his native town. The Clarke Library is largely the result of his liberality. While living he gave $\overline{5}, 000$ for the Memorial Hall Building, and $\$ 50,000$ to the Clarke Institution for Deaf Mutes. By his will he gave $\$ 2,000$ to the Young Men's Institute, $\$ 40,000$ to the Clarke Library, and $\$ 234,000$ to the Clarke Institution.
In addition to the sum given by Mr. Clarke to the library and Memorial Hall, there were given by outside parties, through the solicitations of our publicspiriter citizen his nephew, Christopher Clarke, the sum of $\$ 25,000$ for the Memorial Hall Building. Of this sum $\$ 5,000$ was given by George Bliss, of New York, and $\S: 3,500$ ly E. H. R. Lyman, of Brooklyn, both natives of Northampton.
Charles E. Forles, a lawyer and ex-judge of the supreme court, left one of the largest estates ever acquired in Northampton, all of which he gave to the town for the establishment of a library. The trustees received from the executors of his estate these sums:
Bork fund ..... \$294, 015. 89
Income from same ..... 40, 042.84
Aid fund ..... 2, 858.55
Library luilding and hot ..... 128,99:3. 48
Total ..... 485, 910.76

The library building is finely located and was built with reference to the great future demands that will be made upon it. This is one of the most useful gifts that the town has received.

To aid in maintaining this library Dr. Pliny Earle, for many years the head of the State Lunatic Hospital located here, gave his whole estate, amounting to over $\$ 60,000$.

Cooley Dickinson, of Hatfield, left his entire estate of $\$ 11,196$ to found the Dickinson Hospital, for the benefit of the inhabitants of Northampton, Hatfield, and Whately.

Whiting Street, of Smiths Ferry, gave $\$ 25,000$ to the town of Northampton "for the relief and comfort of the worthy poor," and $\$ 25,000$ more contingent upon the decease of certain of his relatives. He also gave $\$ 1,000$ to Smith College, $\$ 1,000$ to Clarke Institution, and $\$ 1,000$ for Memorial Hall lot.

The State Lunatic Hospital was opened to patients in 1858. The work of building occupied two years and three months, and the original cost was $\$ 315,000$. Extensive improvements have been made from time to time. The grounds have been enlarged from 175 acres at the outset to nearly 500 acres at the present time. The buildings have also been enlarged and improved, so that the entire outlay has been $\$ 630,550$. The hospital has been very ably managed and is now at the height of its prosperity and usefulness.

- Florence has contributed its share to the city's gifts. Samuel L. Hill and Alfred T. Lilly have each giyen large sums. Mr. Hill gave to the erection of the Florence High-school Building, Cosmian Hall, and to establish the kindergarten school, $\$ 178,000$, and Mr. Lilly gave to Cosmian Hall, the kindergarten, and Smith College, $\$ 138,000$.
A beautiful academy of music, thoroughly equipped, was built by E. H. R. Lyman, at a cost of about $\$ 100,000$, and presented to the city as a token of his loyalty-to the place of his nativity. Mr. Lyman has also been a generous friend of the college and other institutions of the town.
Deacon J. P. Williston was a liberal giver to the town. He gave $\$ 8,000$ toward the erection of the old high-shool building, $\$ 3,000$ toward the erection of a chapel for the First Church, $\$ 6,000$ for the Center'Street schoolhouse, and generous sums to the Florence Church and the chapels at Hospital Hill, Bay State, and Leeds.
Deacon George W. Hubbard gave nearly the whole of his estate of about $\$ 90,000$ to Smith College, the Dickinson Hospital, and the Old Ladies' Home, besides making generous donations while living.
Among others who have been generous givers to public uses here may be mentioned, Mrs. Tenny, to Smith College, $\$ 10,000$; L. A. Brooks, to the Edwards Church, $\$ 2,000$; Ansel Wright, to the Unitarian Church, $\$ 3,000$, and Edward C. Bodman, to to the Edwards Church, $\$ 7,000$.


## SMITH COLLEGE

Miss Sophia Smith, of Hatfield, left the greater portion of her estate, one of the largest ever accumulated in this section, to found the college in this city which bears her name. The estate at her decease in 1870 amounted to $\$ 475,000$. The amount received by the college was $\$ 386,608$, to which was added the $\$ 20,000$ paid by the town as a condition of the bequest. Since its opening the college has received many gifts, among which are those made by Winthrop Hillyer, a Northampton merchant, of about $\$ 100,000$, and Alfred T. Lilly, a manufacturer at Florence, who bore the entire expense of erecting Lilly Hall. Mr. Hillyer built the art gallery which bears his name. Deacon George W. Hubbard gave to the college the bulk of his estate, amounting to about $\$ 80,000$.
The college was opened for pupils in 1874. There were 13 young women in the first class. To-day there are 930 names on the roll of students, and the college ranks as the leading college for the higher education of women in the world, having a larger number of students than any other institution of its class.
You may well ask, What has brought about this wonderful growth? A number of causes have contributed. The popularity of the plan of colleges for women has done much. The cottage system of accommodating the students has been an aid. The able corps of college professors and assistants, both male and female, have been a power in the upbuilding. A sound local public sentiment in its behalf has been of value. But greater than any one, and perhaps greater than all, has been the admirable management of President Seelye. For its development he has labored unceasingly, with truly heroic zeal and splendid ability. He has himself been a constant inspiration to the students, and he may well look upon the results of his quarter century's work here with pleasure and satisfaction.

That the college has been of great benefit to this community we have but to look at the large increase in the value of the real estate in its vicinity. The market
value of real extate in that section has doubled, and in some instances trebled. And what it has been to all, to tradesmen, liverymen, mechanics, and others, may be seen from the authoritative estimate that of about 850 of the students each spends here yearly for all purposes, including tuition, board, and various expenses, not less than $\$ 500$, making an annual revenue to the institution and the people of the town from this source alone of the sum of $\$ 425,000$.
In view of these facts, is it worth while for the citizens of this city to spend much time in considering the question of taxing college property?

What the college has been to this community in a financial point of view it has equaled in a social and literary way. Its presence has been an uplifting force and a power for good which this people truly appreciate and for which they are profoundly grateful.

## THE SMITH CHARITIES.

One of the most remarkable wills ever executed in this country is that of Oliver Smith. The mind that conceived it was a rare product of this century. The charities it founded have proved of great practical value in helping the worthy poor and stimulating habits of industry in the boys and girls bound out under its provisions.

Oliver Smith died December 22,1845, leaving an estate of $\$ 370,000$. This he gave to the towns of Northampton, Amherst, Hadley, Hatfield, Williamsburg, Greenfield, Deerfield, and Whatley for certain charitable objects, prominent among which are gifts to poor widows; loans of $\$ 500$ each to poor boys after an apprenticeship of three years to some mechanic or farmer, the loans to become gifts after five years of good behavior; marriage gifts of $\$ 300$ to poor girls who shall have served an appreńticeship as domestics in families of farmers or mechanics; marriage gifts of $\$ 50$ each to indigent young women; and for an agricultural school.

This fund has increased from year to year until it now amounts to nearly $\$ 1,300,000$, but the amounts available for charity are now more fully paid out yearly than during the first twenty-five years after the testator's decease.

To show the extent of these charities, there had been paid out since the will was probated to May 1, 1896, these sums:


The payments considerably exceed the present principal of the funds.
It is probable that no system of charities was ever more wisely devised than this of Oliver Smith. The gifts to widows and indigent young women have been of great assistance to them, while the gifts to apprenticed boys and girls have served to inculcate in them habits of industry and good behavior. There has been no unseemly strife in the management of the institution, and the people of the towns interested have shown a commendable interest in administering the great trust in a spirit of loyalty to the evident benevolent intent of the testator.

As the time when the agricultural school provided for by the will is approaching, being only eight years distant, it may be of interest and profit to see just what this school is to be. The fund originally set aside for this school was $\$ 30,000$. To this was added $\$ 10,000$, which was given to the American Colonization Society on a condition which was forfeited. This fund was to accumulate for sixty years from the death of the testator, and then be used by the town of Northampton for the establishment of the Smith Agricultural School. The fund now amounts to about $\$ 217,000$, and at the expiration of the sixty years-on December 22, 1905-it is estimated that it will exceed $\$ 300,000$.

Two farms, or lands sufficient for two farms, are to be purchased for the school; one for a "pattern farm, to be so improved in practical details as to become a model," and the other for an "experimental farm, to aid and assist the labors and improvements of the pattern farm in the art and science of husbandry and agriculture." So much of the fund as may be necessary to purchase these farms and erect suitable buildings thereon is to be paid to the town, and thereafter only the income of the remainder can be paid for the maintenance of the school.

Connected with this school there will be a "school of industry, for the benefit of the poor." Poor boys are to be admitted and educated, and when 21 years of age
shall be paid $\$ 200$ each as a loan "to enable them to commence business for themselves," and at the end of five years of good behavior such loans shall become gifts.

The management of this school shall be by "three discreet freeholders, one of whom shall be a practical husbandman and one a mechanic," who "shall annually be chosen by ballot in legal town meeting."

## Summary of gifts to Northampton.

Maj. Joseph Hawley ..... $\$ 3,000$
Jenny Lind
$1,323,850$
Smith Charities ..... 20,000
J. P. Willisto
-4,628
For cemetery
7, 000
7, 000
Memorial Hall ..... 54, 000
Clarke Institution ..... 284, 000
Memorial Hall contributions ..... 25,000
Samuel L. Hill:
Samuel L. Hill: .....
36,000 .....
36,000 .....
30, 000 .....
30, 000
Cosmian Hall Florence Kindergarten ..... 112,000
Florence Schoolhouse
Florence Schoolhouse
Judge Forbes, library ..... 485, 910
Dr. Pliny Earle, Forbes Library ..... 62, 736
Cooley Dickinson, for hospital ..... 71, 196
George Bliss:
George Bliss:
Episcopal church ..... 120,000
old Ladies' Home ..... 10,000
Sophia Smith, for college
100,100
Winthrop Hilyer, for college
35,000
35,000
A. T. Lilly, for college
A. T. Lilly, for college .....
80,000 .....
80,000 ..... 10,000
Geo. W. Hubbard, for college
Geo. W. Hubbard, for college
Samuel H. Dickinson, for ..... 10,000
Other gifts for college ..... 200,000
A. T. Lilly:
Florence Kindergarten ..... 75,000 ..... 18,000
Florence Library
Florence Library
Cosmian Hall ..... 10,000
E. H. R. Lyman, Academy of Music ..... 100,000
Whiting Street, for worthy poor ..... 50,000 ..... 50,000
George W. Hubbard: ..... 5,000
Dickinson Hospital ..... 5,000
State Lunatic Hospital ..... 630,550
Lewis L. Draper, Methodist Episcopal church ..... 14,000
Emerson H. Draper:
Dickinson Hospital ..... 30,000
Old Ladies' Home. ..... 10,000
Methodist Episcopal church ..... 15, 000 ..... 1, 000
Dr. Pliny Earle, Old Ladies' Home
Dr. Pliny Earle, Old Ladies' Home
Old Ladies' Home, first contributions.
3,000
Ansel Wright, Unitarian church
2,000
2,000
E. A. Brooks, Edwards Church
E. A. Brooks, Edwards Church
7,000
7,000
Whiting Street:
Clarke Institution ..... 1,000
Memorial Hall lot ..... 1,000
E. H. R. Lyman, Memorial Hall lot ..... 1,000
Roscoe Green and Mr. Lippett, Clarke Institution ..... 892
Grand total ..... 4,443,970
PRNNSYLVANIA.

## What is Higher Education?

## Charles De Garmo, Swarthmore College, Penneylvania.

Higher education has not seldom been thought to mean the acquisition of wathetic graces through classical learning. It may more properly be defined as the comparative study of all subjects. The graces are only a by-product; classical language is but one of many means. Higher education not only refines, it produces in the man a new order of thinking, a more efficient power of doing. Elementary education seizes facts; higher education seizes their meaning. Throngh the comparative study of all subjects it enables us to perceive relations that lie beneath the surface. It enables us to use the tools of knowledge given by elementary education and to pass beyond the seeming to the real. The senses tell us that the sun goes round the earth, but the educated reason knows better. A glass of water may seem pure, but contain the germs of typhoid fever; a financial policy
may promise relief to the country, yet involve its undoing; a grand act of unselfish philanthropy may appear to relieve misery, yet in the end augment it.

The comparative study of knowledge has another peculiarity, in that each subject is a focus for large bodies of related facts. In the higher education botany is the subject of both organic and inorganic nature from the standpoint of the plant. It includes the related facts of physics, chemistry, geology, mineralogy, meteorology, physical geography, entomology (the fertilization of plants through the agency of insects), and other subjects. Each one of these branches becomes in its turn the focus for many of the same facts. It is the standpoint of observation that changes, not so much the facts to be observed. This is the reason why it is not so necessary in higher education to study a multitude of subjects. When the hunian sciences are taken up, we find that the same thing is true. History records the ideas and progress of men largely from the standpoint of political action; the history of art records the civilization of the various periods from the standpoint of æsthetics; that of education treats of the same set of facts, but the focus changes to the consideration of the development of the young. The same is true of the history of religion, of economics, of language.

Life itself, both natural and institutional, is a unity of interesting forces. Everything is interwoven with everything else. Finance depends won economics, economics upon science, science upon mathematics, government upon all of these plus the political genius of the people; the political genius of the people depends largely upon its language, its literature, and its history. All of these have had an evolution, a development through which alone they can be fully comprehended. No man can indeed master all knowledge, so marvelous are its riches; but every man can, according to his capacity and opportunity, master enough to make his thinking reliable. The college is open to him. Every great city in the land has its university, every library contains the possibility of higher training for those who will study. Higher education, like the Christian religion, is a fountain at which all who will may drink.

## SOUTHH CAROLINA.

## Gen. Francis Marion on Popular Education.

Dr. Lewis R. Harley, Central Figh School, Philadelphia.
The student of American history remembers Gen. Francis Marion as the dashing partisan leader of the Revolution, but the "Life of Gen. Francis Marion," by Brig. Gen. P. Horry, of Marion's Brigade, portrays another interesting side of his character. General Horry relates that in hislast visit to Marion, in 1795 , the partisan leader, in a lengthy conversation, discussed the value of free schools to the Republic. Marion claimed that the general ignorance that prevailed throughout the South divided that section, rendering it an easy prey to the British, who held it in their possession during the greater part of the Revolutionary struggle. The remarks of Marion read with all the freshness of a treatise on popular education composed in the last quarter of the nineteenth century, and they are worthy of reproduction here. General Horry remarked to Marion that he feared the legislature of Carolina would dread the expense of free schools, when Marion replied as follows:
" What, sir! Keep a nation in ignorance rather than vote a little of their own money for education! Only let such politicians remember what poor Carolina has already lost through her ignorance. What was it that brought the British, last war, to Carolina but her lack of knowledge? Had the people been enlightened, they would have been united; and had they been united, they never would have boen attacked a second time by the British. For after that drubbing they got from us at Fort Moultrie. in $1 \tilde{i} \boldsymbol{j}$, they would as soon have attacked the devil as have attacked Carolina again, had they not heard that we were 'a honse divided against itself;' or in other words, harl amongst us a great number of Tories; men who, throngh inere ignorance, were disaffecterl to the cause of liberty, and ready to join the British agrainst their own countrymen. Thus, ignorance begat toryism, and toryism begat losses in Carolina of which few have any idea.
"According to the last accounts, America spent in the last war $\$ 70,000,000$, which, divided among the States according to population, gives to Carolina about $\$ 8,000,000 ;$ making, as the war lasted eight years, $\$ 1,000,000$ a year. Now, it is generally believed, the British after their loss of Burgoyne and their fine Northern army, would soon have given up the contest, had it not been for the foothold they
got in Carolina, which protracted the war at least two years longer. And as this two years' ruinous war in Carolina was owing to the encoúragement the enemy got there, and that encouragement to toryism, and that toryism to ignorance, ignorance may fairly be debited to two millions of loss to Carolina.
"Well, in these two extra years of tory-begotten war, Carolina lost at least4,000 men; and among them a Laurens, a Williams, a Campbell, a Haynes, and many others, whose worth not the gold of Ophir could value. But rated at the price at which the Prince of Hesse sold his people to George the Third to shoot Americans, say $£ 30$ sterling a head, or $\$ 165$, they make $\$ 600,000$. Then count the 25,000 slaves which Carolina certainly lost, and each slave at the moderate price of $\$ 300$, and you have $\$ 7,500,000$. To this add the houses, barns, and stables that were burned; the plate plundered; the furniture lost; the hogs, sheep, and horned cattle killed; the rice, corn, and other crops destroyed, and they amount, at the most moderate calculation, to five millions.
"But if it be melancholy to think of so many elegant houses, rich furniture, fat cattle, and precious crops destroyed for want of that patriotism which a true knowledge of our interests would have inspired; then how much more melancholy to think of those torrents of precious blood that were shed, those criuel slaughters and massacres that took place among the citizens, from the same cause! As proof that such hellish tragedies would never have been acted had our State been enlightened, only let us look at the people of New England. From Britain, their fathers had fled to Anerica for religion's sake. Religion taught them that God created men to be happy; that to be happy they must have virtue; that virtue is not to be attained without knowledge, nor knowledge without instruction, nor public instruction without free schools, nor free schools without legislative order.
"Among a people who fear God, the knowledge of duty is the same as doing it Believing it to be the first command of God, 'let there be light,' and believing it to be the will of God that all should be instructed, from the least to the greatest, these wise legislators at once set about public instruction. They did not ask, How will my constituents like this? Won't they turn me out? Shall I not lose my 83 per day? No, but fully persuaded that public instruction is God's will, because the people's good, they set about it like the true friends of the people.
"Now, mark the happy consequence. When the war broke out, you heard of no division in New England; no toryism, nor any of its horrid effects; no houses in flames, kindled by the hands of fellow-citizens; no neighbors waylaying and shooting their neighbors, plundering their property, carrying off their stock, and aiding the British in the cursed work of American murder and subjugation. But, on the contrary, with minds well informed of their rights and hearts gaviowing with love for themselves and posterity, they rose up against the enemy, firm and united, as a band of shepherds against the ravening wolves.
"And their valor in the field gave glorious proof how men will fight when they know that their all is at stake. See Major Pitcairn, on the memorable 19 th of April, 1775, marching from Boston, with 1,000 British regulars, to burn the American stores at Concord. Though hisheroic excursion was commenced under cover of the night the farmers soon took the alarm, and gathering around them with their fowling pieces, presently knocked down one-fourth of their number and caused the rest to run, as if, like the swine in the gospel, they had a legion of devils at their backs.
"Now, with sorrowful eyes, let us turn to our own State, where no pains were ever taken to enlighten the minds of the poor. There we have seen a people naturally as brave as the New Englanders, for mere lack of knowledge of the blessings they possessed, of the dangers threatened, suffer Lord Cornwallis, with only 1,600 men, to chase General Greene upward of 300 miles, in fact, to scout him through the two great States of South and North Carolina, as far as Guilford Court House, and when Greene, joined at that place by 2,000 poor, illiterate militiamen, determined at length to fight, what did he gain by them, with all their number, but disappointment and disgrace? For, though posted very advantageously behind the cornfield fences, they could not stand a single fire from the British, but, in spite of their officers, broke and fled like baseborn slaves, leaving their loaded musisets sticking in the fence corners.
"But, from this shameful sight, turn again to the land of free schools- to Bunker's Hill. There, behind a poor ditch of half a night's raising, you behold 1,500 militiamen waiting the approach of 3,000 British regulars with a heavy train of artillery. With such odds against them-such fearful odds in numbers, discipline, arms, and martial fame-will they not shrink from the contest, and, like their Sonthern friends, jump up and run? Oh, no; to-a man they have been taught to read; to a man they have been instructed to know, and, dearer than life to prize, the blessings of freedom. Their bodies are lying behind ditches, but their thoughts are on
the wing, darting through eternity. The warning voice of God still rings-in their ears. The hated forms of proud, merciless kings pass before their eyes. They look back to the days of old, and strengthen themselves as they think what their gallant forefathers dared for liberty and for them. They look forward to their own dear children, and yearn over the unoffending millions, now, with tearful eyes, looking up to them for protection. And shall this infinite host of deathless beings, created in God's own image, and capable by virtue and equal laws of endless progression in glory and happiness-shall they be arrested in their high career, and from the free-born sons of God be degraded into the slaves of men? Maddening at the accursed thought, they grasp their avenging firelocks, and, drawing their sights along the death-charged tubes, they long for the coming up of the British thousands. Three times the British thousands came up; and three times the dauntless yeomen, waiting their near approach, received them in storms of thunder and lightning that shivered their ranks and heaped the fields with their weltering carcasses.
"In short, my dear sir, men will always fight for their Government, according to their sense of its value. To value it aright, they must understand it. This they can not do without education. And as a large portion of our citizens are poor, and can never attain that inestimable blessing without the aid of government, it is plainly the first duty of government to bestow it freely upon them. And the more perfect the government, the greater the duty to make it well known. Selfish and oppressive governments, indeed, as Christ observes, must.' hate the light, and fear to come to it, because their deeds are evil.' But a government like our Republic 'longeth for the light, and rejoiceth to come to the light, that its works may be made manifest that they are wrought in God,' and well worth all the vigilance and valor that an enlightened nation can rally for its defense. And, God knows, a good government can hardly ever be half anxious enough to give its citizens a thorough knowledge of its own excellencies. For, as some of the most valuable truths have been lost for lack of promulgation, so the best government on earth, if not duly known and prized, may be subverted. Ambitious demagogues will rise, and the people, through ignorance and love of change, will follow them. Vast armies will be formed and bloody battles fought. And after desolating their country with all the horrors of civil war the guilty survivors will have to bend their necks to the iron yoke of some stern usurper, and like beasts of burden to drag, unpitied, those galling chains which they have riveted upon themselves for ages."

## VIRGINIA.

Manassas Industrial School, Manassas, Va.
By H. P. Montqomery, Supervising Principal in the Colored Schools of Washington, D. C.
This school is the direct outgrowth of an effort on the part of Miss Jennie Dean, a young woman of remarkable energy and religious fervor, to better the condition of her own race living among the foothills of the Blue Ridge Mountains in a section of the State of Virginia where the devastation from the late war was great, and from which the people have not yet fully rallied.
Miss Jane E. Thompson, a teacher in the public schools of Washington, D. C., while on a visit to her grandparents, who lived in that region, was attracted by the work of Miss Dean. Miss Thompson, although a descendant of slaveholding ancestors, was so impressed with the character and importance of Miss Dean's work that she determined on returning to interest her city friends in it. She finally succeeded in bringing the matter to the attention of the late Gen. R. D. Mussey. Gen. John Eaton, ex-United States Commissioner of Education; Mr. Henry E. Baker, Mr. H. P. Montgomery, and Mr. J. H. Meriwether, all of Washington, D. C., and Hon. George C. Round, Rev. M. D. Williams, and others̄, of Manassas, Va.

By the advice and assistance of these gentlemen a farm containing 100 acres was purchased. This farm was a part of the Bull Run battlefield, located about 1 mile south of the town of Manassas, on the Southern Railroad.
The necessity for such a school is shown by the following statistics:
The last census showe in Prince William County (in which the school is located) and the adjoining counties of Fauquier, Stafford, Loudoun and Fairfax, a total colored population of 23,972 , with a school population of 11,200 , while statistics of the United States Bureau of Education show the average percentage of daily attendance in the colored schools to be 24.5.

This condition of affairs was brought to the attention of the colored people, and

## CHAPTER XXXIV.

REPORT ON EDUCATION IN ALASKA.

Department of the Interior, Bureau of Education, Alaska Division, Washington, D. C., June 30, 1896.

SIR: I have the honor to submit the eleventh annual report of the United States general agent of education in Alaska for the fiscal year ending June 30, 1896.

There is in Alaska a school population of from 8,000 to 10,000; of these 1,197 were enrolled in the 22 Government schools.

Cape Prince Wales.-Thomas Hanna, teacher; enrollment of pupils, 104; population, Eskimo. The past year having been a very severe one, with much scarcity of food at times, many of the children were compelled to be absent fishing for their daily meals. This irregular attendance added greatly to the burdens of the teacher. He reportéd during the winter much trouble was had through drunken men and women coming to the schoolroom and making a disturbance. Seven times windows were broken by them and knives drawn. While but little intoxicating liquor is traded or received from the ships, a very large quantity is made in the village itself during the winter, especially as it is known that the revenue cutter is gone and will be absent for months. It is reported that the natives of the village distill liquor not only for their own use, but for trading all up and down the coast. He also reports that much gambling is carried on in the village, in which everything available belonging. to house or person is freely sacrificed. Indeed, there are many things in that section that require that some court of justice or some power should be established that can enforce the laws and protect the interests of the community.

St. Lawrence Island.-V. C. Gambell, teacher; enrollment of pupils, 68; population, Eskimo. The attendance and interest manifested during the second year of the school was better than the first, for during the present year quite a number of girls aftended, although they are reported as still very bashful in their school duties. The pupils that have attended school with any degree of regularity have made good progress in their studies and greatly improved in their personal appearance. They read well, write legibly, and are quick at number work. One boy had kept a list of all the words that had been given him, and when he understood the arrangement of the dictionary, made an alphabetical list of them in a blank book that had been given him. This he did without any suggestions from anyone, Quite an emulation was excited among them to keep themselves and their clothes clean, and also avoid those among their companions whom they suspected of being infested with vermin. They sometimes informed the teacher that such and such ones had dirty hands or faces. In the spring a number of families visited the village from Siberia, and the difference between the pupils that have been in school and those from the Asiatic side is very apparent. In addition to the 68 regular pupils there were some 20 others that attended irregularly and have not been counted.

Teller Reindeer Station.-T. L. Brevig, teacher; enrollment of pupils, 56; population, Eskimo. The school attendance during the year has increased in regularity over-the preceding year, and with increased regularity of attendance the children seem to take more interest in their studies. The conveniefice and comfort of the new school building has probably also had something to do with the attendance.

Auroras were observed October 16, 1895, November 17, 18, and 19, December 19, $20,21,28,25,26,27,28,29,30$, and on every clear night during January, February, and March, 1896. During April there was a notable decrease in the number of the auroras, and in May but two, occurring on the 2 d and 4th of the month.

Unalaska.-John A. Tuck, principal, and Miss M. Elizabeth Mellor, assistant teacher; enrollment of pupils, 39; population, Aleut. The school year has been
an uneventful one, the work having run on from day to day in each room marked by a quiet, steady progress. As in previous years, the school has been cramped for want of accommodations, nearly all the available space being occupied by the girls connected with the Methodist Woman's Missionary Home. Only five boys were in attendance. Probably double the attendance would have been had had there been room for the pupils. The very first requirement for successful teaching among such a people is patient reiteration. Like most undeveloped races, they have little aptitude for mathematics. In order to develop this branch of study in their minds, the teacher made a regular and constant interchange between the inental and written, or slate work. In fractions, for instance, taking up the entire subject as developed in a good mental arithmetic, alternating daily between oral and written analysis and reviewing as often as might be necessary. Then he would take up the same subject from a common-school arithmetic, using the slate and working with larger numbers. A constant change of method seems to have worked well in relieving the strain upon their undeveloped powers of attention. Penmanship and map-drawing studies, which draw on the imaginative faculties, are acquired with ease. The spelling lesson was made an aid to reading, the words given being taken from the reading lesson and studied; then written on the slate from dictation before the reading lesson began. In this way the words were first learned; then their use in connection with other words was shown in the reading lesson. The children have shown a great fondness for language and observation lessons. In the crowded condition of the schoolroom, Miss Mellor's recitations were compelled to be heard in the dining room of the mission, where the proper ventilation has been very difficult to secure. Last year the Government contracted for the erection of a large, comfortable school building, with teacher's residence attached, and also dormitories for the boys. A few days after the workmen had left the building as completed, a storm blew it off the foundation. An examination being instituted, it was found that the erection of the building had been slighted in so many directions that it was unsafe to occupy it. As I was sent last spring to make a special investigation of the condition of the building by the Secretary of the Interior, mention will be more fully made of this building later on in the report. This year completes the seventh year of service by Mr. Tuck. Too much praise can not be given him for his patience and self-denial and long continuance in the service in the face of great opposition and difficulties in maintaining the school. Nor is it too much to say that the unstinted praise which has been given of the progress of the pupils in that school is due to his superior skill as a teacher. The progress of the pupils under him has been so marked that Government officials in their public reports, desiring to secure better educational facilities for this or that community, have mentioned Mr. Tuck's school at Unalaska as the type desired. For a portion of that time the school was known as a contract school. The Woman's Home Missionary Society of the Methodist Church, and the ladies of that association, the Government, and all friends of humanity owe Mr. and Mrs. Tuck a large debt of gratitude for what they have accomplished. In view of these things it was not strange that some of the native Aleut population came to the wharf to bid Mr. and Mrs. Tuck godspeed as they left Unalaska for their eastern home.

Unga.-O. R. McKinney, teacher; enrollment of pupils, 44; population, Aleut. The school year opened on the 16 th of September, $189 \overline{5}$, with 29 pupils in attendance. This number increased to 34 at the end of the month. The close of October saw 35 in attendance. At that time an epidemic similar to la grippe broke out in the village, which reduced the school attendance to 30 for the month of November and 29 for that of December. In January the attendance resumed the normal number. Washington's birthday was celebrated by a school exhibition, which awakened much interest among the parents of the pupils. During the past summer an addition 12 by 20 feet was built to the schoolhouse for the use of the circulating library which has been established by the teacher. This is one of the model schools of the Territory.

Afognak.-Mrs. C. M. Colwell, teacher; enrollment of pupils, 39; population, Aleut. The general tone and condition of the pupils has shown a marked improvement since the establishment of the school. They are well-behaved, and being naturally intelligent compare quite favorably with the children of other communities. There is much poverty among the families, so that many of the children are very poorly clad. However, the improvement among the children is in a measure elevating their older brothers and sisters and their parents, so that a noticeable improvement can be seen in the homes of the people. This causes hope that the next generation of natives in Alaska will show a very gratifying improvement mentally and morally over their predecessors.

Kadiak.-C. C.. Solter, teacher; eurollment of pupils, 49; population, Aleut.

The teacher reports a very gratifying progress in reading and drawing, in which the pupils excel. In the other branches of-study their progress was normal, It is very difficult getting the pupils to use out of the school the instructions given them in English, as all the conversation at home is in their native tongue. There is also a prejudice on the part of the parents against the children learning English lest they would be weaned away from the Russian Church. There has also been the hostility of the priest of the Greek Church, more or less disguised, against the school. Upon different occasions he forbade all the children to attend school, but a number seemed to have disregarded his command and attended. Another drawback to the school work is the one that is common in all those localities where the Greek Church has a foothold. There are 12 holidays in the church which are to them peculiarly holy, and during which the children are required to leave school and attend church. Then, in addition to these 12, are 200 holidays, more or less, when absence from school is sought to be excused by attendance upon church service. This, of course, breaks up all regularity of attendance and all connected instruction, so that the pupils in the districts controlled by the Russian Greek Church have made less progress than those at other places. On Christmas eve an entertainment was given by the school to the community, which elicited many tokens of approval from the parents.

Karluk.-R. B. Dunmire, teacher; enrollment of pupils, 27; population, Aleut. This population are still uncivilized and decidedly opposed to anything American. Their experience has largely been with the lower American element that oftentimes clusters around salmon canveries. This lower element of our American civilization has treated the natives brutally, and they have no reason to admire the American ways. These natives are very poor, and especially during the past winter suffered from the want of both food and clothing. Some of the children came to school through the snow entirely barefooted. The children seemed to be bright, and learn quite readily. During the year there has been an increased regularity of attendance, and I have noticed less opposition on the part of the parents. So far, the attendance is largely by boys, the girls being very bashful and their parents afraid to have them out of their sight.

Haines.-W.W. Warne, teacher; enrollment of pupils, 60; population, Thlinget. The year was one of the most prosperous in the history of the school. From September to January 19 the school was open to all who desired to attend, and the attendance was so large that our room was too small and the teacher had more pupils and classes than could be accommodated. Then came the fire which destroyed the schoolhouse, and there was no room in the village large enough to continue the school for the whole population. Not only the building, but the seats and books were burned, so that the difficulty of continuing the school was made much greater. In a small room a portion of the pupils was given blackboard exercises in the forenoon and another portion in the afternoon. This continued for several weeks, until a supply of second-hand books .was sent from Juneau, and then the school was continued all day. This present season a new and larger building will be erected, and the teacher looks forward to the coming year with great pleasure.

Hoonah.-Mary E. Howell, teacher; enrollment of pupils, 144; population, Thlinget. The school, which opened with but few pupils in the fall, became so large in the winter that it was difficult to manage. The irregularity in the lives of the natives makes it very difficult to secure regular attendance on the part of the pupils. As a rule the natives do not have an early morning meal; consequently many of the children come to school without their breakfast, which makes them very restless before noon. This out-of-the-way community has had much to contend with by several deaths during the year by witchcraft. At this, as at so many of the other schools, year by year the teachers claim that the great improvement to the school system to be sought after would be obligatory attendance.

Juneau School, No. 1.-S. A. Keller, teacher; attendance of pupils, 70; population, whites. Of the 26 pupils enrolled the first day, 9 attended until the close of the term and 2 were present every day, and this although in the short days it was still dark at 9 o'clock, and some days with a cold wind sweeping down from the mountains, with the thermometer registering $16^{\circ}$ below zero. Those that have proper home influences are just the same as bright, healthy American children anywhere; but we have a number in our community who are permitted to roam the streets and thereby fall into irreguilar and vicious habits. Our population being a nomadic one, families come and go, making much irregularity and frequent changes in the attendance of the children. The school greatly needs larger accommodations. The crowding resorted to during the year interfered very much with the efficiency of discipline and the progress of the pupils. The school has also arrived at that stage when a second teacher is essential. It should
be graded into primary and grammar departments with a competent teacher over each. Mrs. J. W. Bixby has taught a kindergarten during the year at the expense of the parents of the pupils. Considerable improvement has been made in removing the stumps from and grading the school grounds. This work should be continued until the property is placed in good shape. The ground should also be drained, so that it would become sufficiently dry for the playing of the children. Citizens of the place have manifested more than ordinary interest in the progress of the school.

Juneau School, No. 2.-Elizabeth Saxman, teacher; enrollment of pupils, 67; population, Thlinget. At the close of her third year, Miss Saxman reports her pupils have taken increasing interest in their work, and their progress has been correspondingly marked. Nearly all of them were pupils that had been in the school before and made it much pleasanter for the teacher, and manifested the same gratifying results. As nearly all of her pupils have a home in the Presbyterian mission, the average attendance has very nearly equaled the enrollment. She mentions a little girl who, at the beginning of the term, knew no English whatever; at the expiration of three months she was able to read, spell, and count well. Her progress, however, in writing was very slow, which seemed the more peculiar, as her people excel in that branch of study. Among the older pupils was a native girl, married to \& white man, who was accustomed to do her housework in the morning and attend school in the afternoon. She was always present regardless of the weather and made good progress in her studies.

Douglas City.-Lathan A. Jones, teacher; enrollment of pupils, 57 ; population, whites. This school seems to have had a more turbulent time during the past year than any other. There was considerable friction in the community over the location of a new school building, the present school building being in the north edge of town (when it was located the village was rapialy growing in that direction, and it was the only place where sufficient grounds could be secured for school purposes). The difference of sentiment among the parentscreated much turbulence among the pupils, and although the teacher did his best, yet the results were not as satisfactory as in former years. The parents have taken but little interest in the school, which has created much irregularity of attendance among the pupils. A child that attends school two or three days of the week and then runs the streets the other two or three days receives no benefit himself, and is a detriment to the other pupils when he attends. A schoolhouse has been erected during the season at the south end of the village, where a school will be held this coming year.

Sitka, No. 1.-Mrs. G. Knapp, teacher; enrollment of pupils, 40; population, white-American and Russian. During the year some of the children in the higher grades have been in correspondence with children of schools in the States, sending samples of Alaska woods, furs, and carvings, and receiving in return specimens of products from the various States. By this means a new interest in geography and language lessons has been created, especially beneficial to many of the pupils in the school who have never been out of Alaska. Occasional entertainments have secured the interest of the parents. A small circulating library has been maintained, which is greatly appreciated, as most of the children have no books in their homes.

Sitka school No. ...-Miss Cassia Patton, teacher; enrollment, 156; population, Thlinget. This school for the native children is conveniently located near the ranch. Throughout the winter months festivals of the Greek. Church, feasting and dances in honor of visitors from other tribes, and in the spring hunting and fishing greatly interfere with regularity of attendance. However, with the aid of Governor Sheakley, who frequently caused native policemen to hunt up truants, a very creditable attendance was maintained. Miss Patton has introduced ikindergarten games and methods into her school, and has succeeded in making it attractive to her pupils.

Fort Wrangel.-Miss Anna R. Kelsey, teacher; enrollment, 82; population, Thlinget. Miss Kelsey writes: "I have just closed my third school year in Fort Wrangel. I am happy to say that the last year has in many respects been the mest encouraging. The attendance has been better with much less effort on my part. When the children are going away with their parents hunting or for wood. fish, or making gardens, they tell me of it. On their return they come into school again, even if it is only for a week or two before another flitting. Thus I know pretty nearly their whereabouts and can keep a hold on them. The first year when they were absent from their places I used to have to go through storm and sunchine searching for them. The pupils sometimes express regret that their frientls oblige them to go away with them and lose school. That in itself is encouraging. At the close of February I said to the pupils, 'How time flies; only three more months' school.' A chorus of voices responded, 'Oh, so soon?

We're sorry; we rather have school.' The children certainly did better work and showed much greater interest in their studies than formerly. One of the local board when visiting the school expressed both surprise and pleasure at the interest manifested by the pupils in all the school exercises. The winter feasting and dancing interfered as usual with the attendance and interest. I notice, too, that when there are native families here for a short time, they are quite apt now to send their children to school during their stay. There has not been anything broken or damaged, even to a pane of glass, during the entire year."

Saxman_-J. W. Young, teacher; enrollment, 31; population, Thlinget. Mr. Young reports as follows: "I arrived here October 28, 1895, to take charge of the school work and also the work of gathering together a temperance, self-governing: community, and I may say at the start that my success has been only partial. It takes a good deal of time to get the natives together and build up a town. When I arrived there was no building here except the schoolhouse. The natives have since built seven houses. During three months we had about 50 inhabitants, many of them living in tents. That they are anxious to have their children educated was shown by their coming here and camping in tents during the bitter cold weather of January and February, so that they could send their children to school. The children have made very good progress. Many of them had never been in school before. About April 1 the natives began to go hunting, and by April 15 the town was deserted. They promised that when they have built themselves good houses they will not take the women and children with them when they go hunting. I was very sorry for the children camping in the snow, and that they might be near a school I appealed to Dr. Jackson for funds to build a guest or community house which they could occupy. He sent me \$200, with which I have erected a sabstantial and comfortable house, doing most of the work with my own hands. The great hindrance to the work of educating and civilizing these natives is intoxicating liquor, sold as 'extract of Jamaica ginger' by white men. If it were not disguised, I could have the vendors arrested, but they evade the law by the label. It seems to be the ambition of the people to build up a town similar to Metlakahtla, and I have encouraged them in it. At the same time, I impress on them that they must putaway their old superstitions, and that they must let liquor alone. I have surveyed the town, and will have the houses in regular order. Altogether, I think the prospect encouraging for a good school and moral community of from 200 to 300 inhabitants."

Jackson.-Miss C. Baker, teacher; enrollment, 64; population, Thlinget. The quiet routine of school life at this little out-of-the-way village was sadly broken by the accidental shooting of one of the older boys. Bert Charles, a high-spirited Alaskan boy, and his friend, Willie Johns, the son of Captain Johns, a chief, and others were out in a canoe hunting deer. They sighted an animal on the shore, and in high glee started for a shot at him. "Bert had just loaded his gun," writes the teacher, "when he saw that the deer had already been struck. He dropped his gun to take the paddles, when Willie exclaimed, 'Bert, you've shot me!' How it happened Bert did not know. 'I know I did it, for the load was out of my gun,' he said. Willie died in the boat. The law of retaliation is strong among the Alaskans, and according to that law Bert knew that his life would be demanded for that of his friend. Just before he died, Willie asked the others to say to his people that he did not wish them to punish Bert, as he did not mean to shoot him. The boys wanted to land Bert where he could run away. He answered, ' No; if I do, they will say that I did it, on purpose; I will go back; they can do what they like to me.' So he stayed to help carry the body from the canoe into his father's house. I can not describe the wild scene on the beach and street when the canoe landed. In what seemed like a moment, scores of men and boys were rushing about with knives and guns, ready for defense or attack. The dead boy's family being a-strong one, it was thought they would at once demand the life of the poor boy whose shot, had been so fatal. Soon the pacifying influence of the missionary made itself felt. Most of the natives carried their guns home, and the distracted father, standing beside his dead son, said: 'Nobody is to blame for this; the great God has done it.' Some of Willie's friends, however, still called for blood-revenge; and Bert stood all night at the head of the body, with folded arms, not knowing at what moment his life would be taken. Finally his relatives paid, as a ransom for his life, 400 blankets and $\$ 80^{\circ}$ in money. This he is expeeted to pay back, or be a slave to his people. He has suffered a great deal, and will be subject to persecution as long as he remains in his home. So far they have taken all he has earned, and will continue to do so in spite of all that can be done for him. Before this bappened, he was high caste, bigh spirited, high tempered; now he is a slave, crushed and heartbroken." Subsequently the means necessary for bringing him to the Carlisle school, Pennsyl-
vania，was furnished by a benevolent friend，where he is now，a patient，Christian student．When he was asked what he would do with his education，he said：＂I should like to go back to my people and help them．＂As the feeling will probably subside in his absence，he can，no doubt，return to his people，and influence them as no stranger could．

Statistics of education in Alaska．

| Public schools． | Enrollment． |  |  |  |  |  |  |  |  |  |  | Teachers in the public schools， 1895－96． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | \％ 0 0 0 $\sim$ $\sim$ | $\begin{aligned} & \infty \\ & \substack{\infty \\ \infty \\ \infty \\ \\ \hline} \end{aligned}$ | $\begin{aligned} & \dot{\infty} \\ & \infty \\ & \infty \\ & \infty \\ & \underset{\sim}{\infty} \end{aligned}$ |  |  | $\begin{aligned} & \stackrel{i}{\circ} \mathrm{i} \\ & \stackrel{i}{5} \\ & \stackrel{0}{0} \end{aligned}$ | $\begin{aligned} & \text { ⿷匚 } \\ & \text { in } \\ & \text { 筑 } \end{aligned}$ |  | $\begin{aligned} & \text { 最 } \\ & \text { + } \\ & \stackrel{0}{\infty} \end{aligned}$ |  |  |
| Afognak | （a） | 35 | 24 | 55 | 38 | 37 | 35 | 40 | 38 | 38 | 39 | Mrs．C．M．Colwell． |
| Douglas City，No． 1. | （b） | （b） | 67 | 94 | 50 | 23 | 25 | 13 | 30 | 42 | 57 | Miss A．Hunnicutt． |
| Douglas City No．2－ | （b） | （b） | （b） | （b） | 92 | 68 | 24 | 108 | 87 | 26 | （b） |  |
| Fort Wrangell．．．．．． | 50 | 106 | 106 | 90 | 83 | 93 | 49 | 49 | 54 | 61 | 82 | Miss A．R．Kelsey． |
| Haines | 84 | 43 | 144 | 128 | （b） | （b） | 89 | 54 | 41 | 64 | 60 | W．W．Warne． |
| Jackson | 87 | 123 | 110 | 105 | 87 | 100 | 100 | 82 | 90 | 80 | 64 | Miss C．Baker． |
| Juneau，No． 1 | 96 | 236 | 25 | 36 | 31 | 33 | 26 | 23 | 25 | 54 | 70 | S．A．Keller． |
| Juneau，No． 2 | （b） | （b） | 67 | 58 | 51 | 51 | 75 | 61 | 65 | 50 | 67 | Miss E．Saxman． |
| Kadiak | （a） | 59 | 81 | 68 | 67 | 80 | 69 | 74 | 59 | 56 | 49 | C．C．Solter． |
| Karluk | （b） | （b） | （b） | （b） | （b） | 33 | 29 | （b） | （b） | （b） | 27 | R．B．Dunmire． |
| Killisnoo | （a） | 125 | 44 | 90 | 32 | 68 | 33 | 137 | 75 | （b） | （b） |  |
| Klawock | （a） | 184 | 8.1 | 75 | 68 | 50 | 38 | （b） | （b） | 50 | （b） | Miss A．R．Kelsey． |
| Sitka，No． 1 | 43 | 60 | 60 | 67 | 58 | 54 | 59 | 50 | 43 | 37 | 40 | Mrs．G．Knapp． |
| Sitka，No． 2 | 77 | 138 | 60 | 51 | 83 | 55 | 54 | 48 | 110 | 180 | 156 | Miss C．Patton． |
| Unga | （b） | 35 | 26 | （b） | 24 | （b） | 33 | 35 | 36 | 40 | 44 | O．R．Mckinney． |
| Unalaska |  |  |  |  |  |  |  |  |  | 39 | 39 | Miss M．E．Mellor． |
| Port Clarence Metlakahtla | （b） | （b） | （b） | （b） | （b） | （b） | （b） | 20 | 30 | 56 | （b） | T．L．Brevig． |
| St．Lawrence Island |  |  |  |  |  |  |  |  |  | 53 | （b） | V．C．Gambell． |
| Saxman． |  |  |  |  |  |  |  |  |  |  | 31 | J．W．Young． |
| Hoonah |  |  |  |  |  |  |  |  |  |  | 144 | Mrs．M．J．McFarland． |
| Cape Prince of |  |  |  |  |  |  |  |  |  |  | 104 | Thomas Hanna． |
| Wales． |  |  |  |  |  |  |  |  |  |  |  |  |
| Total |  |  |  |  |  |  |  |  |  |  | 1，19i |  |

a Enrollment not known．
b）No school．
Appropriations for education in Alceslea．


PERSONNEL．
Dr：Sheldon Jackson，Alaska，general agent of education in Alaska；William Hamilton，Pennsylvania，assistant agent of education in Alaska；William A．Kelly， Pennsylvania，superintendent of schools for the southeastern district of Alaska．

## LOCAL SCHOOL COMMITTEES．

Sitka，Edward de Groff，Charles D．Rogers，John G．Brady：Juneau．John G． Heid，Karl Koehler；Douglas．P．H．Fox，Albert Anderson；Treadwell，Robert Duncan，jr．，Rev．A．J．Campbell；Fort Wrangel，Thomas Willson，Finis Cagle； Kadiak，Nicolai Kashevaroff，F．Sargent，H．P．Cope；Unga，C．M．Dederick， Michael Dowd，George Levitt．

Teachers in public schools.

| School. | Teacher. | State. |
| :---: | :---: | :---: |
| Sitka, No. 1 | Mrs. Gertrude Knapp. | Pennsylvania. |
| Sitka, No. 2 | Miss Cassia Patton. |  |
| Juneau, No. ${ }^{\text {Juneau, No. }}$ | S. A. Keller <br> Miss Elizabeth Saxman | Indiana. <br> Pennsylvania. |
| Hoonah .-... | Mrs. A. R. McFarland. | Alaska. |
| Douglas No. 1 | Miss Annie Hunnicutt | California. |
| Wrangel | Miss A. R. Kelsey | Pennsylvania. |
| Jackson. | Miss C. Baker. | Alaska. |
| Saxman | J. W. Young | Washington. |
| Haines | W. W. Warne | New Jersey. |
| Kadiak | C. C. Solter - | Kansas. |
| Unga | O. R. McKinney | Pennsylvania. |
| Afognak | Mrs. C. M. Colwell | Alaska. |
| Unalaska | Miss M. E. Mellor | New York. |
| Port Clarence | Miss M. Salamatoff | Alaska. |
| St. Lawrence Island | V. C. Gambell | Iowa. |
| Cape Prince of Wales | Thomas Hanna | California. |
| Sitka Industrial School | $\left\{\begin{array}{l}\text { F. E. Frobese- } \\ \text { George J. Beck }\end{array}\right.$ | Germany. New York. |

Alaskan children in schools and private families in the States.

| Name. | Where from. | Where stationed. |
| :---: | :---: | :---: |
| Robert Casey. | Junean | Haskell Institute, Lawrence, Kans. |
| Mary Kadashan | Chilkst | Genesee, N. Y., with private family. |
| Helen Kessler.- |  | Carrier Mills, 111. |
| Edward warren David Parker | New Metlakahtla. | Indian School, Chemawa, Oreg. Do. |
| Richard Smith. | Jackson. | Do. |
| Charles Hicks. | Juneau | Do. |
| Amanda Brown | Sitka. | New York City. |
| Katie Douglas. | New Metlakahtla | With private family in Newberg, Oreg. |
| Lydia Hanshaw <br> Louisa Ross | Hoonah | Do. <br> Whereabouts not known |
| Archie Cameron |  | Sumner, Wash. |
| Minnie Baker |  | Parkville, Mo. |
| David and Fred Lewis |  | W ashington. |
| Bert Charles | Jackson. | Carlisle Indian School, Pennsylvania. |
| George Northrop | Sitka |  |
| M. Healy W olf | Point Barrow | Do. |
| Samuel Kendali Paril- | Sitka... | Do. |
| Thomas Hanbury..... | New Metlakahtla | Do. |
| Elizabeth Walker ...... | Fort Wrangel | Do. |
| Lotta Hilton ---....... | Juneau | Do. |
| Mary and Susie Moon.. | Chilkat | Do. |

## SCHOOLHOUSE, UNALASKA.

On the 14th of May, 1895, the Secretary of the Interior entered into a contract with Mr. David William Starrett, of Port Townsend, Wash., for the erection of a one-and-a-half-sfory school building and teacher's residence, 90 by 31 feet in size, for which he was to receive $\$ 2,135.25$ upon the completion and acceptance of one-half of the building, and the balance, $\$ 2,609.75$, upon the completion and acceptance of the whole work, making a total cost of $\$ 4,745$. Hon. Lycurgus T. Woodward, United States commissioner at Unalaska, was appointed superintendent of the work. Upon the 1st of October, 1895, Mr. Woodward, in behalf of the Government, accepted the building from the contractor and certified it as complete in every respect and constructed in accordance with the plans and specifications. Whereupon the contractor sent in his bill for the balance of his pay, having received from the Government $\$ 2,135.25$ upon the completion and acceptance of the first half of the work. The same mail that brought the bill of the contractor to Washington also brought information that upon the 24th day of October, 1895, said schoolhouse had been blown from its foundation and partly wrecked. The same mail brought a communication from Mr. John A. Tuck, the Government school-teacher, testifying that the building had not been constructed in accordance with the plans and specifications. This letter was referred by the

Commissioner of Education to the Secretary of the Interior for his information, with a request that the accounts of the contractor be held up for further information.

Under date of November 23,1895 , the Secretary returned the papers to the educational office, requesting the Commissioner of Education to make a full investigation with a view to determine whether the building was constructed in accordance with the plans and specifications. By your direction I tools the opportunity of my visit to Unalaska to make a full investigation, and found that the Government school building was not constructed in accordance with the plans and specifications, and was not constructed in a workmanlike manner. It should be said here that Commissioner Woodward, who was appointed superintendent of construction, disclaimed any knowletge of carpentering or house building; more than that, while the house was in process of erection he was absent from the village and gave the work no special attention. When the carpenters and builders were through, he took their word to the fact of its being built according to specifications and gave the contractor a certificate of acceptance, so that his certificate is of no value as a statement of fact. As the building had been blown from its foundations, my first attention was given to them. The specifications required that the foundation posts should be 5 feet long. I found them from 2 feet 10 inches to 3 feet 8 inches. The specifications required the posts to be placed in the ground 3 feet 10 inches and well rammed. I found them from 10 to 15 inches only in the ground and not rammed. The specifications required the posts to be 14 inches above ground. I found them from 2 to $2 \frac{1}{3}$ feet.

The specifications required that the sills should be well spliced and spiked to the posts. I found that they were neither spiked nor secured. No building anywhere could be expected to remain any length of time upon such a foundation, the posts being unbraced and the sills unfastened to them, so that the first windstorm had toppled the posts over and damaged the building. If, however, it had remained upon the foundation, the construction was so faulty that the building should never have been accepted. The specifications required that the joists of the second story should be 12 by 3 inches; instead they were 2 by 12 . The joists were but 1 by 6 ; the rafters were 2 by 8 , instead of 3 by 9 . The roof was to be closely sheathed. Instead of that the boards were from 2 to $2 \frac{1}{2}$ inches apart. The rafters were not tied together with collar beams, and were already spread. A heavy weight of snow would crush it in entirely. The shingling was faulty and unworkmanlike. The specifications required that the windows should be supplied with cord and weights. This was complied with only in the lower sash of the first-story windows, the upper sash being nailed solid into the frame and incapable of being lowered or raised. The window sills were poor, with insufficient pitch to throw off the rain. Thin and common glass was placed in the windows, instead of the American cylinder glass, double thick and free from all defects. Six-inch flooring was used instead of 4 , which was required by the specifications. All but joints of the floor were to be well nailed; so far as taken up they were not nailed at all. In the front stairway the lieading between the step and the joist of the second floor allowed but 5 feet of space, causing all grown people to stoop in ascending the main stairway of the building. The specifications required that all chimney places shorld be kept clear of all woodwork by a space of $1 \frac{1}{2}$ inches. In a number of places I found the terra-cotta chimneys to be held in place by the woodwork. The specifications required that all spaces between the flues and woodwork should be filled in solidly with a mixture of slack lime and gravel; instead of this I found that the spaces between the flues and the woodwork were filled in with ends of joist, studding, and other pieces of lumber; and if the building had not blown down, it would certainly have burned down the first winter that these chimneys were used. Desiring the testimony of an expert builder, I had the work investigated by Mr. James Lamont, a carpenter of thirty-five years' experience. I also had it examined by the carpenter from the United States cutter Bear-the Government carpenter. Both of these men furnished written testimony to the fact that the huilding had not been erected according to the specifications or in a workmanlike manner. Consequently there was nothing else for me to report than that the Government should decline to accent the building from the contractor's hands.

Mr)RIVIAN MSSLONS.
Bethe - Missionaries, Rev. and Mrs. John H. Kilbuck, Mr. and Mrs. Benjamin Helmich, Miss Mary Mack, J. H. Romig, M. D., Miss P. King. Not long ago two American gentlemen traveling in Alaska approached the Kuskokwim district. They heard the natives everywhere in the region talking about the "Kilbuckamuks," and expected to meet with some tribe hitherto unknown to ethnologists. Presently they reached Bethel, where they found the inissionaries, and discovered
that the new tribe consisted of the converts in the neighborhood of Bethel, who were thus nicknamed, much as their teachers might deprecate it. The enrollment of pupils in the school was 33. Six of the boys formed an advanced class under special instructions, so that in the course of time they may be efficient assistants in the work of uplifting their peóple.

Last fall Miss King, the trained nurse at the station, in getting into a native boat had a narrow escape from drowning in the Kuskokwim River. The water was deep where she fell in, and but for the timely assistance of one of the oarsmen the accident would have been serious. Through the winter Mr. Helmich was at work building a 40 -foot boat. He had few tools, and says that no onerealizes how many little things go to make a boat until he makes every piece himself. Finally the boat was launched, a complete success. May the Swan have a long life of usefulness.

A feature of the work of the Moravians in the Kuskokwim is a series of trips to villages in that region. Sixteen such trips were made between November and May, covering a distance of 1,500 miles. The benigu influences of Christian civilization are making themselves widely felt. In helping the unfortunate the people have shown a hearty willingness to do what they could. Thanksgiving Day was the time set for a general contribution to help the poor. In all the villages between Bethel and Ougavig, as well as at these two places, the people brought to the chapels dried salmon, white fish, money, fur for barter and for clothing, tea, and flour. Many a poor unfortunate heart was gladdened by a gift from this store.

Ongavig.-Missionaries, Rev. and Mrs. E. L. Weber. The new schoolroom is commodious and satisfactory in every way. The enrollment was 25. Owing to high water, the mission family were compelled to live with the native trader on the other side of the river for ten days during May.

Carmel. -Missionaries, Rev. and Mrs. John Schoechert, Misses Mary and Emma Huber. The scarcity of food seems to have been more severely felt here than at the other statiors in this region, and there was great suffering in the village on account of it. The school has beceme more attractive, so that all applicants could not be received. It seems impossible to retain the girls longer than their thirteenth or fourteenth year, when parents insist on removing them, as it is considered their duty to be married at that age.

Eight journeys into the neighboring region were made, either by dog team or biderka. The longest trip occupied twenty-three days, the distance being estimated at 800 miles. On other occasions 200 to 400 miles were traversed. The mission property has been improved by the erection of a storehouse, the purchase of a log house, and the construction of a new dock.

## BAPTIST MISSIONS.

The work of the Baptist Chturch in Alaska is confined to the school and mission work of the Woman's American Baptist Home Missionary Society, with headquarters in Boston. Their work first commenced in 1886, when Mrs. W. E. Roscoe, wife of the Government teacher at Kodiak, was commissioned by the ladies to do such mission work as she could. In the spring of 1893 Mr . Roscoe, having resigned his position as teacher at Kodiak, was sent with his wife by the missionary society to establish a Baptist mission home and orphanage at Wood Island, one of the smaller islands in the harbor of Kodiak. In the midst of much opposition and petty persecution, he secured the material and erected a large two-story building for the use of the mission. This building is beautifully located on a small freshwater lake about 100 yards from the seashore. In June, 1895, he was relieved of the care of the station by the arrival of the Rev. and Mrs. P. Curtis Coe, allowing Mr. Roscoe and his family to return to California for the education of their children. Mr. Roscoe was very successful in laying the foundations of the present prosperous mission. In July Miss Hattie Snow was appointed to assist at the station. Mr. and Mrs. Coe and Miss Snow and Miss L. Goodchild compose the present mission force. During last summer and fall Mr. Coe, with the assistance of the mission boys, cleared one side of the front yard of stumps, and secured hay for the family cow, taught the boys carpentering, and looked after things generally. The girls have taken lessons in making and mending clothes and in cooking. During the winter a night school was held for the natives of the village, and on the Sabbath preaching was sustained both at Wood Island and at Kodiak. The first Baptist Church of Alaska was organized July 26, 1896, and on the following 26 th of September work was commenced on \& chapel building. There are 25 children in the orphanage.
board of missions of the Methodist Episcopal Church in New York selected Unalaska, the commercial metropolis of western Alaska, as the proper place for the commencement of missions. Through a combination of circumstances, however, work was not commenced at that point until the summer of 1889 , when Mr. and Mrs. John A. Tuck, Methodists from Maine, were sent out to establish a school and home. In 1890 the home was commenced by the bringing to Mr. and Mrs. Tuck of two orphan (waifs) girls from the island of Attoo, a thousand miles west of Unalaska. The teachers were in a small story-and-a-half cottage (half of which was used as a schoolroom) and unprepared to receive any children into their family. But the waifs had to be received; there was nowhere else for them to go. Other girls, finding that two had actually received a home, came and refused to be driven away, and some weeks later six additional orphan girls were sent down from the seal islands by the United States Treasury agent, and the school continued to grow until 35 girls were being sheltered, clothed and fed, and instructed. During the years 1889,1890 , and 1891 the mission was a contract school with the Government; but in 1892, in obedience to the action of the parent society, the women were compelled to withdraw from the work so important and so successfully commenced. To disband the home, however, and turn out into the street the many homeless orphans that had for a little time experienced the comforts of a Christian home was to send them forthwith to a speedy ruiu, and was not to be thought of for a moment. Mr. and Mrs. Tuck did bravely and heroically at their end of the line. Friends in the East assisted by raising money to tide them over, well knowing that when the authorities of the Methodist Episcopal Church understood the real condition of things they would authorize the women to resume their work in the home. This belief was borne out by after results. In 1893 the work was again resumed by the church, and hailed with prayerful enthusiasm by church brothers and Methodist women whose hearts had been touched and sympathy enlisted at the sad condition of the natives of western Alaska. The school has been so successful that through all that region it is held up as a model for other schools to pattern after.
Capt. M. A. Healy (a Roman Catholic) sent me the following testimony:

> "Revenue Marine Steamer Bear, "Port of Unalaska, Alaska, November 9, 1892.
"The Rev. Sheldon Jackson,
"Bureau of Education, Washington, D. C.
"My Dear Doctor: I have brought six girls from the seal islands to the Jesse Lee School. Two years ago I brought down a like number. I am constrained by this part I have had in providing scholars for the school to give you my views of its character and accomplishments, with the hope that they may excite interest in its behalf among its founders and supporters.
"In all my experience in the country I have seen nothing that has rendered so much good to the people. From its situation it has tributary to it this whole western end of the Territory, where there are numbers of children and poor waifs, many the offspring of white fathers, growing up without the care of homes or the education and training of Christian parents.
"Professor and Mrs. Tuck have labored zealously and well to teach the scholars the necessities and requirements of decent living, and train them to become good housekeepers and proper wives and mothers. But they are cramped by the means and accommodations at hand. The school is already crowded to its utmost capacity and can not take many whom it would be a mercy to give its protection, and who could be received with a suitable building and support.
"I am sure the ladies of the Methodist society, could they understand the condition and field of the school and how well it is conducted, would become interested in its behalf and provide it with better facilities with which to continue and enlarge its work for the elevation of these poor neglected members of their sex.
"I can not be accused of bias, for I am of an entirely different religious belief. Professor and Mrs. Tuck know nothing of my writing. I am prompted by my interest in the country and the improvement of its people, and can not remain blind to good to humanity by whomever performed.
" M. A. Healy,
"Captain, United States Revenue Marine."
In October, 1894, the Woman's Home Missionary Society voted $\$ 3,560$ for a new building, 72 by 36 feet in size, with two full stories and an attic. This building was erected in the summer of 1895, but unfortunately was so poorly constructed by the contractor that it may have to be taken down and rebuilt from the foundation. If it should not be necessary to make this radical change, yet it will cost
from $\$ 1,000$ to $\$ 2,000$ additional to place it in suitable condition for occupancy. In 1895 Miss Agnes L. Sowle, of Hagaman, N. Y., was appointed to take charge of the home in the place of Mr. John A. Tuck, who is to give his whole time to the Governmentschool. Miss Elizabeth Mellor, of Brooklyn, N. Y., was sent as her assistant. This past summer Miss Sarah J. Rinch, of Canada, has been added to the mission force. Under the wise and efficient administration of these ladies the mission work in the Jesse Lee Memorial Home of the Methodist women at Unalaska continues to hold its advanced position.

## PROTESTANT EPISCOPAL MISSIONS.

The most notable event of the past year was the appointment, by the general convention of the church in Minneapolis, oi Rev. Peter Trimble Rowe as bishop of Alaska. Mr. Rowe was consecrated in St. George's Church, New York City, November 30, 1895, and last spring moved to Alaska. After visiting the southeastern part of Alaska, he crossed the Chilkoot Pass from Dyed Inlet to the head waters of the Yukon River. Passing down the river, he was able to visit all the villages on that wonderful stream, then securing passage from St. Michael to Unalaska with the revenue cutter Bear, then by mail boat visiting the several leading villages on the coast between Unalaska and Sitka. Mission work was established at Juneau with Rev. Henry Beer in charge, and at Douglas Island with Rev. A. J. Campbell in charge. On the bishop's way down the Yukon River he had erected a $\log$ cabin for services and employed William Lalo as lay reader among the Indians. At Circle City he secured a suitable location for the erection of mission buildings and a hospital which the church proposed establishing at that point.

The mission work of the Rev. Jules L. Prevost at St. James, Fort Adams, continues to prosper. Sixteen boys and girls were registered in the boarding home and 79 enrolled in the day school. In the hospital connected with the mission, 2,238 meals were supplied and 31 patients treated. Of these, 21 were discharged cured, 3 were improved, 1 was unimproved, 4 (all infants) died. At the dispensary there were 347 treatments. In the country tributary to this mission and counted with it are 1,298 baptized persons, of whom 50 are communicants. There were during the year 162 religious services held, 55 baptisms, 13 marriages, 19 burials. Of the burials, 1 was brought 20 miles; 4, 35 miles; 2, 80 miles; 1,200 miles, and 1, 300 miles. A steam launch has this year been secured for the use of the mission up and down the rivers, and will probably do much to extend the work. At Anvik the Rev. John W. Chapman reports 8 pupils in the boarding department of the mission and a number in the day school; 106 adherents of the mission, 10 of whom are communicants. He further reports that during the year 8 baptisms, 2 marriages, and 4 burials were performed. Since this station was established, in 1887, one-third of the native population have abandoned their underground huts and built themselves comfortable $\log$ houses, one striking result of which is the improved health of the people. Up to the present year not a single death has occurred in the log houses, while in the underground houses nearly one-half of the children born have died.

Dr. Mary Glenton, who has for the past two years performed the medical services in all that region. has felt compelled to resign her position and return to the States on account of her heaith. The work of St. Thomas mission, at Point Hope, on the Arctic Ocean, has been continued through the year by Rev. E. H. Edson. On the 6th of August, 1895, Dr. Driggs, who had for five years occupied that station, sailed for the States, leaving Mr. Edson alone at that frontier station. The temporary interests of that distant community were well served. Thirty-three whales, 53 white polar bears, and the usual number of seals had been secured by the native population. This had given them an abundance of food through the winter. One morning the schoolboys reported tracks of a polar bear near the schoolhouse, and upon investigation it was found that the bear had been around the house and visited the wood pile during the night and then crossed over to the village, where he was killed by a native. Seventy children were enrolled in the school. During the winter a night school was established for those that worked during the day.

CONGREGATIONAL MISSIONS.
Last spring Mr. W. T. Lopp and family, who, with Mr. Thornton, were the first missionaries to Cape Prince of Wales, Bering Straits, returned to his field of work after a vacation of one year in the States among his friends. During his absence in the winter of 1895-96 the station was maintained and work kept up by the Rev. Thomas Hanna. A few of the Eskimo have cast in their lot with the
people of God and maintain an interesting prayer meeting. As the missionaries acquire a better command of the native language, the work will progress more rapidly.

## ROMAN CATHOLIC MISSIONS.

No complete report has been received of their operations. They have a mission school and hospital at Juneant, Alaska; also at Nulato, Kosereíski, Akulurak, and Cape Vancouver. They are talking of establishing a mission and hospital at Circle City; also a school at St. Michael. At Koserefski they report 79 boarders in the mission school and 26 day scholars. At Akulurak they report 25 boarders in the mission home. Their work has a force of 1 vicar apostolic, 9 priests, 6 lay brothers, and 13 sisters of the Order of St. Ann.

PRESBYTERIAN MISSIONS.
The Home Missionary Society of this denomination has the distinction of having, at Point Barrow, Alaska, the northernmost mission in the world. Mr. L. M. Stevenson, who went there in 1890, is still holding the fort waiting for someone to relieve him. During the past year a comfortable mission building, with a convenient storehouse nearby, has been erected. In the summer of 1890 the brig W. $H$. Meyer, which had in cargo the annual supplies for this mission, was wrecked in Port Clarence. Consequently the mission school had to be discontinued for the want of supplies that were lost. Mr. Stevenson, however, remained at his post and held religious services as best, he could under the circumstances. Mr. H. Richmond Marsh, a young medical student from Illinois, with his bride, is expected to go to Point Barrow next season and take charge of the work at that point. As has been said in previous reports, this station on the seas, where the ice never melts, has but one communication a year with the outside world. The annual mail which was sent to the station in the spring of 1895 has not yet reached its destination, but, if it has no further mishaps, will finally get there in the fall of 1897, two years and six months after it left the States.

St. Lawrence Island.-Mr. and Mrs. V. C. Gambell, with true heroism, continned on this important subarctic field. Mrs. Gambell reports as follows:
"Our winter comes the last of September and lasts until the middle of June. The lowest point reached by the mercury was $29^{\circ}$ below zero. When the wind is from the southeast, the snow drifts on the west side of the house until the house is nearly out of sight, snow being 3 feet deep on the roof. When the storm is over, the natives come with their shovels, made of the shoulder blade of the walrus, or baby whale, and shovel us out. Sometimes the air is so full of snow that we can not see the storehouse, which is only 20 feet away. There was snow in the village until the middle of July, and it lies on the mountain, a mile east of the village, all summer.
"We go out after school for an hour or so nearly every day, the whole school going with us. We do not mind the cold, for we dress from head to foot in reindeer skins.
"Formerly the people lived in underground houses, but have not done so in this village for a number of years. The houses which they now use are round walls, about 6 feet high, and made of driftwood and portions of wrecks. They cover them with walrus skins. The door is about $2 \frac{1}{2}$ feet from the ground and about $2 \frac{1}{2}$ feet square. It is always placed on the west. On the inside a room is partitioned off with deerskins, about 7 feet wide and as far around the wall as is needed. Only five or six people live in some of the houses; in others there are over twenty occupants.
'Their rooms are heated with oil lamps, the oil used being either seal, walrus, or whale. The lamps are made of clay. I have a stone lamp which I procured on the Siberian side. It is the same in shape as those used by the people on St. Lawrence Island.
"The walrus skins are dried on frames in the open air in summer, but the seal skins are stretched close to the ceiling in the living rooms. When the seal skins are dried, the women scrape and rub them until they are very soft and easy to make into clothing. They shape the boot soles, which are made of the big seal, with their teeth.
"There are no trees on the island. There is a little shrub resembling the willow, which creeps along on the ground like a strawberry vine. There are some beautiful flowers. Forget-me-nots, daisies, monks' hood, and the dandelion grow everywhere, while the buttercups come before the snow is off the ground.
"The house we live in is 20 by 40 feet, the schoolroom being in the north end. On Sunday the room is nearly always crowded. When the tables and benches are full, the people who can not be thus accommodated sit on the floor. They do not
mind this in the least, as they have no chairs in their own homes. Sometimes it is so crowded that it is almost impossible to move around.
"The pupils that have attended school with any degree of regularity have made good progress in their studies and greatly improved in their personal appearance. They read well, write legibly, and are quick at number work. One boy had kept a list of all the words that had been given him, and, when he understood the arrangement of the dictionary, made an alphabetical list of them in a blank book that had been given him. This he did without any suggestions from anyone." "

Haines.-This station, among the Chilkats, is occupied by Rev. and Mrs. W. W. Warne, Mrs. A. M. Sheets, and Miss Fannie Willard (native). The religious interest of the preceding year has continued during the present, and the teachers have been rejoicing that those for whom they labor and yearn have so many of them been brought into the kingdom.

The desire to attend meeting so overcrowded the church as to make some friction between the inhabitants of the different villages. They were like the Grecians of old, who thought that their wives were neglected in the daily distribution of bread. This inability to get into the church finally led to a compromise by which certain services were given to the inhabitants of certain villages, so that by rotation the people of each village would have an opportunity tooget into the church. In January, 1896, the building burned down and the regularity of the services was somewhat impaired. During the past summer a'larger and more commodious building has been erected for the mission. At the Chilkat Fishing Station the schoolhouse, which was intended to seat 40 , has been crowded with attendance of considerably over 100, sometimes 140 to 150 being present, and many compelled to go away for lack of room. At another village where services are held matters are scarcely any better, so that in addition to new mission building at Haines there is important need of two chapels at the outer villages. Winter prayer meetings are held at both of these villages, and from twenty to thirty prayers are often offered by the natives at a single meeting. Some pray in public who do not profess to be Christians, but pray for the light. Many have confessed their sins, and though some may go no further, yet many are coming into the kingdom.

Hoonah. -This station, among a barbarous and uncivilized people, 60 miles by sea from a post-office or white community, has been led by two widow ladies; Mrs. John W. McFarland and Mrs. Mary E. Howell. Mrs. MeFarland has served in the mission work for seventeen years, and upon the death of her husband three years ago continued the work at the station where they resided, teaching the natives, nursing their sick, settling their quarrels, and administering generally the affairs of the village, and also preaching the gospel on the Sabbath to the native church of 100 communicants. A year ago the tragedy connected with the killing of the last Indian medicine man in the place has resulted in good by freeing the community from their cruelty and rapacity. Some of the officials in years past have denied the existence of witchcraft in Alaska, for fear the knowledge of it would check immigration; but it still exists, and will continue to exist until every native village is leavened out of its superstition by the introduction of the gospel and the blessing of the Spirit of God. Such scenes as the following are still witnessed in that country.
"Some of our people took a sick man across the sound to the other Hoonah village to havé the Indian doctor perform over him. The doctor charged one of the party with being a witch, whereupon the young man became so enraged that he shot the doctor dead. Then he, with his friends, fled for this village. Early the next morning a large canoe filled with bloodthirsty men, whooping and firing off their guns, made their appearance. After a war dance on the beach they marched up to the house, demanding the man. For over an hour they tried in vain to settle with blankets. 'No! No! Life for life!' was the cry. Then the poor man came out and gave himself up and was shot down by two of the Indian doctor's friends. One gun, being accidentally discharged, wounded one of our men in the limb. Peace is now restored and I hope the old Indian doctor's death will end witchcraft among this tribe. A year ago he charged one of our schoolboys with being a witch, and had the sick man shoot him, after which a stone was tied around his neck and the body dropped into the bay."

Juneau.-The mission home at this place is prospering under the care of Rev. and Mrs. L. F. Jones, Miss Sue Davis, Miss M. E. Gould, and Mr. Frederick Moore, native. Mrs. Jones gives the following graphic picture of native life with which they deal:
"We have reached the far end of the villageand will pay our first visit. Entering a small room, built more in the form of a shed than a house, we find it full of all sorts of things, except furniture. The room is in utter confusion, while dirt is seen everywhere. Sitting upon two blankets spread on the floor and with a
cracker box for a support to her back is an old woman dying with consumption. We do what we can for her comfort, relieving her present necessities. Leaving some medicine, we continue on our way. The house we now enter consists of a single room, where live members of six families. Two rude bedsteads stand in one end of the room. An old stove in the middle of the apartment is giving off far more smoke than heat. About the stove are scattered a few dishes, pots, and pans. Nailed to the side of the wall to dry is a bear skin. Bunches of fish liang overhead. Several boxes painted in allegorical figures-receptacles for clothing-and an old chair are the only furniture. Lying on the floor near the stove, with one thin blanket for a bed and an old coat for a pillow, is a young man, suffering from a gun wound through the arm. During the night several boat loads of people, friends of his family, have arrived from a distance, bringing with them a dead body for interment. These visitors are all assembled in the room with the sick man, some mourning over their dead, others eating their breakfast, some smoking, and others sleeping. Children are singing, crying, and playing by turns, or all at the same time. As we advance to the side of the sick man we are obliged to step over sleeping forms on the floor. The atmosphere! Words are too feeble to describe it. The patience of the suffering Christian is beautiful to see. His face brightens as we speak words of cheer and comfort. After washing and dressing his arm, we offer a short prayer, cheered to know that we have been able to alleviate suffering.
"In that little hut we are approaching is one sick with a disease no medicine can reach save the 'Balm in Gilead.' That misery is the white man's stamp.
"But as the morning is far spent we will hasten on to pay our last visit. As we approach this Christian home our hearts grow lighter, for we know within will be seen the fruits of mission labors of past years. We enter a large room in perfect order, scant of furniture, to be sure, but a home where comfort and cleanliness are conspicuous. We ask for a drink of water; Jennie, the young wife, goes to a cupboard and brings forth two glasses with no little pride, handing them to her husband, who has just entered the room with a pail full of fresh spring water.
"On a cot, neat and clean, rests the sick brother. Jennie's floor is as white as a new kitchen table. A few large picturesillustrating Bible lessons are on the walls. At one end of the room is the dinner table, clean and nice, while at the other end is the bed, which looks inviting and restful with its white spread and snowy pillowcases. A sewing machine, with a partly finished shirt on it, stands by one window. The stove would.almost serve for a mirror if there were no other at hand. And this is only one of the neat, comfortable homes in Alaska resulting from the teaching and example of the missionaries."

During the year the Rev. James H. Condit has been sent to take charge of the white church at Juneau and has entered upon his work with enthusiasm.

Sitka.-This central-mission station continues to maintain the lead in mission work. It has the most complete set of buildings and appliances for carrying on mission work and much the largest force of employees. This is probably equal to the communicants of all the other Protestant churches in Alaska combined. The hospital in connection with the mission continues to reach a large number of patients from places 160 to 300 miles away by sea. Some have been received from Copper River, 500 miles away, and the Aleutian Islands, 1,200 miles away. Some months ago a number of native Christians from Sitka went to Kluck-Won, partly to get work and partly to carry the gospel to their own people. They established and have maintained regular prayer meetings, under the lead of Robert Harris, for many years a pupil in the Sitka mission school.

Fort Wrangel.-This oldest Presbyterian mission station in Alaska is occupied by Rev. and Mrs. Clarence Thwing, who writes encouragingly of the progress of the work in that village.

Jackson.-Owing ta the want of funds, which so greatly hampers the mission work of all the churches through Alaska, as well as other portions of the United States, the mission home at this place has been discontinued, and thus a portion of the girls have been transferred to the home at Sitka, with Miss A. J. Manning their teacher. A new church was completed last year at the station, to the great joy of the community. At one of the meetings a native seeking Christ thus prayed: "Lord, open my eyes and teach my heart how you would have me live before you." Another said: "If we were strong, like large new canoes, we would just ride over our temptations and not have them wash over us, just as a new, strong canoe does the waves."

THE SWEDISH EVANGELICAL MISSION COVENANT'S MISSIONS IN ALASKA.
We are indebted to the Rev. D. Nyvall, secretary of the Swedish Evangelical Mission Covenant, for this synopsis of their work.

The missions in Alaska, now promoted by the Swedish Evangelical Mission Covenant of America, were founded, 1886, by the Swedish Evangelical Mission Covenant of Sweden, which that year sent to Alaska their first missionaries: Mr. Adolph Lydell to Yakutat, to work there among the Thlingets; and Mr. Axel E. Karlson to Unalaklik, to take up work among the Eskimos, the Indians, and the Russians (half-breeds) of that region. Two years later, 1888, Mr. K. J. Hendricksen was sent to the Yakutat mission. In the year 1889 two more missionaries were sent from the old country to the Alaska stations, namely, Mr. August Anderson to Unalaklik and Mr. Albin Johnson to Yakutat.

In the meantime it was, among the missionaries themselves, discussed how much more natural it would be to have the new missions in Alaska stand under the control and lead of the American Covenant, rather than of the far-off Swedish society. The missionaries had all of them traveled through America to their destination, and were greatly affected by the love and help given them everywhere in America. Mr. Lydell, whose health did not permit him to stay long at one time in Yakutat, made several journeys through the States in the interest of the Alaska missions. At last the missionaries submitted their wishes to their board in Sweden, which readily accepted their plan, and formally, 1889, turned the mission over to the American society.

In the year 1891 the society strengthened the forces at the several stations by sending Mr. David Johnson and Miss Hanna Svenson (now Mrs. A. EE. Karlson) to Unalaklik, and Miss Agnes Wallén (now Mrs. Albin Johnson) to Yakutat. One year later, 1892, Miss Selma Peterson and Miss Anna Carlson were sent to Yakutat, the last mentioned returning the year after on account of failing health. In 1893 Miss Malvina Johnson was sent to Unalaklik and Mr. N. O. Hultberg to Golovin Bay to open the new station there, and, 1894, Miss Hanna Holm (now Mrs. Hultberg) followed. During the year 1895 no missionary was sent, owing to the hard times, but, 1896, the society called two school-teachers, one, Mr. P. H. Anderson, for Golovin Bay, and one, Miss Hulda Cecilia Peterson, for Yakutat.

Their entire corps of white workers in Alaska, including Mr. P. H. Anderson, is 14- 7 men and 7 women. Besides they have in the service of their mission one Eskimo, by the name of Rock, working as an evangelist in connection with their morthern stations, with such success as to give the missionaries occasion to call him "the Paul of the Eskimos." Another coworker is a Russian, Stephan Ivanoff, who, with his wife, has superintended an outstation at Kangekosook, until this winter, when he was obliged to give up that station and join the station at Unalaklik, because of the urgent need of more workers there. In connection with the mission are also the Eskimo girl Dora, a native nurse, and Frank Kameroff, a young Russian, serving as an interpreter, both located at the northern stations, making, in all, four native workers at present. Their stations are, as already mentioned, the following: Yakutat, Unalaklik, and Golovin Bay, besides an outstation at Kangekosook.

Yakutat is the nearest and most easily reached, and is superintended by Mr. K. J. Hendrikson, with the aid of Mr. Albin Johnson, Mrs. Albin Johnson, Miss Selma Peterson, and Miss Hulda Cecilia Peterson, the school-teacher. Albin Johnson with his wife and infant son is at present in the States, but intends to return early in June.

At this station the society has been able to place a sawmill to the service of the mission, with the best results. In fact, in seven years a whole little village of clean beautiful frame houses has been built, where formerly were only wretched huts. The natives have readily taken to carpentering, and they not only build their own houses, under the direction of Mr. Hendrikson, but also have learned to make many kinds of furniture until then unknown to them. In one word, the sawmill has proven an effective help in civilizing the natives and thereby opening a way for the Christian mission among them.

The congregation of converted natives at Yakutat, formally received into Christian fellowship by the missionaries, numbers about 20.
Five children are at present wholly cared for at the station. And it is to be noticed that this special work of charity was badly interfered with by the accident of the burning some years ago of the orphans' home, which the society has not as yet been able to rebuild.

The mission school is frequented by 60 to 100 children, or at an average, 45. Not only the English language and other elements of a primary-school education are tanght, but also useful industries, both to the boys and girls, such as knitting and sewing; and the girls are reported to learn very quickly and eagerly.

At Unalaklik is the'largest station. The superintendent is Mr. A. E. Karlson, one of the founders of our missions in Alaska. He has to his aid his wife and Miss Malvina Johnson, besides Mr. David Johnson, the school-teacher. Of Mr, Karlson's
hardships and triumphs many tales could be told if time and space permitted. Without the help of a sawmill and other facilities; with the aid only of an ax and his energy, he has built the station. Often has he experienced the greatest perils, even coming near risking his life for the gun or knife of the native, or at sea during stormy seasons while crossing the bay in order to provide his station with the necessaries of life from St. Michael or inland, in his many missionary journeys among the tribes living between Unalaklik and Golovin Bay. But he has until now been protected; and the last six years he has been nobly assisted by Mr. David Johnson, a young man of great courage and self-denying zeal. This Mr. Johnson has during the last two year's made several missionary journeys farther north as far as Kotzebue Sound, in company with the Eskimo Evangelist Rock. Many were the perils and the hardships of the young missionaries upon these journeys. The whole of Christmas night, 1895, they were obliged to bivouac in the cold arctic region beneath the starry sky, without any other protection than their sleighs offered. And still this young man, with an apostle's heart, asks of the society the privilege to be allowed to work in the same manner among the tribes farthest in the north, even offering himself to go without salary and eating the fare of the natives for a time, if only the society would consent to open a new station at the Kotzebue Sound.

The congregation of converted natives numbers about 50. At present not more than 15 children are wholly cared for at the station.

The children enrolled at the mission school are reported to be 90 , of whom 50 are under 10 years of age, 20 under 15 , the rest under 30 years of age. The best atterdance is reported during March, with an average of 40, the next best in January and February, with 35, and October, November, December, with 25. During May only 15 atterided, and in September fewer still (no exact figure given). These changes in the number of pupils is to be explained from the native half-nomadic mode of living. In the Sunday school at Unalaklik 175 children at the most have been gathered; and great was the joyful surprise for the poor little ones of the Christmas feast given them last Christmas eve, with a Christmas tree, burning in all its glory, and many small presents in the way of clothing, sweetmeats, and other good things liberally bestowed upon half-clothed, half-starved boys and girls, who showed their appreciation by laughter and tears continually alternating the whole evening, the greatest evening of their life.

Golovin Bay is the youngest station, and was opened 1892, and Mr. N. O. Hultberg, the superintendent of the station, was sent forthwith to take up work at the new place. He is now aided by his wife and Mr. August Anderson, and will be further assisted from next summer by P. H. Anderson, the school-teacher.

The success at Golovin Bay, the first and especially the second winter, exceeded all their expectations and former experiences, the report numbering the baptized during the winter of 1894 alone as over 20. The congregation of converted natives is at present 30 in number.

The attendance at the mission school is 40 , a number which could be easily doubled, as there are hundreds of children living a few miles around the station, were it not for the small schoolhouse, which can accommodate no more.

A brief summary of their work in Alaska is as follows:
(1) They expend yearly between $\$ 8,000$ and $\$ 10,000$ in Alaska. And this expenditure may be better understood when it is stated that all the members of all the churches in connection with the covenant do not number more than 10,030 , including both women and men, most of these being persons of smail means.
(2) As an immediate fruit of their missions there, is counted a Christian congregation of at least 100 natives.
(3) About 300 children are instructed at their mission schools.
(4) About 20 children are cared for at the mission stations.
(5) In connection with their missionary efforts, a great work of civilization is going on, not only at the stations, but through the influences of the missionaries.

## CHURCH OF ENGGLAND.

The diocese of Selkirk, while having its stations on the Canadian side of the boundary line, yet ministers to the natives and miners both of Canada and Alaska. The demoralization of the Indians, through intemperance and other vices introduced among them by the large influx of gold miners, is very marked, and has become a great hindrance to missionary work. Archdeacon and Mrs. T. H. Canhan, who have for many years labored in that arctic region, this season returned to England on account of their health.

The governor of Alaska. referring to the operations of the various Christian denominations in Alaska and also to the Government schools, stated in his annual
report to the Government that "the teacher and the missionary, the church and the school, have exerted a more potent influence for the elevation, civilization; and education of the Alaskan native than any and allother forces combined."

TEACHERS AND EMPLOYEES IN CHURCH MISSION SCHOOLS.

> Episcopalians.

Point Hope.-J. B. Driggs, M. D., Rev. H. E. Edson.
Anvik.-Rev. and Mrs. J. W. Chapman, Miss Bertha W. Sabine.
Fort Adams.-Rev. and Mrs. Jules L. Prevost, Mary V. Glenton, M. D.
Juneau.-Rev. Henry Beer.
Douglas Island.-Rev. A. J. Campbell.
Sitka.-Bishop Peter Trimble Rowe.

## Congregational.

Cape Prince of Wales.-Mr. and Mrs. W. T. Lopp, Rev. and Mrs. Thomas Hanna.

## Swedish Evangelical.

Kotzebue Sound.-Rev. David Johnson, and Rock, a native assistant.
Golovin Bay.-Rev. August Anderson, Rev. and Mrs. N. O. Hultberg, and Dora, a native assistant.

Unalaklik.- Kivev. and Mrs. A. E. Karlson, Miss Malvina Johnson.
Kangekosook.-Stephan Ivanoff.
Koyuk.-Mr. Frank Kameroff.
Yakutat.-Rev. and Mrs. Albin Johnsen, Rév. K. J. Hendricksen, Miss Selma Peterson, Miss Hulda C. Peterson.

## Roman Catholic.

Kosyrevshoy.-Rev. Paschal Tosi, S. J., prefect apostolic of Alaska; Rev. R. Crimont, S. J.; and Brothers Rosati, S. J.; Marchesio, S. J.; Cunningham, S. J.; Sisters M. Stephen, M. Joseph, M. Winfred, M. Anguilbert, M. Heloise, and M.' Damascene.

Nulato.-Rev. A. Ragaru, S. J.; Rev. F. Monroe, S. J., and Brother Giordano, S. J.
Shageluk.-Rev. William Judge, S. J.
Urhhamute, Kuskokwim River.-Rev. A. Robant, S. J.
St. Josephs, Yukon Delta.-Rev. J. Treca, S. J.; Rev. A. Parodi, S. J.; Rev. F. Barnum, S. J.; Brothers Twohigg, S. J., and Negro, S. J., and Sisters M. Zypherine, M. Benedict, M. Prudence, and M. Pauline.

Juneau.-Rev. J. B, Rene and Sisters Mary Zeno, M. Peter, and M. Bousecour.

> Moravians.

Bethel.-Rev. and Mrs. John H. Kilbuck, Mr. and Mrs. Benjamin Helmick, Miss Mary Mack, Mr. and Mrs. J. H. Romig, M. D.
Quiegaluk.-Mr. Ivan Harrison (Eskimo).
Tulaksagamute.-Mr. and Mrs. David Skuviuk (Eskimos).
Kalchkachagamute. - Mr. and Mrs. George Nukachluk (Eskimos).
Alcaigamiut.-Mr. Neck (Eskimo).
Ugavig.-Rev. and Mrs. Ernst L. Webber.
Quinehaha.-Mr. L. Kawagleg and Mr. and Mrs. Harvey Suruka (Eskimos).
Carmel.-Rev. and Mrs. John Schoechert, Rev. S. H. Rock, Misses Mary and Emma Huber, Miss P. C. King.

## Methodist Episcopal.

Unalaska.-Miss Agnes S. Sowle, Miss Sarah J. Rinch.
Friends.
Douglas City.-Mr. and Mrs. C. N. Reploge. (No report.)
Kake.-Mr. and Mrs. S. R. Moon. (No report.)
Baptists.
Wood Island.-Rev. and Mrs. Curtis P. Coe, Miss Lulu Goodchild, and Miss Hattie Snow.

## Presbyterian.

Point Barrow.-L. M. Stevenson.
St. Lawrence Island.-Mr. and Mrs. V. C. Gambell.
Haines.-Rev. and Mrs. W. W. Warne, Miss Anna M. Sheets, Miss Fannie H. Willard (native).

Hoonah.-Rev, and Mrs. Alvin C. Austin, Mrs. John W. McFarland, and Mrs. Mary E. Howell.

Juneau.-Rev. and Mrs. James H. Condit, Rev. and Mrs. L. F. Jones, Miss Sue Davis, Miss M. E. Gould, Mr. and Mrs. Frederick Moore (natives).

Sitka.-Rev. and Mrs. Alonzo E. Austin, Mr. and Mrs. U. P. Shull, Dr. B. K. Wilbur, Mrs. E. C. Heizer, Mrs. M. A. Saxman, Mrs. A. Carter, Mrs. L. S. Wallace, Miss A. J. Manning, Mrs. T. K. Paul (native), Mr. P. Solberg.

Fort Wrangel.--Rev. and Mrs. Clarence Thwing.
Jackson.-Rev, and Mrs. J. Loomis Gould, Mrs. A. R. McFarland.

## Church of England.

Buxton.-Bishop and Mrs. Bompas, Rev. Frederick F. Flewelling, Miss MacDonald, Mr. R. J. Bowen.

Fort Selkirk.-Rev. and Mrs. B. Totty.
Rampart House.-Rev. and Mrs. H. A. Naylor, Rev. and Mrs. T. H. Canham.

## Introduction of Domestic Reindeer into Alaska.

During the year a comfortable log schoolhouse 22 by 32 feet, together with a woodhouse and bell tower for the same, has been erected for the use of the children of the employees at the Teller Reindeer station. The building has attracted considerable attention from its neat and comfortable appearance. The main headquarters building was enlarged with an addition 24 by 40 feet, built in connection with it. This addition gives accommodation for a storeroom, and also for the herders' families who may be sojourning temporarily at the station. It furnishes accommodations for keeping seal meat, oil, blubber, dried and frozen fish; also a carpenter's bench, with facilities for manufacturing sleds and snowshoes. In the attic is furnished much needed room for storing sails, boat oars, and fishing nets.

In addition to the buildings erected at the station, huts made of plank and driftwood, covered with sod and dirt, were erected at several convenient points for the accommodation of the herders passing between the herd and the main station in winter. During the severe storms of last winter these huts were found of very great value, and probably in some instances saved lives. Similar huts were also erected at the winter camp for the use of the herders.

## PERSONNEL.

After a sea voyage of thirty-seven days, Mr. J. C. Widstead, who had been appointed assistant superintendent of the station, reached Port Clarence July 12 on the brig $W . H$. Meyer. Two days later, the supplies for the station being safely landed, a southerly wind springing up so increased in violence that the vessel was driven ashore from her anchorage and became a total wreck. With the wrecking of the vessel were lost the supplies of the schools at Bering Straits and also Point Barrow, together with the personal effects of the Rev. Thomas Hanna and family, who were en route to their station at Cape Prince of Wales.

Owing to some misunderstanding and friction which arose over the sale of the wrecked vessel, Mr. William A. Kjellmann sent his resignation to Mr. William Hamilton, who represented the Bureau. As there was nothing else to be done, the resignation was accepted, and on July 20 Mr . J. C. Widstead was appointed superintendent, with Mr. Thorwald Kjellmann as assistant superintendent. Mr. Widstead had been selected for a subordinate position, but in the absence of any other more suitable person in that region he was necessarily given the first place upon the resignation of Mr. Kjellmann. His administration during the past year was not a success, and upon my arrival at the station, July 28,1896 , I removed him and reappointed Mr. William A. Kjellmann superintendent and Albert N. Kittilsen, M. D., assistant superintendent, who had been sent up from the States this season for service at the station.

During last year some dissatisfaction was expressed by the Lapps that there was no physician within reach for their families. This want has been supplied by the appointment of Dr. Kittilsen as assistant superintendent of the station. The seven families of Lapps have remained with the herd, performing their usual duties
with efficiency and success. The experience of the past two years has demonstrated the wisdom of their importation as instructors to the Eskimos in the care and management of deer. Their success has been so marked that hereafter, whenever a herd is loaned to a mission station, an experienced Lapp will be sent with the herd to take charge of and instruct the apprentices.

Under the tuition and direction of the experienced and skilled Lapps were ten Eskimo apprentices from different villages extending all the way from Point Hope on the Arctic shore southward and eastward to Fort Adams on the Upper Yukon River, a distance of 2,000 miles. These apprentices have made fair progress in mastering the science of managing and breeding reindeer.

In January, Moses, Tatpan, Martin, and Okweetkoon were transferred from the Teller Reindeer Station to the new station established on Golovin Bay, they having come originally from that general region of country.

During the fall, Oozhaloo, one of the most prominent natives at Point Barrow, with his family, was transported to the Teller Reindeer Station at his own request and accepted as an apprentice. It is hoped that ultimately he will be able to go back in charge of a herd to that distant and desolate northern section.

## HERDS.

There are now five herds in Alaska, one at Cape Prince of Wales, a mission station of the Congregational Church, numbering 253; one at Cape Nome, in charge of three experienced Eskimo apprentices, numbering 218; two at Golovin Bay, one belonging to the Swedish Evangelical Mission Station and the other to the St. James Episcopal Mission Station, together numbering 206, and the central Government herd at the Teller Reindeer Station, numbering 423, making a total of 1,100 head.

During the previous five years the transporting of reindeer from Siberia was done by the revenue cutter Bear. This year the Bear, having extra work in connection with the policing of the sea islands of Bering Sea, was unable to afford the usual assistance. In place of the Bear, arrangements were made with Mr. Minor W. Bruce to purchase the deer on the Siberian coast and deliver them to the Government at so much a head on the Alaska shore. Through a combination of circumstances, however, he failed to carry out this contract, and the result was that no deer were purchased this season. It is perhaps as well that this attempt to procure deer through private parties from Siberia has so signally failed, as the men who were selected to live in Siberia and do the purchasing were not such as were competent to suitably represent the United States Goyernment. Russia had kindly given permission to the United States to purchase, but would naturally expect that the agents doing the work would be responsible men under the control of the United States Government. It is hoped that the Bureau of Education will this coming year be able to send its own agent on the field, and thus prevent any international complications arising from the misdoings or mistakes of agents not responsible to the Government. But while there was no increase of the herd from importation, there was a very gratifying increase by birth. Four hundred and sixteen fawns were born to the herds last spring, of which 357 lived.

At the Teller Station there were at the opening of the year 525 head. On the 14th of January, 1896, 130 of these were sent off to establish a new herd at Golovin Bay.

During the year 25 died from accidents received during transportation from Siberia. Upon the second trip of the Bear the steamer encountered a severe gale and the reindeer were thrown helplessly from side to side across the deck, resulting in dislocated joints and broken limbs and internal injuries, resulting in death. During the fall a hoof disease broke out in the herd, resulting in the death of 25. A portion of a diseased lung and liver was sealed up in alcohol, and has been sent to the Agricultural 'Department for diagnosis of the disease and a possible remedy. Ten male deer were killed during the year for food. One hundred and forty-one fawns were born, of which 10 died. Of the 423 deer at the station on the 1st of July, 1896, 15 are claimed by the apprentice Taootuk, 11 by Kummuk, 7 by Sekeoglook, 4 by Woksok, 4 by Electoona, and 3 by Ahlook, making 44 that are the private property of the apprentices. There are 7 head of female deer belonging to the Teller Station that are still in the herd at Cape Nome.

In the herd at Cape Prince of Wales there are 253 head, of which 84 are fawns born last spring. There are 5 herders or apprentices in charge of the herd. Some of the cows without fawns were milked, and the herd seemed to be prospering.

The Cape Nome herd numbers 218, of which 43 were born last spring. During the spring 11 were killed in an avalanche as they were feeding at the base of a mountain.

The two herds at Golovin Bay aggregate 206, of which 80 were born last spring. Of this herd, the apprentice, Martin, claims 12 deer, Tatpan 7, Moses 21, and Okweetkoon 10 , making 50 claimed by the herders as private property.

The trip made in driving the herd from Port Clarence to Golovin Bay was a successiul and interesting one, a full account of which is given by Mr. G. T. Howard.

During the year at the Teller Station 22 deer were broken to harness, making 52 sled, deer in the herd. Much time was given to the training of these deer for freighting and traveling purposes. Seventeen sets of harness were made, 14 freight sleds, and a number of snowshoes and skis. But little difficulty has been met with during the past year from the dogs.

## DISTRIBUTION.

In the general plan of distribution it has been our purpose to supply the mission stations, partly in the order of their proximity to the central herd, that the new herds may be more conveniently supervised, and partly through the interest which the stations have manifested in sending their young men for training. Hence the first station to receive a loan from the Government was the Congregational, at Bering Straits, 60 miles away from the central station. The superintendent of that mission was for one year (1893-94) superintendent of the reindeer station, and had around him a number of his young mell as apprentices. About that time the report was maliciously circulated among the natives that they were not to receive any benefit from the reindeer; only the whites. To disabuse their minds, three of the more advanced of the native herders were loaned (January 31, 1895) 100 head of deer and sent off some 60 miles down the coast to Cape Nome by themselves. This was the beginning of the third herd.

Among the first stations to respond to the call for young men to learn the business was the Swedish station at Unalaklik, Norton Sound, and the St. James Episcopal mission, on the Yukon. As the Swedish station was the next nearest to Port Clarence after the Congregationalists, and as they had had three young men in training, it was very proper that they should have the next or fourth herd, and while the Episcopal station at Fort Adams is more remote than the Roman Catholic station on the lower Yukon or the Presbyterian station on St. Lawrence Island, yet as that station had had an apprentice almost from the first in the herd and was a central point for the establishment of reindeer among a different race of people in Alaska, it seemed appropriate to give the fifth herd to them, which was done.

In arranging plans for the distribution of the domestic reindeer in Alaska, so far as the native population are concerned, I have looked to the missionaries settled among them for cooperation and assistance.

They are the wisest and most disinterested friends the natires have. From their position and work, having learned the character and needs of the people, they can wisely direct the transfer of the ownership of the deer from the Government to such of the natives as have been trained in the care of the deer.

And in order that the herders should have, in the infancy of the business, the continued oversight of experienced herders, and teaching in methods of handling by the most competent instructors, it is important that with every new herd sent out there shall also be sent a competent Lapp. In accordance with this purpose, the several missionary organizations at work in arctic and subarctic Alaska were last spring corresponded with by this office.

In the commencement of the work it was anticipated that all the mission stations would have ere this been furnished a loan of reindeer, but the increase through purchase in Siberia has been much smaller than was anticipated. Instead of being able to purchase a thousand or more head a year, the average increase by purchase has only been about 150 a year. This necessarily delays the distribution of deer, as it is not good policy to weaken unduly the central herd at Port Clarence, and of course we can not distribute more than we bave.

It is as important to teach the natives just emerging from barbarism how to earn an independent support as it is to give them book instruction. The industrial pursuit which nature has mapped out for the native population of arctic and subarctic Alaska is the breeding and herding of reindeer and the use of the deer as a means of transportation and intercommunication.

During the past season the influx of miners into the Yukon region has made a very urgent call for reindeer for freighting purposes. In the original plan for the purchase and distribution of reindeer reference was mainly liad to securing a new fool supply for the famishing Eskimo, but it is now found that the reindeer are as essential to the white men as to the Eskimo. The wonderful placer mines of
the Yukon region are situated from 25 to 100 miles from the great Yukon River. The provisions brought from the south and landed upon the banks of the river are with great difficulty transported to the mines. So great was the extremity last winter, that mongrel Indian dogs cost $\$ 100$ to $\$ 200$ each for transportation purposes, and the freight charges from the river to the mines, 30 miles, ranged from 15 to 20 cents per pound. The difficulty experienced in providing the miners with the necessaries of life has demonstrated the necessity of reindeer transportation, and that the development of the large mining interests of that region will be dependent upon the more rapid introduction of reindeer for freighting. There are no roads in Alaska, and off of the rivers no transportation facilities to any great extent. In the limited traveling of the past dogs have been used for that parpose; but dog teams are slow and must be burdened with the food for their own maintenance. On the other hand, trained reindeer make in a day two or three times the distance covered by a dog team, and at the end of the day can be turned loose to gather their support from the moss, which is always accessible to them.
W. H. Gilder, of the Century, in his trip across Siberia to telegraph to the Navy Bepartment the burning of the United States naval vessel Rogers in St. Lawrence Bay, Siberia, 1882, says in his book, Ice Pack and Tundra, page 190:
"During a portion of the route we had horses for draft animals and at other times reindeer. I much prefer the latter, because so much fleeter and so much moie docile:"

Last spring an application was received from the United States Treasury Department for the placing of 40 reindeer on the Seal isfands, and arrangements were made for complying with the request; but before the arrangements could be carried out I received a protest from the North American Commercial Company, who are the lessees of the islands; as they feared that the reindeer would disturb the seal upon the rookeries. Consequently nothing was done in the matter.

A number of inftuential parties, several being in the United States Congress, have expressed an earnest wish that a few reindeer might be placed upon each of the larger islands of the Aleutian group to provide a food supply for any crew that may hereafter be wrecked on those islands, and prevent the repetition of the starvation and cannibalism which occurred in 1894 on Uranak Island, one of the Aleutian group, in the wrecking of the whaling bark James Allen. When, June 14, the United States revenue cutter Bear, upon which I was a passenger, found the survivors, there were nine left in a hut, crazed with starvation. They were gathered around the fire with a pot of human flesh on cooking, which they had cut from the body of a man who had died and been buried two weeks before. Upon perceiving the rescue party they gave a feeble hurrah, and, laughing and crying by turns, remarked that they were sorry to say that they were cannibals, but that starvation had stared them in the face and they were compelled to resort to the flesh of their dead companions for food. They reported that Gideon had died June 7, and they had eaten him. When he was gone, they had dug up Pena, who had been buried on May 30, and were now (June 14)-eating him. When they reached the ship, they were so weak that some of them had to be carried and all of them helped to the forecastle, where the clothes; swarming with vermin and reeking in filth, were cut off of them and thrown overboard. They were then thoroughly washed and their hair cut. When stripped of their clothing, their emaciation showed their-suffering.

Requests have also come from parties who haveleased some of the Alaska islands for the purpose of raising foxes. They are anxious in connection with their fox ranches to try the experiment of raising reindeer for the market.
In Ice Pack and Tundra, page 179, W. H. Gilder, speaking of the people of northeastern Siberia, thus testifies to the value of reindeer meat as a food:
"Reindeer meat is also eaten by those who can afford it, unless rich enough to eat beef, which they prefer, though why I could never discover, for the meat of the reindeer is much more delicate and tender, and has a peculiarly delicious flavor, probably derived from the fragrant moss that constitutes its food: It is cheap enough to satisfy the most economical housekeeper, a fine fat buck, entire, costing at Nishne Kolymsk only 3 rubles, that is \$1.50, and at Sradnia 5 rubles. The meat of the reindeer is al ways excellent, while the beef is more expensive, and is only exceeded in price by the horse, which is a luxnry only to be indulged ini by the rich."

I am in full sympathy with all these requests for the distribution of reindeer in widely separated sentions of Alaska. The more widely they are distributed and the larger the number of interests that are subserved by them the greater good will be accomplished and the larger the constituency of those who will take an interest in this new industry.

The vast territory of central and arctic Alaska, unfitted for agriculture or cattle
raising, is abundantly supplied with the long, fibrous white moss, the natural food of the reindeer. Taking the statistics of Norway and Sweden as a guide, arctic and subarctic Alaska can support $9,000,000$ reindeer, furnishing a supply of food, clothing, and means of transportation to a population of a quarter of a million.

Providence has adapted the reindeer to the peculiar conditions of arctic life, and it furnishes the possibilities of large and increasing commercial industries. The flesh is considered a great delicacy, whether fresh or cured. The untanned skin makes the best clothing for the climate of Alaska, and when tanned is the best leather for the bookbinder, upholsterer, and glove maker. The hair is in great demand, by reason of its wonderful buoyancy, in the construction of life-saving apparatus. The horns and hoofs make the best glue known to commerce. With Alaska stocked with this valuable animal, the hardy Eskimo and the enterprising American would develop industries in the lines indicated that would amount to millions of doilars annually, and all this in a region where such industries are only developed enough to suggest their great possibilities.

The terms for which the Lapps contracted to serve the United States has expired. They have so fully proved their efficiency, justified their employment, and made themselves so necessary that their services can not be dispensed with without injury. An effort is being made to induce them to remain in the country longer, and there is a reasonable prospect that, after returning to their native land, they will close out their business affairs and return to Alaska as permanent settlers. If a few additional families of Lapps can be encouraged to accompany them, it will be a great boon to the rising reindeer industry.

Reindeer Lapps are of two classes-one who give their entire attention to the raising of reindeer, and the other who give their whole attention to freighting and transportation. The latter class in the old country seldom raise the reindeer which they own, butare accustomed to purchase from the breeder, then train and use entirely for freighting. We are very fortunate in having both classes among the seven Lapp men in Alaska. Two of the seven are trained freighters, and it is proposed to allow them this coming season to go to the mines and demonstrate the usefulness of the reindeer in that region for transporting freight and furnishing rapid communication for passengers and mail. With the introduction of a larger number of deer, suitable for freighting purposes, it will be necessary to secure a larger number of experienced Lapps from the old country, as it will take a series of years before the natives can be so far trained that they can be trusted to freight on their own account.

At the request of this office, through the Secretary of the Interior, the Secretary of State has communicated with his Imperial Majesty the Czar of Russia, requesting permission for this office to place a purchasing agent, with one or two herdsmen, at some suitable point on the coast of Siberia adjacent to Alaska.

At the request of the Department of the Interior in 1892, permission to purchase reindeer on the Siberian coast was obtained through his excellency the Russian minister resident at this capital. But experience has shown that unless the deer are purchased beforehand and collected at one point on the coast, the United States steamer is delayed too long in the process of effecting these preliminaries, and the consequence is that the short season in which the transportation of reindeer is possible in these northern seas passes away with slender results. The average purchase has been considerably less than 150 reindeer per annum during the past four years. It will be easy to double the number annually, provided the purchasing and collecting of deer can be performed by some party in advance.
The scarcity of food in places continues periodic, and much suffering, with loss of life, must ensue while the present slow process of introducing a new food supply into the country continues. Missionaries of all churches on the ground unite in testifying to the need of more speed.

A few years of larger appropriations on the part of Congress would purchase and place in Alaska two herds of 5,000 each, the natural increase of which would perpetuate and extend the stock until the whole country is covered.

THE ITINERARY.
Leaving Washington on May 14, 1896, for my annual inspection of the schools and reindeer stations in Alaska, Seattle was reached on the 29th of the same month. The following two days, exclusive of an intervening Sabbath, were spent in looking after the procuring and shipment of supplies for the various schools, and on June 2 I took the steamship City of Topelar for Sitka, visiting en route the schools at Fort Wrangel, Juneau, and Douglas Island, reaching Sitka on the 8th of June. Five very busy days were given to the several schools at Sitka. Through the courtesy of Capt. C. L. Hooper, commanding the Bering Sea fleet, arrange-
ments were made by which I was allowed to take passage on board the United States revenue cutter Bear.

On the morning of June 13 I went on board the Bear, which got under way at ten minutes after 11 o'clock a. m., and proceeded out to sea bound for Bering Sea and the Arctic Ocean. The seven-day voyage to Unalaska was unusually pleas-ant-the sea was smooth, the wind favorable, and we made a quick trip. Through the whole trip I found the officers both obliging and companionable.

The ship's roster reads: Francis Tuttle, captain; David H. Jarvis, first lieutenant and executive; Claude S. Cochran, second lieutenant; William E. W. Hall, second lieutenant; H. G. Hamlet, third lieutenant; Charles S. Coffin, chief engineer; Harry U. Butler, first assistant engineer; Henry K. Spencer, second assistant engineer; Robert Lyall, surgeon.

In the early morning of the 18th, meeting the revenue cutter Rush, bound for Sitka, we availed ourselves of the opportunity of sending back letters to friends in the States. At $10.20 \mathrm{a} . \mathrm{m}$. of the same date we dropped anchor in Delaroff Harbor (Unga). Going ashore, I had an opportunity to visit the schoolhouse and teacher's family; also to meet some of theopupils. The teacher had taken a sailing vessel to Puget Sound for his vacation. While at anchor the Alaska Commercial Company's steamship Bertha arrived from San Francisco laden with supplies for various trading and mission stations, and among theopassengers were a number of missionaries. At noon we were again under way, calling at Sand Point for about an hour. Leaving Sand Point and passing through Popoff Strait, we were in sight of Pavloff Volcano, which was vigorously throwing out huge puffs of black smoke from its crater.

At noon on June 19 we steamed through Unimak Pass into Bering Sea. That afternoon, sweeping rapidly by the head of Akun Island, we were soon off the north point of Akutan Island. Horizontal bands of red rock alternating with yellow and green rings, bright in the rays of the setting sun, gave a foreground of wondrons beauty. In the background towered Akutan Volcano, its sides covered with snow, portions of which were discolored and shaded by a recent shower of ashes. Occasional puffs of light, vapory smoke arose from the crater and slowly rolled off into space. At the western end of the island a remarkable pillar of rock, with perpendicular sides and level top, arises out of the sea, while, to complete the marvelous picture, on the east a cloud of fog was seen rolling over a high ridge and down the precipitous sides of a mountain, giving it the appearance of a vast cataract-a score of Niagaras united in one. It was a scene of a lifetime and never to be forgotten,

At 11.20 p. m. of the 19th we dropped anchor in Dutch Harbor. It was the first time during fourteen trips that I was permitted to reach Unalaska without being seasick. Ten days were spent at Unalaska and Dutch Harbor in looking after and arranging for the educational work at Unalaska, and also the several points on the coast of Bering Sea and the interior of Alaska. The next day the steamship Bertha arrived from San Francisco having the following persons on board: Rev. and Mrs. H. A. Naylor, Rev. Frederick F. Flewelling, of the Church of England, en route for the Church of England's missions on the head waters of the Yukon River, a distance from their English home of about 11,200 miles; the Rev. S. H. Rock, and Dr. and Mrs. J. H. Romig, of the Moravian Church; the former was en route to Carmel, on the Nushagak River, and the latter to establish medical missions on the Kuskokwim River; the Rev. Paschal Tosi, vicar apostolic; the Rev. James M. Cataldo and Brother Pietro Branesli, of the Roman Catholic Church, en route to their missions unon the Yukon River; the Rev. and Mrs. Jacob Kortchinsky, of the Russo-Greek Church, en route to their mission at St. Michael.

Attracted by the herring or other small fish, the harbor was full of whales, a dozen of which played around the ship and could easily have been shot from the deck.

On June 24 we escorted to the steamship Homer Prof. and Mrs. John A. Tuck, who were leaving Unalaska to return to the States. A large number of friends, whom they had made among the natives, were also at the wharf to bid them godspeed. They have done faithful, efficient, and self-denying work during the seven years they have labored in Unalaska.

The Methodist Episcopal missionaries at Unalaska took the occasion of the presence of so many missionaries and teachers to give their own school a picnic, to which all the visiting missionaries were invited. This was held on a mountain side on the afternoon of the 26th, and was a very enjoyable occasion.

On the 29th, by direction of the Secretary of the Interior, with the assistance of sailors furnished by Capt. Francis Tuttle, commanding the revenue cutter Bear, I selected and marked out the land necessary for Government school and mission purposes in the proposed town site of Unalaska.

On June 30, the revenue cutter Rush having arrived from Sitka with mail for the fleet, at $9.50 \mathrm{p} . \mathrm{m}$, the cutter Bear got under way for St. Lawrence Island, the reindeer station, and other points in Bering Sea and the Arctic Ocean.

On July 3, at $2.30 o^{\prime}$ clock p. m., we met our first ice, in latitude $59^{\circ} 51^{\prime} 15^{\prime \prime}$ and longitude $170^{\circ} 9^{\prime} 55^{\prime \prime}$. Keeping off about 2 miles from the ice, we steamed parallel with it for the next 100 miles. It was a part of a large ice floe that extended from St. Matthew Island across Bering Sea to Nunivak Island. That night we passed through considerable ice drift, being spurs from the main floe.

On July 4, in the midst of a dense fog somewhere off the south end of St. Lawrence Island, the ship was decorated with flags, and at noon a salute of 21 guns was fired. Working the ship slowly through a dense fog and broken ice during the night and the next forenoon, we reached and came to anchor off the village at the extreme northwest corner of St. Lawrence Island.
Soon our ship was surrounded with boat loads of natives, and among them came Mr. Gambell, the teacher at that island, receiving his annual inail (for this is one of the several stations in northern Alaska that has but one mail a year'). I went ashore with him to inspect the station and school. My stay on shore; however, was cut short by the surf commencing to rise and threatening to prevent my return to the ship. All haste was made to reach the ship, which was already, under the influence of the storm, dragging her anchor. The anchor being lifted, the ship's station was changed to the south side of the point, but that anchorage was very little better. In the meantime the sea had become so rough that it was with great difficulty the natives who had returned me to the ship were able themselves to make a landing through the surf. After watching them safely on shore, at $10.20 \mathrm{p} . \mathrm{m}$. we got under way and steamed out to sea. The next morning, steaming through a large field of floating ice, we came to anchor at $6.35 \mathrm{a} . \mathrm{m}$. off the village of Indian Point, Cape Tchaplin, Siberia. As usual upon the arrival of a vessel, the deck of the cutter was soon crowded with natives, some endeavoring to barter reindeer skins, furs, and curios, and other's desiring to see the ship's surgeon.
The annual cruise of the revenue cutter along that northern coast offers the natives the only opportunity during the year of the advice of an educated physician; consequently, whenever the ship drops anchor all the sick and ailing that are able to be moved are gathered up from the village and neighborhood and brought on board the ship to see the doctor. Those who are unable to be moved are usually afterwards visited in their huts on shore, and everything possible done for their help and relief. For the time being the ship becomes a traveling hospital and dispensary. During our stay the captain and a number of the officers accompanied the surgeon on shore. At 4.05 p . m . we were again under way, steaming through a field of drift ice that seemed to be running out of the bays north of the point. As we are in north latitude, where at this season of the year there is no night, it makes but little difference whether we are steaming or lying at anchor during the night. We rise by the watch and retire in the same way, the sun shining both when we go to bed and when we wake up.

On July 7, at 3 o'clock in the morning, we reached and anchored off South Head, St. Lawrence Bay, Siberia, and several boat loads of Tchuctchees came to the ship. This is one of the best points for procuring reindeer on the Siberian ccast, and here we secured in former years the greatest number; but this season, as the Bear could not be spared for the purpose of transporting deer, we were compelled to notify the deer men that other vessels were coming later in the season for their deer. However, through a combination of circumstances, no ships went for the deer, greatly to our disappointment and that of the people.

In an hour we were again under way. Passing to the north of the point, several large umiak loads of natives were seen coming out to sea to meet us, and the engine was stopped to allow them to come on board. The same message concerning the purchase of reindeer was communicated to them. At 5.40 a . m, we were again under way, headed for the reindeer station at Port Clarence, which we confidently expected to reach that evening (alas for human confidence, it was nineteen days before we finally reached that station). But at 1.20 p . m . we got into the ice and had to slow down speed. To add to our troubles so dense a fog set in that we could scarcely see the length of the ship. Two or three times during the night the engine was stopped until the fog should lighten up a little-occasional glimpses only revealed heavy ice all around us. After a night of great anxiety, the captain anchored at sea the next morning at 7.30 . At 9.50 a . m . the fog lifted a little, the anchor was hoisted, and another attempt made to work through the ice and get into Port Clarence. At $3 \mathrm{p} . \mathrm{m}$. the fog again lifted a little, and from the crow'snest at the masthead it was seen that the ice was densely packed all the way across from Cape York to Cape Douglas, that the original ice of the previous
winter was still unbroken in Port Clarence, and heavy icə floes were packed together from the entrance of Port Clarence 8 miles out to sea.

Realizing the impossibility of making any progress toward land, the captain determined to run down to King Island and land a family of natives belonging to that place that he brought over from Siberia. Upon approaching the island he was surprised to find at anchor under the lee of the land the steam whalers Orca, Thrasher, and Narwhal, the whaling schooner Rosario, and the coal bark J. P. Peters. A heavy fog enveloped the island. Anchor was dropped in the midst of the whaling fleet at 7.20 p.m. The whalers, unable to get into Port Clarence (the first time in fifty years at this season of the year), had taken refuge in the lee of King Island and were coaling ship. That night, a storm arising, two of the whalers lost their anchors and were compelled to put to sea to save going on the rocks. While lying at anchor at King Island, in company with Captain Tuttle, I called upon the several captains of the whaling fleet. Captain Smith, who had wintered at Herschel Island, narrâted an incident where the children of an old man, being tired of caring for him, had removed all their belongings and provisions from the hut, leaving their old father to starve or freeze to death. The sailors, learning the situation, kept the old man supplied with provisions through the winter; and the following spring he died from. natural causes. Among the wild Eskimos of the Arctic, both on the Alaskan and the Siberian coasts, it is considered a Kindness and neighborly act to kill an old person, or one that is chronically sick without prospect of ever being well again.

While Captain Smith was on the coast of Siberia, a native who had made up his mind to change his residence to another section of the country had an invalid daughter who, with their appliances, could not be moved. Instead of remaining in his old home and caring for that daughter, he and his sons packed up all the family belongings and supplies on their dog sleds, hitched up their dog teams, and when everything was ready for a start, they went into the hut and stabbed the daughter to death. At the island where we were anchored, a few weeks before our arrival, a man who had been sick a long while adjusted a cord around his own neck and then asked his neighbors to pull him up until he was strangled to death; he wanted to die, and, as good neighbors, they assisted him in accomplishing his wish.

On July 10, the weather having somewhat cleared, a large number of King Islanders came on board. They crawled down the precipitous sides of their island home to the water's edge like so many ants, and lannching their one-hole bidarkas through the surf came off to the ship in droves. During the day, on hearing a report that the teacher at Cape Prince of Wales had had some trouble with the natives, and as we had his yearly mail on board, Captain Tuttle concluded to make an attempt to reach him, and at 10.45 got under way. Upon coming within sight of the place, at $3.15 \mathrm{p} . \mathrm{m}$., a large ice floe was found moving against the village, making it impossible to land. Nothing could be done but turn and steam for another anchorage.

The ice still blocking up the entrance to Pert Clarence, the ship was headed for St. Michael, and we found to our regret that the immense ice floe, which we had been in vain attempting to penetrate in order to get to the Teller Reindeer Station, extended all the way down the coast to Cape Nome, a distance of 180 miles, so that in going to St. Michael the ship was forced by the ice floe 50 miles south of its true course. There was, however, a good providence in this, as it led the captain to find the brig Geneva dangerously situated in the ice and to tow it safely into St. Michael. On the morning of the 22d of June the steamer Bertha had taken the Geneva in tow for St. Michael, a trip of five or six days. But after battling for nearly three weeks with the ice the captain left the schooner at sea until the steamship coald force her way through the ice to St. Michael, unload, and then return for the schooner. However, providentially for the schooner, she did not have to wait, but was picked up and towed to a place of safety before being crushed.

All through July 11 and 12 our steamer kept along the edge of the great ice floe, the weather thick with fogs and snow squalls until the latter part of the aftornoon of the 12th, when the snow squalls were succeeded by a drizzling rain. At 10.10 p. m. we anchored off St. Michael. Going ashore on the forenoon of the 13th, we found mosquitoes in swarms.

July 15 Captain Tuttle took the Bear up the coast to enable me to visit the school and Swedish mission at Unalaklik. In previous years, when requesting to visit the place, I had been told that the water was too shallow for an ocean steamer. Upon making the attempt, however, we found no special difficulty; the day was perfect, bright, sunshiny, no wind, smooth water. The captain had invited a select company from St. Michael to accompany us. At 2.50 p . m., anchoring off the village, Lieutenant Jarvis took the party in the steam launch close to the shore,
where we were transferred to rowboats to make a landing. Although it was vacation time, the school bell was rung and the children called in that I might have an opportunity of seeing them at work. The mosquitoes, however, were so bad that the visiting party became anxious to get off shore, and I did not have as much time as I would have liked. Returning to the ship, we loisted anchor and sailed for St. Michael, which we reached at 1.50 the following morning.

In the harbor at St. Michael we found the Yukon River steamer Portus B. Weare, the ocean steamer Bertha and bark Geneva, of San Francisco, and the small steamers William Seward, Explorer, Koyuk, and Yukon, and the schoonerrigged yawl Edith.
On July 21 the American brigantine C. C. Funk arrived from. San Francisco and the steamer Arctic came down the Yukon. Among the passengers on the Arctic were Rev. and Mrs. T. H. Canham, Miss Macdonald, and Mrs. Bishop Bompas, all of the Church of England missions; Dr. Glenton, of the American Episcopal mission; Mr. and Mrs. Harper, from the Pelly River Trading Station, and Mr. William A. Beddoe, of Chicago, contractor for the mail route between Junear and Circle City; Mr. Omer Maris, correspondent of the Chicago Record, and Mr. H. De Windt, correspondent of the Pall Mall Gazette, London. The cutter Bear had instructions to convey the latter to Siberia, where he proposed making a land journey across to Europe. I have since learned that his plan miscarried, and he came down later in the fall on a whaler to San Francisco, returning "to Europe across the United States and the Atlantic instead of across Siberia. It was reported so healthy in the Upper Yukon Valley, just below the Arctic Circle, that although white women have been in that section for fifty years as wives of missionaries and fur traders, only one had died during that time in the district-Mrs. Bell, wife of Captain Beil, of Fort Simpson, on the McKenzie River. Such an unusual occurrence caused much comment among the people.

The missionaries reported that the gold mining at Circle City was making rapid progress. During the present season both the Protestant Episcopal and the Roman Catholic churches have established missions at that place and proposed hospitals. Last winter the first public school ever held in Circle City was established by the miners and taught by a volunteer teacher, Mrs. Dr. Yates. The school lasted three months, January, February, and March, 1896, with 30 pupils. The Episcopalians have paid $\$ 1,300$ for an unfinished frame building, and have also bargained for an additional lot at $\$ 800$. A corner lot 50 feet front and 100 feet deep sold this spring for $\$ 2,500$ in gold; another lot 30 feet front and 50 feet deep, with an uncompleted two-story building, sold for $\$ 7,000$ in gold. Half the buildings in the place are saloons, and liquor costs 50 cents a drink. Last winter the place contained 560 white inhabitants; this summer, 1,150 , of whom 200 are permanent residents in the village and the others scattered among the adjacent mines. There are about 40 white women in the district. Last winter the thermometer registered at $5 \mathrm{p} . \mathrm{m}$. $66^{\circ}$ below zero for three weeks at a time. During the entire month of January the average temperature was $46^{\circ}$ to $48^{\circ}$ below zero. At Mastodon mines the thermometer last winter registered $76^{\circ}$ below zero, and this summer $103^{\circ}$ above zero.

The valley of the great Yukon River is being fairly well supplied with missionaries. Belonging to the Church of England are Rev. and Mis. T. H. Canham and Miss Mellett, on the Porcupine River; Rev. B. Totty, at Fort Selkirk; Bishop and Mrs. Bompas and Miss Macdonald, at Forty-mile Creek. In the service of the Protestant Episcopal Church are Rev. and Mrs. J. L. Prevost, at Fort Adams; Rev. and Mrs. J. W. Chapman, Mrs. Bertha W. Sabine, and Miss Mary V. Glenton, M. D., at Anvik. In the employ of the Roman Catholic missions are Right Rev. Paschal Tosi, vicar apostolic; the Rev. A. Robant, the Rev. F. Barnum, the Rev. Monroe, with lay brothers Marchisio, J. T. Sullivan, and J. Negro, together with ten sisters, at Kosoriffsky; the Rev. William Judge, the Rev. A. Ragaru, and lay brothers C. Gioarano and J. Rosetti, at Nulato; the Rev. J. Treca, the Rev. A. Parodi, and lay brothers B. Cunningham and J. Twohig, at Cape Vancouver. Those belonging to the Russo-Greek Church are Rev. Belkof (retired), at St. Michael; the Rev. Johannes Orloff, at Ikogmute, Yukon River, and Rev. and Mrs. Jacob Kortchinsky, for St. Michael and Paul's village, St. Sergius. Belonging to the Swedish Evangelical Church are Rev. and Mrs. A. E. Karlsen; Miss Malvina Johnson and David Johnson, teachers at Unalaklik; Rev. August Anderson, Rev. and Mrs. N. O. Hultberg, and Mr. and Mrs. Frank Kameroff, at Golovin Bay; and Mr. and Mrs. Stephan Ivanoff, at Koyuk.

During the evening of July 22 the steamship Bertha sailed for San Francisco with 125 passengers and a mail to our friends. Learning that the Swedish mission at Golovin Bay was out of food, Captain Tuttle very kindly offered to go to their relief, and I at once made arrangements with the Rev. A. E. Karlsen, Swedish missionary at Unalaklik, who is in charge of their stations, to procure the neces-
sary supplies for the relief of the station at Golovin Bay. While I was on shore making these arrangements, the steamship Portland arrived from Seattle with a later mail and newspapers. She also brought lumber and workinen for the construction of a river steamer for the North American Trading Company. The Alaska Commercial Company are also building a new river steamer and some large barges.

The development of the Yukon gold mines is greatly stimulating trade through all this country.

Having received on board the supplies for the relief of the Swedish station, we hoisted anchor at $9.55 \mathrm{p} . \mathrm{m}$. and put to sea. At 7.10 the following morning we were at the entrance of Golovin Bay, but a gale having arisen, the sea was too rough to land stores, and as there was no sheltered anchorage we were compelled again to go out to sea, where we hove to, riding out the storm-a most miserable day.

On the morning of the 25th we again skirted the bay and were able to make an entrance, dropping anchor at $6.40 \mathrm{a} . \mathrm{m}$. Upon the slope of the west bank of the bay the reindeer herd was clearly visible from the ship; also the native village on the end of the eastern spit. Having finished breakfast, at 8.15 a . m. Dr. Lyall, the physician, and myself were sent to the village in a boat in charge of Lieutenant Hamlet. A fair wind made it a pleasant sail. On our way we were met by Mr. Hultberg, the missionary, and Mr. Dexter, the trader, coming to the ship. They were taken aboard our boat and returned with us to the village, where they tried to engage all the natives with their umiaks and send them off to the ship to bring in the stores and supplies. Some friction having arisen between the trader and the mission with regard to the location of the mission buildings, I staked off a plat of vacant ground around the mission buildings, having first informed Mr. Dexter, the trader, and invited him to accompany and counsel with me. As some of the reindeer apprentices have tried to dispose of their private deer to the trader, I left him a formal notification that they were not allowed to sell. While we were on shore the wind freshened, and we found it rough and dangerous getting back to the ship. Many natives who had started out in their umiaks had returned to the beach, being unwilling to venture in the rough sea. When we reached the ship, at 1 p. m., the captain got under way and moved in to the western shore, somewhat sheltered from the wind and the waves. From our new anchorage the supplies were speedily landed, and as the storm was still heavy and our anchorage in the open roadstead insecure, the ship got under way at 4.43 p . m. and stood out to sea.

On Sunday evening, July 26, at 8.35 p. m., we dropped anchor at Port Clarence, near the mouth of which we had been over two weeks before. At anchor in the harbor was the schooner Ida Schnauer, of San Francisco, Captain Neilsen in command; also the whaling schooners Bonanza and Rosario. The schooner Ida Schnauer had on board the supplies for the reindeer.station and several of the schools and missions, together with Mr. Lopp and family, who were returning to their stations at Bering Straits, and Mr. Kjellmann of the reindeer station. Soon after dropping anchor Mr. Lopp came on board and remained until midnight.

At $8.40 \mathrm{a} . \mathrm{m}$. on the 27 th the Bear got under way and moved up to the Teller Reindeer Station, where supplies, barter goods, and mail were sent on shore, after which, at $11.35 \mathrm{a} . \mathrm{m}$., anchor was hoisted, and we crossed to the south side of the bay to the watering station near Cape Riley. While the ship was absent watering I remained at the reindeer station, and with Mr. Widstead took an inventory of the public property. At $11.15 \mathrm{a} . \mathrm{m}$. the schooner Ida Schvauer anchored off the station and commenced discharging freight. We all worked far into the night. As the year before the brig $W$. II. Meyer, that had on board the supplies for the missions and schools, was forced ashore and wrecked in front of the reindeer station (the natives claiming through the power of their medicine man), the Eskimos made the night hideous by their drums and howlings as they tried to invoke another storm and secure the wreck of the present vessel.

The next day was indeed stormy, with a very heavy surf, but the schooner did not come ashore; she, however, was unable to land any freight at that time, and found it necessary to go into deeper water. Having finished the inventory and looked over the station, I appointed Mr. William A. Kjellmann superintendent in the place of Mr. J. C. Widstead, removed. As the storm kept up all day, preventing the landing of any supplies, various conferences were held with different employees, and the work of the station mapped out for the coming year. The storrn that prevented the landing of supplies also prevented the return of the cutter, and as the employees at the station had no extra furniture and did not suppose that they needed to make any provision for visitors at that station, with one communication with the world a year, the physician and myself had to sleep on the Hoor in the
drug room. The employees, however, did the very best they could to make us comfortable.

On the 29th, the sea being still rough, no goods were landed, but at $3.55 \mathrm{p} . \mathrm{m}$. the Bear returned and anchored off the station, allowing us to return to our quarters on ship. As Captain Tuttle was anxious to start northward, I returned on shore and worked until late in the night closing accounts with Mr. Widstead and the Lapps. The surf was so rough that but for the hull of the wrecked Meyer making a slielter I would not have been able to have got through and returned on board ship. Early in the morning Mr. David Johnson, a Swedish missionary from Unalaklik, and his native assistant came on board by permission of the captain to go to Kotzebue. Sound, where they hoped to be able to establish a new mission. Two of the Eskimo apprentices, Ahlook and Electoona, were taken on board for a visit to their relatives at Point Hope. At 6.10 a. m., July 30 , the ship was under way, stopping a few moments as we passed out of Port Clarence to communicate with the schooner Bonanza. At $2.40 \mathrm{p} . \mathrm{m}$. we were steaming by the village at Cape Prince of Wales, but as there was too much surf for landing we passed on, entering the Arctic Ocean with pleasant weather.
July 31, while skirting the Alaska coast north of Bering Straits, the ship anchored at $10.25 \mathrm{a} . \mathrm{m}$. to allow some natives to come on board for medical attention. At $6.15 \mathrm{p} . \mathrm{m}$. resumed our trip; during the night, reaching drift ice, anchor was dropped at $11.10 \mathrm{p} . \mathrm{m}$. All night heavy drift ice surrounded the vessel.

At $6.35 \mathrm{a} . \mathrm{m}$., August 1, starting up the engines, the ship worked its way through heavy ice until 8.30 a . m., when we anchored off Cape Blossom, in Kotzebue Sound. Soon several boat loads of natives came on board, among them being the uncle of Mr. Johnson's interpreter. During the day, the storm increasing, the natives were unable to leave the ship. In the afternoon and evening the rain and sleet of the morning turned to snow and continued during the night. The drift ice, which was scouring the sides of the vessel, increasing in volume, making it dangerous to remain longer, and the storm of the previous day having somewhat abated, about 6 o'clock in the morning of August 2 the natives started for shore, accompanied by Mr. David Johnson and his native assistant of the Swedish Evangelical Union Mission Society. Mr. Johnson was landed among these wild people without a house to shelter him, without anything to build a house from, with no protection of courts, policemen, or governnent within 1,000 miles, with nothing but a few pounds of provisions for the winter, throwing himself upon the barbarous people among whom he expected to work. His strong, heroic faith made an impression upon the officers and crew of the ship. The natives having left, at 7.10 a . m. the cutter Bear got under way, and at 5.52 p . m. rounded Cape Krusenstern. The day was misty and stormy, with frequent snow squals and heavy ice.

On Monday morning at 6.30 the officer on deck discovered a brig ashore. At $7.10 \mathrm{a} . \mathrm{m}$. we passed Cape Thompson, and at $9.15 \mathrm{a} . \mathrm{m}$. we were abreast of the wrecked bark, which was found to bo the whaler Hidalgo, Capt. C. A. Gifford, master. An officer was sent ashore and soon returned, reporting the vessel a complete wreck and abandoned, the crew being quartered at one of the whaling stations south of Point Hope. At 10.2 F a. m. the ship steamed ahead, and at 11.10 anchored off one of the whaling stations, 7 miles below Point Hope, to communicate with the wrecked crew. Various parties, whalers and natives, were soon on board. At $1 \mathrm{p} . \mathrm{m}$. anchor was hoisted and we steamed around to the north side of the spit, and at $2.45 \mathrm{p} . \mathrm{m}$, anchored oft the village of Point Hope. In the harbor were the whaling schooner Rosario and the bark Mermaid. The captain kindly sent the physician and myself immediately ashore with the annual mail for the Episcopal mission station. The grounded ice made it very difficult and dangerous landing. We were able, however, to reach the beach at the lower end of the village, and then had a long, hot walk to the mission. As-Dr. Driggs, the missionary, had been home from the States but a few days, we did not remain long. During the afternoon Captain Gifford, of the wrecked whaler, cane on board the Bear and asked passage to Unalaska, which was granted him. Having transacted the necessary business at Point Hope, at $5.35 \mathrm{p} . \mathrm{m}$. the anchor was hoisted and the ship passed around to the whaling station on the south side of the spit. where we anchored at $7.15 \mathrm{p} . \mathrm{m}$., to enable Captain Gifford to secure and bring on board his personal effects. Having completed his arrangements and returned on board with his things, at $9.30 \mathrm{p} . \mathrm{m}$. the Bear got under way for the far north.

All night long we steamed through floating ice, encountering light hail and rain storms. At 7 a. m., August 4, passed Cape Lisbourne, distant 5 miles. At 8.15 the ice, which bad been light, became very heavy, and at 9.35 a . m., unable to proceed farther on account of the ice, we came to anchor off Point Lay.

August \% another attempt was made to get northward. Getting under way at $2.40 \mathrm{a} . \mathrm{m}$., we steamed for some distance along the edge of the ice, but by 4.10
a. $m$. found that we were in the midst of heavy drift ice. At 8.15 , the ice becoming too heavy for progress or for safety, we came to anchor under Icy Cape: At noon, the ice floe closing in upon us, the ship got under way and proceeded slowly through heavy ice floes and thick fog southward until, finding comparatively open water near Cape Lay, it came to anchor at 5.55 p . m., the current setting strongly to the north. The next day we made our third attempt to get north, hoisting anchor at $2.40 \mathrm{a} . \mathrm{m}$. . but by 4.45 a . m. were again in the heavy ice, and at 7.56 a. m . were compelled to anchor on the south side of Icy Cape, the great ice floe forming a solid wall in front of us. Soon after some natives came on board and reported the ocean closed with ice up to Point Barrow. The drift ice again closing in upon us, at $6.20 \mathrm{p} . \mathrm{m}$. the anchor was hoisted and we were compelled to steam to the southward through heavy ice until 8.55 p . m., when we were able to anchor in clear water off Point Lay, near which we found already anchored the whaling barks Horatio, Captain Slocum commanding, and the Alice Knoules, Captain Ogden commanding.

During the night conferences of the captains were held, and Captain Gifford of the wrecked Hidalgo joined the bark Horatio as mate. As Sisyphus rolled his stone up the hill only to find it at the bottom the next day, the same toil to be repeated day after day, so every morning the cutter Bear, pushing for the north, would get fast in the ice and be compelled to return again to the south in the afternoon. Thus on the 7th of August, at $5.35 \mathrm{a} . \mathrm{m}$., the anchor was hoisted and another attempt made to get north. This time the captain concluded to steam southward and westward around and through the southern edge of the great jce floe, Hoping to find open water outside to the westward. Passing north along the west edge of the ice floe we steamed through floating ice until 10.10 p . m., when the ice became too heary to make further progress, and we repeated our daily experience of steaming southward until 11.30 p . m., when the propeller was stopped and the vessel allowed to drift. with the ice. At 3.15 on the morning of August 8, the fog lifting, Point Belcher was seen about 15 miles away and we found that we had drifted northward during the night at the rate of 2 miles per hour. The weather clearing somewhatat $3.30 \mathrm{a} . \mathrm{m}$. , wंe again steamed northward through the ice. At 7 the masts of some whalers were seen to the north of us, and soon after the mission buildings and whaling station at Point Barrow were sighted through the field glasses. Everyone was now in high glee, as we would soon be there, and, after discharging our duties at that place, would be able to face southward and homeward.

At $10 \mathrm{a} . \mathrm{m}$. we were opposite the station, where some of the whalers had succeeded in getting in, when the ice had closed in upon them, and they were prisoners. But the opening that had let them in had, before our arrival, closed with ice, which stood a solid, impenetrable wall to bar any further progress on our part. We had got our mail out, our clean clothes on, in expectation of going ashore and seeing friends; but, alas, we could not get ashore; we could not even remain where we were, and nothing was left to do but to turn and steam southward to open water, which we did until 1.45 the next morning, when the engine was stopped, and, it being too deep to anchor, the vessel was allowed to drift. To our astonishment, when the thick fog and rainy night had passed, we found that we were back opposite Point Barrow, having during the night drifted northward with the ice. Again we steamed through the drift ice along the edge of the main floe, looking for some channel through which we could force our way in and reach the station, but in vain; and again at $2 \mathrm{p} . \mathrm{m}$. we turned southward and west, steaming through heary ice until midnight, when the engine was stopped and, as usual, the vessel allowed to drift.

August 10, at 5 a. m., the ship resumed her usual practice of bumping ice and forcing her way within sight of the desired haven, and then turning away and steaming southward, until $6.20 \mathrm{p} . \mathrm{m}$. , when we came up with the whaling barks Horatio, Mermaid, and Alice Knowles. The three captains soon came aboard to spend the evening, while the four vessels drifted around the sea. At $11.20 \mathrm{p} . \mathrm{m}$. Mr. John Wells, mate of the wrecked brig Hidalgo, was taken on board the cutter Bear for transportation to Unalaska, provided we ever got out of the ice. The previous night having been spent as usual in drifting in the fog and the ice, at $9.25 \mathrm{a} . \mathrm{m}$. August 11 some of the officers went in the second cutter to shoot walrus discovered asleep on the ice. They claimed to have shot three, but none were brought back to the ship. In the afternoon the officer of the crow's-nest having discovered some open water inshore, the vessel was forced through the heavy ice until the open water was reached, and at $3.40 \mathrm{p} . \mathrm{m}$. the ship was anchored off Skull Cliff. Heavy drift ice was floating by us all night to the northward. On August 12 , at 8.40 a . m., we started northward, reaching heavy ice at 10.07 , and a few minutes afterwards, came to anchor, unable to proceed. At 12.40, discoveríng
a small lead in the ice, we were again under way, and at $2 \mathrm{p} . \mathrm{m}$, anchored near Refuge Inlet. The day was stormy, raining and snowing by turns. The ice coming in too heavy for safety, at $10.55 \mathrm{p} . \mathrm{m}$. the anchor was again hoisted and we turned southward, steaming for a safer location. Finally, at 11.10 p. m., the ship was fastened to the lee side of a large berg of grounded ice, where we lay very securely until the next day.

At noon August 13 an officer reported that he thought the vessel could get through the ice to Point Barrow. At 1.20 p. m. the moorings of the ship were cast off from the grounded ice and we commenced picking our way northward through the heavy ice with blinding flurries of snow and squalls of rain. This time (the ninth attempt) we made it, and at $4.25 \mathrm{p} . \mathrm{m}$. the ship was secured to a grounded iceberg off Point Barrow Refuge Station. The berg was probally 6 miles long with an average breadth of half a mile; in places it was from 50 to 75 feet high above the water and went down under the water to the bottom of the sea. This great berg had come in from the sea eleven months before and had remained until our visit, the middle of August, and perhaps is still there. We found that the past winter had been an exceptionally severe one. On the 20th of December the thermometer registered $40^{\circ}$ below zero and remained steadily below zero until the middle of May. During an ordinary winter at that point there are mild spells of weather, but last winter was very cold. The warmest weather during February was $38^{\circ}$ below zero and the coldest $66^{\circ}$ below. The average temperature for the month was $45^{\circ}$ below. The extreme cold lasted through the winter until the 20th of April, when it was $37^{\circ}$ below zero. From that time on the weather continued to moderate until the middle of May, when the thermometer marked zero. Snow did not leave the ground until the 19 th of July, and on the fresh-water lakes ice remained until the middle of August, a month later than usual. Spring plowing and gardening had not yet commenced at the time of our visit, the middle of August. The long summer day commenced on the 10th of May and lasted until the 4th of August. The long winter nights will commence the 19 th of November and last until the 23d day of January.
Soon after making the ship fast to the ice, Mr. John W. Kelly, manager of the Pacific Steam Whaling Company's station, and Mr. Charles Brower, of the Liebes Station, Mr. L. M. Stevenson, teacher and missionary, and Captain Aiken, superintendent of the Government Refuge Station, with others, came on board. A portion of the ice which had blocked the entrance to the roadstead had that morning moved to the northward, making a channel for our entrance. After dinner I accompanied Captain Tuttle on shore and made calls at the Government Refuge Station and the Presbyterian mission. When I left Washington in May it was with the understanding on the part of the Presbyterian Missionary Society that their station at Point Barrow would be closed until a suitable man and his wife could be found for the work, as it had been found necessary for Mr. Stevenson to return to his family in Ohio. But as the Government had ordered the refuge station closed, and the building and supplies sold to the Pacific Steam Whaling Company, it seemed better that Mr. Stevenson should be kept another year to look after the school and mission building. As he was out of supplies, Captain Tuttle very kindly advanced him 15 tons of coal, 150 gallons of coal oil, 4 boxes of navy crackers, and 16 sacks of flour, which were to be replaced by the mission society when the ship reached Unalaska. Other supplies for the mission were secured from the wardroom mess and the whaling station on shore, and Mr. Stevenson has remained at his difficult post another year.

To expedite the work of turning the Government station over to the whaling station, Lieutenant Jarvis, with two sailors, were sent on shore. As time was precious and our stay, on account of the ice at Point Barrow, uncertain, I again went ashore on the 15 th, immediately after breakfast, and remained all day, looking after various matters connected with the school and mission at that northernmost station. Oozhaloo, one of the wealthiest and most active Eskimos of the settlement, made application to be taken with his family to the reindeer station, where he desired to become an apprentice and learn the management and care of domestic reindeer. His application was an evidence of his ability and farsightedness. When a boy, if hungry, he could get into a kiak and go out and club a seal on the head in front of his home; now seals have become so scarce that but few are secured even with guns. When he was a boy, whales were always found in the waters adjacent to his home: they remained there during the entire season of open water; now the few whales that are seen at all scurry past the village as if conscious that bomb guns were waiting to take their lives, and it is but rare that the natives get them. When he was a boy, if he wanter a change in his diet irom whale blubber and seal meat, he could go just back of the village and shoot a deer with his arrow; now he finds it necessary to go 100 miles or more inland after
caribou, and it is with difficulty they are secured by rifle and bullet. He sees that the food supply of the country is practically gome, and that there is no future for his people unless a new food supply is furnished. This he sees to be through the introduction of domestic reindeer, and for himself and his family desires an early opportunity of learning how to have and care for the new food supply. As he was indorsed by the "missionary, I agreed to take him, and securing permission from Captain Tuttle, brought him on board the ship with his wife Toakluk, his son Chowlock, his daughter Neuta, and his adopted daughters Kontelow, and Ahlahle. Mr. John W. Kelly, who has been in the arctic region for eleven years, also sought and received permission to return south with the Bear.

Having received on board the annual mail and finished our work at Point Barrow, at $3.45 \mathrm{p} . \mathrm{m}$. August 15 the Bear got under way for the south, working slowly through the heavy drift ice.

During the 16th Point Belcher was passed. The whaling schooners Rosario and Mermaid were met and their mail taken on board. All day the cutter Bear worked her way through the drift ice. On the 17 th we finally got out of the Arctic ice into clear water, and after a most gorgeous sunset, at 11.50 midnight, anchored off the Corwin coal mine for fresh water. The forenoon of August 18 was consumed by the crew in getting fresh water. Two of the officers went ashore to hunt ptarmigan. While tramping over the tundra they found the tent, clothing, and skeleton of a white man; also his sled and other belongings. As no white man is known to be missing, and as neither natives nor white men in the vicinity knew anything about it, the dead man must have been a prospector who had come alone across the wilderness the previous winter, and worn out, perhaps out of provisions, had starved and perished upon that bleak shore of the Arctic Ocean. Since his remains have been found, the people at Point Hope, 60 miles away, recall the fact that during the previous winter two unknown and half-starved sled dogs had come to the village.

Having watered ship, at 1.30 p. m. anchor was hoisted and we stood to the westward to round Cape Lisbourne, where we have always found a rough sea, and this year was no exception. At 10.30 a . m. the ship anchored off Cooper's whaling station, Point Hope, and the stores, the whalebone, and fifteen sailors of the wrecked schooner Hidalgo were received on board for passage to Unalaska; also the whalebone from the whaling bark Gay Head; also mails for the south were received from the whalers and the village. The herder Ahlook, whom I had brought to Point Hope to visit his friends, also returned on board, and at $5.30 \mathrm{p} . \mathrm{m}$. the anchor was hoisted and we started for Kotzebue Sound, passing Cape Krusenstern on the morning of August 20. About $6 \mathrm{p} . \mathrm{m}$. in the afternoon we took in tow four umiaks with their loads of people en route to Kotzebue Sound, and at 9.30 p. m. anchored off Cape Blossom. During the night large numbers of natives came on board from shore, but as the sea began to be very rough, they left for land, and at 9 a. m. on the 21st the vessel got under way for shelter, which it secured at 2.25 p. m. near Choris Peninsula. We reached that place at noon, none too early, as the storm had increased to a gale.

It'had been expected that the steam launch wेould be sent to Elephant Point to investigate the unusual quantity of the bones of the mammoth which have been exposed by the elements at that point. But during the morning of August 22, the weather continuing stormy and the gale apparently increasing, the captain concluded to go to sea, and at $11.15 \mathrm{a} . \mathrm{m}$. we got under way and drove before the storm. At $5.50 \mathrm{p} . \mathrm{m}$. Cape Krusenstern was abeam, and at 8.55 p . m. the west point of Cape Espenberg was abeam. During Sunday, August 23, it alternately snowed and rained, the wind blowing a gale. As the steamer could make no headway against the storm, we sailed with the wind, and were taken a long distance westward out of our course. At 11.25 on the 24 th ice appeared ahead of us, and all afternoon we steamed through heavy drift ice. About 5 p.m. East Cape, Siberia, loomed up in the distance through the fog, and as we approached it made a beautiful sight. East Cape and the Diomede Islands were covered with freshfallen snow from summit down to the water's edge. The ship attempted to make Whalen Village, Siberia, but found that the ice was packed from the shore 5 miles out to sea. We then turned and tried to make East Cape, Siberia, but again we were headed off by the ice, which was packed to sea 3 miles out from the cape. At midnight the captain gave up the struggle and allowed the steamer to drift, until the following morning he could make another attempt to reach East Cape. But with the coming of the morning, August 25, the situation was no better, and giving up the attempt to reach East Cape, the ship skirted around the south end of the ice floe, and at 8 o'clock came to anchor in clear water in the bight south of East Cape. A number of miak loads of Siberians came on board to see the physician and do some trading.

At $11.10 \mathrm{a} . \mathrm{m}$. , the thick fog clearing up, the ship got under way and stood for the Siberian village on Ratmanoff Island, one of the Diomedes, where we anchored at $3.23 \mathrm{p} . \mathrm{m}$. Three loads of Siberians came off to the ship. Stopping for an hour, we were again under way for the American side of the Straits, but at 5.25 p. m. stopped to receive a boat load of natives from the village on Kruseastern Island. At $5.50 \mathrm{p} . \mathrm{m}$. we were again under way for Cape Prince of Wales, reaching there soon after midnight. Being unablo to effect a landing, the ship turned and put out to sea again for safety. With the morning light of August 26 the ship returned to the village of Cape Prince of Wales and anchored at $7.45 \mathrm{a} . \mathrm{m}$. Shortly afterwards Mr. W. T. Lopp, the missionary, came on board with some natives. Immediately after breakfast Dr. Lyall, the physician, and myself went ashore with Mr. Lopp. The affairs of the mission and school were looked after, a number of natives were attended to by the physician, and at noon we returned to the ship. Soon after, the schooner Ella Johnson, John T. Smith master, anchored near by. Mr. Minor W. Bruce and party for trading for reindeer were on board. Accompanying Lieutenant Hall, I paid a visit to the schooner and had a conversation with Mr. Bruce concerning arrangements for securing reindeer. Upon returning to the $B e a r$, I was greatly surprised to find that the sailing papers of the Ella Johnson were defective, and that not being properly registered the schooner could not go to Siberia and trade for reindeer, as was expected. This closed all hope of procuring reindeer from Siberia this year.

At $2.45 \mathrm{p} . \mathrm{m}$. we got under way for Port Clarence. A dense fog having set in, at $10.30 \mathrm{p} . \mathrm{m}$. the ship came to anchor at Point Jackson, at the entrance of the harbor. The next morning, the fog having lifted, at $5.40 \mathrm{a} . \mathrm{m}$. the ship got under way, and at 8 o'clock anchored off Point Riley after fresh water. Having watered ship, at 2.45 p. m. the Bear got under way and steamed over to the Teller Reindeer Station, on the north side of the bay, where the captain kindly allowed me, together with the herders, Ahlook, Electoona, and Oozhaloo and his family, to land, after which the steamer ran down to Point Spencer for a sheltered place in which to make repairs and changes in her propeller. At the station we were very busy looking after the details of the business until after midnight. During the morning of August 28 Lieutenant Cochran came over from Point Spencer with the steam launch and, picking up Dr. Lyall, Mr. Kjellmann, Dr. Kittlesen, Mr. John W. Kelly, Mr. Wells, mate of the Hidalgo, three herders, and myself, steamed away for Grantley Harbor, to visit the reindeer herd. Landing about 11 a. 1n., we had lunch on the beach, after which we walked to the reindeer camp, 4 miles distant. It was a very hard walk. At the time of the arrival of the Bear an epidemic had appeared in the herd, causing a swelling and suppuration around the hoofs. A brush corral had been constructed and some 30 sick deer gathered into it. The two physicians of the party, with the herders, proceeded to give an examination, and a portion of the diseased heart and liver of one that had died was placed in alcohol, to be sent to the Agricultural Department at Washington for expert examination.

As it had proved a very hard walk from the depot to the herd, the Lapps proposed. to send me back by a sled drawn by the reindeer. The deer had not been hitched up all summer and were very frisky. The result was that the very first brook that we came to they gave a leap, overturning the sled, throwing me out into the bushes, and nearly breaking away from the drivers. The sled was righted and I again got on. The rest of the way they took me along rapidly over the snowless tundra, across a mountain, through bunches of arctic willow, up and down the steep sides of the ravines, and landed me safe and sound on the beach in an astonishingly short time. After lunch we embarked in the launch for the station. In the meantime the wind had changed and got up a rough sea which tossed and pitched the steam launch, greatly to our discomfort. Reaching the station at 7 o'clock, I went ashore, and the others continued on their way to the ship at Point Spencer.

August 29 dawned with a storm raging at sea and a heavy surf on the beach. As there was no going out or returning ashore, the day was spent without interruption looking over the affairs of the station. Sunday morning, August 30, came in with fog. The gale of the previous day had ceased. At 11 o'clock the bell was rung and divino service held in the schoolhouse. Thirty-three persons were present, comprising nine nationalities. There were Americans, Norwegians, Lapps, Ootlaeavies, Tigaraites, Kinegans, Kaveans, Seelawiks, and natives around Norton Sound. The preacher spoke in English. The Rev. T. L. Brevig, Norwegian minister, translated the English into Lappish, and Dora, an Eskimo girl from Golorin Bay, translated the English into Eskimo, thus requiring three langnages to reach the audience. It was an interesting and unique service.
Dora, the Eskimo interpreter, has had an eventful career. When born, she was
thrown out of the house by her mother to freeze to death, the mother not wishing the trouble of bringing her up. An older sister took pity on the babe, brought her into the house, and assumed charge of her.- After a while the sister became tired of her charge, and again the babe was thrown out of doors to perish. Then a neighboring woman took her in and brought her up as her own child. When she was about 12 years of age, shé was sold to a man for his wife, but being brutally treated, she ran away and found an asylum at the Swedish mission. The mission was raided by the natives and the girl carried off by force. "Again escaping, she was permitted to remain at the mission, where she has becorme a strong, fine-looking, intelligent, consecrated girl, of about 17 years of age. At presentshe is living with Rev. and Mrs. Brevig at the reindeer station. As I rose from-the dinner table the cutter Bear was seen steaming over from Cape Spencer. I was very sorry, as it would probably necessitate going on board ship on Sunday, thus setting a bad example to the natives, and I had repeatedly given strict orders against all unnecessary Sunday work at the station. True enough, orders came from the captain to come on board, as he would sail immediately. Lieutenant Hall was sent with a steam launch to arrest some natives for various misdemeanors, and Mr. Kjellmann was sent to the herd to secure some necessary vouchers from the Lapps. The launch having returned from Grantley Harbor, adieus were spoken to the friends on shore, and at $8.30 \mathrm{p} . \mathrm{m}$. the anchor was hove, and we steamed away for St. Michael. The fog setting in heavy, we anchored outside at Cape Spencer at $10.20 \mathrm{p} . \mathrm{m}$. The next morning we were under way at 7.40 , reaching St. Michael at 11.40 p. m, September 1.

In the harbor were the brigantine C. C. Funk, John Calliston; master; the schooner Alice Cooke, D. B. P. Penhallon, master, and the steamer Lakme, Charles Anderson, master. Letters were received from tho Swedish stations at Unalaklik and at Golovin Bay, calling attention to the failure of the fish supply this season and the prospect of a famine during the next winter; also making inquiries whether it was not pessible for provisions to be left at those stations. September 3, Mr. H. De Windt, correspondent of the Pall Mall Gazette, London, England, was taken on board, with supplies, to be landed at Indian Point, Siberia, from whence he expected to make a sled trip across Siberia; also Lewis Sloss, jr., and Rudolph Neumann, of the Alaska Commercial Company, and Rev. P. T. Rowe, the Episcopal bishop of Alaska, for transportation to Unalaska. At $9.20 \mathrm{p} . \mathrm{m}$. farewell salutes were fired from the ship and the battery on shore, and we stood out of the harbor for East Cape, Siberia.

On September 5, encountering a gale with a rough sea, the vessel, being unable to proceed, hove to. The following morning, making out King Island looming up through the fog, the ship got under way at 5.25 o'clock and attempted to reach it, which was accomplished at 8.5 , when we auchored under the lee of the island abreast of the village.

Soon a number of natives crowded the deck. The northwest storm continuing with unabated severity and the timedrawing near when the ship was under orders to report at Unalaska, the captain concluded to give up attempting to reach East Cape and to make at once for Indian Point; hence at $5 \mathrm{a} . \mathrm{m}$., September '7, we were again under way. In the afternoon we came up with a large quantity of heavy drift ice, which we skirted for $\AA$ long distance. On Tuesday, at $4.20 \mathrm{a} . \mathrm{m}$., we dropped anchor off Indian Point. Mr. H. De Windt, with servant and supplies, was sent ashore. All possible arrangements having been made for his comfort, at $10 \mathrm{p} . \mathrm{m}$. we again got under way and stood for St. Lawrence Island, where we came to anchor at 3 a. m. on the morning of September 9. As there was coal to land for the use of the school, I went ashore with the first load to confer with the teacher and look over school matters. After breakfast Lieutenant Jarvis and Dr. Lyall, the physician, came ashore and performed a surgical operation on a child. The ailments of various natives were also attended to. While at lunch on shore the steam whistle blew for our return to the ship. Upon boarding ship the anchor was hove and we got under way for the Pribilof Islands. That day and the following one were charming-as old sailors say, "weather breeders," and so it proved to us. During the night of the 10 th and 11 th the wind changed dead ahead and we hove to, the wind blowing a gale from the southeast and a heavy sea running; but little sleep was had on board the ship.

On the morning of September 12, there being a little lull in the gale, the ship again resumed her course, but in the evening the storm resumed its fury and we were again hove to under double-reefed mainsail. On the morning of the 13 th at $2 \mathrm{a} . \mathrm{m}$. the gale split the fore trysail. All that day and the following day and the day after that, the storm raged in its fury. The supply of coal in the steamer was getting low. The date at which the captain was to report at Unalaska had passed, so, making a desperate effort and proceeding as best we could through the storm,
we were fortunate enough to get into the harbor of Unalaska, the quiet waters of which seemed very delightful after the tossing of the previous week. Going ashore for our mail, I had the unpleasant experience to find that through some one's blunder my whole mail for the summer had been sent into the Arctic, and eventually did not reach me until weeks after my return to my office in Washington. This, however, was not as bad as the disappointment of the teachers and traders at Point Hope and Point Barrow in the Arctic at the loss of their annual mail, which was sent them in the spring of 1895 . It has not yet reached them, and information secured recently in the office at Washington locates the missing mail still on Puget Sound. If there are no further delays, the letters which were sent in the spring of 1895 will probably reach their destination in the fall of 1897-two and a half years after they started.

At Unalaska, finding that the United States revenue cutter Wolcott was under orders to proceed to Sitka, I sought and secured permission from Captain Hooper to accompany her. Going on board the morning of the 20th of September, we got under way during the forenoon and proceeded to sea in company with the cutters Corwin and Grant and two English men-of-war. It was the disbanding of the Bering Sea fleet for the season. The passage through the Aleutian Islands was made by the Analga Pass. The day was pleasant and the sail along the south side of the Aleutian Islands with their wonderful scenery delightful. On the 21st a short call was made at Belkofsky to ascertain the condition of a small Aleutian settlement, where the people were said to be out of food. Learning that the settlement was safe, we were again under way for Sitka. The pleasant weather of the 20th and 21st was the calm before the approaching storm. While tornadoes were sweeping along the Atlantic coast, destroying much property in towns and cities, a similar storm raged along the Pacific, and, commencing with the 22d, for a week we were tossed and buffeted as the North Pacific in the late fall knows how to do. Much anxiety was felt for the safety of our vessel. Boxes of oil were adjusted so that the drippings could stay somewhat the severity of the waves, and no doubt contributed greatly to the safety of the vessel. But it is a long road that has no turn. So after the discomforts of the protracted storm, we entered on the 28th the land-locked island-studded harbor of Sitka with satisfaction and thankfulness.

The interval between September 29 and the departure of the mail Steamer City of Topeka on October 10 was given to schools and educational work at Sitka. Taking in charge two young girls-Misses Lotta Hilton and Elizabeth Walkerwho were sent to the Indian school at Carlisle, Pa., we sailed from Sitka on the 10 th of October. The following day a call was made at Juneau. On the 12th we reached Fort Wrangel and on the 13th visited Metlakahtla, reaching Seattle on the 16th, leaving the same night by train over the Northern Pacific Railroad. My trip was concluded by reaching Washington, October 22, having traveled 18,465 miles.

As in the past, so again this season I have been greatly indebted for facilities of transportation furnished me by the Revenue-Cutter Service of the Treasury Department. The permission accorded by the honorable Secretary of the Treasury and Capt. C. F. Shoemaker, Chief of the Revenue-Cutter Service, was cordially seconded by Capt. C. L. Hooper, commanding the Bering Sea fleet; Capt. Francis Tuttle, commanding the Bear, and Capt. Martin L. Phillips, commanding the cutter Wolcott, together with the officers of the Bear and the Wolcott.

I have the honor to be, sir, very respectfully, your obedient servant,
Sheldon Jackson.

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## CHAPTER XXXV.

## NECROLOGY, 1895.

Austin, Clarence Willis, in Hartford, Conn., February 18; born in Suffield, Conn., December 23, 1870; graduated at Yale in 1892; was a teacher of Latin in the Connecticut Literary Institute at Suffield.
Avery, John Humphrey, in Cleveland, Ohio, May 25; born in Boston July 22 , 1807; fitted for college at Phillips Andover, attended Yale and.Amherst, and graduated at Union College in 1834. He taught a select school in New Holland, Pa., and in Ephrata, Pa., and lectured upon the "Laws of life" in various schools and colleges.
Batley, Judge Joseph Mead, in Freeport, Ill., December 15; born in Middlebury, Vt., June 22, 1833; graduated at the University of Rochester, 1854. He was a justice of the supreme court of Illinois, a trustee of the University of Chicago, and for a number of years dean of the Chicago College of Law.
Battele, Robbins, philanthropist, Norfolk, Conn., January 26; born in Norfolk April 9, 1819; graduated at Yale in 1839. He and his family gave to Yale $\$ 300,000$. He also gave $\$ 10,000$ to other mstitutions, among them Marietta College.
Battey, Dr. Robert, in Rome, Ga., November 8; born in Augusta, Ga., November 26, 1826; graduated at the University of Pennsylvania in 1856 and at the Jefferson Medical College in 185\%. He spent his professional life in Rome, was professor of obstetrics in Atlanta Medical College, 1873-1875.
Baxter, Mrs. Mary Elizabeth Roberts, philanthropist, Rutland, Vt., November 9; born in Manchester, Vt., June, 1829. Gave $\$ 100,000$ for library in Rutland; gave also to other educational and religious objects.
Beach, Nathaniel, at Norwichtown, Conn., November 3; born in Wendham, N. J., October 5, 1809; graduated at Williams College in 1832 and at Andover Theological Seminary in 1836. He taught in Pittsfield, Mass., and while pastor of the church in Millburg, Mass., had principal charge of the schools.
Beecher, Edward, D. D., in Brooklyn, N. Y., July 28; born in East Hampton, Long Island, August 27, 1803; graduated at Yale in 1822; taught languages in the Grammar School, Hartford, Conn., 1822-1824; tutor in Yale, 1825-26; studied at Andover Theological Seminary, and was ordained pastor of the Park Street Church, Boston, Mass., December 27, 1826; was president of Illinois College, 1830-1844. He was the author of numerous books.
Bennett, Rev. Henry Stanley, at Nashville, Tenn., August 5; born in Brownsville, Pa., in 1838; graduated from Oberlin College in 1860, and from Oberlin Theological Seminary in 1863; was pastor in W akeman, Ohio; in 1867 became pastor of the church connected with Fisk University, and reacher of German and theology in the university; was especially helpful in promoting the publicschool work of the State.
Bills, D. Howard, at Quincy Point, Mass., September 4; born in Hope, Me., in 1817; taught school early and was active in school supervision.
Blake, Prof. Eli Whitney, A. M., at Hampton, Conn., October 1; born in New Haven, Conn., April 20, 1836; graduated at Yale in 1857; spent a year at the Sheffield Scientific School and several years at the universities of Heidelberg, Marburg, and Berlin, studying chemistry and physics; was professor of chemistry and physics at the University of Vermontand State Agricultural College; professor of physics and the mechanic arts at Cornell, 1868-1870; during a portion of the same time was acting professor of physics at Columbia College, and from 1870 until June, 1895, filled the chair of physics at Brown.
Blodgett, Edward Phelps, at Roslindale, Mass., December 28; born in East Windsor, Conn., August 23, 1815; graduated at Amherst in 1838; taught one year at Hatfield Academy; attended Andover Theological Seminary; was superintendent of the Greenwich (Mass.) schools for thirty years.

Boise, James Robinson, in Chicago, Inl., February 9; born in Blanford, Mass., January 27, 1815; graduated at Brown in 1840, and at once was appointed tutor of ancient languages in his alma mater. In 1850 he went abroad to study. In 1862 he became professor of the Greek language and literature in the University of Michigan; in 1868 took the same chair in the University of Chicago, and in 1877 was appointed professor of New Testament interpretation in the Baptist Union Theological Seminary. On the establishment of the new University of Chicago he was made professor emeritus of New Testament Greek.
Boyesen, Prof. Hjalmar Hjorth, in New York City, October 4; born in Frederiksvaern, Norway, September, 23, 1848; graduated at the University of Christiana in 1868; came to the United States in 1869; occupied the chair of Latin and Greek in Urbana University, and while there began his first novel. He spent a year at Leipsic in the study of philology, and in 1874 was appointed assistant professor of the German language and literature in Cornell University, where he remained until 1880; he then became an instructor in German at Columbia College, and in 1882 professor of that language; in 1890 the chair of Germanic languages was established in order that he might fill it.
Broadus, Rev. Dr. John Albert, in Lotisville, Ky., March 16; born in Culpeper County, Va., January 24, 1827; graduated at the University of Virginia in 1850; was assistant professor of Latin and Greek there, 18.51-1853; pastor in Charlottesville, Va., for a number of years. He became professor of New Testament interpretation and homiletics in the Soutlern Baptist Theological Seminary in 1859, when first established in Greenville, S. C., and removed with it later to Lonisville. He remained with it until his death, being its president for a number of years. His general publications were highly esteemed.
Brooks, Arthur, D. D., brother of Rev. Phillips Brooks, at sea, July 10; born in Boston, June 11, 1845; graduated at Harvard in 1867; studied at Andover Theological Seminary, and graduated at the Protestant Eniscopal School in Philadelphia. Was rector at Williamsport, Pa., Chicago, In1, and New York City, and was president of board of trustees of Barnard College and an overseer of the Divinity School in Philadelphia.
Brown, Mrs. Charles Emerson, in East Orange, N. J., February 5; born in Andover, Mass., April, 1838. She was the daughter of Prof. Ralph Emerson, of Andover Theological Seminary, and wife of Rev. William B. Brown, D. D.; graduated at Abbott Female Seminary, and studied modern languages and music in Europe; on her return she taught languages at the seminary at Rockford, Ill., and organized a conservatory of music. She was prominent in all movements for the uplifting of woman.
Brusf, Wililam, D. D., in Englewood, Ill., April 29; born in New Fairfield, Conn., February 19, 1827; graduated at Yale in 1800; began to preach in 18.,1, and remained in and around Stockport, N. Y., until 18j8, when he removed to Iowa. He was called to the presidency of Upper Iowa University at Fayette, and remained in that position nine years. Afterdfifteen years of church work in Texas and Iowa he filled the presidency of Dakota University at Mitchell from its opening in 1885 until 1892 , during a portion of which time he was consul at Messina, Sicily. In 1892 he was induced to take the presidency of the University of Towa, at Sioux City, but was obliged by his lealth to give it up at the end of two years of hard work and also the task of financial agent of the University of Dakota, which he had undertaken to perform.
Calkins, Norman A., LL. D., in New York City, December 22; born in Gainesville, N. Y., September 9, 1822; was educated in the district and classical schools of that locality, and at the age of 18 began to teach. He became principal of the Central School of Gainesville, and in $1845-46$ was elected superintendent of schools; removed to New York City, edited The Student and Schoolmate, and engaged in conducting teachers' institutes. He was elected assistant superintendent of the public schools of New York City in 1862, and held the office by reelection until his death. For a long time he taught methods and principles of education in the Saturday Normal School. He was professor of the same in the normal school of the city of New York, and published a number of books on educational subjects. He was president of the National Educational Association, was, with John Eaton and Z. Richards. an incorporator of the association, and was an efficient chairman of the board of trustees until his death.
Chaydler, Dr. Thomas Henderson, Ll. B., D. M. D., in Bostou, August 2i; born in that city July 4, 1824; graduated from Harvard in 1845; taught in the Latin School, and had charge of the famous Dr. Tower's S'chool under Park

Street Church and taught there a number of years; was made adjunct professor of mechanical dentistry at Harvard in 1869, full professor in 1871, and dean of the dental faculty in 1874.
Clark, Rev. Dr. Nathaniel Green, in West Roxbury, Mass., in January; born in Calais, Vt., 1824; graduated at the University of Vermont, where he served as a tutor for several years, and studied theology at Andover and Auburn seminaries. He was professor of English literature and later of Latin at the University of Vermont, and still later of English literature and logic. He was a trustee of Wellesley and Mount Holyoke, and secretary of the American Board of Foreign Missions from 1865 until his death, and specially promoted education in foreign lands.
Cogswell, Parsons Brainard, Concord, N. H., October 28; born in Henniker, January 22, 1828; editor and for many years member of the school board of Concord and of the board of education, and trustee of the State Normal School.
Coit, Rev. Henry Augusta, D. D., LL. D., in Concord, N. H., February 5; born in Wilmington, Del.; was educated at St. Paul's School, Long Island, and took a partial course at the University of Pennsylvania. He entered the Prottestant Episcopal ministry, and engaged in missionary work in Clinton County, N. Y. His life work was the building up of St. Paul's School, at Concord, of which he became rector when it was established in 1856, and from an attendance of five or six he made it one of the most noted academies of the country. He was elected to the presidency of Trinity College and Hobart College, but declined both, remaining at St. Paul's until his death.
Coppee, Henry, LL. D., in Bethlehem, Pa., March 22; born in Savannah, Ga, October 13, 1821; studied one year at Yale; graduated at West Point in 1845,. and was assigned to the artillery. He served through the Mexican war, and from its close until 1855 was professor of geography, history, and ethios at West Point; from 1855 till 1866 was professor of English literature and history. in the University of Pennsylvania. He then organized and was president of Lehigh University until 1874, from which date until his death he was professor of English literature and history and of international and constitutional law in that institution. His writings are numerous. He was a Regent of the Smithsonian Institution, a Member of Congress, and United States commissioner on Government assay of coin in 1874 and 1877.
Cotton, Samuel Carleton, in Orlando, Fla., December 9; born in Sandown, N. H., August 16, 1830; graduated at Dartmouth in 1860; taught in Gloucester, Mass., and Georgetown, Mass.; was superintendent of schools, Cedar Fails, Iowa, principal of high school, Freeport, Ill., and superintendent of schools, Mount Carroll, Ill.
Craighead, Rev. James Geddes, D. D., in New York City, April 28; born in Carlisle, Pa., in 1833; graduated from Dickinson College and studied theology in Union Seminary; was an editor of the Evangelist for fourteen years and for a number of years dean of the theological faculty of Howard University.
Curtis, George Edward, in Washington, D. Ci, February 8; born in Derby, Conn., July 8, 1861; graduated at Yale in 1882; was connected with the United States'Signal Office and professor of mathematics in Washburn College, Karrsas, and did valuable work for the United States Geological Survey in connection with the subject of irrigation and for the Smithsonian Institution in editing meteorological tables.
Dana, Prof. James Dwight, LL. D., in New Haven, Conn., April 14; born in Utica, N. Y., February 12, 1818; graduated at Yale in 1883; was appointed instructor in mathematics to midshipmen in the United States Navy; in 1836 became assistant to Professor Silliman; was in 1838 the mineralogist and geolo ${ }^{*}$ gist to the United States exploring expedition which was sent to the Pacific Ocean under Lieatenant Wilkes. He occupied the Silliman professorship of geology and mineralogy in Yale from 1850 until his death, and was the author of several works on those subjects.
Davidson, Mrs. Eleanor, near Lyons, N. Y., February 8; born in Rochester; taught for some years in Mount Morris, N. Y.
Dawson, Col. Nathaniel Henry Rhodes, Lit. D., in Selma, Ala., February 1; born in Charleston, S. C., February 14, 1829; graduated from St. Joseph's College, Mobile, Ala., and was admitted to the bar in 1850. He was a delegate to the Charleston and Baltimore conventions, withdrawing from the former under instructions from his State convention. He entered the Confederate service as captain, and during the last two years of the war commanded a battalion. In 1863-64 was a member of the Alabama legislature. After the war he resumed the practice of law. In 1876 he became trustee of the State University, and so continued. Was member, and a portion of the time chair-
man, of the Democratic State executive committee 1876 to 1886 , and by many was urged as a candidate for governor. He was speaker of the Alabama house of representatives 1880-81, and General Eaton having resigned as United States Commissioner of Education in November, 1885, Mr. Dawson was appointed and qualified as Commissioner August 6, 1886, and continued in service until September 3, 1889. He retained the trained assistants of the Bureau, secured as his chief clerk Hon. J. W. Holcombe, an experienced educator, and left a distinct mark of his work by carrying forward the plans for the publication of college histories under the supervision of Dr. H. B. Adams. He was especially esteemed for his high sense of honor and for his gentlemanly bearing toward all.
Day, Prof. Edward Hartswick, in Algiers, January 4; born in Bath, England, in 1833. He was a brother of Justice Sir John Day, of England; was educated in the Roman Catholic College of Downside and the London School of Mines. He did geological work with Huxley, Owens, Hawkins, and Ethridge. Came to this country as assayer for a mining company in Montana, and on the failure of that enterprise became master assayer in the School of Mines of Columbia College. From 1872 until his death he was professor of natural sciences in the New York Normal College.
Dillingham, Miss Mabel W., in Calhoun, Ala.; born in New England and educated in Boston; taught in Hampton, Va., for a number of years, and with Miss Thorn, another Hampton teacher, bought a farm in Lowudes County, near Calhoun, Ala., and established a school on the plan of Hampton.
Dorsey, James Owen, in Washington, D. C., Febrraary 4; born in Baltimore, Md., October 31, 1848; attended the City College, of Baltimore; spent a year in teaching, and studied theology at the Seminary of Virginia, and became an authority on ethnology.
Douglas, Thomas, in New London, Conn., January 25; born in Waterford, Conn.; graduated at Yale in 1831, and studied at Yale Divinity School and at Andover Theological Seminary; taught in Brooklyn, N. Y., and Norwich and New London, Conn., having charge of the Union School in the last place from 1836 to 1844. Sailing to the Sandwich Islands for his health, he remained, and became assistant to Amos S. Cook in a school attended by the children of the royal family. He returned to the United States, and taught in San Francisco, and is said to have been the first American teacher there.
Douglass, Frederick, Washington, D. C., February 20; born a slave in 1817; educated himself as best he could, and became one of the most cultured and eloquent pleaders for the elevation of his race; in 1877 he was appointed United States marshal of the District of Columbia; in 1881 recorder of deeds for the District of Columbia; in 1889 minister resident and consul-general to Haiti and chargé d'affaires to Santo Domingo.
Duncan, Gen. Samuel Augustus, in Englewood, N. J., October 18; born in Plainfield, N. H., June 19, 1836; graduated at Dartmouth in 1858; was principal of the high school, Quincy, Mass.; tutor in Dartmouth College, school commissioner of Grafton County, and served through the war. He was successively special agent United States Treasury Department, chief examiner in Patent Office, and Assistant Commissioner of Patents.
Durell, Rev. George W., in Somerville, Mass., August 26; born in Kennebunkport, Me., in 1818; graduated from Bowdoin, and was at once made principal of Limerick Academy. After teaching four years, he attended the Virginia Theological Seminary. He served on the school boards of Calais, Me., eleven years while occupying a pastorate there, and filled a like position for thirteen years when settled in Somerville.
Eaton, Daniel Cady, LL. D., in New Haven, Conn., June 29; born in Fort Gratiot, Mich., September 12, 1834; graduated from Yale in 1857; studied botany at Harvard, and in 1864 accepted the chair of botany at Yale which was made for him and remained there until his death. His most noted works were The Flora of the Southern States and The Fauna of North America. He left an unpublished work on Eaton Genealogy.
Eaton, Darwin G., A. M., Ph. D., in New York City, March 17; born in Chautauqua County, N. Y., in 1822; began teaching at 18 and passed through the State Normal School at Albany, N. Y. He immediately became instructor of physiology, and in 1851 was called to the Brooklyn Female Academy, afterwards the Packer Collegiate Institute, where he had the general charge of instruction in natural science for thirty-two years. During this time he visited Europe in the interest of his scientific and educational studies; was acting president of the institute one year, and was offered the presidency at President Crittenden's death. He was one of the first members of the council of the

Brooklyn Institute of Arts and Sciences and a member of the American Association for the Advancement of Science.
Eaton, Leonhard H., teacher in Pittsburg, Pa., February 10; born in Groton, N. H., in 1819; president and superintendent of the Western Pennsylvania Humane Society. He was widely known and for thirty years was prominent as an educator.
Ellis, Harry, in Cambridge, Mass., April 1; born there in 1859. He received a common-school education, and devoted himself to manual training, being superintendent of the Rindge School in Cambridge from its establishment.
Emery, Edwin, in New Bedford, Mass., in September; born in Sanford Me., in 1836. After graduating from Bowdoin College, he served as principal of the high schools in Gardiner and Belfast, Me., Great Falls, N.H., and Southbridge and Northbridge, Mass. He was also instructor of cadets on board the United States school-ships J. C. Dobbin and S. P. Chase.
Foster, Prof. Luther C., in Ithaca, N. Y., February 1, aged about 72. He was for many years superintendent of the public schools of Elmira and of the graded schools of Ithaca, which he raised to the rank of third in the State.
Fuller, Rev. Samuel, D. D., in Middletown, Conn., March 8; born in Rensselaerville, N. Y., in 1802; graduated from Union College in 1822; was principal of the Hudson Academy in 1823, and then tutor in the family of Mrs. Carter, of Halifax, Va. He graduated from the General Theological Seminary, New York City, in 1827; was appointed lecturer on Christian life at Philadelphia in 1853, and was professor of Latin and interpretation of the Holy Scriptures at Berkeley Divinity School, Middletown, Conn., from 1859 until 1883, when he became professor emeritus. In 1831 he was editor of The Churchman, and in 1844 acting president of Kenyon College.
Fulton, Rev. Robert, S. J., in San Jose, Cal., September 5; born in Alexandria, Va., June 28, 1826; in his youth he was a page in the United States Senate. Intending to prepare for a military career at West Point, he entered Georgetown College and joined the Jesuit society. He taught in Frederick, Md., and at Georgetown, D. C.; was connected with Boston College from its beginning, and was for many years its president.
Gardner, Rev. George Warren, D. D., in New London, N. H., April 27; born in Pomfret, Vt., October 8, 1838; fitted at Thetford (Vt.) Academy; graduated at Dartmouth in 1852; principal of Black River Academy, Ludlow, Vt., 1852-53, and held the same position at Colby Academy, New London, N. H., 1853-1861. He was licensed to preach in 1853; traveled abroad; pastor in Charlestown, Mass., 1861-1873; home secretary of American Baptist Missionary Union; occupied pastorates at Cleveland, Ohio, and Marblehead, Fitchburg, and Waltham, Mass.; was president of Central University of Iowa at Pella, 1881-1885; instructor in Biblical literature and Christian evidences in Colby Academy from 1890 until his decease.
Gayarrê, Judge Charles Étienne Arthur, in New Orleans, La., February 11; born in that city January 9,1805 ; graduated at College of New Orleans; studied law in Philadelphia; eminent as a jurist, statesman, and historian.
Goodhue, Jonathan Elbridge, in Newark, N. Y., March 17; born in Deerfield, N. H., April 15, 1824; was a member of the class of 1852 in Yale College; taught school several years; studied at the Berkeley Divinity School, Middletown, Conn.; occupied pastorates in Connecticut, Illinois, Iowa, and New York; taught three years in Griswold College, Davenport, Iowa.
Graves, Rev. Samuel, in Grand Rapids, Mich., January 20 ; born in Acworth, N. H., about 1820; graduated from Colgate University; tutor there four years; pastor at Ann Arbor, Mich., three years; professor of Greek at Kalamazoo College nine years; pastor at Norwich, Conn., ten years and at Grand Rapids, Mich., fifteen years. For the last nine years of his life he was the efficient president of the Baptist Seminary at Atlanta, Ga.
Ham, Alonzo G., in Pembroke, Mass. He was twenty-three years principal of the Lincoln School and six years principal of the Hart School, Boston.
Harrington, Col. Samuel, in Boston, Mass., October in; born in Paxton, Mass., in 1839; graduated at Amherst; taught the grammar schnols of New Bedford and Gloucester, Mass., and Melrose (Mass.) High School; was instructor in the English High School of Boston, and was from 1876 until his death principal of the Eliot Grammar School, Boston. He had a very honorable military record.
Harris, Rev. W. A., D. D. in Roanoke, Va., September 4, aged 68. He was a successful educator for forty years; was president of Wesleyan Female Institute at Staunton, Va., for twenty-seven years and president of the Virginia College for Young Ladies at Roanoke, Va., at the time of his death.
Hasbrocck, Washington, in Newburg, N. Y., February 24; born in New Paltz,

Ulster County, N. Y.; was vice-principal of Kingston (N. Y.) Academy for three years; established classical schools at Saugerties and Jersey City, N. J., where he remained twenty years. Many of his pupils became prominent. He was principal of the State Normal School at Trenton, N. J., for thirteen rears.
Haywood, Bishop Atricus G., LL. D., in Oxford, Ga., January 19; -born in Georgia in November, 1839; became a Methodist minister in 1859. In 1876 he assumed the presidency of Einory College, Macon, Ga., which he held eight years. From 1883 he was general agent of the Slater fund for the education of the freedmen of the South. He was a leading bishop of the Southern Methodist Church.
Henry, Rev. Thomas, in New Orleans, La., December 6; born in County Derry, Ireland, in 1856; was educated at Dundalk; entered as a novitiate at Lyons, France; taught four years at Laseyne-sur-Mer, and read theology at Lyons. Came to this country in 1878; was profect of classes at Jefferson College seven years; became president of that institution in 1887, and was superior of all Hallow's College, Salt Lake City, for four years.
Herricis, Henry, in North Woodstock, Conn., March 11; born in Woodbridge, Conñ., March 5, 1803; fitted for college at Phillips (Andover) Academy, Massachusetts; graduated at Yale College in 1822; taught in West Springtield, Mass., 1822-23; Berkeley scholar and teacher in Hopkins Grammar School, New Haven, 1823-1825; teacher of penmanship in Phillips (Andover) Academy 1826-27. He studied theology at Andover Theological Seminary, and graduated at Yale Divinity School in 1828; principal of female academies in Knoxville, Tenn., and Somerville and Moulton, Ala., 1835-1842; home missionary until 1867.
Hill, Alfred James, in St. Paul, Minn., June 15; born in London, England, in 1833; archæologist and geographer.
Hine, Elmore Charles, M. D., Atlantic City, N.J., March 8; born in Middlebury, Conn., September 16, 1836; graduated from Connecticut State Normal School and taught in several places; then entered and graduated from Yale Medical College in 1861; served through the war as a surgeon. Since 1880 he had occupied the chair of natural history in Girard College.
Hitchcock, Prof. Hiram Augustus, in Hanover, N. H., January 17; born in Boston, Mass., May 13, 1857; graduated from Dartmouth in 1879 and from the Thayer School of Civil Engineering in 1881. He became an instructor in ciril engineering in the Thayer School in 1883, and from 1887 until decease was associate professor in the same. He served írequently on boards of engineers and as consulting engineer of many large pieces of engineering.
Holland, Rev. GEORGE W., in Newberry, S. C., September 30; born in Churchville, Va., July 16, 1838; graduated from Roanoke College, Salem, Va., in 1857; was tutor in the college for a year, and graduated at Theological Seminary at Gettyshurg, Pa. Served during the war in the Confederate Army; became principal of the academical department of Roanoke College; was pastor of Rockingham parish for six years; became professor of ancient languages in Newberry College, and in 1877 president of that institution.
Hopkins, Mrs. Loutse Parsons, in Newburyport, Mass., May 26; born in same place in 1834; received her education from Putnam Free School, Newburyport, and the State Normal School at Framingham, Mass. She tanght in Albany; N. Y., Keene, N. H., and New Bedford, Mass.; later she was professor of English literature in the Swain Free School. In 1887 she became one of the Boston school supervisors and served on a commission to investigate and report upon manual training methods and theories. She was a large contributor of articles on educational subjects, especially child culture.
Houcihton, Henry Oscar, in North Andover, Mass., August 26; born in Sutton, Vt., April 30, 1823; was educated in the common school, Bradford (Vt.) Academy, and University of Vermont. He was a large publisher of educational works and did much toward raising the standard in book making. He belonged to the firm of Houghton, Mifflin \& Co., which includes the Riverside Press.
Irwin, Rebecca, in Albany, N. Y., January 5 ; was a graduate of the Female Acadeny and of the Normal College. She was assistant in natural sciences in the Albany High School from its opening in 1868, and a writer for masazines.
Kexdif'k, Ashinel Clark, in Rochester, N. Y., October 21; born in Poultney, Vt., December 7, 1•03: graduated from Hamilton College in 1831: becanue at once tutor in the Literary and Theological Institute at Hamilton, N. Y.. n Colgate University; two years later he became professor of Latin and (ireek, and then taught (ireek exclusively until $1 \times 50$. From the founding of Rochester University, in that year, until his retirement as professor emeritus in $1 \mathrm{~s} \leq 8$,
he occupied the chair of Greek in that institution. He was añ extensive writer, a Hebrew scholar, and well versed in antiquities.
Kirkwood Prof. Daniel, in Riverside, Cal., June 11; born in Bladensburg, Md. 2 September 27 , 1814; spent four years at the academy at York, Pa.; was instructor in mathematics there for five years and was appointed principal of the high school at Lancaster, Pa., in 1843. In 1851 he became professor of mathematics in Delaware College, and president of the same in 1854; two years afterwards he accepted the chair of mathematics in the University of Indiana and remained there until he retired in 1886.
Kitchel, Harvey Denison, D. D., in Danville, N. Y., September 11; born in Whitehall, N. Y., February 3, 1812; graduated from Middlebury College in 1835 and Yale Divinity School in 1838. He occupied pastorates at Thomaston, Conn., Detroit, Mich., and Chicago, Ill., and was president of Middlebury College from 1866 until 1873.
Ladd, William Henry, in Boston, Mass., in September; born in Augusta, Me., in 1824; was educated in the Bridgewater Normal School; began teaching at 17; was instructor of English in aGerman school in Baltimore, Md., and occupied a similar position in one of the grammar schools of Charlestown, Mass., and also in one of the Cambridgg grammar sehools. In 1855 he became a teacher of rhetoric and elocution in Chauncey Hall, sole principal in. 1879, and senior principal and a proprietor in 1884. :
Langstroth, Lorian L., in Dayton, Ohio, October 6; born in Philadelphia, Pa., December 25, 1810; graduated at Yale in 1830, and was a tutor there in 1834-35; entered the Congregational ministry and became principal of"a young ladies' seminary in Philadelphia in 1848.
Lathrop, Nary A., in Los Angeles, Cai.; born in Somerville, N. J., in 1855; graduated at the New York Conservatory of Music and the Oswege (N. Y.), Normal School; taught in the New Paltz Normal School and in Oswego Normal School. She studied sloyd abroad and on her return was engaged in sloyd and drawing in the Los Angeles Normal School.
Leland, Luther E., in Newton Lower Falle, Mass., January 12, aged 69; came to Newton as a teacher, and at the organization of the Hamilton School at Newton Lower Falls was made principal and filled that position more than twenty years.
Locke, Rev. John W., D.D., in Kansas City, Kans., December 29; born in Paris, Ky., February 12, 1822; graduated from Ohio Wesleyan in 1842; became a minister in the Methodist Episcopal Ohurch and served many pastorates; was president of Brookville College four years, professor of mathematics in De Pauw University twelve years, and president of McKendree College, during which time the highest enrollment in the history of the institution was reached.-
Loomis, Dr. Alfred Liebbens, in New York City, January 23; born in Bennington, Vt., June 10; 1831; graduated at Union College and the College of Physicians and Surgeons; served prominently on the staffs of many New York hospitals, and was connected with University of the City of New York as adjunct professor of the theory and practice of medicine and after 1866 as full professor. He was prominent in many medical societies, wrote extensively on medical subjects, and was active in his efforts for the medical department of the university.
Mctauchlin, Daniel Decius Tompinins, in Litchfield, Conn., May 26; born in New York City, October 18, 1812;-graduated from Yale in 1834; had charge of the classical department of St. Luke's School, New York, for two years, and maintained a classical school in the same city for seven years. He graduated from Union Theological Seminary and spent the remainder of his life in evangelistic work.
Melvin, Sarak Hale, in South Hadley, Mass., June 4; graduated at Mount Holyoke in 1862, and studied at the Massachusetts Institute of Technology; was a teacher in Mount Holyoke for fifteen years, and was connected with the English department for the last ten years.
Merriam, Prof. Augustus Chapman, in Athens, Greece, January 19; born in Locust Grove, N. Y., May 30, 1843; graduated at Columbia College in 1866; was a tutor in Latin and Greek there, 1868-1880; adjunct professor of Greek, 1880-1889, and professor of Greek archæology and epigraphy from 1889 until his death. He was also senior active professor in the school of philosophy and one of the senior instructors in the school of arts of the college. He was at one time president of the New York Archæological Institute, president of the American Philological Society, and a director of the American School at Athens. He supevintended many excavations, and wrote numerous papers on inscriptions, etc.

Miller, H. Thane, in Cincinnati, Ohio, December 7; he established and was at the head of the Mount Auburn Institute for thirty years; was blind for a number of years; a notable singer and leader in Young Men's Christian Association work.
Miner, Rev. Alonzo Ames, A. M., LL. D., in Boston, Mass., June 14; born in Lempster, N. H., August 17, 1814; studied at Lebanon, Franklin, and Hopkinton, N. H., and Cavendish, Vt.; began teaching at 16, and served four years as principal of the Scientific and Military Academy at Unity, N. H. He devoted himself for a number of years to the ministry of the Universalist Church, and filled pastorates at Lowell and Boston. He was active in the foundation of Tuft's College, and was its president from 1862 to 1874; was an overseer of Harvard, member of the Massachusetts State board of education, chairman of the board of visitors of the State Normal Art School, president of the trustees of Bromfield School at Harvard, and of the board of trustees of Dean Academy, at Franklin.
Minor; John Barbee, in Charlottesville, Va., July 29; born in Louisa County, Va., June 2, 1813; was educated at Kenyon College and University of Virginia; studied law and went to Charlottesville in 1840 to practice. In 1845 he was elected professor of law at the University of Virginia, and was in charge of the law school for a number of years; later he filled the chair of common and statute law and conducted a summer law school from 1870 until his death. He was a special friend of public schools.
Monks, James Richard, in Elmira, N. Y., February 25; born in Paterson, N. J.; graduated at Union College. He was a teacher in Elmira from 1870, being first assistant and principal of the Free Academy.
Moore, Mary E., in Chicago, Ill., November 11; was a teacher in the Collegiate Institute in Salt Lake City, Utah, for sixteen years.
Morey, Prof. J. H., in Concord, N. H., March 12, aged 59; born in Franklin, N. $H_{\text {. ; }}$; was one of the officers of the New Hampshire Musical Society, and also one of the best-known music teachers in the State.
Morris, John Gottlieb, in Lutherville, Md., October 10; born in York, Pa., November 14, 1803; graduated from Dickinson College in 1823, and at Princeton Theological Seminary in 1826; was pastor of the First English Lutheran Church, Baltimore, for thirty-four years; trustee of Peabody Institute; one of the principal founders of the College for Women in Lutherville, Md.; a lecturer on natural history in Pennsylvania College, Gettysburg, Pa., from 1834, and for a long period professor of natural history in the University of Maryland. He was prominent in church polity and an extensive writer on ecclesiastical and scientific subjects.
Moulder, Andrew J., in San Francisco, Cal., October 14. He was superintendent of the city schools, State superintendent of public instruction, and was prominent in educational conventions.
Nason, Henry Bradford, Ph. D., in Troy, N. Y., January 18; born in Foxboro, Mass., June 22, 1831; graduated at Amherst in 1855 and studied chemistry at the University of Göttingen; was appointed professor of natural history at Rensselaer Polytechnic Institute, Troy, N. Y., in 1858, and later professor of chemistry and natural sciences in Beloit College, Wisconsin. In 1866 he was called to the chair of chemistry and natural sciences at the Rensselaer Polytechnic Institute, which he occupied until his death. He wrote numerous text-books on chemistry.
Nooney, James, in Chester, Mass., April 12; born in the same town August 12, 1810; graduated at Yale in 1838; was professor of mathematics in the United States Navy two years, tutor at Yale three, professor of inathematics and natural philosophy in Western Reserve College four years. He was engaged on the survey of the boundary between Mexico and the United States and astronomer of the commission on the boundary line between the United States and Great Britain in 1859.
Northend, Charles A., in New Britain, Conn., August 8; born in Newbury, Mass., April 2, 1814; was educated at Amherst College; became an assistant teacher in Duminers Academy; taught in South Danvers, and was master of Epps School, in Salen, for twelve years; was superintendent of the public schools of Danvers for three years and of the New Britain. Conn.. public schools for eleven years. He traveled over New England, New York. and Pennsylvania in the interest of education, and held teachers meetings and lectured for several years in Connecticut. For fifty years he was a member, and once president. of the American Institute of Instruction, held the same office for a number of years in the Essex County Teachers' Association, and wrote quite extensively on educational subjects.

Norton, Franklin Burroughs, in Fernando, Cal., April 13; born in Ware, Mass., March 5, 1833; graduated at Amherst, 1856; taught in Missouri and Tennessee, 1857-1861; graduated from Chicago Theological Seminary, 1864, and spent the largest part of his life in the ministry.
Oliver, Prof. James Edward, in Ithaca, N. Y., March 27; born in Portland, Me., July 27,1829 ; graduated at Harvard in 1849 and was in the office of the American Ephemeris and Nautical Almanac until 1871, when he was called to Cornell as assistant professor of mathematics. He succeeded to the chair in 1873, and remained at the head of the department until his death.
Packard, Dr. Liberty D., in Boston, Mass., early in January; born in Brockton, Mass., September 13, 1831; was educated in the public schools and graduated from the New York Homeopathic College in 1862. He practiced his profession thirty-two years, and was an active and efficient member of the Boston school committee for a number of years.
Paine, Timothy Otis, in Boston, Mass., December 6; born in Winslow, Me., October 13, 1824; graduated at Waterville College, Maine, in 1847; became a Swedenborgian minister, and was for many years after 1866 professor of Hebrew in the theological school of the New Jerusalem Church in Boston. He became an acknowledged authority on Egyptology.
Painter, Charles Cornelius Coffin, in Great Barrington, Mass., January 13; born March 21, 1833, in Drapers Valley, Va.; graduated from Williams College in 1858 and from the Theological Seminary at Hartford, Conn. He was a professor of theology in Fisk University at Nashville, Tenn., for a number of years, and at the time of his death was a member of the Indian Commission, having been active as an agent of the Indian Rights Association since 1880.
Park, Calvin Emmons, in West Boxford, Mass., March 4; born in Providence, R. I., December 30, 1811 ; studied at Brown University one year, and graduated at Amherst College in 1881; was principal of the Classical School of W eymouth and Braintree a year; graduated from Andover Theological Seminary in 1835. He occupied pastorates in Maine and Massachusetts, was a tutor in Amherst, instructor of rhetoric in Colby University, and carried on a private school for boys in West Boxford, Mass., for many years.
Payne, John Kerr, in Knoxville, Tenn., June 16; born in Pine Grove, Gallia County, Ohio, September 26, 1839; graduated at Yale in 1865, having spent three years at Marietta College, Ohio. At graduation he became professor of mathematics in East Tennessee University, at Knoxville, and remained there twelve years.
Pearl, Isaac Emerson, in Farmington, N. H.; born in same place September 26, 1857; graduated at Dartmouth in 1882; taught mathematics in Williston Seminary, Easthampton, Mass., in Mrs. Shaw's private school in Boston, and also in Boston Evening High School. Was admitted to the bar and practiced his profession.
Perkins, Prof. William Rufus, in Erie, Pa., January 28; boru in that city September 1, 1847; graduated at Western Reserve College in 1868; was tutor there three years; admitted to the bar in 1878; assistant professor of Latin and Greek in Cornell University and later of history; traveled abroad; professor of history in Iowa State University, and was a delegate to the eighth centenary of the University of Bologna, Italy. He seemed just entering upon a literary career at his death, having published several poems of unusual merit.
Perry, Rufus Lewis, in Brooklyn, N. Y., June 18; born in Tennessee about 1833; son of a slave; graduated at Kalamazoo in 1861; became a baptist minister'; was superintendent of a freedmen's school for a number of years. He was considered one of the best scholars the negro race has produced.
Pitcher, Gen. Thomas Gamble, in Fort Bayard, N. Mex., October 21; born in Rockport, Ind.; graduated at West Point; had a lorilliant military career, and was superintendent of the United States Military Acarleny 1866-1871.
Pollens. Prof. Louis, in Hanover, N. H., September 28; born in the Canton of Vaud, Switzerland, March 10, 1838; was educated in the local schools and cantonal college; caine to Anerica in 1851, and tanght French in the mission school at Grande Ligne, Quebec, at Fort Edward aud Keeseville, N. Y., and at the University of Vermont 1868-1874; had been professor of inodern language in Dartmouth since $18 \% 7$.
Poole, Reuben Brooks, in New York City, April 6; born in Rockport, Mass., in 1834; graduated at Brown University in 18:5~. He tanght in the Rockport High School one year, and in 1860-1864 was a teacher in the House of Refuge in Philadelphia. From 1864 he held the position of librarian of the Young Men's Christian Association of New York City.
Porcher, Francis Peyre, M. D., LL. D.; in Charleston, S. C., November 19; born in Berkeley, S. C., December 14, 1825; graduated at the South Carolina

College in 1844, and at the State Medical College in 1847. He held the chair of materia medica and therapeutics at the latter institution for many years, and was a prolific writer on medical and botanical subjects.
Posse, Baron Nils, in Boston, Mass., December 18; born in Stockholm, Sweden; was educated for the army, and attained a commanding rank; graduated from the Royal Central Institute, and received the degree of master of gymnastics in 1885. He introduced Swedish gymnastics in Boston, and continued teaching them until his death. In May, previous to his death, he was knighted by the King of Sweden.
Powell, Dr. Thomas S., in Atlanta, Ga., December 30; born in Virginia in 1825. He organized the Southern Medical College, and was president until his death.
Raymond, Rev. Charles Atwater, in West View, Va., March 5; born in New Haven, Conn., in 1822. He filled several pastorates North, and was principal of a female seminary in Newburg, N. Y.; accepted a call to New Orleans, and was subsequently principal of the Fuller Institute and of Edgefield College, S. C. During the war he went North, and from 1863-1871 was superintendent of public instruction for the eastern district of Virginia.
Rhoads, James F., M. D., LL. D., in Bryn Mawr, Pa.. January 2; born in January, 1822; was early a teacher, then studied and practiced medicine, and in 1883 returned to the work of education, accepting the presidency of Bryn Mawr College, where he remained until his health failed him.
Ridgway, Henry Bascom, in Evanston, Ill., March 30; born in Talbot County, Md., September 7,1830; graduated from Dickinson College in 1849, and became a circuit rider of the Baltimore conference of the Methodist Church. He occupied pastorates in a number of the leading cities; had been professor of history and theology in Garrett Biblical Institute since 1884 , and president and professor of practical theology in the same. He made a tour around the world, and was the author of several books.
Rogers, Elliot Folger, A. M., Ph. D., in Cambridge, Mass., October 3. He graduated at Harvard in 1890, held the Parker traveling fellowship, and was State instructor in chemistry in that institution.
Rounds, Mrs. Libbey N., in South Onondaga, N. Y., February 14; was a graduate of the Cortland State Normal School, and had taught at Groton, Flushing, and Geddes. At the time of her death she was principal of the Indian schools on the Onondaga Reservation.
Ryder, Prof. John Adams, LL. D., March 26; born in Lyndon, Pa., 1852; professor of embryology in the University of Pennsylvania; published many pamphlets bearing on his original researches.
Sanborn, Daniel Webster, in Richmond, Ind., August 19, 1890; born in East Kingston, N. H., June 7, 1836; graduated at Dartmouth in 1860; was principal of high school, Milford, N. H.; associate principal of Chapman Hall, privato school, Boston; principal of Academy in Woburn, Mass.; four years viceprincipal of Greenpoint Academy, Brooklyn, N. Y., 1874-1877; principal of Mount Washington Collegiate Institute, New York; taught in National School of Elocution and Oratory, and in Shortlidge's Academy, Philadelphia.
Schauffler, Mrs. Mary Reynolds, in New Rochelle, N. Y.; born in Longmeadow, Mass., April 13, 1802; was a teacher in a private school in New Haven, Conn.; went to Turkey as a missionary and established a school for girls in Constantinople; married Rev. William G. Schauffler, and remained in the missionary field forty years.
Scudder, Hexry Martya, in Winchester, Mass., June 4; born in Panditeripo, Ceylon, being the son of the missionary, Rev. John Scudder, M. D.; graduated at the University of the City of New York in 1840 and at Union Theological Seminary in 1843 . He returned to India, and was active in organizing schools and churches for twenty years, when failing health compelled him to retire.
Seelye, Julius Hiwley, D. D., LL. D., Amherst, Mass., May 12; born in Bethel, Conn., September 4, 1824: graduated at Amherst in 1847; studied at Amberst Theological Seminary, and Halle, Germany, and became pastor in Schenectady, N. Y., until called to le professor of mental and moral science at Amherst in 18テ8; was Member of Consress from 1874-1876; becaine president of Amherst in 1877, and so continued until 1890, when he resigned on account of failing health. In Congress he specially promoted the improvement of Indian affairs. He carried Amherst through a critical period, and established among the students a system of self-government. He was noted both as teacher of philosophy and as preacher. He visited India and delivered a noted series of lectures. He was a lrother of President L. Clark Seelye, of Smith College.
Sewali, Theo. L., in Indianapolis, Ind., December 23; born September 20, 18.33, in Massillon, Ohio, graduated at Harvard in 1878; conducted preparatory
school for boys in Indianapolis and after his marriage started a classical school for girls and continued both schools for a number of years.
Shedd, Rev. John Haskell, D. D., in Ourmiah, Persia, April 12; born in Mount Gilead, Ohio, July 9, 1833; graduated at Marietta College in 1856; studied at Lane Theological Seminary and graduatéd at Andover Theological Seminary in 1859; was connected with the Nestorian Mission in Persia until 1870; professor in Biddle University, North Carolina, 1872-1878. He returned to Persia and was president of Ooroomeeyah College and Theological Seminary.
Shepard,- William Arthur, in Ashland, Va., June 3; born in Dorchester, Mass., June 26, 1831; graduated at Yale Sheffield Scientific School in 1852; upon graduation he became instructor of chemistry in Randolph-Macon College, Boydton, Va., and later professor of ancient languages. He served through the war, and taught in Petersburg from the close of the war until called to the chair of natural science in Randolph-Macon College, which had moved to Ashland, Va. He continued his connection with the college until his death, when he was senior member of the faculty and professor of chemistry.
Smith, James B., in Chicago, III., June 13; born June 21, 1825; graduated at Williams College; was principal of the famous Barton Academy, Mobile, Ala.; principal of the Third Ward School, and instructor in the Illinois Female College, at Jacksonville, III.
Smith, Samuel Francis, D. D., in Boston, Mass., November 16; born in Boston, October 21, 1808; graduated at Harvard in 1829, and at Andover Theological Seminary. He spent most of his life in religious and literary work, and was professor of modern languages in Waterville College, now Colby University, 1834-1841. Among his literary efforts are the hymins "America" and "The Morning Light is Breaking."
Spalding, EDW ARD, LLL. D., at Lake Parmacheene, June 22; born in Amherst, N. H., September 15, 1813; graduated at Dartmouth in 1833, and at Harvard in medicine in 1837. He held many offices of prominence and of public trust; was a member of the city school board of Nashua for many years, and trustee of Dartmouth, 1866-1891.
Speir, Dr. Samuel Fleet, in Brooklyn, N. Y., December 19; born in that city April 9, 1838; graduated in medicine at the University of the City of New York, 1860; studied abroad, and brought back the use of plaster of paris in the place of splints. He served through the war and after its close was demonstrator of anatomy in the Long Island College Hospital.
Sprague, Ada M., in Macon, Ga., November 23; born in Keene, Ohio, November 15, 1863; attended Wooston College, Texas, and was an assistant in the normal department of the Ballard School, Macon, Ga., at the time of her death.
Sprague, Eben Carleton, in Buffalo, N. Y., February 14; born in Bath, N. H., November 26, 1822; studied at Phillips Exeter and graduated at Harvard in 1843; practiced law in Buffalo, and was chancellor of the University of Buffalo for several years.
Starr, Oliver Winthrop, in Red Bank, N.J., January 18; a graduate of Hobart College and a teacher of private schools in Yonkers, Port Chester, Hastings, and Red Bank.
Strong, Judge William, at Lake Minnewaska, N. Y.. August 19; born in Somers, Conn., May 6, 1808; graduated at Yale in 1824. He had a Iong and prominent career at the bar and was active in religious movements. For several years he lectured before the Columbian Law School, Washington, D. C., and he also delivered a course of lectures at Union Theological Seminary.
Tatterson, Harry Jordan, at Kennebunkport, Me., July 22; born in Saco, Me., November 12, 1853; graduated from Dartmouth, 1874; taught in a boys' preparatory school at Newburyport, Mass., read law, and was principal of a grammar school at Biddeford, Me., from 1885 until 1895.
Taylor, Safford S., in Schuyler Falls, N. Y., January 23; born in the town of Ausable, N. Y., in 1840; taught winter school near his home until the war, when he enlisted as a private. He served two terms as school commissioner in Clinton County, was president of the County Teachers' Association and Sunday School Association.
Thomas, Edwin Alonzo, in Toledo, Ohio, March 29; born in Claremont, N. H., June 4, 1882; graduated at Dartmouth in 1855; was principal of Toledo High School, 1855-56; taught in Jackson, Miss., 1856-1859; was admitted to the bar; taught at Raymond, Miss., 1859-1861. He spent the remainder of his life in business.
Van der Weyde, Peter H., in New York City, March 18; born in Nymegen, Holland, in 1813; graduated at the Royal Academy in Delft and became professor of mathematics and natural philosophy at the Government School of Design. He came to this country in 1849, and graduated at the New York

University Medical College in 18556; after three years' practice became professor of physics, chemistry, and higher mathematics at Cooper Institute, and also professor of chemistry in the New York Medical College. In 1864 he accepted the chair of industrial science in Girard College, Philadelphia, and after a few years returned to New York as editor of The Manufacturer and Builder. He was an inventor, painter, musician, and composer.
Van Dyck, Cornelius, M. D., D. D., in Beyreut, Syria, November 16; born in Kinderhook, N. Y., August 13, 1818; graduated from the Jefferson Medical College in 1837; went to Syria as a missionary, and was appointed principal of the Seminary on Mount Tabor. Later he was professor of pathology in the Syrian Protestant College. He was an accomplished Arabic scholar and published many works in Arabic on scientific and religious subjects.
Waddell, John Newton, D. D., LL. D., in Birmingham, Ala., June 9; born in Willington, S. C., April 2, 1812; graduated at the University of Georgia in 1829; entered the ministry of the Presbyterian Church in 1841; was professor of Latin and Greek in the University of Mississippi 1848-1857, and held a similar chair in La Grange College, Tennessee, 1857-1860. He then became president of the last institution, which was closed in 1862; was chancellor of the University of Mississippi 1865-1875, and held the same position in the Southwestern Presbyterian University, Clarksville, Tenn. He was secretary of the Board of Ministerial Education of the Southern Presbyterian Church from 1874.
Walker, Charles L., in Flint, Mich., February 11; born in Otsego County, N. Y., in 1814; became a teacher in 1830; practiced law and held several prominent positions. He was professor in the law department of the University of Michigan for several years, and wrote several historical books.
Ward, Dr. Isaad M., in Lyons Farms, N. J., February 24; born in Bloomfield, N. J., in 1806; graduated at Yale in 1825; studied medicine at Rutgers Medical School and received his degree in 1828. He became a homeopathist and gained a lucrative practice in Newark, N. J.; was professor in the Homeopathic Medical College of Philadelphia, 1853-1861; held a like position in a kindred institution in New York City, and became its dean.
Weers, Asa, in Laconia, N. H., May 3; born in Sanbornton, N. H., December 22, 1816; graduated at Dartmouth in 1846; preceptor Moors Charity School, Hanover, N. H., 1846-1849; usher in Mathers School, Boston, 1849-1856; practiced law, and was clerk in United States Navy Department.
Weld, Theodore Dwight, in Hyde Park, Mass., February 3; born in Hampton, Conn., November 23, 1803; was educated at Phillips Andover Academy. He was a great antislavery advocate and established a school in Eagleswood, N. J., for pupils irrespective of sex or color. From 1864 he taught in Hyde Park until his failing health compelled him to stop.
Westbrook, Benjamin Frank, M. D., in Broolklyn, N. Y., April 12; born in St. Louis, Mo., February 4, 1851; graduated at Long Island College Hospital in $18 \pi 4$, and became professor of surgical pathology at that hospital and adjunct professor of anatomy at the Methodist Episcopal and St. Mary's hospitals. He contributed largely to medical literature.
Wheelwright, Isaac Watts, at Byfield, Mass., July 14; born in Newburyport, Mass., September 17, 1801; fitted for college at Phillips Andover Academy; graduated at Bowdoin in 1821 and from Andover Theological Seminary in $18 \% 5$. He was assistant teacher in Phillips Andover Academy 1822-23, having had classes during his last two years in the seminary at Dummers Academy, Byfield; preached at Harwich, Mass.; principal of Newburypor't Academy and taught in New Orleans. In 1833 was appointed agent of American Bible Society in South America and introduced Lancasterian schools into Guayarquil and Quito, and was made director of education by the President of Chile. After an absence of two years in the United States, he conducted a young ladies' school for ten years.
White, Prof. George L., in Ithaca, N. Y., November 9; born in Cadiz, N. Y., in 1833; served through the war and became treasurer of Fisk University; while there he organized and trained the famous Jubilee Singers. He had been connected with Sage College for a number of years at the time of his death.
White, Jimes, in William town, Mass., September 3; born in Hinsdale, Mass., July 9, 1828; fitted at Williston Seminary: grarluated at Williams College in 18.5; instructor in Williston Seminary 1851-1853: studied at Andover Theological Seminary, but har to give up on account of his eyes. He was treasurer of Williams College from 1886.
Wilber, Mary Cole, born in Smithfiein. Madison County, N. Y., in 1821 ; studied at Cazenovia Seminary and the Utica finishing school; married Rev. Perlee B. Wilber in 1939. The two founded and were sustaining forces at Wesleyan Female College for years.

Willett, William Marinus, in Jersey City, N. J., December 8; born in New York City, January 3, 1803; became*a minister of the Methodist Episcopal Church in 1823; was instructor of Hebrew at Wesleyan University in 18381841; founded the Biblical Institute at Newburg, Vt., in 1843, and was its president until 1848. He spent most of his life in literary work and published a great deal on religious history.
Williams, Henry Willard, M. D., in Boston, Mass., June 13; born there December 11, 1821; was educated at the Boston Latin School and Harvard Medical School, graduating in 1849. He continued his studies abroad; was lecturer in Harvard Medical School, 1868-1871, and professor of ophthalmology there, 1871-1891. He was a frequent contributor of medical treatises, confining himself to ophthalmic science.
Woods, Rev. Daniel Bates, in St. Louis, Mo., May 30, 1892; born in Andover, Mass., September 20, 1809; fitted at Phillips, Andover, attended Amherst College, graduated at Union College in 1833, and at Andover Theological Seminary in 1837; taught schools for young ladies at Prince Edward Court-House, Appomattox Church, and Cumberland Church, Va. He taught also in Philadelphia, 1844-1849, Cincinnati, 1852-1855, and for a few years in St. Louis.
Wright, J. W. A., in Greensboro, N. C.; was a teacher at Greene Springs for many years.
Wylie, Rev. Theophilus Adam, D. D., LL. D., in Bloomington, Ill., June 11; born in Philadelphia, Pa., October 8, 1810; graduated at University of Pennsylvania in 1830; was instructor there; professor of chemistry and natural philosophy in the University of Indiana, 1837-1852; professor of mathematics in Miami University, 1852-1855; held his former position in the University of Indiana, 1855-1864, acting as president in 1859. From 1864 until 1886 he was professor of ancient languages, and at the latter date professor emeritus. He published a history of Indiana.
Youngman, David, in Boston, Mass., May 11; born in Peterboro, N. H., August 26, 1817; graduated at Dartmouth College, 1837; taught at Franklin, Tenn., Hartford, Vt., and Peterboro Academy; graduated at Dartmouth Medical School, 1846. He was a practicing physician the remainder of his life in Winchester and Boston, Mass., being a member of the school board of the former city.
Yonce, Rev. Dr. William M. Brown, in Salem, Va., March 22; born in Virginia in 1827; had been professor at Roanoke College since 1855.

## FOREIGN.

Autenheimer, Frederick, June 5; professor of mathematics and director of the technical school at Winterthur, Switzerland.
Bartsch, Samuel, January 10; principal of a preparatory school in Baja, Hungary.
Bebar, Paul, October 22; teacher in a secondary school for girls in Nikolsburg, Moravia, Austria.
Beccu, Jean, in Berlin, Germany, aged 71. He was director of the French Hospital, having given up teaching some years ago; was for many years treasurer of the Diesterweg fund.
Bonghi, Ruggiero, at Torre del Greco, Italy, October 22; born in Naples, March 20, 1828; founded at Florence "Il Nazionale;" became professor of philosophy at the Academy of Milan in 1859, professor of Greek and literature at Turin in 1864, and subsequently was called to the University of Rome as professor of ancient history. From 1874 to 1876 he was minister of public instruction and was a strong advocate of secular education. He was the author of many philosophical works.
Bunge, Nicholas Christianovich, in St. Petersburg. June 15; born in Kieff, Russia, in 1823. He gained distinction as a professor of political science, economy, and statistics, and in 1881 was appointed deputy minister of finance; in 1882 chosen president of the council of ministers; author of several works on economic, financial, and legal subjects.
Cantri, Cesare, in Milan, March 11; born in Brivio, near Milan, December 2, 1805; was professor of literature in the College of Sondrio and wrote many historical books.
Carriere, Moritz, in Munich, January 19; boin in Criedel, Hesse, March 5, 1817; studied at Giessen, Gü̈ttingen, and Berlin; became a private docent at the University of Giessen. and in 1849 was made professor. He wrote many philosophical treatises and lectured on resthetics at the University of Munich, and later at the Academy of Arts on the history of art.

Edinger, Friedrick, March 21; professor of languages in Berne, Switzerland.
Ender, Franz Josef, in Maeder, Austria, March 25, nearly 80 years of age. He was a very active member of the Vorarlberger Teachers' Association.
Freytag, Gustav, the novelist, in Wiesbaden, April 30; born in Kreuzberg, Silesia, in 1816; studied at Breslau and Berlin, and was a private docent at University of Breslau eight years.
Frerichs, in Oldenberg, Germany; vice-president of the Oldenberg Teachers' Association.
Galdo, D. Manuel Maria Jose di, in Spain, July 18; doctor of science, law, and medicine, director of Institute Cardenal Cisneros; councillor of public instruction; ex-inspector of public instruction.
Gayette, Georgens Jeanness Marie, in Leipzig, Germany, June 14, aged r8, widow of Jau Daniel Georgens. She was a very successful authoress of juvenile books.
Geffroy, Mathieu Auguste, in Paris, August 15; born there April 21, 1820; was educated at the Normal School, and was instructor in history at the Lycée Louis Le Grand when he was called to the chair of history at Bordeaux in 1852 . In 1872 he became professor of ancient history at Paris, and in 1875 was appointed director of the French school at Rome, where he remained until a short time before his death. He was an authority in Scandinavian history, having made extensive researches.
Girokuty, Franz, in Budapest, Hungary, September 8; inspector of the museum of education and professor of education.
Gleichmann, Professor, September 15; principal of Normal School in Eisenach, Germany.
Gennit, Theodor, April 24; teacher of an elementary school in Hagen, Germany, He was, though young, an indefatigable worker in the interests of educational associations.
Gneist, Rudolph von, in Berlin, Germany, July 22; university professor and one of the most noted and vigorous advocates of the people's school.
Glogau, Gustav, in Greece, March 17; born in Laukischken in 1844; studied, at Berlin, medicine, history, philology, and philosophy, and after serving through the Franco-Prussian war became a teacher; was professor at the Polytechnicum, Zurich, extraordinary professor at Halle, and professor of philosophy at Kiel, University.
Gunther, Franz, March 22; head teacher in a realschule (modern high school) in Berlin, Germany. His chief work was aiding the elementary schools.
Helm, county school inspector; died in Upper Franconia, loved and revered by the teachers of Bavaria, Germany.
Hochegger, Rudolph, professor of philosophy and pedagogy in the University Czernowitz, Austria; author of numerous essays and treatises on education, and particularly on pedagogy.
Hoffmann, Dr. Friedrich, March 2; principal of a gymnasium (classical high school) in Berlin, Germany; an eminently practical schoolman, and active as an author in defense of progressive measures; was a member of the Prussian Lower House of Deputies and chairman of the committee on education.
Hug, Arnold, at Zurich, Switzerland, June 17; professor of classical philology.
Karffy, Titus, March 26 ; ministerial councilor in Budapest, Hungary. As chief of the division of elementary schools he did much to advance popular education in Hungary.
Keck, Christian, in Kiel, Germany, February 6; author of national readers and noted promoter of popular education.
Kern, Franz, aged 64; principal of a gymnasium (classical high school) in Berlin. Germany. He was especially interested in improving methods of language instruction, and wrote a popular text-book on pedagogy.
Kramer, Karl, March 18; teacher in Liestal, Switzerland.
Lahressen, H., in Oldenburg, Germany; president of the Oldenburg Teachers' Association.
Langexscheidt, Prof. Gustav, in Berlin, Germany, November 11; was associated with Professor Toussaint in advocating natural methods in learning foreign languages.
Lacth, Franz Josef, in Munich, Germany, February 11; born in 1822; Egyptologist and professor in the Cniversity of Munich. He wrote numerous monographs on Egyptology.
Lextwhr. P. Pacl, Aqgust 21; teacher in Hallein, near Salzburg, Austria. He was active as a member of the city council and chairman of teachers' associations.

Levay, Franz, in Budapest, Hungary; May 2; ministerial councilor in the department of public instruction.
Ludwig, Karl, M. D., in Leipsic, Germany, April 25; born in Witzenhausen in 1816. He was a private docent in the University of Marburg in 1842, professor at Zurich 1849-1855, and professor in the Vienna Academy of Military Surgery. For the last thirty years of his life he was professor of physiology at Leipsic. Important discoveries in pathology were made by him, and he invented the kymograph.
Lutzmayer, Ignaz, Septernber 23; inspector of city schools, Vienna, Austria.
Marbach, in Budingen, Germany, August 21; active in educational works and president of the Hessian Teachers' Association.
Martha, Benjamin Constant, in Paris, France, May 28; born in Strassburg, June 4,1820; studied in the Ecole Normale, became professor at Strassburg in 1843, went to Douai as professor of ancient literature in 1854 and was transferred to Paris in 1865, becoming professor of Latin prose at the Sorbonne. He was a member of the Academy of Moral Sciences and the author of several famous works.
Meyer, Hans Wilhelm, a Danish surgeon, in Venice, June 3; born in 1824. He discovered in the enlargement of the glands between the nose and throat a very frequent cause of arrested mental, as well as physical, development in children.
Muller, Moritz, in Pforzheim, Germany, March 19, aged 80; an active promotor of popular education.
Muller, Dr. Von, March 24; minister of worship and public education in Bavaria, Germany. He developed a vigorous policy in advancing the interests of popular education.
Nagy, Stefan, May 26; principal of a burgher school in Szegedin, Hungary.
Nikolits, Alexamper, May 2\%; director of the Hungarian music school at Budapest, Hungary.
Ordman, cantor emeritus, June 19, aged 92 years. He taught sixty years in the parish of Siedenburg, near Solingen, Germany.
Pick, Adolf, September 19; a teacher in Vienna, Austria, and a distinguished promoter of the science of astronomical geography.
Rafbel, Theodor, May 2; principal of an elementary school in Berlin, Germany. He was the author of the famous ballad "The blacksmith of Sedan."
Rosenkrans, Karl; principal of a bargher school in Vienna, Austria, and well known as a promoter of liberal ideas in education.
Rydberg, Abraham Victor, September 21; born in 1829; was appointed professor of history of civilization at Stockholm in 1884. His reputation is based mainly on his poetry.
SAATzen, Josef, in Eger, Bohemia, Austria, January 14; school inspector and author of popular educational works.
Saint. Hilaire, Jules Barthelfimy de, in Paris, France, November 22; born at Paris August 19, 1805; an eminent statesman and professor. He was assistant professor of French literature in the polytechnic school, professor of Latin and Greek philosophy in the College de France, and was a member of the Academy of Moral and Political Sciences. He was with De Lesseps in Egypt, and wrote treatises on Buddhism, the Koran, etc., and translations of Aristotle.
SCHAFER, cantor emeritus, January 29, aged 94 years. He taught sixty-two years in Seifershaw, near Hirschberg, Germany.
Schafli, L., March 20; professor of mathematics in the University of Bern, Switzerland.
Schenk, Karl, in Bern, Switzerland, July 18; a member of the federal council.
SCHMIDT, Alois, died July 30; professor in the Komotaw, Austria, Normal School.
SCHNEIDER, Dr. KARL THEODOR, privy councillor in Schleswig, Germany, November 10, aged 75; distinguished for theological and pedagogical writings.
Secretan, Charles, in Lausanne, Switzerland, January 22; born there January, 1815. He was professor of philosophy at the University of Lausanne the larger part of his active life and a teacher at the Academy of Neuchatel. As an author he showed a tendency to socialism in his ethical and political efforts.
Stambuloff, Stefan Nicolas, a leader of the Liberal party of Bulgaria; born in Tirnova in 1855; assassinated in Sofia July 18.
Steppilak, Sergivs Michael Dragomanofe, in London, England, December 23; born in Hajatsch, in the Ukraine, Russia, in 1841. He was tutor of ancient history in the University of Kieff for a number of years and the author of a number of historical works.
STOSSEL, JOHANN, March 7; professor of natural science and prorector of a girls' school in Zurich, Switzerland.

Sven, Louis Loven, in Stockholm, Sweden, September 4; born there January 6, 1809; took the degree of Ph. D. at Lund and studied at Berlin; devoted himself to the study of the farna along the Scandinavian Peninsula, and was professor and conservator of the Museum of Natural History at Stockholm. He was a member of the Royal Society of Great Britain and the Institute of France and the author of many scientific memoirs.
Sybel, Heinrich von, in Marburg, August 1; born in Dusseldorf, December 2, 1817; was educated at the gymnasium of his native city and the University of Berlin. He was a professor at the University of Bonn, at the University of Marburg, and University of Munich, and occupied several prominent political positions. The greatest of his many historical works was "Begründung des Deutschen Reiches durch Wilhelm I."
Szollbsy, Karl, March 29; principal of a burgher school in Budapest, Hungary. Tabler, Ludwia I., at Zurich, Switzerland, August 15; professor of philology.
Trmmel, Julian, at Linz, Austria, January 2; professor in boys' high school and inspector of city schools.
Trenkel, H., July 18; professor and head teacher in the normal school at Cohen, Germany. He was one of the few men in Germany who succeeded in rising from the modest position of elementary teacher to university professor.
Vilatte, Professor, at New Strelitz, Germany, June 13; a noted lexicographer.
Visbnegradsky, Ivan Alexander, in St. Petersburg, Russia, April 5; born January 1, 1832; was educated in the Pedagogic Institute and in Germany; taught mathematics in the Cadet School; was professor of mathematics in the Artillery Academy, and was a director of the Technological Institute. He was an advocate of technical education and the promoter of large industrial enterprises. Alexander III made him successively councilor of state and minister of finance.
Vogt, Karl, in Geneva, Switzerland, May 6; born in Giessen in 1817. He won a name as a naturalist by his work as a collaborator with Agassiz and Desor in their treatise on fresh-water fishes. A few years later he occupied a chair in the university of his native city. On account of his part in the revolution of 1848 he was exiled, and became professor of biology in the University of Geneva. He wrote extensively on scientific subjects.
Voss, Wilhelm, in Vienna, Austria, March 30; was professor in a boys' high school and had distinguished himself as a botanist.
W AgNer, Friedrick, January 24; principal of a burgher school in Dresden, Germany.
Westermayer, Leopold, in Judenburg, Austria, aged nearly 90 years; was principal of a parish school
Wettstein, Heinfich, February 16; professor of natural science and principal of normal school at Küsnacht, Switzerland.
Wiessner, Edward, cantor in Lichtenberg (province of Saxony), Germany. He was editor of an educational journal, contributor to Kehr's Praxis, and interpreter of Pestalozzi and Herbart.
Wilkomm, Moritz, at Niemes, August 26, aged 75 years; university professor in Prague, Bohemia, Austria. He was one of the most noted professors in Austria and had been elevated to the position of States' councillor.
Winkler, Karl, January 8; principal of a burgher school in Brunn, Moravia, Austria, and active in behalf of school gardens.
Zupita, Julius, July 5; born in 1844; professor of philology at the University of Berlin.

ENGLISH.
Blackie, Prof. John Stuart, in Edinburgh, March 2; born in Glasgow July, 1809; studied at Marischal College, Aberdeen, University of Edinburgh, Göttingen, Berlin, and Rome. In 1841 he was appointed professor in Marischal College, and occupied the chair of Greek at Edinburgh University from 18.52 to 1 s 82. He was an inspiring and enthusiastic teacher, and was a prominent advocate of the universities act which was passed in 1858 ; his writings include ethical, religious, esthetic, and literary subjects.
Buchanas, Sir Geomes. M. D., in London, May 5; born there in 1831; was educated at University College, and graduated at the London University in medicine in 18:59. He devoted himself to sanitary conditions in population centers, and showed its importance as a protection against contagions diseases. His interest in education, especially university education for wonen, was great.
Farthril, Miss Emily, in Manchester, May 31; born in Headley, Surrey, in 18:3j. She began early to take a kecu interest in the condition of women, and in
endeavors to widen women's field of employment; in 1860 she founded the Victoria Press, in which women were employed as compositors. Queen Victoria made Miss Faithful her printer and publisher in ordinary. For eighteen years she published the Victoria Magazine, in which she advocated the claim of women to remunerative employment in branches of business monopolized by men. She twice visited the United States, giving lectures, and published a novel entitled "Change upon Change."
Huxley, Prof. Thomas Henry, the eminent scientist, at Eastbourn, England, June 29; born May 4, 1825, at Ealing, Middlesex; received common school education; graduated in medicine at Charing Cross Hospital, and entered the royal navy as an assistant surgeon. He served under Sir John Richardson, the Arctic explorer and naturalist, and was on the Rattlesnake when it was engaged in the survey of the Barrier Reef of Australia, New Guinea, and the Louisiade Archipelego under the command of Captain Stanley. Among the first of his efforts was the publication of the "Description of the Calycophorida of the Voyage of the Rattlesnake." In 1854 he succeeded Edward Forbes in the natural history chair of the School of Mines. From 1863 to 1869 he was Hunterian professor in the Royal College of Surgeons, and during the absence of C. Wyville Thompson in 1875-76 filled his place as professor of natural history in the University of Edinburgh. He was à member of the London school board in 1870, was elected lord rector of the University of Aberdeen, and in 1881, at the death of Frank Buckland, he was called to the vacant post of inspector-general of salmon fisheries. Aside from his wide and thorough knowledge of his subjects, Profesor Huxley was extremely popular because of the simple and lucid style of his scientific discussions and writings. He was the author of a great many standard treatises on scientific subjects and the recipient of distinguished honors.
Lumby, Rev. Dr. Joseph Rawson, in Grantchester, England, November 21; born in Stanningly, Yorkshire. He was one of the revisers of the Old Testament, and at the time of his death was professor of divinity at Cambridge. He wrote "Early Dissent, Modern Dissent, and the Church of England," "A Hisfory of Creeds," etc.
Moncrieff, Lord James Wellwood, in Edinburgh, April 27; born there in 1811; solicitor-general and lord advocate. In Parliament he labored to establish a national system of education in Scotland and carried several measures modernizing the old educational institutions. He was elected rector of Edinburgh University.
Palmer, Rev. Edwin, in Oxford, October 17; born in Mixbury, Oxfordshire, July 18, 1824; was educated at Oxford and a fellow at Balliol, 1848-1867; was professor of Latin in the university in 1870 and archdeacon of Oxford in 1878. He was one of the revisers of the New Testament, and edited the revised Greek text.
Payne-Smith, Rev. Robert, in Canterbury, March 31; born in Chipping Campden, Gloucestershire, November 7, 1819; was educated at Oxford, head master of the Kennsington Proprietary School; professor of divinity ato Oxford, Bampton lecturer for 1869, and accepted the deanery of Canterbury in 1870. His great work as an oriental scholar was the "Thesaurus Syriacus." He was also a member of the Old Testament revision committee.
Poole, Reginald Stuart, in London, February 8; born there February 27, 1832; spent most of his youth in Egypt with his uncle Edward, and while quite young became deeply engrossed in Egyptology. He lectured on that subject and on numismatics, and in 1885 was made professor of archæology in the University College. "Cities of' Egypt" was published by him in 1882.
Savory, Sir William Scovell, in London, March 4; born in 1826; was educated in medicine at the College of Surgeons and London University. He was a fellow of the College of Surgeons, professor of comparative anatomy and physiology, and for several years president of the same institution.
Seeley, Sir John Robert, January 13; born in London in 1834; was educated at the City of London School and at Cambridge, where he graduated in 185\%. He remained at Cambridge as a lecturer, was a master in the City of London School, and was elected professor of Latin in University College, London. He became professor of history at Cambridge in 1869, being at that time widely known as the author of "Ecce Homo," though he never publicly acknowledged the book as his own. The book was a common-sense survey of the life and work of Christ, which aroused great criticism on the side of the Evangelical party and was a stimulus to the thought of the time. He wrote a great many historical books of immense value.
Sxephens, Prof. George, born in Liverpool, England, December 18, 1818; was
professor at Copenhagen University from 1855 until his death. Of his works the best was "The Old Northern Runic Monuments of Scandinavia and England."
Thorold, Rt. Rev. Dr. Anthony Wilson, in Farnham Castle, Surrey, July 2; born in Hougham, Lincolnshire, June 13, 1825; educated at Oxford, Canon residentiary of York, Bishop of Rochester, and later of Winchester. Was a tireless worker, and published a number of volumes.
Wilkorn, Prof: Henry Maurice, October 5; the distinguished German botanist.
Williamson, William Crawford, in Clapham, June 23; born in Scarborough, November 24, 1816; practiced medicine in Manchester for some years, and was professor of natural history and geology at Owens College, 1851 to 1892. His "Organization of the Fossil Plants of the Coal Measures" has taken rank as high authority.

## CHAPTER XXXVI,

## CITY SCHOOL SYSTEMS.

The statistics of city schools as a whole show little difference from year to year except in the matter of growth. The relation of the items to each other, as shown by the various ratios and percentages, change but little, and the changes of one year are often counterbalanced during the next. But cities still grow apace and the schools grow with them.

Two factors enter into the aggregate growth of cities, one being the growth of cities already recognized as such and the other being the growth of villages to the point where they must be classed with cities and their activities reckoned in any discussion of city affairs. The greater part of the increases that occur are ascribable to the former factor, for the growth of the same cities usually amount in the aggregate to about $4 \frac{1}{2}$ per cent a year, while the increase due to the influx of new cities would probably not be over 2 per cent in any year. The difficulty of correctly determining the extent of the annual accessions has often been mentioned in these reports. There are scores of places that are nearing the boundary line that divides the village from the city, and unless there is an annual census it is impossible to say precisely how many of them come over the line in any year. It is hazardous, therefore, to present a list of "cities of over 8,000 inhabitants" without some reservation and qualification. But due diligence is exercised in the Bureau to discover evidences of growth, and care is taken in the admission of new cities. The lists presented are therefore as good as the facilities of this office permit, and are worthy of consideration if not of implicit confidence.

The following table shows the relative importance of the city school enrollment for the past six years. Prior to $1890-91$ the statistics of all places having over 4,000 inhabitants were tabulated together, and it is not practicable to extend the comparison further than that year:

| Date. | Public school enrollment in the United States. | School systems in cities of over $8,000 \mathrm{in}-$ habitants. | Enrollment in cities. | Increase. | Per cent of increase. | Per cent of enroll ment in cities. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1890-91 | 13,050,132 | 442 | 2,627,275 |  |  | 20.1 |
| 1891-92 | 13,255, 921 | 459 | 2,743, 430 | 118, 155 | $4{ }^{4}$ | 20.7 |
| 1892-93 | 13, 483, 340 | 473 | 2,876, 468 | 188, 438 | 4.86 | 21.3 |
| 1893-94 | 13,995,357 | 554 | 3,126, 859 | 249,783 | 8.88 | 223 |
| $1894-95$ | 14, 201, 752 | 574 | 3,302, 841 | 176, 182 | 5.56 | 23.3 |
| 1895-96 | 14, 424, 500 | 602 | 3,484,255 | 181, 414 | 5.49 | 24.2 |

The comparatively low rate of growth indicated for the first two years in the above table is explainable by the difficulty in this office of discovering newly developed cities, a difficulty that was largely remedied in 1893-94 by beginning the systematic collection of school statistics of smaller places, in order to secure data as to their yearly growth. This measure at once disclosed the fact that 81 places not previously reckoned as having 8,000 inhabitants were worthy of consideration as cities. This heavy accession to the list ran up the percentage of increase shown by the tables to 8.68 per cent for that year, and counterbalanced the low figures of the two years previous.

The average annual increase indicated since $1890-91$ has been 5.80 per cent in geometrical ratio. The enrollment in the table for 1890-91 is probably a little too low as compared with the other figures, and it is likely that the actual increase has been about 5.50 per cent or approximately that shown for the last two years.

The last column in the table clearly shows the greater progress which cities and city schools are making in comparison with rural and village schools. These do not often decrease in actual numbers, but their relative gain is small in comparison with the city schools. The former class have gained only 1 per cent a year on an average since 1891. It is not yet practicable to go beyond this and determine the relative increase in village and in country schools, or, in other words, in graded and in ungraded schools; but there is every reason to believe that if the figures could be made they would show that even the 1 per cent increase comes entirely from schools in the villages. It is probable, in fact, that there is a steady decline in the number of country ungraded schools. New schools of this kind are constantly established, but on the other hand their number is being continually lessened by those which attain the dignity of the graded school.

The recent movement toward consolidating country schools and making graded schools of them must also have its effect upon their number within a few years at most.

In regard to the comparative tables in which the relations of the several statistical items to each other are shown, it may be said that no new tendencies of a permanent character are indicated, although many facts of interest are brought out, and additional evidence is disclosed of certain tendencies previously observed and mentioned.

The estimates of the several superintendents seem to show a continual decline in the relative enrollment in schools other than public. Of the whole number of children in school, there were in private and parochial schools 21.5 per cent in 1891-92, 21.2 per cent in 1892-93, 20.8 per cent in 1893-94, 20.3 per cent in 1894-95, and 19.6 per cent in 1895-96.

It must be confessed, however, that the statistics of private schools are far from satisfactory. Wholly without public control, and usually without public supervision, it is, except in two or three States, the legal duty of no local authority to collect or compile the statistics relating to them. And being often of temporary and evanescent character, to say nothing of their numbers, it is out of the question for this office to gather their statistics directly. An estimate is all than can be given in most cases; and since the use of estimates is necessary, no one is better capable of making those estimates than the city superintendents. Unfortunately even they are generally without any real basis for an estimate, and what is reported is often a mere guess. The tendency is noticeable, too, to "use the same figures as last year." It is largely due to this, probably, that the reported enrollmentin private and parochial schools stands almost stationary-the increase in 1895-96 was only about three-fourths of 1 per cent-and since the public schools continually advance, the indicated proportion in the private schools naturally grows steadily less.

The figures in the tables are not wholly without value in themselves, but the principal reason that data confessedly unreliable are presented every year is the hope, which is founded on experience, that continually asking for certain facts will in time lead to the taking of steps to furnish them. The work of private schools is a necessary factor in the sum total of education. No thorough accounting can be made of the educational excellencies or deficiencies of any city unless they be taken into account, and this is especially important where any attempt is made to enforce compulsory attendance laws. For these purposes their statistics are just as essential as those of the public schools, and it is to be hoped that the time will soon come when their work will be as fully and as accurately recorded and reported as that of the public schools.

The average length of school term has increased 1.3 days over 1894-95, but this seems to be one of those variations that occur constantly without having any special significance in indicating a general tendency, since the average term in 1893-94 was 191.5, or one tenth of a day longer than in 1895-96. The same absence of a general tendency may be seen in the changes in the per cent of attendance to enrollment, and in the number of pupils to each teacher.

But in regard to the matter of supervision, it is plain that supervising officers are becoming yearly more numerous. One supervisor to 17.9 teachers is now the ratio, the proportion having steadily grown from 1 to 20.2 teachers four years aso. The term "supervisors" must include, of course, all those who do not artually teach classes, but whose duties are to aid and direct those who do. Principals who do not teach, and specialists. likn writing and drawing teachers, whos lessons are only for purposes of illustration, while the main work is done by class teachers,
are embraced in this category, as well as superintendents and assistant superintendents. There have been few instances of noticeably large accession to the supervising force, but as a whole the number has grown much more rapidly than either teachers or pupils. There is an increasing inclination to relieve principals of all teaching, and in some cities the rules requiring principals of large schools to teach a portion of each day have become dead letters through their nonobservance.

Male teachers increased in number by only 36, that is, from 5,023 to 5,059, during the past year, while females have increased by 3,295 , or from 61,971 to 65,266 . In several of the larger cities there have been material reductions in the number of male teachers in the last year. There are now very few places in which men are employed as teachers in the elementary schools, nearly all the males reported being in the high schools or in the manual training shops. Men arestill in the majority among principals and supervising officers, but even there the proportion of women is constantly increasing, and necessarily so; there are no training schools for officers, and the natural way to get them is by promotion from the ranks, and as there are only women in the ranks the officers will be women, too.

Notwithstanding the continuance of hard times the cost of the schools has increased more rapidly than the pupils. An examination of the detailed statistics for the last two years shows a number of conspicuous instances of reduction in the number of teachers; and it is a matter of common knowledge that in several cities there were general reductions in salaries. But all these were more than made up in the aggregate by increases in other cities. The average daily cost of instructing each pupil in attendance was less in 1895-96 than in the year before, but the schools were open a little longer and the number of pupils to each teacher was slightly greater, so that the average amount received by members of the supervising and teaching force actually increased from $\$ 625$ to $\$ 643$. It cost about $9 \frac{1}{2}$ cents a day on an average to instruct a pupil; and other expenses, including new buildings, repairs, janitors, supplies, etc., ran the whole cost up to about $16 \frac{1}{8}$ cents a day.

Table 1.-Summary of statistics of school systems of cities containing over 8,000 inhabitants, showing increase or decrease from previous year.
[NoTE.-In the absenco of an annual census it is impossible to prepare an absolutely correct list of cities of given size in any year. The totals presented, therefore, may vary somewhat from the true totals, but the percentages of increase should be approximately correct. See remarks on page 1487.]


Table 2.-Summary, by States, of enrollment, attendance, supervising officers, and teachers in cities containing over 8,000 inhabitants. (a)

| Cities of - |  | Enrollment in public day schools. | Aggregate number of days' attendance of all pupils. | Average daily attendance. | Enroll- <br> ment <br> in pri- <br> vate <br> and pa- <br> rochial <br> schools <br> (esti- <br> mated) |  | Number of teach. ers. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  | Male. | $\begin{gathered} \mathrm{Fe}- \\ \text { male } \end{gathered}$ | Total. |
| 1 | 8 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| United Stat | 602 | 3,484, 255 | 489, 886,705 | 2,560,293 | 348, 760 | 3,938 | 5, 059 | 65,266 | \% $0.3 \%$ |
| N. Atlantic Division | 233 | 1,639,631 | 232,118,588 | 1,186, 738 | 373,689 | 1,769 | 2,020 | 30, 744 | 32,770 |
| S. Atlantic Division | 43 | 251,492 | 33, 684, 196 | 1\%8,269 | 51, 949 | 223 | 529 | 4,517 | 5,046 |
| S. Central Division | 53 | 190,366 | 24,580,505 | 138, 250 | 48,008 | - 247 | 1, 403 | $\stackrel{3}{3,257}$ | 3, 25.608 25.085 |
| N. Central Division. | 237 | 1,208,248 | 173,257, 180 | 918,318 | 350, 708 | 1,423 | 1,775 | 23,310 <br> 3,438 | 25,085 3,764 |
| Western Division... | 36 | -194,518 | 126,146,236 | 138, 718 | 24,406 | 276 | 326 | 3,438 | 3,764 |
| N. Atlantic Division: |  |  |  |  |  |  |  | 609 | 653 |
| New Hamp | 6 | 15,427 | 1,909, 813 | 10,843 | 6,959 | 21 | 27 | $3: 8$ | 355 |
| Vermont... | 2 | 3,992 | 1,549, 450 | 3,041 | 2,075 | 6 | 7 | 91 | ${ }^{98}$ |
| Massachuset | 51 | 301, 196 | 45, 481, 149 | 235, 925 | 52,941 | 224 | 573 | 6,200 | 6,773 |
| Rhode island | 9 | 46,556 | 5,783, 004 | 30,318 | 10,313 | 33 | 90 | -967 | 1,057 |
| Connecticut | 19 | 74, 881 | 10, 371,179 | 53, 277 | 15, 64.2 | 90 | 121 | 11,544 | 12,093 |
| New York | 61 | 649,343 | 92, 377, 723 | 462, 994 | 153, 025 | 873 | 520 |  |  |
| New Jersey | 2 | 137, 607 | 18,455, 728 | 93, 720 | 34,121 93,046 | ${ }_{316}^{172}$ | 70 574 | 2,444 | $\underset{\sim}{2}, 56{ }^{2}$ |
| Pennsylvania | 53 | 386,513 | 54, 058, 503 | 278, 486 | 93,046 | 316 | 574 | 6,988 | 7,50\% |
| Atantic Division | 1 | 10,162 | 1,539,800 | 7,699 |  | 3 | 5 | 212 | 217 |
| Maryland | 4 | 80, 927 | 11, 458,615 | 55, 703 | 18, 428 | 39 | 157 | 1,534 | 1,691 |
| Dist. of Co | 2 | 42, 464 | 5, 851,664 | 32, 153 | 5,000 | 57 | 117 | 859 | ${ }_{976}^{976}$ |
| Virginia | 10 | 32,718 | 4, 516,222 | 24,484 | 8,599 | 30 | 64 | 513 | ${ }_{213}$ |
| West Virginia | 3 | 10,207 | 1,261,510 | 6,945 | 1,450 | 12 | 9 | 204 | 213 |
| North Carolina | 6 |  |  |  | 2,227 | 16 | 17 | 154 | 171 |
| Georth Caro | $\stackrel{4}{9}$ | 9,935 42,258 | 4, $4,883,672$ | 87,369 | 7,535 | 47 | 79 | 651 | 730 |
| Florida | 4 | 10,877 | 1,126, 513 | 7,161 | 4,550 | 9 | 55 | 188 | +3 |
| S. Central Division: |  |  |  |  |  |  |  |  |  |
| Kentucky- | 12 |  |  |  | $150,607$ | 67 | 80 58 | 866 435 | ${ }_{493}^{946}$ |
| Tennessee | ${ }_{6}^{6}$ | - 27,579 | $3,823,682$ $1,768,731$ | 20,864 11,587 | $\begin{aligned} & 5,100 \\ & 3,850 \end{aligned}$ | 63 12 | 58 49 | ${ }_{310}^{430}$ | 359 |
| Alabama- | 6 5 5 | 16,659 8,289 | $1,768,731$ $1,036,620$ | 11,587 5,759 | 3,850 2,510 | ${ }_{20}^{12}$ | 14 | 159 | 173 |
| Louisiana. |  |  |  |  |  |  |  |  |  |
| Texas | 16 | 45,816 | 5,712,864 | 34,204 | 9,461 | 40 | 142 | 721 | 863 |
| Arkansas | 4 | 11,695 | 1,423, 358 | 8, 084 | 1,270 | 4 | 27 | 159 | 186 |
| Oklahoma | , | 1,69 | 1, 139,482 | \%99 | 1, 150 | 1 | $\stackrel{2}{0}$ | 22 | 24 |
| Indian Territory | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |
| N. Central Division: ${ }_{\text {N }}$ |  |  |  |  |  |  |  |  |  |
| Indiana | 30 | 102,270 | 13, 222,945 | 172,547 | 21,789 | 104 | 236 | 1,833 | 2.039 |
| Mlinois | 39 | 303,911 | 45, 628,159 | 236,25\% | 113,160 | 377 | 372 | 5,961 | 6, 333 |
| Michigan | 30 | 123,116 | 18, 100,899 | 92, 279 | 35, 192 | 164 | 126 | 2,435 | 2, 561 |
| Wisconsin | 21 | -93,473 | 12, 984,374 | 69,478 | 34, 500 | 119 | 141 | 1,753 | 1,894 |
| Minnesota | 10 | 75,461 | 10, 889,329 | 57, 982 | 17, 745 | 133 | 66 | 1,627 |  |
| Iowa | 22 | 66, 417 | 9, ${ }^{\mathbf{7}, 315,331}$ | 51, 144 | 11,223 | 84 130 | 84 | 1, 454 | 1, 2,411 |
| Missouri North Dakota | 15 | \| 127,848 | 17, 250,749 | 91,637 | 32,623 | 130 0 | 150 | 2,260 | 2,4110 |
| North Dakota | 1 | \| $1,8 \%$ |  |  | 0 300 | 0 3 3 | 2 | 0 43 | 4.5 |
| Nebraska. | 10 | 37,385 | 262,800 $4,989,220$ | 27,938 | 3,250 | 36 | 48 | 696 | 74 |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Montana- |  | 3 \% | 965.136 | 5,500 | 770 | 17 | 22 | 151 | 13 |
| Wyoming | 1 | $\begin{array}{ll}1 & 1,142 \\ 0 & 33,88 \%\end{array}$ | 147,030 $4,463,46 i$ | 5,58 8.30 $2+.583$ | 75 3,640 | 28828 | 0 | 6\%5 | 619 |
| Coloralo | 0 | 0) 33, 88\% | 4,463, 46 \% | 24.583 0 | 3,640 0 | 5 | 44 | G5 | 69 |
| Arizona. | 0 | 0 0 | ) | 0 | $1)$ | 0 | 0 | 0 | 0 |
| Utah |  | 2 14,864 | 2,175,99\% | 11, \%31 | 650 | 32 | 48 | 250 | 293 |
| Nerad |  | $0) 0$ | 2,1\% 0 | 1, 0 | 0 | 0 | 0 | 0 | 0 |
| Idaho | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ) | (1) |
| Washington |  | 4 1 17,776 | 2,334, 856 | 13,354 | 3,240 | 18 | 32 | 337 | 3:3) |
| Oregon. |  | 3 13,65\% | 2,012,967 | 10,723 | 1,400 | 13 | 31 | 249 | : $\sim_{\prime \prime}^{\prime \prime}$ |
| Californ | 14 | 4 105, 661 | $14,144,784$ | 71,952 | 14,621 | 136 | 14! | 1,819 | 1.928 |

[^73]Table 3.-Summary, by States, of school property and expenditures in cities containing over 8,000 inhabitants. (a)

| Cities of- | $\begin{array}{\|c\|} \text { Num- } \\ \text { ber of } \\ \text { school } \\ \text { build- } \\ \text { ings. } \end{array}$ | Number of seats, or sittings, for study. | Value of all public property used for school purposes. | Expenditure for supervision and teaching. | Expenditure for all purposes (loans and bonds excepted). |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 |
| United States. | 8,496 | 3,369,082 | \$257,236,583 | \$46,747, 865 | \$80,042, 118 |
| North Atlantic Division. South Atlantic Division. South Central Division.. <br> North Central Division.- <br> Western Division......... | $\begin{array}{r} 3,952 \\ 672 \\ 465 \\ 2,878 \\ \hline 629 \\ \hline \end{array}$ | $\begin{array}{r} 1,515,887 \\ 228,579 \\ 191,730 \\ 1,256,360 \\ 176,508 \end{array}$ | $125,616,050$ <br> $10,960,2222$ <br> $10,857,437$ <br> $90,802,990$ <br> $18,999,934$ | $22,294,477$ $2,932,741$ $2,188,338$ $16,179,769$ $3,152,540$ | 40,754,876 <br> 4,119,513 <br> 3,163,570 <br> $27,144,150$ $4,860,009$ |
| North Atlantic Division: |  |  |  |  |  |
| Maine - .-...-...... | 195 | 28,053 | 1,382, 982 | 278,688 | 449,003 |
| New Hamp |  | 14, ${ }^{2787}$ | 1,524, |  |  |
| Massachusetts | 1,191 | 296, 604 | 31,109, 728 | 4, 8441,443 | 8,663,955 |
| Rhode Island. | 210 | 42,244 | 3,680, 128 | 662, 663 | 1,370, 299 |
| Connecticut | 267 | 70,082 | 6,366,282 | 1,024,668 | 1,930,440 |
| New York- | 851 | 588, 953 | 45, 560,446 | 9,077, 225 | 16, 301, 502 |
| New Jersey- | 240 888 | ${ }_{352,573}^{118,553}$ |  | 1, 846,172 | ${ }_{9}^{2,523,251,150}$ |
| Pennsylvania |  | 352, 973 | 28,733,571 | 4,503,254 | 9,031,150 |
| Delaware | 28 | 10,476 | 657, 817 | 94,831 | 164,930 |
| Maryland. | 120 | 74, 750 | 3,075, 600 | 1,042,305 | 1,539,613 |
| District of | 114 | -35,500 | 3,200, 00 | 714, 367 | 1,050, 369 |
| West Virgin | ${ }^{69}$ | 10,350 | 1,623,375 | 101, 287 | 143, 381 |
| Nouth Caroli | 15 | 9,020 | 235,400 | 86,128 | 101, 85.5 |
| Georgia | 156 | 37,048 | 1,413, 950 | 408, 527 | 500, 362 |
| Florida. | 118 | 11,310 | 157,390 | 77,193 | 93,518 |
| South Central Division: |  |  |  |  |  |
| Tennessee | 53 | 24, 180 | 1,309,947 | 298, 885 | 363, 577 |
| Alabama. | 48 | 14,360 | 809, 000 | 146, 888 | 180,120 |
| Mississippi | 18 | 8,990 | 358, 000 | 75, 101 | 107, 472 |
| Texas .- | 141 | 40,797 | 2,854,323 | 508, 494 | 6778,2979 |
| Arkansas. | 35 | 10,777 | 937, 603 | 96,055 | 141,505 |
| Oklahoma | 7 | 1,200 | 62,000 | 11,925 | 35,213. |
| Indian Territory | 0 |  |  |  |  |
| North Central Divis | 547 | 242,958 | 19, 128,805 | 3,295,755 | 5, 161,564 |
| Indiana. | 277 | 98,060 | 6,914,941 | 1,174,613 | 1,961, 809 |
| Illinois | 554 | 390, 952 | 20,110,104 | 4,917, 827 | 8,546, 255 |
| Michigan | 329 | 111,370 | $8,207,662$ | 1, 432, 761 | 2,616,458 |
| W isconsin | 177 | 87,973 | 5, 229,974 | 1,125,012 | 1, $1,886,531$ |
| Minnesota | ${ }_{218}^{17}$ | 73, 64.428 | 7, $4,810,898$ | 1,173,383 | 1, 424,139 |
| Missouri | 262 | 113,226 | 8,048,584 | 1,366, 110 | 2,607, 715 |
| North Dakota | 0 |  |  | $24,85$ |  |
| South Dakot <br> Nebraska | 120 | 33,447 | 3,011,554 | 401, 484 | 687,450 |
| Kansas, | 131 | 38,582 | 2,190,700 | 371,888 | 565,501 |
| Western Division: |  |  |  |  |  |
| W yoming | 5 | 1,240 | 1, 134,753 | 21,607 | 27,501 |
| Colorado... | 80 | 20,315 | 4,407,000 | 556,011 | ,058,683 |
| New Mexico | 0 |  |  |  |  |
| Arzan | 38 | 14,935 | 1,268,581 | 195,383 | 311,009 |
| Nevada |  |  |  |  |  |
| Idaho | 5 |  | 1,062,004 | 228,277 | 308,352 |
| Oreghingt | ${ }_{43}$ | 12,346 | 1,014,368 | 240,735 | 309, 334 |
| Californ | 282 | 82, 493 | 9,135, 538 | 1,769,895 | 2,516,556 |

[^74]Table 4．－Comparative statistics of cities containing over 8，000 inhabitants，summarized by States，etc．

| Citios of－ | Ratio of private school emroll－ ment to enroll－ ment in all schools， public and private． | Ratio of average attend－ ance to enroll－ ment （public schools）． | Average number of days attend－ ance of each <br> pupil en－ rolled． | Average length of school term． | Average number of pupils in attend－ ance to each teacher． | Average number of teachers to each super－ vising officer． | Average number of seats for each 100 <br> pupils in attend－ ance． | Average number of seats to a building． | Value of school property per capita of pupils in average attend－ ance． | Cost of teach－ ing and super－ vision per cap－ ita of pupils in average attend－ ance． | Total cost of schools per capita of $\mathrm{pu}-$ pils in average attend－ ance． | Average cost per day of tuition for one pupil． | Average daily expendi－ ture per pupil for all pur－ poses． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
|  | Per cent． | Per cent． |  |  |  |  |  |  |  |  |  |  |  |
| 1s！ 1 － 12 |  | $20.1$ | $13 \% .9$ | $\begin{aligned} & 191.5 \end{aligned}$ | 35.9 | 20.2 | 126.5 | 371 | $\$ 97.92$ | $\$ 16.83$ | \＄28．80 | $8.79$ $9.60$ | 15.04 |
| 1812 93 | $\because 1 . \therefore$ | 71.9 | 137.0 | 190.6 | 35.3 | 20.2 | 130.3 | 387 | 99．32 | 18.29 | 31.92 | 9.60 | 16.75 |
| 1393－9t | $\cdots$ | $7 \% .9$ | 139.7 | 191.5 | 36.2 | 18.7 | 127.1 | 374 <br> 385 | 100.15 97.39 | $\begin{aligned} & 17.85 \\ & 18.16 \end{aligned}$ | $30.64$ $30.72$ | $\begin{aligned} & 9.32 \\ & 9.55 \end{aligned}$ | $\begin{aligned} & 16.00 \\ & 16.16 \end{aligned}$ |
| 1838－95 | 30.3 19.6 | \％3．6 <br> 73.5 <br> 78 | 140.0 140.6 | 190.1 191.4 | 36.3 36.4 | $\begin{aligned} & 18.2 \\ & 17.9 \end{aligned}$ | $\begin{aligned} & 128.3 \\ & 131.6 \end{aligned}$ | 385 397 | $\begin{array}{r} 97.39 \\ 100.48 \end{array}$ | $\begin{aligned} & 18.16 \\ & 18.26 \end{aligned}$ | $\begin{aligned} & 30.72 \\ & 31.26 \end{aligned}$ | $\begin{aligned} & 9.55 \\ & 9.54 \end{aligned}$ | $\begin{aligned} & 16.16 \\ & 16.34 \end{aligned}$ |
| North Atlantic Division： <br> 1sil－ 9 | 21.0 | $\% 1.1$ | 138.5 | 194.7 | 35.0 | 21.5 | 128.5 | 383 | 102.25 | 18． 23 | 31.63 | 9.37 | 16.24 |
| 1992 $3^{3}$ | 20.7 | \％1．2 | 138.0 | 193.7 | 34.5 | 20.6 | 131.2 | 388 | 105． 15 | 18． 45 | 32． 28 | 9.52 | 16.67 |
| 1－93： 91 | 20.3 | \％\％． 1 | 140.4 | 194.8 | 36.1 | 18.8 | 127.9 | 374 | 103.95 | 17.93 | 30.95 | 9． 20 | 15.89 |
| 189493 | 19.8 | 72． 6 | 141.5 | 194.8 | 35.9 | 19.9 | 126．8 | 381 | 102.37 | 18.44 | 32.17 | 9.46 | 16． 51 |
| $1895!9$ | 18.5 | 72． 4 | 141.5 | 195.6 | 36.2 | 18.5 | 127.7 | 384 | 105.85 | 17.93 | 34.34 | 9． 60 | 17.56 |
| South Atlantic Division： |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1891 | $1 \% .8$ 18.6 | 72.0 70.7 8. | 137.3 | 190.7 188.3 | 37.3 35.4 | 28.9 26.3 | 121.9 | 407 457 | 58.37 64.90 | 14.79 16.14 | 23．08 | 7.75 8.66 | 12.10 12.05 |
| 18934 | 18.8 | 71.6 | 134.0 | 187.3 | 36.0 | 23.5 | 130.4 | 426 | 68.85 | 16.03 | 22.69 | 8.56 | 12.12 |
| 1594－4．） | 17． 8 | 52.5 | 133.6 | 184.2 | 35.2 | 26.9 | 127.8 | 373 | 60.31 | 15． 88 | 21.84 | 8.62 | 11． 86 |
| 1 $54.5-915$ | 1ส゙ 1 | 70.9 | 133.9 | 189.0 | 35.3 | 22.6 | 128．2 | 340 | 61.49 | 16． 4.5 | 23.10 | 8.71 | 12．23 |
| South Central Division $1: 91-9 \%$ | 24.4 | 70.7 | 131.2 | 185.5 | 38.5 | 16.4 | 112.2 | 324 | 72.01 | 15． 30 | 21.50 | 8.25 | 11.58 |
| 149\％－93 | 20．5 | 72 | 133.9 | 184.2 | 38.6 | 22.4 | 126.0 | 379 | 66.73 | 15.81 | 21.62 | 8.58 | 11.74 |
| 1593 ！ 1 | 21.1 | \％1． 4 | 134.3 | 180.4 | 37.3 | 19.7 | 117.6 | 344 | 71.67 | 15.65 | 22．42 | 8.48 | 12.46 |
| 1 191－9\％ | 1s．s | 69.6 | 125． 6 | 180.6 | 36.0 | 14.1 | 130.0 | 349 | 74.94 | 16． 72 | 23.49 | 9.26 | 13.00 |
| נ人） | 20.1 | 72．$\%$ | 129.2 | $1 \%$ \％． 8 | 37.8 | 18.7 | 138．6 | 412 | 78.52 | 15.79 | 22.87 | 8.88 | 12.87 |
| North Centa Division： |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 15011 \\ & 1 \times 4 \\ & 4 \\ & 4 \end{aligned}$ | 23．8 | 74.0 73.2 | 138.5 <br> $13 \%$ <br> 18 | 187.2 188.4 | 36.4 35.9 | 19.3 | $12 \% .4$ 130.4 | 368 388 | 96.50 95.54 | 17.63 17.95 | 30.21 32.73 | 9.40 9.53 | 16.14 17.37 |
| 189： 9 | 23．4 | 74.6 | 141.4 | 189.6 | 36.3 | 17.3 | 127.6 | 385 | 98.05 | 17.56 | 31.93 | 9.26 | 16.85 |
| $1 \times 14$ | \％ | 76.11 | 142 | 187.2 | 37.0 | 16.4 | 130.9 | 408 | 96.01 | 17．73 | 30.83 | 9.47 | 16.47 |
| 159，！ni | ～2．う | 76.0 | 1434 | 188.6 | 36.6 | 17.6 | 136.8 | 437 | 98.90 | 17．6\％ | 29.55 | 9.34 | 15.67 |
| Wostern 1）ivismm． 12： 11,0 | 13．9 | \％0．7 | 137.1 | 194.1 | 36.9 | 13.6 | 124.8 | 31.2 | 154.00 | 23.87 | 44.52 | 12.30 |  |
| 1s\％： | 13：3 | （99． 9 | 133． 5 | 191.1 | 35.9 | 13.8 | 123.4 | 318 | 156． 23 | 24.05 | 48.16 | 12.59 | 25.21 |
| 1as） 11 | 12． 7 | \％1．1 | 135.6 | 190.8 | 35.5 | 15.1 | 121.3 | 297 | 151.07 | 24.07 | 38.26 | 12． 20 | 19.40 |



Table 5.-Public kindergartens in cities of over $\mathcal{8}, 000$ inhabitants.


Table 5.-Public kindergartens in cities of over 8,000 inhabitants-Continued.


Table 5.-Public kindergartens in cities of over 8,000 inhabitants-Continued.

|  | City. | Number of kin-dergartens. | $\begin{aligned} & \text { Number of } \\ & \text { teachers. } \end{aligned}$ | Number of pupils. |
| :---: | :---: | :---: | :---: | :---: |
|  | NEW YORK-continued. |  |  |  |
| 103 | Niagara Falls. | 3 | 5 | 180 |
| 104 | North Tonawanda. | 4 | 4 | 143 |
| 105 | Rochester ---........ | 11 | 68 | 1,972 |
| 106 | Saratoga Springs. | 5 | 10 | 259 |
| 107 | Schenectady .....- | 1 | $\stackrel{2}{2}$ | 40 |
| 108 | Sing Sing -.... | 2 | 3 | 114 |
| 109 | Syracuse --.... | 5 | 5 | 318 |
| 110 | Tonawanda -- | 1 | 12 | 78 |
| 111 | Utica --.-----...- | 10 | 26 | \%46 |
| 112 |  | 4 | 5 | 200 |
|  | оНІО. |  |  |  |
| 113 | Cleveland ...... | 1 | 12 | 33 609 |
| 114 | Columbus .----- | 11 | 2 | 106 |
| 115 116 | Fremont | 2 | $\stackrel{2}{3}$ | 100 33 |
|  | OREGON. |  |  |  |
| 117 | salem * | 1 | 1 | --------- |
|  | PENNSYLVANIA. |  |  |  |
| 118 | Allegheny | 3 | 12 | 120 104 |
| 119 | Oil City * | $\stackrel{2}{105}$ | + ${ }_{14}$ | 5,443 |
| 120 | Philadelphia. | 105 | 149 33 | 5,473 |
| 121 | Pittsburg ...... |  | 33 | 473 |
|  | RHODE ISLAND. |  |  |  |
| 122 | Newport..- | 4 | 7 | 205 |
| 123 | Pawtucket.- | 3 | 7 |  |
| 124 | Providence.... | 11 | 22 |  |
|  | TEXAS. |  |  |  |
| 125 | El Paso... | 1 | 2 | 113 |
|  | VERMONT. |  |  |  |
| 126 | Burlington | 1. | 1 | 104 |
|  | WISCONSIN, |  |  |  |
| 127 | Madison---.----- - |  |  |  |
| 128 | Marinette..... | 3 39 3 |  | 5, 231 |
| 129 | Milwaukee. | 39 3 | 76 13 | 5, 20.5 |
| 131 | Racine. | 6 | 12 | 550 |
| 132 | Sheboygan | 5 | 18 | 668 |
| 133 | Stevens Point | 2 | 2 | 61 |
| 134 | Superior....... | 9 | 29 | 915 |
|  | Total | 943 | 1,808 | 66, 245 |

Table 6.-Statistics of population and school enrollment and attendance in cities of over 8,000 inhabitants.


[^75]$a$ Estimated.
$b$ Average.
c Approximately.

Table 6.-Statistics of population and school enrollment, etc.-Continued.


Table 6.-Statistics of population and school enrollment, etc.-Continued.


[^76]Table 6.-Statistics of population and school enrollment, etc.-Continued.


* Statistics of 1891-85.
a Estimated.

Table 6.-Statistics of population and school enrollment, etc.-Continued.


TABLE 6.-Statistics of population and school enrollmerit, eto.-Continued.


[^77]Table 6.-Statistics of population and school enrollment, etc.-Continued.

|  | City. |  | School population. |  |  | Different pupils enrolled in public day schools. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | 1 | 2 | 3 | 4 | 5 | 6 | \% | 8 | 9 | 10 | 11 |
| $\begin{aligned} & 274 \\ & 275 \\ & 276 \\ & 277 \end{aligned}$ | MICHIGAN-cont'dr | $\begin{aligned} & 13,568 \\ & 23,000 \\ & 9,000 \\ & 20,000 \end{aligned}$ | $\begin{aligned} & 5-21 \\ & 5-20 \\ & 5-20 \\ & 5-20 \\ & 5-20 \end{aligned}$ | $\begin{aligned} & 3,787 \\ & 7,078 \\ & 2,239 \\ & 6,898 \end{aligned}$ | 440 | $\begin{aligned} & 1,290 \\ & 2,972 \\ & 950 \\ & 1,718 \end{aligned}$ | $\begin{aligned} & 1,275 \\ & 1,256 \\ & 1,5000 \\ & 1,00 \end{aligned}$ | $\begin{aligned} & 2,565 \\ & 5,028 \\ & 1,950 \\ & 1,950 \end{aligned}$ | $\begin{aligned} & \frac{1}{3,815} \\ & \begin{array}{l} 3,407 \\ 1,471 \end{array} \end{aligned}$ | $\begin{aligned} & 196 \\ & 190 \\ & 195 \\ & 190 \end{aligned}$ | $\begin{aligned} & 355,740,740 \\ & 647,330 \\ & 286,845 \\ & 512,752 \end{aligned}$ |
|  | Menominee |  |  |  |  |  |  |  |  |  |  |
|  | Muskegon |  |  |  | 80 |  |  |  |  |  |  |
|  | Port Hur |  |  |  | 900 |  | 1,624 | 3,3425,741 | 2,776 | 198 |  |
| 278279280281282 | Saginaw: |  |  |  |  | $\begin{array}{r} 2,858 \\ 2,000 \\ 674 \\ 907 \\ 1,240 \end{array}$ |  |  | 1,00 | 190 19 | 8 855,760 |
|  | West Side |  |  |  | 400 |  | 2,200716965 | 4,200 <br> 1,390 <br> 1 |  |  |  |
|  | Sault Ste. Mario..... |  |  | 2,003 <br> 2,043 | 150 |  |  |  | $\begin{array}{r}1,074 \\ +1,132 \\ \hline\end{array}$ |  | a $\begin{array}{r}198,5838 \\ \hline 2380\end{array}$ |
|  | West Bay City |  |  | 4,246 | 700 |  | 1,257 | 2,497 | 1,740 | 193 | ${ }^{2} 2353,899$ |
|  | minnesota. |  |  |  |  |  |  |  |  |  |  |
| 283 | Brainerd | 8,000 <br> 89,369 <br> 8,500 | 5-21 | 11,667 | ${ }_{1}^{1,200}$ | $\begin{array}{r} 700 \\ 4,413 \\ 4,43 \end{array}$ | 1,021 | 1,721 | 1,299 | 180 | ${ }_{1}^{2349,818}$ |
| 284 | Duluth |  |  |  |  |  |  |  |  |  |  |
|  | Mankato | 200,000 | 6-2 | 2,700 | *1,040 | 15, ${ }^{9568}$ | $\begin{array}{r} 980 \\ 15,366 \end{array}$ | 1, 80734 | ${ }^{1,400}$ | 176 |  |
| 288 | Minneapo |  |  |  |  |  |  |  |  | 175 | 4,568,586. |
| 288 | Red Wing | 8,500 | $\begin{gathered} 5-21 \\ 5-21 \\ \hline \end{gathered}$ | 1,750 | 100 | 15, 820 |  | 1, 654 | 1,347 |  | 242,562 |
| 290 | St. Paul | 150,000 |  | 0,223 | * 7,000 | 11,114 |  |  |  |  | 3,171, 164 |
| 291 | Stillwater* |  |  |  |  |  |  |  | $\stackrel{1}{2,536}$ | 190 | 564, ${ }^{2715}$ |
| 292 | Wino | 22,000 | 5-2 |  | 1,600 | 1,887 | 1,862 | 3,737 |  |  |  |
|  | MISSISSIPPI |  |  |  |  |  |  |  |  |  |  |
|  | Columbu | $\begin{array}{r} 8,000 \\ 8,000 \\ 14,000 \\ 11,000 \\ 19,000 \end{array}$ | $\left\|\begin{array}{\|c\|} 5-21 \\ 5-21 \\ 5-21 \\ 5-21 \\ 5-21 \\ 6-21 \end{array}\right\|$ | 2,5002,2003,5953,4254,687 | $\begin{aligned} & 150 \\ & 90 \\ & 985 \\ & 600 \\ & 600 \end{aligned}$ | $\begin{aligned} & 595 \\ & 600 \\ & 897 \\ & 890 \\ & 687 \end{aligned}$ | $\begin{array}{r} 709 \\ 700 \\ 1,131 \\ 754 \\ 7,206 \end{array}$ | 1,3041,3002,0281,3642,293 | $\begin{array}{r} 900 \\ 950 \\ 1,544 \\ 835 \end{array}$ | $\begin{aligned} & 180 \\ & 180 \\ & 180 \\ & 180 \\ & 180 \end{aligned}$ | $\begin{aligned} & 162,000 \\ & 171,000 \\ & 277,020 \\ & 150,300 \end{aligned}$ |
| 29 | dackson |  |  |  |  |  |  |  |  |  |  |
| 206 | Natchez |  |  |  |  |  |  |  |  |  |  |
| 207 | Vicksbur |  |  |  |  |  |  |  |  |  |  |
|  | musso |  |  |  |  |  |  |  |  |  |  |
| 298 | Carthage |  | $\begin{gathered} 6-20 \\ 6-20 \\ 6-20 \end{gathered}$ | $\begin{aligned} & 2,655 \\ & 1,830 \\ & 2,890 \end{aligned}$ | * 150 | $\begin{array}{r} 1,011 \\ 759 \\ 7 \\ 795 \end{array}$ | 1, 110 | 2,121 | 1,558 | ${ }_{177}^{180}$ | ${ }_{208,683}^{280,080}$ |
| 3410 | Clinton |  |  |  |  |  |  |  | 1,129 |  |  |
| 301 | Hannibal |  |  |  | 300 | 1,141 | 1,387 | 2,588 | 1,86 | 177 | 303, 672 |
| 302 | Jefferson C |  | 6-20 |  | 500 | 560 | 665 |  | a 816 | 180 | a 146,880 |
| 30 | Joplin...̈ |  | $\begin{aligned} & 6-20 \\ & 6-21 \\ & 6-20 \end{aligned}$ | 4,087 | 176$* 3,00$+300 | 8,549 | $\begin{array}{r}1,710 \\ 10,497 \\ \hline 035\end{array}$ | 3,259 20,008 | 14,351 | 175180178 | 4,582,180 |
| ) | Moberly |  |  | 3,778 |  |  |  | 1,766 | 1,242 |  | , 2121,076 |
|  |  | $\begin{gathered} 8,2 \overline{250} \\ 60,000 \\ 60,830 \\ 20,000 \\ 25,000 \\ 8,00 \end{gathered}$ | $\begin{gathered} 6-20 \\ 6-20 \\ 6-20 \\ 6-20 \\ 6-20 \\ 6-20 \end{gathered}$ | 2,1223,120158,524,4346,426$1,25 \%$ | $\begin{array}{r} 1250 \\ 1,200 \\ 25,000 \\ 200 \\ 500 \\ 10 \end{array}$ | $\begin{array}{r} 3,275 \\ 35,83 \\ 1,80 \\ 1,683 \\ 2,487 \\ 7878 \end{array}$ | $\begin{array}{r} 8,30 \\ 3,979 \\ 37,788 \\ 1,763 \\ 2,668 \\ 2,868 \end{array}$ |  |  | $\begin{aligned} & 1989 \\ & \hline 170 \\ & 1970 \\ & 190 \\ & 160 \\ & 176 \end{aligned}$ | $\begin{array}{r} 34,398 \\ 090,930 \\ 1,49,668 \\ 457,688 \\ 524,960 \\ 199,280 \end{array}$ |
| 30 | St. Charie |  |  |  |  |  |  |  |  |  |  |
| 309 | St. Loui |  |  |  |  |  |  |  |  |  |  |
| 310 | Sedalia |  |  |  |  |  |  |  |  |  |  |
| 311 | Springfi |  |  |  |  |  |  |  |  |  |  |
|  | montana. |  |  |  |  |  |  |  |  |  |  |
| 313 | Butte | $\begin{aligned} & 40,000 \\ & 41,000 \\ & 15,000 \end{aligned}$ | $\begin{aligned} & 6-21 \\ & 6-21 \\ & 6-21 \end{aligned}$ | $\begin{aligned} & 6,354 \\ & 1,8043 \\ & 2,423 \end{aligned}$ | 54030 | $\begin{aligned} & 1,826 \mid 2,354 \\ & (1,309) \end{aligned}$ |  | 4,180 | 3,156 | 187 |  |
| 3 | Grest |  |  |  |  |  |  | $\begin{aligned} & 50,949 \\ & 155,020 \\ & 259,167 \end{aligned}$ |  |  |  |
| 815 | Helen |  |  |  | 200 |  | 1,072 |  | 2,033 | 1,525 | 170 |
|  | nebraska. |  |  |  |  |  |  |  |  |  |  |
| 316 | Beatr | $\left.\begin{gathered} 12,000 \\ 0,000 \end{gathered} \right\rvert\,$ | $\begin{gathered} 5-2-21 \\ 5-21 \end{gathered}$ | $\underset{2,689}{2,596}$ | 100 | 1,019 | $\begin{array}{r} 1,044 \\ 951 \end{array}$ | 2,063 | 1,601 | ${ }_{187}^{176}$ | ${ }_{263,947}^{279,580}$ |
|  | Fremo |  |  |  |  |  |  |  |  |  |  |

Table 6.-Statistics of population and school enrollment, etc.-Continued.


[^78]a Bstimsted.
$b$ About 400 other pupils attend the Cortland
Normal School.

Table 6.-Statistics of population and school enrollment, etc.-Continued.


TAble 6.-Statistics of population and school enrollment, otic.-Continued.


TABLE 6.-Statistics of population and schoal enrollment, etc.-Continued.


Table 6.-Statistics of population and school enrollment, etc.-Continued.


Table 6.-Statistics of population and school enrollment, etc.-Continued.


Table 7.-Statistics of supervising officers, teachers, property, ctc., in schools of cities of over 8,000 inhabitants.


* Statistics of 1894-9.)
$\iota$ Value of apparatus; the building is private property.
a Value of sites and buildings.

Table 7.-Statistics of supervising officers, teachers, property, etc.-Continued.


[^79]Table 7.-Statistics of supervising officers, teachers, property, etc.-Continued.


Table 7.-Statistics of supervising officers, teachers, property, etc.-Continued.


[^80]TABLE 7.-Statistics of supervising officers, teachers, property, etc.-Continued.


* Statistics of 1894-85.
$a$ Including 31 hired buildings.

Table 7.-Statistics of supervising officers, teachers, property, etc.-Continued,


Table 7.-Statistics of supervising officers, teachers, property, etc.-Continued.


* Statistics of 1894-95.
a MI mual training, in the sense of paper folding, sewing, mat weaving, and the like, is given in the kindergarteus, of which nearly every public school has one. Manual training, in the form of paper folding and cutting, forms part of the drawing lessons in every grammar sebool from the first to the eighth grade. There is also shopwork in wood and typesetting in the colored L'Ouverture School in the sixth, seventh, and eighth grades.
$b$ Real estato only.

Table 7.-Statistics of supervising officers, teachers, property, etc.-Continued.


* Statistics of 1894-95.
a J. W. Barris, principal.
b A. Hall Burdick, principal.
$c$ And in truant school.
dThe Buffalo Free Kindergarten Association conducts 12 kindergartens with 15 teachers; the school department pays the salaries of six of the teachers.
e In special manual training schools of elementary grades.

Table 7.-Statisties of supereqising officers, teachers, property, etc.--Continized.


* Statistics of 1894-95.

Table 7.-Statistics of supervising officers, teachers, property, etc.-Continued.


[^81]$a$ Sewing is taught to girls from the third to the eighth year; there are six special schools of cooking for seven-year pupils.

Table 7.-Statistics of supervising officers, teachers, property, etc.-Continued.


Table 7.-Statistics of supervising officers, teachers, property, etc.-Continued.


* Statistics of 1894-95.

Table 8.-Statistics of receipts of public schools of cities of over 8,000 inhabitants.


Table 8.-Statistics of receipts of public schools of cities, etc.-Continued.


[^82]Thable 8.-Statistics of receipts of public schools of cities, etc.-Continued.

|  | City. | Receipts for the school year 1895-96. |  |  |  |  | Amount available for use during the year. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Stateap-portionment or taxes. | City ap-propriations or taxes. | County and other taxes | All other sources. | Total. |  |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 108 A | INDIANA. <br> Anderson* $\qquad$ | \$16,045 | \$39,414 | \$3,355 | \$550 | 8,59,364 | \$83, 364 |
| 109 B | Bloomington |  |  |  |  |  |  |
| 110 | Brazil .-....- | 14,357 |  |  | 4,291 | 18,648 | 34,448 |
| 111 C | Columbus --. |  |  |  |  |  |  |
| 112 | Crawfordsville | 8,385 |  |  | 0 | 31,709 | 35, 365 |
| 114 | Evansville | 8,385 |  |  |  | 143, 437 | 203, 670 |
| 115 | Fort Wayne |  |  |  |  | 102, 418 | 164, 788 |
| 116 | Frankfor't. | 6,643 |  | 19,873 | 920 | 27, 4.4 | 35,571 |
| 118 | Hammond | 8,093 | 11,597 | 6,694 | 0 | 96,384 | 26,384 |
| 119 | Huntington. |  |  | 6, | 8, (ing | 43, 017 | 46,721 |
| 1:20 | Indianapolis | 99, 632 | 362,471 | 41,380 | 14, 115 | 517,598 | 657, 668 |
| 121 | Jeffersonville |  |  |  |  | 35,149 | 62,154 |
| 122 | Kokomo La Fayet | 8,512 31,410 | 13,105 | 1, 31,919 | 12,523 | 63, 63,20 | 99,632 |
| 124 | Laporte | 12,359 | 2,923 | 11, 26 | 517 | 27, 05.2 | 44,381 |
| 125 | Loganspor | 48, 403 | 3,300 |  | 2,959 | 51, 66\% | 74,448 |
| 126 | Madison* | 15,213 | 1,873 | 0 | 0 | 17,086 | 17,086 |
| 127 | Marion ${ }^{\text {Michigan } \mathrm{City}}$ | 16,175 | 2,180 | 8,305 | 311 | 20,671 | - 38,6680 |
| 129 | Muncie | 15,927 | 18,023 | 25,614 | 0 | 59,564 | 100, 178 |
| 130 | Nev Albany | 18,940 |  | 7) | , | 46, 637 | 22,334 |
| 131 | Richmond | 19,35, | 46, 401 | 1,497 | , | 67, 313 | 110,341 |
| 132 | Shelby ville* | 8,903 | 6,395 |  |  | 15, 2, 18 | -20,494 |
| 134 | Terre Haute | 42,991 | 9,867 | 65,660 | 219 | 118, $7: 37$ | 146,319 |
| 135 | Vincennes | 10, 052 | 9,801 |  | 3,144 | 22, 997 | 27,84 |
| 136 | Wabash |  |  |  |  |  |  |
| 137 | Washington |  |  |  |  |  |  |
|  | row A. |  |  |  |  |  |  |
| 138 | Boone | 2,000 |  |  | 38,000 | 40, 001 | 411, 1000 |
| 139 | Burlington | 8,431 | (80, |  |  | 88,593 | 109,214 |
| 140 | Cedar Rapid | 8,332 | a 54,920 | 77,989 | $\begin{aligned} & 6 \times 2 \\ & 489 \end{aligned}$ | 87,103 67,293 | 104,191 |
| 142 | Council Bluffs | 8,850 | 87, 253 | ---7.9 | 16,848 | 112, 993 | 122,548 |
| 143 | Creston. | 2,694 |  | 25, 008 | 10,87\% | 29,27 | 38, 1053 |
| 144 | Davenport. | 11,489 |  | 81,918 | \%,1\%3 | 100, 580 | 118,522 |
| 145 | Des Moines: | 8,794 | 58,723 | 0 | 549 | 68,0 Ofic | 94, 112 |
| 146 | North Side | 8,704 | 5,123 |  | 54. | 81, Of: | 50,000 |
| 147 | West Side. | 11,712 |  | 134,330 | 11,508 | 157, min | 197,607 |
| 148 | Dubuque | 12, 183 | 89,875 |  | 112 | 102, 10.2 | 102, 229 |
| 150 | Fort Marlison |  |  |  | 173 | 20), 51 | 58,599 |
| 151 | Iowa (ity | 5,003 | 29, 642 | 17,0 | 10 | 34.645 | 34.645 |
| ${ }_{153}^{152}$ | Karshallow | 5,54\%) | 61-6\% | 44,808 | 107 | 50,415 | \%4.184 |
| $15 \pm$ | Muscatine* | 6,298 | а 38, $76 \%$ |  | 1,280 | 46, 34, | 46.345 |
| 150 | Oskaloosa | 2,008 | 26, (0) | 0 | 1,0 | 28,0148 | 28,008 |
| 157 | Ottumwa | 15,660 | 143,383 |  | 3,3,3 | 162,399 | 223,676 |
| 158 | Waterloo: East Side |  |  |  |  |  |  |
| 158 | West Side | 1,216 |  | 13,981 | 194 | 15. 471 | 18,761 |
|  | kansas. |  |  |  |  |  |  |
| 160 | A Arkansas City. |  |  |  | 2,360 | 24.874 | 24,874 |
| 161 | 1 Atchison... | 3. 90.5 | , 0 | 25, 889 | 1,110 | 311.934 | 41,960 |
|  | 3 Emproria* | $2.78 \%$ | 21, f6\% |  |  | 94, 601 | 26,243 |
| 116 | 3 ) Fort Sicott | 4. 1000 | 21, 723 |  | 1,4(6) | 27. 123 | 34,841 24.718 |
| 18.5 | 5) Kanas City | 11,.51 | 77, 27 | 22,179 |  | 94, $\mathrm{m}^{2}$ | 94, ¢12 |
| $1{ }^{168}$ | Sif Lawrance..... | 3.2in | 27, |  | 1, 人5:3 | 33, 033 | 34,028 |
| 167 | Learmithorth* |  | 34, 9 |  |  | 4, 3 ,388 | 7,1,108 |
| 169 | 69 Par cons |  | 18,183) | (1) |  |  |  |
| 170 | 19 Pitt-i,urg | 2, | (2), |  | 29 | 20.031 | 37,204 |
| 111 | 1 Tounhit | 9, | -2, |  | 2.\%il | 101.349 | 119,154 |
| 172 | ! Wichita | 19,670 | 42, 52\% |  | \%, 2 \% | 49, 2013 | 49,810 |

Table 8.-Statistics of receipts of public schools of cities, etc.-Continued.


TABLe 8.-Statistics of receipts of public schools of cities, ctc.-Continued.


Table 8.-Statistics of receipts of public schools of citics, etc.-Continued.


Table 8.-Statistics of receipts of public schools of cities, etc.-Continued.

|  | City. | Receipts for the school vear 1895-96. |  |  |  |  | Amount <br> availa- <br> ble for <br> use dur- <br> ing the <br> ing the <br> year. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | State ap-portionment or taxes. taxes. | City ap-propriataxes. | $\begin{aligned} & \text { County } \\ & \text { and } \end{aligned}$ other taxes. | All other sources. | Total. |  |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 354 | NEW YORK. <br> Albany | \$44, 510 | \$192,431 | 0 | \$8,175 | \$245, 116 | \$349,879 |
| 355 | Amsterda |  | 72,52220,058101,500$2,570,213$980,62938,54518,60311,00028,194 | 0000 | $\begin{array}{r} 8,203 \\ 2,51 \\ 1,795 \\ 48,544 \end{array}$ |  |  |
| 356 | Auburn | $\begin{array}{r}15,596 \\ 6,458 \\ 2,502 \\ 421,998 \\ 136,243 \\ 12,173 \\ 1,375 \\ 4,279 \\ 6,900 \\ \hline\end{array}$ |  |  |  |  |  |
| ${ }_{358}^{357}$ | Batavia |  |  |  |  |  |  |
| 359 | Brooklyn |  |  |  |  |  |  |
| ${ }_{361}^{360}$ | Buffalo. |  |  | $\begin{array}{r} 0 \\ 0 \\ \$ 498 \\ 0 \end{array}$ | $\begin{gathered} \mathbf{o}^{0} \\ 503 \\ 0 \\ 924 \end{gathered}$ |  |  |
|  | Corning |  |  |  |  |  |  |
| $363$ | Cortland |  |  |  |  |  |  |
| 364 | Dunkirk ... <br> Edgewater: |  |  |  |  |  |  |
| 366 | Tompkinsv | 3,48220,4025,4407,6924,7478,5967,3995,839,8816,0716,2025,302 | $\begin{aligned} & 23,900 \\ & 68,850 \end{aligned}$ | --..-- | 5,455 |  | 142,888 |
| ${ }_{367}$ | Stapleton* |  |  |  |  | 32,899 <br> 90,201 <br> 30,059 |  |
| ${ }_{369}^{368}$ | Flumira |  |  |  |  |  |  |
| 370 | Genera |  | $\begin{gathered} 08,800 \\ 28,566 \\ 24,818 \\ 10,182 \end{gathered}$ | 0 | 1,5421,575 | ${ }_{25,785}^{32,845}$ | ${ }_{26,911}^{75,561}$ |
| 371 | Glens Falls |  | 19,463 <br> 15 <br> 1025 |  |  |  |  |
|  | Gloversvi |  | 30,216 | 0 | - ${ }_{2}^{4,079}$ | 47,700 40,310 | 65,450 41.043 |
| ${ }_{374}^{373}$ | Horneson*.. |  |  |  | ${ }_{8,756}^{4,873}$ | 17,05639,260 | -2, 41,564 |
| 375 | Ithaca. |  | - 25,697 | 0 |  |  |  |
| 376 <br> 377 | Jamestown |  | 23,418 | 0 0 0 | $\begin{aligned} & 8,216 \\ & 3,267 \end{aligned}$ | $\begin{aligned} & 72,38 \\ & 32,187 \\ & \end{aligned}$ | 159,793 32,187 |
|  | Kingston: | 7,016 | 25,000 | 0 | 2,615 | 34,631 | 41,684 |
|  | District No. |  | 10,000 |  |  |  |  |
|  | District N | 1.200 |  |  |  |  |  |
|  | Lansingburg | $\begin{array}{r} 8,408 \\ 3,630 \\ 11,934 \end{array}$ | 31,46519,025 |  |  |  |  |
| 383 | Little Falls |  |  | 0 | 2,734 |  |  |
| 析 | Lockport |  | 35,000 99,302 |  |  |  |  |
|  | Midalletown | $8,8,23$ | $\begin{aligned} & 26,45 \\ & 56,729 \\ & 56 \end{aligned}$ | 0 | $\begin{gathered} 40,047 \\ 1,047 \\ 6,251 \end{gathered}$ | $\begin{array}{r} 139,349 \\ 35,695 \\ 63,465 \end{array}$ | - 1118,908 |
| 387 | Mount Verno |  |  |  |  |  | 143,288 |
|  | Newburg | $\begin{array}{r} 18,566 \\ 7,886 \\ 718,647 \\ 7,674 \\ 8,720 \end{array}$ | $\begin{array}{r} 62,660 \\ c 52,878 \\ 4,550,334 \\ 41,516 \\ 28,018 \end{array}$ | $-\cdots$0000164 | $\begin{array}{r} 3,628 \\ 378 \\ 1,000 \\ 1,824 \\ 18 \end{array}$ | $\begin{array}{r} 79,854 \\ 61,142 \\ 5,339,981 \\ 51,014 \\ 34,902 \end{array}$ |  |
|  | New Rochel |  |  |  |  |  |  |
|  | Niagara Fail |  |  |  |  |  |  |
|  | North Tona |  |  |  |  |  |  |
|  | Ogdensbtrg |  |  |  |  |  |  |
| 396 | Oswego | 12,988 | 34,400 | 0 | 813 | 48,201 | 53,588 |
| ${ }^{397}$ | Peekskill ${ }^{\text {District }}$ | 2,309 | 11,855 | 0 | 321 | 14,485 | 14,494 |
|  | District |  |  |  |  | 20,000 |  |
| 399 | Plattsburg |  |  | --.--------- |  |  |  |
| 400 | Port Jervis | 12,580 |  | 0 |  | 38, 3607 | 37,97575,418890,557 |
| 402 | Rochester |  |  |  | 1,329 | 924, 965 |  |
| 403 | 3 Rome ... |  | 83,1202045,025 |  |  | ${ }_{5}^{32,973}$ |  |
| 40 | Saratoga | 9,658 |  |  | ¢ | 53,402 48,683 |  |
| 206 | Sing Sing |  | 32,000 18,528 |  |  |  | $4,4,663$ 28,474 |
|  | ${ }^{\text {a }}$, syracuse. | 49,8845,308 | 282,446$2 \%, 004$102 |  | 9,883 | 342,21328,791 | 560,08880,865 |
| 8 | 8 Tonawand |  |  | 0 |  |  |  |
| 9 | 9 Troy | 28, 281028,37812,288 | $\begin{aligned} & 120,111 \\ & 105,500 \\ & 40,000 \\ & 40 \end{aligned}$ |  | $\begin{aligned} & 1,956 \\ & \mathbf{8}, 381 \\ & \hline 968 \\ & \hline 08 \end{aligned}$ | $\begin{aligned} & 150,977 \\ & \hline 85, ~ \\ & \hline, 259 \\ & 50,295 \end{aligned}$ |  |
| 1 | Urica |  |  |  |  |  |  |
| 412 | Watervli |  |  | ( |  |  |  |
| 413 | 3 Woodhaven | B,078 | 17, 624 |  |  | 23,702 |  |
| 414 | 4 Yonkers .... |  |  |  |  |  |  |
|  | norte carolima. |  | $\begin{array}{r} 10,500 \\ 7,500 \end{array}$ | 4,500 |  |  |  |
| 415 | 5 Asherille | d6,000 |  |  | 0 | $\begin{aligned} & 15,000 \\ & 14,100 \end{aligned}$ | 15,000 |
| 417 | 7 Newbern. |  |  |  |  |  |  |
| 418 | 8 Raleiph |  |  | -.......... |  |  |  |
|  | 9 Wilmingt | 4,000 | 18,000 |  | --.......- | 20,000 | 20,000 |
| 420 | 1 Winston. |  |  |  |  |  |  |

* Statistics of 1891-95.
aJ. W. Barris, principal
bA. Hall Bardicte, principal.

Table 8.-Statistics of receipts of public schools of cities, etc.-Continued.

*Statistics of 1894-95.

Table 8.-Statistics of receipts of pablic schools of cities, etc.-Continued.


- Statistics of 1804-05.
$a$ Includes receipts from county taxes.

Table 8.-Statistics of receipts of public schools of cities, etc.-Contintued.


Table 9.-Statistics of expenditures of public schools of cities of over 8,000 inhabitants.

*Statistics of 1894-95. a The accounts of evening schools are not kept separate.

Table 9.-Statistics of expenditures of public schools of cities, etc.-Continued.


* Statistics of 1894-85. $\quad a$ The accounts of the evening schools are not kept separate.

Table 9.-Statistics of expenditures of public schools of cities, etc.-Continued.


* Statistics of $109+55$.

TARLE 9.-Statistics of expenditures of public schools of cities, etc.-Continued.

*Statistics of 1891-95. a The accounts of evening schools are not kept separate. $b$ Included in the other items reported.

Table 9.-Statistics of expenditures of public schools of cities, etc.-Continued.


Table 9.-Statistics of expenditures of public schools of cities, etc.-Continued.


Table 9.-Statistics of expenditures of public schools of cities, etc.-Continued.

|  | City. | Expenditure for the school year 1890-96. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \text { Perma. } \\ & \text { nent in. } \\ & \text { vestments } \\ & \text { and lasting } \\ & \text { improve. } \\ & \text { ments. } \end{aligned}$ | Teaching and suner vision. | Current dental expenses. | Evening schools. | Total. |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | NEW JERSEY--continued |  |  |  |  |  |
| 349 | Phillipsburg | \$9,206 | 819,498 | \$13,430 |  | 342,134 |
| 351 | Plainfield | 7,3:9 | 16,531 | 18,677 | 0 | 61, 337 |
| 352 | Town of Union* |  | 20,339 | 11,362 | 6637 | 33, 338 |
| 353 | Trenton....... | 10, $3 \times$ | 91,671 | 31, 6 ¢ít | 3,315 | 139,974 |
|  | NEW YORK. |  |  |  |  |  |
| 354 | Albany | 8,394 | 187, 598 | 59, 183 | 1,408 | 256,483 |
| 355 <br> 356 | Amsterd | 34,218 | 54,211 | 1+6, 61 |  | 113.153 |
| 357 | Batavia | 1,734 | 14,633 | 9,344 | 0 | 2, 2,710 |
| 358 | Binghamton | 15, 958 | 76, 580 | 21,3415 | ${ }^{0}$ | 113, 884 |
| 359 | Brooklyn | 843, 894 | 2,244,648 | 519, 208 | 13,359 | 3,621. 199 |
| 360 | Buffalo | 436, 212 | 685, 204 | 169, | 13,827 | 1,314, 952 |
| ${ }_{362}$ | Corning | 28,390 | 16,659 | 7,169 | 0 | \%2, 218 |
| 363 | Cortland | 2,308 | 10,352 | 2,482 | 0 | 15, $1+2$ |
| 364 | Dunkirk | 30,942 | 22, 657 | 9,591 | 0 | 6 3 , 190 |
| 365 | Edgewater: <br> Rosebank |  |  |  |  |  |
| 366 | Tompkinsvilie ${ }^{\text {a }}$ |  | 6,452 |  |  | 11,013 |
| 367 | Stapleton $b$ | 59, 845 | 17,860 |  |  | 193,347 |
| 368 | Elmira-- | 42, 105 | 64, 453 | 22, 969 | 0 | 129,597 |
| 369 | Flushing | 4,290 | 17,092 | 8,743 | 0 | 30, 12.5 |
| 370 371 | Geneva- | 23, 764 | 19,409 | ${ }^{6}$, | 0 | 49. ${ }^{49}$, 461 |
| 372 | Gloversville | 15,93 | 29,891 | 4 9, 15 | 0 | 54, 946 |
| 373 | Hornellsville | 1,100 | 23,045 | 8,3713 | 0 | 3.2. 458 |
| 374 | Hudson* |  | 13,125 | 8 8,928 |  | 22, 113 |
| 375 | Ithaca ..... | 6,015 | 23, 191 | 7, | 0 | 39, 113 |
| 377 | Johnstown | 30.106 | 16, $2 \pm 1$ | \%,5en | 0 | 26,886 |
|  | Kingston: |  |  |  |  |  |
| 378 <br> 379 <br> 8 | Kinston scho | 4,558 | $\begin{aligned} & 24,143 \\ & 12,425 \end{aligned}$ | 12,983 | 0 | $\begin{aligned} & \text { 41. } 688 \\ & 19.5 \times 9 \end{aligned}$ |
| 380 | District No. 3 |  |  |  |  |  |
| 381 | District No. 4 |  | 4,400 |  |  | 5. 110 |
| 382 383 | Lansingburg |  | 24,285 | 9, 9 , 6 80) | 0 0 | $\stackrel{3+2.29}{27}$ |
| 384 | Lockport -. | 12.29\% | 138, $1: 14$ | 10. 10.6 | ${ }_{0}$ |  |
| 385 | Long Island City | 11, 764 | 83, 59\% | 28, +46 | 1,273 | 1\%..159 |
| ${ }^{336}$ | Midaletown. | 8 8, 619 | 22, 348 | 11,130 |  | 42.145 |
| 387 | Mount Vernon (District No.5) | 31, 194 | 46, 519 | 矿, (x) | 0 | 110.713 |
| 389 | Newbrig |  |  |  |  |  |
| 390 | New Rocheile | $\begin{aligned} & \text { B. } 49.921 \\ & i, 961 \end{aligned}$ | 53, 369 | 320.717 <br> 17.15: | 0 | 59.614 |
| 391 | New York | 2,215,506 | 3 , 6ill (1)10 | 1, 143.886 | 175, $\sin \left(\sin ^{2}\right.$ | 7,0136. $1 \times 1$ |
| 392 | Niagara Falis.- | 4,479 | 28, 460 | 12, 610 |  | 45. 9714 |
| 393 | North Tonawanda | 0 | 20,753 |  | 0 | 35.619 |
| 394 | Ogdensluurg. |  |  |  |  |  |
| ${ }^{393}$ | Orean |  |  |  |  |  |
| 396 | Oswe | 11, 198 | 33, 683 | 8. 116 | 0 | 53,593 |
| 397 | District No | 1,45:2 | 8,34i | 4,08' | 0 | 13,88: |
| 398 | Platsistrict No.8 |  |  |  |  | 5, 585 |
| 400 | Port Jervis | 1,291 | 211, $1(1)$ | 8, 18 \% | 0 | 30. 718 |
| 401 | Poughkeepsie* |  | 37, 1(1) | 16.3.318 |  | 53, 417 |
| 402 | Rochester | 94,577 | 477, (685) | 137, 19\% |  | 714, ${ }^{2} 83$ |
| 403 | Rome. | 6,181 | 20, 13 | 5, 839 |  | 32.313 |
| 404 | Saratoga Spr | 2,6188 | 29, 148 | 10.2x) | 0 | ${ }_{43} 683$ |
| $\stackrel{4}{406}$ | Sing Sing... | 1,088 | 13, 108 | \%, \%\% | 0 | 21.958 |
| 407 | Syracuse | 28,439 | 213, 6922 | 101, 136 |  | 313,267 |
| 408 | Tonawanda | 1,823 | 17,918 | $8.10{ }^{8}$ |  | 27,848 |
| 409 | Troy | 5,932 | 120, 623 | 24,418 |  | 120,982 |
| 410 | Utica | 47,868 | 9,3,4.3 | 31.301 | 1, 418 | \% 7 , 646 |

* Statistics of 189495.
${ }^{\text {1 }}$ A. Hall Burdick, principal
$a J . W$. Barris, principal. $c$ The accounts of evening schools are not kept separate,

Table 9.--Statistics of expenditures of public schools of cities, etc.-Continued.


* Statistics of 1894-85. a The accounts of evening schools are not kept separate.

Table 9.-Statistics of expenditures of public schools of cities, etc.-Continued.

|  | City. | Expenditure for the school year 1895-96. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Permanent investments and lasting improvements. | Teaching and supervision. | Current and incidental expenses. | Evening schools. | Total. |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | PENNSYLVANIA. |  |  |  |  |  |
| 471 | Allegheny | \$179,996 | \$218,988 | \$100, 856 | \$3,531 | \$503, 371 |
| 472 | Allentown | 15,698 | 49, 811 | 38,206 | 563 | 104,278 |
| 473 | Altoona | 12,839 | 60,505 | 29,665 | 0 | 103, 009 |
| 474 | Beaver Falls* | 3,714 | 16,584 | 9,454 | 0 | 29,752 |
| $4{ }^{4} 5$ | Braddock | 251 | 20,090 | 11, 637 | 0 | 31,978 |
| 476 | Bradford* | 18,813 | 26,468 | 14,547 |  | 59, 828 |
| 477 | Butler | 35,740 | 18, 901 | 7,694 | 0 | 62, 335 |
| 478 | Carbondale | 3,091 | 16,583 | 9,833 | 0 | 29,507 |
| 479 | Carlisle. | 2,505 | 13,549 | 4,467 | 0 | 20, 521 |
| 480 | Chambersburg | 1,500 | 14,000 | 6, 990 | 0 | 22, 490 |
| 481 | Chester--- | 25,598 | 41,821 | 17, 661 | 0 | 85, 180 |
| 482 | Columbia* | 6,160 | 15,095 | 12,677 | 0 | 33, 932 |
| 483 | Du Bois-- |  | 9,614 |  |  | 18,543 |
| 484 | Dunmore. | 43,789 | 13,730 | 5,281 19 19 | 480 | 24,280 |
| 485 | Easton... | 13,118 | 40,331 | 19,372 | 985 | 72, 821 |
| 486 487 | Erie Harrisburg | 71, 15.60 | 77,310 86,087 | 38,037 29,961 | 985 0 | 187, 5882 |
| 4878 | Harrisburg | 15,615 49,981 | 86,087 23,404 | 29,961 11,896 | 0 | $\begin{array}{r}131,663 \\ 85 \\ \hline 81\end{array}$ |
| 489 | Homestead* | 42,000 | 17,011 | 9,800 | 0 | 68,811 |
| 490 | Johnstown* |  | -39,958 |  |  | 120,916 |
| 491 | Lancaster... | 51,165 | * 52,190 |  | (a) | 132, 366 |
| 492 | Lebanon.. | 8,624 | 20,369 | 8,640 | 8 | 37, 633 |
| 493 | Lock Haven | 2,500 | 11,700 | 8,500 | 0 | 22, 700 |
| 494 | McKeesport | 5,649 | 50,647 | 25, 486 | ${ }_{0}^{0}$ | 81, 782 |
| 495 | Mahanoy City | 4,674 | ${ }_{23}^{18,741}$ | 5,827 <br> 7,53 <br> 18 | 200 0 | 24.468 <br> 35 <br> 888 |
| 497 | Mount Carmel | 2,828 | 13,285 | 15, 688 | 240 | 32,041 |
| 498 | Nanticoke* | 1,276 | 15, 300 | 10, 441 | 600 | 27,617 |
| 499 | New Brighton |  | 16,000 |  |  | 20,000 |
| 500 | Newcastle* | 11,284 | 38,050 | 13,067 |  | 62,401 |
| 501 | Norristown | 4,698 | 36,564 | 10, 692 | 0 | 51,956 |
| 502 | Oil City* | 1,000 | 22,476 | 15, 557 |  | 39,033 |
| 503 | Philadelphia | 799,509 | 2,161, 689 | 1,004.373 | (a) | 3, 965, 571 |
| 504 | Phøenixville | 84 | 12,572 | 7,018 | 0 | 19,674 |
| 505 | Pittsburg | 392, 878 | 530, 118 | 268, 613 | 0 | 1, 191, 609 |
| 506 | Pittston* | 8,850 | 12,143 | 5, 805 | 300 | 2T, 198 |
| 507 | Plymouth | 701 | 14,224 | 5, 231 | 434 | 20, 990 |
| 508 | Pottstown- | 1,589 | 28,682 | 8,015 | 0 | 38,286 |
| 509 | Pottsville* |  | 26,215 |  |  | 67,611 |
| 511 | Reading | 186, 12805 | 98,480 129,408 | 55, 531 | 1,240 | 278,934 379,139 |
| 512 | Shamokin | 180,435 | 129,408 28,443 | 56, 13.160 | 6, 372 | 379.139 46,810 |
| 513 | Shenandoah | 17,713 | 31,673 | 12. 057 | 1,642 | 63. 1185 |
| 514 | South Bethlehem* |  | 22,198 |  |  | 46, 1023 |
| 515 | South Chester | 3, 666 | 14,033 | 9,448 | 0 | 27,167 |
| 516 | Steelton- | 858 | 20,331 | 6,943 | 0 | 28,132 |
| 517 | Sunbury |  | 17,546 |  |  | 34,226 |
| 518 | Titusvills | 1.528 | 20). 068 | 8,970 | 0 | 30, 584 |
| 519 | Uniontown | 2,240 | 13. 369 | 4, 9:3 | 0 | 20, 738 |
| 520 | West Chester | 15, 296 | 18,3(2) | 9. 231 | 0 | 42. 899 |
| 521 | Wilkesharre | 49,780 | -81.791 | 26.137 | (a) | 157. 748 |
| 522 | Williamsport |  | * 51,232 | *24.340 |  | 82.567 |
| 523 | York ...... | 51,071 | 31,456 | 16,109 | 0 | 98, 636 |
|  | RHODE ISLAND. |  |  |  |  |  |
| 524 | Central Falls. |  | 26,817 | 10,052 | 647 | 37.516 |
| 525 | Cranston |  | 21,209 |  |  | 32, 691 |
| 526 | Cumberland |  | 17,350 |  |  | $2 \times .698$ |
| 527 | East Providence* | 2,949 | 22,423 | 9,830 | 25 | 35, 277 |
| 528 | Johnston - |  | 24,567 | 8,814 | 1,024 | 34.405 |
| 529 | Newport |  | 53,349 | 24, 711 | 1, 154 | 79, 774 |
| 530 | Pawtucket | 92, 231 | 77, 586 | 33,280 | 3. 798 | 24*, 915 |
| 531 | Providence | 287,529 | 381,397 | 159,690 | 30.317 | 858, 933 |
| 532 | Woonsocket. | 3,963 | 37, 966 | 12,545 | 2,267 | 56, 740 |
|  | SOUTH CAROLINA. |  |  |  |  |  |
| 533 | Charleston | 3,750 | 58,534 | 4,808 | 0 | 67.182 |
| 534 | Columbia . | 1.011 | 12,204 | 2.439 | 0 | 15,654 |

Table 9.-Statistics of expenditures of public schools of cities, etc.-Continued.


* Statistics of 1894-95.

Table 9.—Statistics of expenditures of public schools of cities, ctc.-Continued.

a The cost of new buildings does not appear in the accounts of the school board.

Table 10.-School statistics of cities and villages containing between 4,000 and 8,000 inhabitants.


Table 10.-School statistics of cities and villages containing between 4,000 and 8,000 inhabitants-Continued.









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| ※® | cosocis | Critoceran | A crercor |  | 0s： $\operatorname{crcosacractat}$ |
| 5 8 8 |  |  |  |  |  |


| 100，000 | 9，681 | 11，906 |
| :---: | :---: | :---: |
| 35，000 | 7，995 | 11，641 |
| 80，000 | 14，957 | 19，972 |
| 46，300 | 8，198 | 10，707 |
| 300，000 | 47， 799 | 70，811 |
| 46，000 | 10，360 | 12，678 |
| 55， 000 | 12，959 | 18，886 |
| 27，000 | 11，000 | 13， 180 |
| 30，000 | 7，400 | 9，600 |
| 51， 000 | 10，000 | 13， 000 |
| 31，000 | 10，650 | 15，315 |
| 45，500 | 11， 398 | 13， 096 |
| 60，300 | 10，535 | 13，189 |
| 60，000 | 10，109 | 15， 074 |
| 27，500 |  |  |
| 70，000 | 10，257 |  |
| 40，000 | 10， 395 | 12，895 |
| 50，000 | 8，515 |  |
| 77，500 | 10，440 | 13， 638 |
| 70，000 | 12，000 | 19， 327 |
| 50，000 | 10，510 | ，11， 550 |
| 75，000 | 11，000 | 13，500 |
| 100，000 | 10，000 | 21，000 |
| 50，000 | 10，533 | 13， 650 |
| 100，000 | 14，000 | 27，000 |
| 42，000 | 9，300 | 11，900 |
| 47，000 | 7，040 | 10，500 |
| 45， 000 | 14，500 | 15，500 |
| 90， 000 | 14， 206 | 17，542 |
| 75，000 | 14，980 | 18， 379 |
| 125，000 | 8，732 | 11，000 |
| 100，000 | 12，280 | 13，350 |
| 39，412 | 9，423 | 12，808 |
| 33， 000 | 10，127 | 11，627 |
| 35，000 | 8，350 | 10，500 |
| 30，000 | 7，511 | 8，000 |
| 20，000 | 10，147 | 12，757 |
| 31，000 | 8，258 | 11，283 |

Table 10.-School statistics of cities and villages cantaining between 4,000 and 8,000 inhabitants-Continued.


| 109 | Wasthampton.. |
| :---: | :---: |
| 103 | Easton -........ |
| 104 | Franklin* |
| 105 | Grafton. |
| 106 | Greenfield |
| 107 | Hingham |
| 108 | Hopkinton |
| 109 | Marblehead |
| 110 | Methuen. |
| 111 | Middleboro |
| 112 | Milton |
| 118 | Millbury |
| 114 | North Attleb |
| 115 | Northbridge. |
| 116 | Orange..... |
| 117 | Palmer |
| 118 | Provincetown |
| 119 | Reading |
| 120 | Rockpoit |
| 121 | Saugus. |
| 129 | South Hadley |
| 123 | Stoneham |
| 124 | Ware |
| 125 | Warren* |
| 128 | Watertown |
| 127 | Webster |
| 128 | Wellesley |
| 129 | Westboro |
| 130 | West Springfleld |
|  | Winchendon. |
|  | MICHIGAN. |
| 132 | Albion |
| 133 | Ausable |
| 134 | Benton Harbor |
| 135 | Big Rapids.. |
| 136 | Cadillac* |
| 137 | Charlotte |
| 138 | Coldwater |
| 139 | Hillsiale. |
| 140 | Ionia* |
| 141 | Monroe |
| 142 | Mount Clem |
| 143 | Negaunee. |
| 144 | Niles..... |
| 145 | Pontiac |
| 146 | St. Joseph |
| 117 | Wyandotte |
| 148 | Ypsilanti. |

Table 10．－School statistics of cities and villages containing between 4，000 and 8，000 inhabitants－Continued．

|  | 年 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\cdots$ |  |
|  <br>  | $\infty$ 8 8 |  | 9 | Population in 1895 （esti－ mated）． |
|  T్రీ | $\begin{aligned} & 2 \times 1 \\ & 20 \end{aligned}$ | eri prerexerop <br> Ninginnoxis | $\omega$ |  |
|  | $$ |  | $\stackrel{\wedge}{ }$ | Children of school census age． |
|  | 客 |  | $e r$ | Pupils in private and parochial schools． |
|  <br>  | \& |  | $\bullet$ | Male． |
|  <br>  | N | 留: | 4 | Female． |
|  <br>  | 宸 |  | $\infty$ | Total． |
|  | － | \％6\％ | $\cdots$ | Number of days the pub－ lic schools were actu－ ally in session． |
|  <br>  ， | 88 808 80 |  | － | Aggregate number of days＇attendance of all pupils． |
|  <br>  | 䍒 |  | 気 | Average daily attend－ ance． |
|  | No |  | $\frac{15}{9}$ | Supervising offlcers． |
|  | $\cdots$ | －wnernes！ | ${ }_{6}^{6}$ | Male． |
|  | 年 |  | $\stackrel{\text { ® }}{ }$ | Female． |
|  | Er |  | $\underset{\sim}{6}$ | Total． |
|  | $\omega$ | werereroso！ | ${ }^{-0}$ | Buildings used fer school purposes． |
|  <br>  <br> 合N <br> 오요 <br> ल | E |  | $\stackrel{4}{4}$ | Seats or sittings for study in all public schools． |
| KW Kity <br>  | $\begin{array}{r} 3 \\ 8 \\ 8 \end{array}$ | \＄noys <br>  | 安 | Value of public prop． erty used for school purposes． |
| $\rightarrow$－ <br>  <br>  | － |  | ${ }_{6}$ | Salaries of teachers and supervising officers． |
| 耳 | \％ |  웅웅유얄얀 రరర్ర $0^{\circ}$ | $\stackrel{2}{2}$ | Total expenditure． |


| CITY SCHOOL SYSTEMS． |  |  |  |  |
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TABLe 10.-School statistics of cities and villages containing between 4,000 and 8,000 inhabitants-Continued.

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* Statistics of 1894-95.

Table 10.-School statistics of cities and villages containing between 4,000 and 8,000 inhabitants-Continued.



## CHAPTER XXXVII.

STATISTICS OF SECONDARY SCHOOLS.

For the scholastic year ending June, 1896, there were 559,003 students receiving secondary instruction in institutions reporting to the Bureau of Education. This was an increase of 19,291 over the number reported for the year ending June, 1895. The number of students pursuing secondary studies in the elementary schools and not reported separately probably does not exceed 50,000. A fair estimate of the total number of secondary students in the United States would be 600,000. The 559,003 secondary students reported for 1896 were distributed among oight classes of institutions, as follows:


The above table does not take into account students of secondary grade in busiress colleges. The total namber of stadents reported by 398 business colleges was 80,662 , and of these 37,630 were in regular commercial courses and may be regarded as secondary students. These added to the total of the above table would swell the total number of secondary students reported to 596,633 .

The purpose of this chapter is to review the statistics of public and private high schools, these two classes of institutions having nearly seven-eighths of all the secondary students in the United States.

The following table shows the growth of parblic and private high schools for the past seven years:

| Year reported. | Public. |  |  | Private. |  |  | Total. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
| 1889-90. | 2,528 | 9,120 | 202, 863 | 1,632 | 7,209 | 94,981 | 4,158 | 16,329 | 297,894 |
| 1890-91 | 2,771 | 8,270 | 211,596 | 1,714 | 6,231 | 98, 400 | 4,485 | 14,501 | 309,998 |
| 1891-93\% | 3,085 | 8,584 | 289,558 | 1,250 | 7,093 | 100, 739 | 4,585 | 16,657 | 340,295 |
| 188 | 2,812 | 8888 | 292,951 | 1, 434 | 6,261 | 96,147 | 4,216 | 15, 750 | 329,098 |
| 1883 | 3,964 | 12, 120 | 289,274 | 1,982 | 8,009 | 118, 645 | 5,946 | 20,129 | 407,019 |
| 1894 | 4, 712 | 14, 122 | 350,099 | 2,180 | 8,559 | 118,347 | 6,892 | 22,681 | 488,446 |
| 1895-96. | 4,974 | 15,700 | 380, 483 | 2,106 | 8,752 | 108,654 | 7,080 | 24,452 | 487, 147 |

The increase in the total number of secondary students in seven years has been nearly 64 per cent, the increase in the number of public secondary students being 87 per cent, while the private secondary stadents inereased only 12 per cent.

The relative progress of public and private high schools for the past seven years
is graphically illustrated by the diagram on the next page. The private schools reached their highest enrollment in 1893-94, when they had 118,645 students. Since then the number has decreased nearly 12,000 . The statistics for 1892-93 were incomplete, but the number of public secondary students for that year is estimated at 260,000 and the number of private secondary students at 103,000.

The following table of percentages shows the proportion of students in public bigh schools as compared with private high schools for each year since 1890:

Proportion of secondary schools, teachers, and students for seven years.

| Year reported. | Per cent of num ber of schools. |  | Per cent of num ber of teachers. |  | Per cent of num ber of students. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Public. | Private. | Public. | Private. | Public. | Private. |
| 1889-90 | 60.75 | 39.25 | 55.85 | 44.15 | 68.13 | 31.87 |
| 1890-91 | ${ }^{61.78}$ | 38.22 | 57.03 | 42. 97 | 68. 26.26 | ${ }_{29}^{31.74}$ |
| 1891-92 | 66.19 66.23 | 33.81 33 | 57.42 60.25 | 39.75 | 70.78 | 29.22 |
| 1893-94 | 66. 67 | ${ }_{33} 33$ | 61.21 | 39.79 | 70.91 | 29.09 |
| 1894-95 | ${ }^{68.37}$ | 31.63 29.75 | 62.26 64.21 | ${ }_{35.79}^{37.74}$ | 74.74 78.11 | ${ }_{21}^{25.89}$ |
| 1895-96 | 70.25 | 29.75 | 64.21 | 30.79 |  |  |

In 1890 the public high schools comprised less than 61 per cent of the number of secondary schools, while in 1896 they had increased to over 70 per cent. In 1890 the puiblic high schools had nearly 56 per cent of the teachers, while in 1896 they had over 64 per cent. In 1890 the public high schools had 68 per cent of the secondary students, and in 1896 they had 78 per cent.

## Public High Schools.

It is found convenient to examine separately the statistics of public high schools and private high schools and academies and finally to combine the results in a statistical review of secondary education.

In this chapter Tables 1 to 10, inclusive, are summaries of the statistics of public high schools, Tables 11 to 22 relate exclusively to private high schools and academies, while Tables 23 to 29 combine the statistics of public and private high schools. Tables 29 and 30 show the distribution of secondary students in the various classes of institutions.

The number of public high schools reporting to this office for the year ending June, 1896, was 4,974 , as may be seen from Table 1. Of the total number 1,814 were reported as independent high schools, and 3,160 as high school departments of city or village systems. Here was an increase of 262 public high schools over the number reported for the previous year.
The number of teachers employed in instructing secondary students in the public high schools was 15,700 , the number of men being 7,226 and the number of women 8,474. This does not include the teachers whose time was wholly employed in instructing pupils in elementary grades attached to many high schools.

The number of secondary students in the 4,974 schools was 380,493 , the number of boys being 157,942 , and the girls numbering 222,551 , or 58.49 per cent of the whole number. More than half the secondary students, or $195,6: 34$, were in the North Central Division, composed of 12 States. The North Atlantic Division, composed of 9 States, had 114, 731 , while the remaining 29 States and Territories included in the two Southern divisions and the Western Division had only 70,128 secondary students in public high schools.

In the public high schools of the North Atlantic, North Central, and Western divisions and in colored high schools of the two Southern divisions were 4, 008 colored secondary students.

The last column of Table 1 shows that there were 253,980 pupils receiving instruction in elementary departments attached to public high schools. These elementary pupils belonged largely to the independent high schools.

## STUDENTS AND COURSES OF STUDY.

Of the 380,493 secondary students in the public high schools, only 52,597 , or less than 14 per cent, were preparing for college. Table 2 shows that 29,222 were preparing for the college classical course and $23,3 \%$ for college scientific courses. The number of students preparing for college was 13.82 per cent of the whole

Number of Students in Public and Private High Schools, 1890 to 1896.

number of secondary students. The number of male students preparing for college was 16.60 per cent of the whole number of male students, while th $\theta$ number of female students preparing for college was 11.85 per cent of the whole number of female students. It appears that 8.96 per cent of the male students were preparing for the college classical course and 7.64 for college scientific courses, while 6.77 per cent of the female students were preparing for the college classical course and 5.08 per cent for the college scientific courses. These percentages and others showing the proportions of male and female students in certain studies are given in the following table:
students in certain courses and studies in public high schools.

| Courses, studies, etc | Number students. | Per cent to total number secondary students. | $\begin{aligned} & \text { Male } \\ & \text { students. } \end{aligned}$ | Per cent to number male dents. | Female students. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Students preparing for college: |  |  |  |  |  |  |
| Classical course <br> Scientific courses -- | $\stackrel{29,222}{23,375}$ | 7. 68 6.14 | $\begin{aligned} & 14,154 \\ & 12,072 \end{aligned}$ | \% <br> 7.64 <br> .96 | $\begin{aligned} & 15,068 \\ & 11,303 \end{aligned}$ | 8.18 |
| Total preparing for colle | 52, 597 | 13. 82 | 26, 226 | 16.60 | 26,371 | 11.85 |
| Graduating in 1896 | 45,864 | 19.05 | 16,498 | 10.45 | 29,366 | 13.20 |
| College preparatory students in | 13,4 | 29. 28 | 6, 182 | $37.4 \%$ | 7,246 | 24. 67 |
| Students in-- | 12, |  |  |  |  |  |
| Latin. | 1755, 7 | 46.18 | 69,092 | 43. 5 | 106, 623 | 4.91 |
| Greek | ${ }_{26,597}^{11,821}$ | 3.11 6.99 | 9,762 | 5. 4.4 | 17, 534 | 7.88 |
| German | 45, 670 | 12. 00 | 17, 165 | 10.87 | 28,505 | 12.81 |
| Algebra | 207, 912 | 54.64 | 88,668 | 56.14 | 119, 24.4 | ${ }_{26} 9.43$ |
| Geometry | 99, 816 | 26. 23 | 40,991 4,533 | 2.87 | 4,915 | 21 |
| Astronomy -.. | 16,7\%3 | 4.40 | 6,143 | 3.89 | 10,610 | 4. 77 |
| Physics | 84, 005 | 22.08 | 35, 303 | 22.35 | 48,699 | ${ }^{21.88}$ |
| Chemistry | ${ }^{34} 97,046$ | -8.95 | 14, ${ }^{14} 125$ | 9.033 | \%6, 046 | 25. 18 |
| Physical ge | - ${ }^{97} 18,174$ | 4.80 | $\underset{\tau}{7} 1 \times 8$ | 4.55 | 11,094 | 4.98 |
| Physiology | 121,517 | 31.94 | 51,266 | 32.46 | ${ }^{70,251}$ | ${ }_{3}^{31.57}$ |
| Psycholog | 123, 1133 | $\begin{array}{r}3.00 \\ 32.34 \\ \hline\end{array}$ | 4,105 48,886 | 30.95 30 | \%4, 777 | 33.33 |
| History (other than United States) | 134,236 | 35.28 | 54,337 | 34.40 | 79,899 | 35.90 |

Table 2 also shows that there were ${ }^{*} 45,864$ graduates from the public high schools for the year ending June, 1896. This was 12.05 per cent of the whole number of secondary students. The 16,498 male graduates are 10.45 per cent of the male students, and the 29,366 female graduates are 13.20 per cent of the female students, as shown in the above table.

The number of college preparatory students in the graduating classes for 1896 was 13,428 , or 29.28 per cent of the graduates. The above talle shows that $3 \pi .4 \pi$ per cent of the male graduates were college preparatory students, and $24.6 \pi$ per cent of the female graduates were college preparatory students.

Tables $3,4,5$, and 6 give the number of students pursuing each of the sixteen leading high-school studies in each State, while Tables 8 and 9 show the per cent of students in each study to the total number of students.

In 1895-96 in the public high schools of the United States 175, 115 stadents were studying Latin. This was 46.18 per cent of the whole number of secondary students. The 69,002 male students studying Latin were 43.7 .5 per cent of the whole number of male secondary students, and the 106,623 female students in Latin were 47.91 per cent of the whole number of female students.

By reference to the same tables it is found that 11,821 students. or 3.11 per cent of the whole number, were studying Greek; 26,597, or 6.99 per cent, were studying French; 4., $6 \pi 0$, or 12 per cent, were in German; 207,912, or 54.64 per cent, in algebra: 99,816 , or 26.23 per cent, in geometry; 9,448 , or 2.48 per cent, in trigonometry; 16,7.3, or 4.40 per cent, in astronomy; 84,005 , or 22.08 per cent, in physics; 34,046 , or 8.95 per cent, in chemistry; $9 \pi, 174$, or 25.54 per cent. in physical geography: $18,28,2$, or 4.80 per cent, in geology; 121,51\%, or 31.94 per cent, in physiology; 11.432, or ? per cent, in psychology: 123, 063 , or 32.34 per cent, in rhetoric; 134,236, or Thi. 2. per cent, in history other than United States history.

The precerling table, headed "Students in certain courses and studies," shows the per cent of male students in each study to the total number of male students and
the per cent of female students in each study to the total number of female stridents. It will be seen that the percentages of male students studying Greek, algebra, trigonometry, physics, chemistry, physical geography, amd physiology were larger than the percentages of female students in the same studies, while the female students had larger percentages in Latin, French, German, geometry, astronomy, geology, psychology, rhetoric, and history.

In this commection, it may be interesting to note the proportion of secondary students in priblic high schools pursuing certain courses of stwdy or stadying certain bramehes each year for the past seven years. In 1890 the per cent of students preparing for the college classical course was 7.38 , while the per cent in 1896 was 7.68 . The lowest percentage was 6.04 in 1891 , and the highest $7.8 \%$ in 1894. In 1890 theper cent of students preparing for college scientific courses was 7.06 , while the per cent in 1896 was only 6.14 . The lowest percentage was 5.80 in 1891, and the highest 7.10 in 1893. Combining the two classes of preparatory stwdents, it is found that in 1890 the per cent preparing for college was 14.44, while in 1896 the per cent was only 17.82,

These percentages and the per cent of students each year in certain studies are given in the following table:

Per cent of total namber seorddary students in public high schools in certāin courses and studies, etc.

| Students and studies. | 1889-90. | 1890-91. | 1891-92. | 1892-93. | 1893-94. | 1894-95. | 1895-96. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Males | $\frac{42.67}{57.33}$ | $\begin{aligned} & 40.27 \\ & 59.73 \end{aligned}$ | $\begin{aligned} & 40.59 \\ & 59.41 \end{aligned}$ | $\begin{aligned} & 40.10 \\ & 59.90 \end{aligned}$ | $\begin{aligned} & 40.45 \\ & 59.55 \end{aligned}$ | $\begin{aligned} & 41.15 \\ & 58.85 \end{aligned}$ | $\begin{aligned} & 41.51 \\ & 58.49 \end{aligned}$ |
| Preparing for college classical course.... Preparing for college scientific courses. | $\begin{aligned} & 7.38 \\ & 7.08 \end{aligned}$ | 6.04. 5.80 | 6.33 6.90 | 7.50 7.10 | 7.87 6.43 | 7.58 6.22 | 7.88 6.14 |
| Total proparing for colleg | 14.44 | 11.84 | 13.23 | 14.60 | 14.39 | 13.75 | 13.82 |
| Graduates Graduates prepared for coll | 10.78 | $\begin{aligned} & 12.00 \\ & 28.58 \end{aligned}$ | $\begin{aligned} & 11.48 \\ & 32.44 \end{aligned}$ | $\begin{aligned} & 12.60 \\ & 29.97 \end{aligned}$ | $\begin{aligned} & 12.90 \\ & 28.70 \end{aligned}$ | $\begin{aligned} & 12.11 \\ & 28.08 \end{aligned}$ | $\begin{aligned} & 12.05 \\ & 20.28 \end{aligned}$ |
| Studying- |  |  |  |  |  |  |  |
| Qreek |  | 8.00 | 3.08 | 3. 40 | 3. 33 | 3.10 | 8.11 |
| French | 1.84 | 5.70 | 5. 18 | 6. 42 | 6. 81 | 6. 52 | 6. 99 |
| Algebra | 45.40 | 56.20 | 48.98 | 50.88 | \%ex 14 | 54.40 | 54.64 |
| Geometry |  | 24.60 | 43.71 2.37 | 29.00 2.73 | 27. 20 | 25.34 2.53 | 28.28 |
| Astronomy |  |  |  |  |  | 4.79 | 4.40 |
| Physics | 22.21 | 24.00 | 22.82 | 23.27 | 25.29 | 22.77 | 22.08 |
| Chemistry |  | 10.20 | 10.17 | 10.00 | 10.31 | 9.15 | 8. 95 |
| Geology |  |  |  |  |  | 5.00 | 4.80 |
| Physiology |  |  |  |  |  | 29.95 | 31. 94 |
| Phetoric -- |  |  |  |  |  | ${ }^{2} 2.74$ | 32.34 |
| History | 27.31 | 28.20 | 30.97 | 38.88 | 36.48 | 34.33 | 35.28 |

$a$ Per cent to total number graduates.
The per cent of students in Latin increased from 34.68 in 1890 to 46.18 in 1896 , the per cent in French increased from 5.84 to 6.99 , the per cent in German from 10.51 to 12 , the per cent in algebra from 45.40 to 54.64 , the per cent in geometry from 21.83 to 26.23, and the per cent in history from 27.31 in 1890 to 35.28 in 1808. These are the only studies in which there has been marked increase in the number of students. There was a deerease in the per cent of stadents in ehemistry from 10.10 in 1890 to 8.95 in 1896.

The above table also shows that 10.78 per cent of the public high-school students graduated in 1890 and 12.05 per cent graduated in 1896.

It is noted that there has been little change in the proportion of male and female students. In 1890 the per cent of males was 42.67 , the highest for any year of the seven, while in 1896 the per cent was 41.51. The lowest per cent of male students was 40,10, in 1893.

## EQUIPMENT AND INCOME.

Table 10 shows the equipment and income of public high schools so far as the items could be summarized from the reports. Of the 4,974 schools 3,921 are reported as having libraries containing in the aggregate $1,922,923$ volumes. This would give
an average of 490 volumes to a library. In the North Atlantic Division the average is 696 volumes to a library, in the South Atlantic 353, in the South Central 304, in the North Central 439, and in the Western Division 413.
The value of grounds, buildings, scientific apparatus, etc., reported by 3,872 schools was $\$ 74,684,740$, an average of $\$ 19,288$ to the school.
The amount of State and municipal aid received by 2,281 public high schools was $\$ 5,312,517$, an average of $\$ 2,329$ to the school. This average seems very small, and it is probable that the greater part of the $\$ 2,647,166$ reported by 1,078 schools as "income from other sources and unclassified" should be credited to State and municipal aid.
The amount received from tuition fees by 2,582 schools was $\$ 808,339$, while 248 schools received $\$ 305,620$ from productive funds.
The total incoine reported by 3,207 schools was $\$ 9,073,642$, an average of $\$ \varepsilon, 829$ to the school. Of the 1,767 schools which did not report their income, the majority were departments of city school systems in which separate accounts are not kept of high school expenditures. For a similar reason a large number of schools could not report the value of grounds and buildings.
Sixty-five schools reported the receipt of $\$ 39,318$ from benefactions, while 152 schools reported permanent endowments aggregating $\$ 3,279,413$. There were 96 schools receiving income from productive funds which failed to report the amounts of their endowments.

## Private Hrgh Schools and Academies.

In Tables 11 to 22 , inclusive, are summarized the statistics of 2,106 private high schools, academies, seminaries, and other institutions under private management offering secondary instruction. The forms of inquiry sent to these schools are similar to those sent to public high schools, and the statistical summaries are arranged so that the public and private secondary schools may be readily compared. Tables 11 to 20 may be compared with Tables 1 to 10 in consecutive order.

Table 11 shows that 2,106 private high schools and academies reported to this office, for the scholastic year ending June, 1896, a decrease of 74 in the number of schools for the previous year. The number of teachers reported as instructing secondary students in these schools was 8,752, an increase of 193 in the number of teachers. The number of secondary students reported was 106,654 , or 11,693 less than for the previous year. The number of students was almost equally divided as to sex, there being 53,491 males and 53,163 females.

Included with the 106,654 students were 2,184 colored students pursuing secondary studies. Of this number 1,740 were in colored schools of secondary grade in the Southern States.
The number of elementary pupils in the 2,106 schools was 120,764 , an increase of 6,886 over the previous year. In the elementary grades the number of boys was 55,073 and the number of girls $6.5,691$.

## STULENTS AND COURSES OF STUDY.

The number of students in private high schools and academies preparing for college in $1895-96$ was 31.231 , or more than 29 per cent of the whole number of secondary students. The per cent of college preparatory students in the public high schools was less than 14 . Of the 31,231 college preparatory students 19,733 were preparing for the classical course and 11.495 for scientific courses, as shown in Table 12. The number of male students preparing for college was 38.98 per cent of the whole number of male students, while the per cent of female students preparing for college was only 19.53. There were 11,289 graduates in 1896 , or 10.58 per cent of the whole number of secondary students, and 46.5.5 per cent of these graduates had been preparing for college. These percentages are shown in the table on next page.

Students in certain courses and studies in private high schools and academies.

 $a$ Per cent to number of graduates.

Of the 5,818 male graduates, 3,518 , or 60.47 per cent, had prepared for college; and of the 5,471 female graduates, 1,737 , or 31.75 per cent, had prepared for college.

The above table also shows the per cent of male students in each of sixteen studies as compared with the whole number of male students, and also the per cent of female students in each of these studies as compared with the whole number of female students. It will be noted that larger percentages of male students are in Latin, Greek, algebra, geometry, and trigonometry, while in' all the other studies the percentages of female students are greater.

Tables $18,14,15$, and 16 show the number of students, male and female, in each of the sixteen leading high school studies in the private high schools and academies of each State, while Tables 18 and 19 show the per cent of students in each study to the total number of students.

Table 17 shows for each State the per cents of male and female students, the per cent preparing for the college classical course, the per cent preparing for college scientific courses, and also the per cent graduating in 1896. The last column shows that of the whole number of graduates 46.55 per cent had been preparing for college.

The table which follows indicates the progress made by the private high schools and academies since 1890 as relates to the number of students in certain courses and studies. In 1890 the per cent of students preparing for the college classical , course was 17.54 and in 1896 it was 18.50. In 1890 the per cent of students preparing for college scientific courses was 10.16 and in 1896 the per cent was 10.78. The total number college preparatory students increased from 27.70 per cent in 1890 to 29.28 per cent in 1896 .

Per cent of total number of secondary students in private high schools and academies in certain courses and studies, etc.

| Students and studies. | 1889-90. | 1820-91. | 1891-32. | 1890-93. | 1893-94. | 1894-95. | 1890-96. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Males | 50.07 | 50.97 | 52.14 | 52. 10 | 50.39 | 48.46 | 50.15 |
| Femal | 49.93 | 49.03 | 47.86 | 47.90 | 49.61 | 51.54 | 49.85 |
| Preparing for college classical course . Preparing for college scientific courses. Total preparing for college........ | 17.54 | 13.62 | 15.87 | 15.60 | 16.36 | 17.30 | 18.50 |
|  | 10.16 | 7.62 | 9.22 | 10.90 | 9.55 | 9.78 | 10.78 |
|  | 27. 70 | 21.24 | 25.09 | 26.50 | 25.91 | 27.08 | 29.28 |
| Graduates | 8.50 | 7.22 | 8.41 | 8.70 | 9.40 | 10.11 | 10.58 |
| Graduates prepared for college $a$ |  | 61.37 | 61.68 | 60.10 | 50.39 | 47.93 | 46.55 |
| Studying- |  |  |  |  |  |  |  |
| Greek | 31.32 7.02 | 37.00 8.00 | 38.60 8.48 | $\begin{array}{r} 39.23 \\ 8.61 \end{array}$ | 40.77 9.04 | 43.14 9.55 | 46.36 9.83 |
| French | 17.03 | 16.30 | 16. 69 | 18.47 | 18.85 | 19.38 | 21.31 |
| German | 13.55 | 15. 10 | 14.45 | 15.63 | 15. 25 | 16.07 | 17.46 |
| Algebra | 37.12 | 45.00 | 44.57 | 42. ${ }^{\text {2 }}$ \% | 44. 37 | 46.88 | 49.22 |
| Geometry | 17.36 | 19.60 | 19.66 | 20. 37 | 20.54 | 22.06 | 23. 81 |
| Trigonomet |  |  | 4.37 | 5. 76 | 5.93 | 5.39 | 5.51 |
| Astronomy |  |  |  |  |  | 6.699 | 7.99 |
| Physics | 18.39 | 20.98 | 20.16 | 19.76 | 20.91 | 20.32 | 21.02 |
| Chemistry | 8.59 | 10.60 | 9.83 | 9.94 | 10.32 | 9.79 | 9. 89 |
| Physical geography |  |  |  |  |  | 18.15 7.08 | 22.77 6.61 |
| Physiology |  |  |  |  |  | 22.34 | $2 \times .01$ |
| Psychology |  |  |  |  |  | 5.13 | 6.74 |
| Rhetoric (other than U. ${ }^{\text {R }}$ ) |  |  |  |  |  | ${ }_{35}^{29.12}$ |  |
| History (other than U. S) | 28.98 | 33.10 | 32.22 | 32.46 | 34.07 | 35.60 | 37.35 |

a Per cent to total number of graduates.
The above table also shows that the per cent of graduates increased from 8.50 in 1890 to 10.58 in 1896. But there has been a gradual decrease in the percentage of college preparatory students in the graduating classes. In 1891 the per cent of graduates prepared for college to the whole number of graduates was 61.37, while in 1896 the per cent was only 46.55 .
This table also shows that the number of students in Latin increased from 31.32 per cent in 1890 to 46.36 per cent in 1896, the number in algebra from 37.12 in 1890 to 49.22 per cent in 1896, and the number in history from 24.98 per cent in 1890 to 37.35 per cent in 1896. There is not a single instance of a decrease in the percentage of students pursuing a high school study.

The proportion of male and female students has shown little variation for the past seven years.

## EQLIPMENT AND INCOME.

The items reporting the equipment and income of private ligh schools and academies are summarized in Table 20 . Of the 2,106 schools 1,369 are reported as having libraries aggregating $1,504,60 \%$ volumes, an average of 1,164 volumes to a library. In the North Atlantic Division the average was 1,644 volunes to a library; in the North Central Division, 1,168; in the Western Division, 84.3; in the South Atlantic Division, 765 , and in the South Central Division, 730.

The value of grounds, buildings, scientific apparatus, etc., reported by 1,176 schools was $\$ 5,6560,935$, an average of $\$ 37,724$ to the school.
The amount of State and municipal aid receiverl by 309 schools was $\$ 2 \cdot 2$, , $7 \%$, the amount received by 1,413 schools from tuition fees was $5,5,6 \cdot 3,5,50$, the amount received by 310 schools from productive funds was $\$ 1,863,86 \%$, while the amount received by 43.5 schools from sources not named was $\$ 994,114$. The total income of 1,408 schools reporting was $5 \$, 604,305$, or an average of $\$ 6,111$ to the school.

During the year ending June, 1s96, the aggregate received in lomefactions by 197 schools was $\$ 1,121,579$. The permanent cndowment funds possessed by 345 institutions aggregated $\$ 3 \dot{3}, 849,431$.

Of the 2,106 private high schools, academies, seminaries, etc., classed as private secondary sehools, 924 are under themanagement, control, or patronage of religious denominations, while 1,182 are reported as nonsectarian.

From Tables 21 and 22 may be condensed the following statement, showing the number of schools, including their teachers and secondary students, controlled by each of the leading religious denominations:

| Religious denomination. | Schools. | Instructors. | Students. |
| :---: | :---: | :---: | :---: |
| Nonsectarian | 1,182 | 4,605 | 57, 385 |
| Roman Catholic | 271 | 1,237 | 11, 728 |
| Methodist (North and South) | 125 | 533 | 8,786 |
|  | 119 | 675 | 4,895 |
| Baptist... | 115 | 474 | .7, 294 |
| Presbyterian | 106 | 394 | 4,816 |
| Friends --....- | 61 | 292 | 4,006 |
| Congregational | 58 | 231 | 2,813 |
| Lutheran .-...- | 33 | 134 | 1,989 |
| All other denominations | 36 | 177 | 2,942 |
| Total. | 2,106 | 8,752 | 106, 654 |

## Public and Private Secondary Schools.

Certain comparisons have been made in the preceding pages between public high schools on the one hand, and private high schools, academies, and seminaries on the other. It has been noted that in the private institutions the number of secondary students is nearly equally divided between the sexes, while in the public high schools the number of female students is largely in excess of the nuinber of males. In the private institutions nearly 30 per cent of the secondary students are preparing for college, while in the public high schools the per cent is less than 14. In the private institutions nearly 47 per cent of the students graduating had been preparing for college, while in the public high schools less than 30 per cent of the graduates had been preparing for college.

Other comparisons between the public and the private secondary schools are made in Table 23. The average number of secondary students to a public high school is about 76 , while the private secondary school has only about 51 . The public secondary school has an average of three teachers, while the private school has four. In the public high school there is an average of 24 students to the teacher, while in the private school the average is 12. The average number of graduates to a public high school is 9 , while the average to the private school is Б. The average number of elementary pupils to a public high school is 51 , while in the private high school the average is 57 , or about 6 more than the average number of secondary students in the same institutions.

In Tables 24 to 29, inclusive, the statistics of public high schools and private high schools, academies, and other private institutions of secondary grade are combined. Table 24 shows that there were 7,080 public and private secondary schools reporting to this office, and that these schools had $24,45^{2}$ teachers and 487,147 secondary students. The number of male students was 211,433 , or 43.40 per cent of the total number, while the female secondary students numbered 275,714 , or 56.60 per cent of the total.

The remainder of Table 24 and the first four columns of Table 25 show the number and per cent of students preparing for college, the classical and the scientific students being separately summarized. There were 83.828 students preparing for college, or 17.21 per cent of the whole number of secondary students. There were 48,955 classical preparatory students, and 34,873 preparing for scientific college courses. There were 57,153 graduates from the public and private secondary schools in 1896, or 11.73 per cent of the whole number of secondary students. Of this number of graduates, 18,683 , or 32.69 per cent of the number graduating, had prepared for college.

Tables 26, 27, 28, and 29 show the number and per cent of students in each of the sixteen leading high-school studies in the public and private secondary schools of each State. The same items for the United States are condensed in two columns of the table given below. The following table also shows the number and per cent of male students compared with the number and per cent of female students in certain courses and studies in the 7,080 public and private secondary schools reporting to this office:

Students in certain courses and studies in public and private high schools and academies.

| Courses, studies, etc. | $\begin{gathered} \text { Number } \\ \text { stu- } \\ \text { dents. } \end{gathered}$ | Per cent to total number seconddents. | $\begin{aligned} & \text { Male } \\ & \text { stu- } \\ & \text { dents. } \end{aligned}$ | Per cent ber male students. | Female stu- <br> dents. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Students preparing for college: Classical course Scientific courses. $\qquad$ | 48,955 34,873 | 10.05 7.16. | 26,964 20,112 | 12.75 9.51 | 21, 14,761 | 7.98 <br> 5.95 |
| Total preparing for co | 83,828 | 17.21 | 47,076 | 22.26 | 36,752 | 13.33 |
| Graduating in | 57,153 | 11.73 | 22,316 | 10.55 | 34, 837 | 12.64 |
| College preparatory students in graduating class $a$ | 18,683 | 32.69 | 9,700 | 43.47 | 8,983 | 25. 79 |
| Students in- |  |  |  |  |  |  |
| Greek | 22,304 | 4.58 | 15,250 | 7.21 | 7, 054 | 2. 56 |
| French | 49,327 | 10. 13 | 16, 700 | 7.90 | 32, 627 | 11. 83 |
| German | 64, 293 | 13. 20 | 26,334 | 12. 46 | - 37,959 | 13.77 |
| Algebra. | 260, 409 125,237 | 53.46 | +116,857 | ${ }_{26.37}^{55.27}$ | 143,552 69,625 | ${ }_{25.25}^{525}$ |
| Trigonometry | 125,237 | 25.71 3.15 | 55,612 8,183 | - 3.87 | 69, 7,145 | +2. |
| Astronomy | 25, 272 | 5.19 | 8 8,751 | 4. 14 | 16, 521 | \%1.79 |
| Physics-... | 106, 427 | 21.85 | 46, 361 | ${ }_{21}^{21.93}$ | 60,066 25.288 | 21.79 9.17 |
| Chemistry | 44, 997 | 9.15 24.93 | 52,239 | 24.71 | 69, 229 | 2.11 |
| Geology | 25, 330 | 5. 20 | 9,932 | 4.70 | 15,398 | 5.58 |
| Physiology | 151,391 | 31.08 | 64, 408 | 30.46 | 86, 983 | 31.55 |
| Psycholog <br> Rhetoric | 157\%, 208 | $\begin{array}{r}3.82 \\ 32.27 \\ \hline 8 .\end{array}$ | 6,668 64,049 | 30.29 | 93, 159 | 33.79 |
| History (other than United States). | 174,070 | ${ }_{35.73}$ | 71,989 | 34.05 | 102, 081 | 37 |

«Per cent to number of graduates.
This table shows that 22.26 per cent of the male students were preparing for college and only 13.33 per cent of the female students. In the graduating classes 43.47 per cent of the males and 25.79 per cent of the female students had prepared for college. The male students show larger percentages in Greek, algebra, geometry, trigonometry, and physics, while the female students had larger percentages in the remaining eleven studies.

Some idea of the progress of public and private secondary schools for the past seven years may be gained by an inspection of the condensed table of percentages given below. The table shows the per cent of the secondary students in certain courses and studies each year since 1890. The number of students studying Latin increased from 33.66 per cent in 1890 to 46.22 per cent in 1896 . In the same time the number in algebra increased from 42.77 per cent to 53.46 per cent, and the number in geometry from 20.07 to 25.71 per cent. The number in history increased from 2\%.8.3 per cent in 1890 to 3.5.73 per cent in 1896. There was a decrease in the number preparing for college from 18.66 per cent in 1890 to 17.21 per cent in 1896 , but the number of graduates increased from 10.05 per cent to 11.73 per cent. In 1891 the per cent of graduates prepared for college was 3.5 .74 , and in 1896 it had fallen to 32.69 per cent. The percentages in the following table would indicate that these changes have been in most instances regular from 1890 to 1896:

Per cent of total number secondary students in public and private high schools and academies in certain courses and studies, etc.

| Students and studies. | 1889-90. | 1890-91. | 1891-92. | 1892-93. | 1893-94. | 1894-95. | 1895-96- |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Males | 45. 03 | 43.67 | 44.01 | 43.62 | 43.39 | 43.00 | 43.40 |
| Females | 54.97 | 56.33 | 55.99 | 56.38 | 56.61 | 57.00 | 56.60 |
| Preparing for college, classical course | 10.61 | 8.45 | 9.18 | 9.90 | 10.34 | 10.00 | $10.0{ }^{\text {a }}$ |
| Preparing for college, scientific courses | 8.05 | 6.38 | 7.59 | 8.22 | 7.33 | 7.11 | 7.16 |
| Total preparing for coll | 18.66 | 14.83 | 16.77 | 18.12 | 17.67 | 17.11 | 17.21 |
| Graduates | 10.05 | 10.51 | 10.87 | 11.46 | 11.88 | 11. 60 | 11.78 |
| Graduates prepared for college |  | 35.74 | 39.15 | 36.62 | 30.92 | 32.44 | 32.69 |
| Studying- | 33.62 | 39.80 | 38.80 | 41.94 | 43.59 | 43.76 | 46.22 |
| Greek | 4.32 | 4.65 | 38.80 4.68 | 4.92 | 4.99 | 4.73 | 4.58 |
| French | 9.41 | 9.06 | 8.59 | 9.94 | 10.31 | 9.77 | 10.13 |
| German | 11.48 | 15.68 | 11.61 | 13. 00 | 12.78 | 12. 58 | 13.20 |
| Algebra | 42.77 | 49.89 | 47.65 | 49.92 | 52. 71 | 52.40 | 53. 48 |
| Geometry | 20.07 | 23.04 | 22.52 | 24.36 | 25.25 | 24.51 | 25.71 |
| Trigonometry |  |  | 2.96 | 3.61 | 3.80 | 3.25 | 3.15 |
| Astronomy |  |  |  |  |  | 5.27 | 5.19 |
| Physics | 21.36 | 23.06 | 22.04 | 22.25 | 24.02 | 22.15 | 21.85 |
| Chemistry | 9.62 | 10.37 | 10.08 | 9.98 | 10.31 | 9.31 | 9.15 |
| Physical geograph |  |  |  |  |  | 22.44 5.52 | 24.93 5.20 |
| Physiology |  |  |  |  |  | 28. 03 | 31.08 |
| Psychology |  |  |  |  |  | 3.35 | 3:82 |
| Rhetoric | 27.83 | 29.77 | 31.35 | 33.48 | 35.78 | 31.31 | 32.27 35.73 |
|  |  |  |  |  |  | 34.65 | 35.73 |

$a$ Per cent to total number of graduates.

## SECONDARY STUDENTS IN THE UNITED STATES.

On the first page of this chapter is a brief table showing the classification of the 559,003 secondary students in all the institutions reporting to this office. The distribution of these students by classes and by States is given in Tables 30 and 31. Table 30 shows the number in public high schools, in preparatory departments of public universities and colleges, and in public normal schools. The total number of secondary students in public institutions was 392,729 , the number of males being 163,802 and the number of females 229,927. Table 31 shows the number of secondary students in private high schools and academies, in preparatory departments of private universities and colleges and colleges for women, in private normal schools, and in mantal training schools. The total number of secondary students in these private institutions was 166,274 , the number of males being 90,100 and the females 76,174 . The third column of Table 30 gives the total number of secondary students in each State.

The number of secondary students to each 1,000 of population in 1896 was 7.92. The North Atlantic Division had 8.06 secondary students to each 1,000 of population, the North Central had 10.03, the South Atlantic had 4.79, the South Central had 4.91, and the Western Division had 8.53 secondary students to each 1,000 of population. These figures and the number of secondary students to each 1,000 of population in each State are given in the third column of Table 32.

For convenience of comparison, the number of students in higher education to each 1,000 of population in each State is given in the last column of Table 32. The total number is 139,611 , as may be seen in the beginning of the chapter on "Higher Education," or 1.98 to each 1,000 of population.

Table 33 contains in detail the statistics of the 4,974 public high schools summarized in Tables 1 to 10. Table 34 gives similar statistics of the 2,106 private high schools, academies, and other institutions for private seconḍary instruction.

Table 1.-Public $\begin{gathered}\text { igh schools-Number of schools, secondary instructors, secondetry }\end{gathered}$ students, and elementary pupils in 1895-96.


Table 2.-Public high schools-Number of secondary students in college preparatory. courses; number of graduates and college preparatory students in graduating class in 1895-96.


Table 3．－Public high schools－Number of secondary students pursuing ancient and modern languages in 1895－96．

| State or Territory． | Latin． |  |  | Greek． |  |  | French． |  |  | German． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{gathered} \dot{9} \\ \text { 馽 } \end{gathered}$ | $\begin{aligned} & \dot{0} \\ & \text { 䑐 } \\ & \text { En } \end{aligned}$ | $\begin{aligned} & \text { Fig } \\ & \text { 世i } \\ & \text { Hi } \end{aligned}$ | 感 | $\begin{aligned} & \text { థ゙ } \\ & \text { む్ğ } \\ & \text { © } \\ & \text { 年 } \end{aligned}$ | $\begin{aligned} & \text { 玉ें } \\ & \text { ثे } \\ & \text { E } \end{aligned}$ |  |  | $\begin{aligned} & \text { స్టं } \\ & \text { ث̀ } \\ & \text { E } \end{aligned}$ | 帚 |  | ¢ + 0 H－1 |
| United States ．－． $69,092106,623175,715 \quad 6,7525,06911,8219,06317,53426,59717,16528,50545,670$ |  |  |  |  |  |  |  |  |  |  |  |  |
| North Atlantic Div | 21， 126 | 31,845 | 52，971 | 4，256 | 3，003 | 7，259 | 6， 722 | 11， 262 | 17， 984 | 6，244 | 10，747 | 16， 991 |
| South Atlantic Div | 5，428 | 7，853 | 13，281 | 460 | 179 | 639 | 579 | 1，45\％ | 2，036 |  | 1， 638 | 2，568 |
| South Central Div | 5， 452 | 8， 746 | 14， 198 | 372 | 131 | 503 | 410 | 926 | 1，336 | 662 | 702 | 1，364 |
| North Central Div | 32， 701 | 52， 172 | 84， 873 | ．1，315 | 1，411 | 2，726 | 1，163 | 3， 142 | 4，305 | 8，444 | 13， 681 | 22，125 |
| Western Division | 4，385 | 6，007 | 10，392 | 349 | ， 345 | 694 | 189 | 747 | 936 | 885 | 1，737 | 2，622 |
|  |  |  |  |  |  |  |  |  |  | 10 | 54 | 64 |
| New Hampshire | 645 | 1， 027 | 1，672 | 130 | 117 | 247 | 225 | 406 | 631 | 26 | 66 | 92 |
| Vermont | 475 | 796 | 1，271 | 130 | 98 | 228 | 107 | 215 | 322 | 64 | 69 | 133 |
| Massachusetts | 5，968 | 8， 804 | 14，772 | 1，567 | 1，332 | 2，899 | 4,610 | 6，240 | 10， 850 | 827 | 1，816 | 2，643 |
| Rhode Island | 593 | 758 | 1，351 | 180 | 1， 109 | －289 | 212 | 453 | －665 | 97 | 195 | 292 |
| Connecticut | 1，696 | 2，029 | 3，725 | 351 | 158 | 509 | 261 | 583 | 844 | 558 | 734 | 1，292 |
| New York | 5，247 | 6，580 | 11，827 | 953 | 540 | 1，493 | 553 | 1，326 | 1，879 | 2，375 | 3， 951 | 6， 326 |
| New Jersey | 1，198 | 1，867 | 3，065 | 163 | 92 | 1，255 | 131 | 279 | 410 | 819 | 1，303 | 2，122 |
| Pennsylvania | 4，076 | 7，922 | 11，998 | 368 | 161 | 529 | 181 | 897 | 1，078 | 1，468 | 2，559 | 4，027 |
| South Atlantic Div．： |  |  |  |  |  |  |  | 1 |  |  | 14 | 36 |
| Maryland | 1，127 | 1，094 | 2，221 | 115 | 17 | 128 | 222 | 76 | 298 | 472 | 550 | 1，022 |
| Dist．Colum | 436 | 1，669 | 1， 105 | 47 | 30 | 77 | 62 | 198 | 260 | 202 | 560 | 762 |
| Virginia | 989 | 1，587 | 2，576 | 26 | 14. | 40 | 88 | 246 | 334 | 191 | 434 | 625 |
| West Virginia | 105 | －182 | 287 |  |  |  | 5 | 3 |  |  |  |  |
| North Carolina | 283 | 377 | 660 | 8 | 8 | 16 | 8 | 9 | 17 | 8 | 15 | 23 |
| South Carolina | 532 | 673 | 1，205 | 57 | 33 | 90 | 64 | 142 | 206 | 20 | 19 | 39 |
| Georgia | 1，335 | 2，420 | 3，755 | 196 | 74 | 270 | 119 | 745 | 864 | 13 | 31 | 44 |
|  |  |  |  |  |  |  |  |  |  |  |  | 17 |
|  |  |  |  |  |  |  |  |  |  |  |  | 697 |
| Tennessee | 687 | 1，235 | 1，922 | 127 | 34 | － 81 | 28 | 74 | 102 | 20 | 51 | 71 |
| Alabama | 525 | 1，899 | 1，424 | 78 | 13 | 91 | 41 | 162 | 203 | 32 | 64 | 96 |
| Mississippi | 565 | 767 | 1，332 | 48 | 21 | 69 | ， | 16 | 20 | 32 | 29 | 61 |
| Louisiana | 423 | 743 | 1，166 | 2 | 10 | 12 | 289 | 553 | 842 | 20 | 30 | 50 |
| Texas | 1，746 | 2，699 | 4，445 | 61 | 28 | 89 | 16 | 45 | 61 | 121 | 176 | 297 |
| Arkansas | 495 | 630 | 1，125 | 11 | 7 | 18 | 21 | 25 | 46 | 27 | 43 | 70 |
| Oklahoma | 20 | － 59 | 79 |  |  |  |  |  |  |  | 13 | 22 |
| North Central Div． |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  | 2，388 | 3，885 |
| Indiana． | 4，591 | 6，438 | 11， 029 | 61 | 63 | 124 | 29 | 100 | 129 | 1，634 | 984 | 1，608 |
| Illinois | 4，655 | 8，890 | 13， 545 | 227 | 270 | 497 | 406 | 1，159 | 1，565 | 1，3：0 | 2，552 | 3， 832 |
| Michigan | 3． 106 | 4，446 | 7，572 | 223 | 212 | 435 | 270 | 1，515 | 785 | 1，284 | 2， 1906 | 3，380 |
| Wisconsin | 1，223 | 1， 1,874 | 3，097 | 61 | 35 | 96 | 30 | 24 | 54 | 1，304 | 1，853 | 3.157 |
| Minnesota | 2，246 | 3， 306 | ธ， 852 | 127 | 131 | 258 | 157 | 325 | 482 | 573 | 903 | 1，476 |
| Iowa． | 3，238 | 5，483 | 8，721 | 34 | 32 | 66 | 41 | 126 | 167 | 596 | 1，051 | 1， 647 |
| Missouri | 2，323 | 3 4,147 | 6， 470 | 121 | 143 | 264 | 59 | 315 | 374 | ti31 | 912 | 1， $2+3$ |
| North Dakota | 171 | 1302 | －473 | 1 | 1 | 4 | 6 | 2 | 8 | 3 | 1 | 4 |
| South Daknta | 173 | 3294 | 467 | 5 | 3 | 8 | 1 | 13 | 14 | 23 | 311 | 53 |
| Nebraska | 1，6330 | 2，70， | 4，333， | 65 | 86 | 151 | 37 | 11 t | 153 | 181 | 333 | 514 |
| Western Division： |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wyoming | 41 | 1 85 | 128 |  |  |  |  |  |  | \％ | 19 | 27 |
| Coloradr New Mexico | 825 | 1，3\％4 | 2，199 | 91 | 94 | 185 | 34 | 179 | 213 | 293 | 593 | 886 |
| New Mexico | 25 | 3 3 | 62 |  |  |  |  |  |  |  |  |  |
| Arizona | 13 | 3 29 | 4： |  |  |  |  |  |  |  |  |  |
| Utah <br> Nevada | 80 | 176 | $25 \%$ | $1)$ | 10） | 10 | 14 | 23 | 37 | $2 \pi$ | 53 | 81 |
| Nevada Idaho | 33 | 383 | 116 |  |  |  |  |  |  |  |  |  |
| Washington | 62 $3+2$ 3 | 2 － 89 | 151 |  |  |  |  |  |  |  |  |  |
| Washington | 342 | 2513 | 85.5 | 10 | 1 | 11 |  |  |  | 15 | 244 | 3\％＊ |
| Oregon California | －166 | 6 16i3 | －329 | 2 | 5 |  |  |  |  | 51 | 1.5 | $\cdots(15$ |
| California | 2，6：8 | 8 3，184 | 5，842 | 244 | 235 | 481 | 141 | （5） | （686 | 34.3 | 645 | 988 |

Table 4.-Public high schools-Number of secondary students pursuing certain mathematical studies in 1895-96.


Table 5.-Public high schools-Number of secondary students pursuing certain science studies in 1895-96.


Table 6．－Public high schools－Number of secondary students pursuing certain studies in 1895－96．

| State or Territory． | Physiology． |  |  | Psychology． |  |  | Rhetoric． |  |  | History． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\stackrel{\dot{\oplus}}{\stackrel{\leftrightarrow}{A}}$ | 䍖 | $\begin{aligned} & \text { ज़゙ } \\ & \stackrel{\rightharpoonup}{\circ} \end{aligned}$ |  | 器 | $\begin{gathered} \text { N} \\ \stackrel{y}{\circ} \\ \text { Hi } \end{gathered}$ | 范 | 臨 | $\begin{aligned} & \text { す⿳亠丷冖巾 } \\ & \text { से } \end{aligned}$ | 覣 | 产 | \％ |
| United S | 66 | 2511 | 2，517 | 4，105 | 7，327 1 | 11， 43248 | 48，886 | 74， | 123， | 37 | 79，899 | 134，2 |
| North Atlantic South Atlantic South Central North Central | $\begin{array}{r}\text { 6，155 } \\ 26,200 \\ \hline 1\end{array}$ |  | 35,290 <br> 6,996 <br> 13,369 <br> 62,285 | $\begin{array}{r}4861 \\ 321 \\ 797 \\ 2,351 \\ \hline 150\end{array}$ | 1,276 <br> 537 <br> 1,023 <br> 4,258 | 1,7621 888 1,800 6,6092 | 24，587 | 36，${ }^{6,5}$ | 3,251 7,251 11,585 61,364 9 | $\begin{array}{r}17,883 \\ 4,392 \\ 4,544 \\ 23,202 \\ 1 \\ \hline\end{array}$ |  | 43,277 10865 11,407 57,540 1,50 |
| Western Divisio | 1，530 | 2，047 | 3，577 | 150 | 233 | 383 | 4，087 | 5，874 | 9，961 | 4，516 | 6，631 | 11，147 |
| th Atlantic | $\begin{array}{r} 62 \\ 237 \\ 288 \\ 2,217 \\ 5, \\ 53 \\ 559 \\ 5,939 \\ 1,234 \\ 3,368 \end{array}$ | $\begin{array}{r} 746 \\ 275 \\ 3,373 \\ 3,066 \\ 739 \\ 7,998 \\ 7,998 \\ 7,894 \end{array}$ |  | $\begin{array}{r} 64 \\ 15 \\ 37 \\ 64 \\ 9 \\ 58 \\ 77 \\ 8 \end{array}$ | $\begin{array}{r\|r\|} 104 \\ 14 \\ 64 & 167 \\ 167 \\ 113 \\ 107 & 351 \\ 51 & \end{array}$ | $\begin{gathered} 168 \\ 29 \\ 101 \\ 291 \end{gathered}$ | 786 |  |  | $\begin{aligned} & 1,095 \\ & \hline 476 \\ & \hline 80 \end{aligned}$ |  | $\begin{aligned} & 2,598 \\ & 1,114 \end{aligned}$ |
| Maine |  |  |  |  |  |  |  | 1，134 |  |  |  |  |
|  |  |  |  |  |  |  |  | 5，213 | 1,920 755 905 | 6，${ }^{394}$ | 7，723 | 13，937 |
| Massachuse |  |  |  |  |  |  |  |  | 9，201 |  |  |  |
| Connectict |  |  |  |  |  |  | $2{ }^{411}$ | 1，135 |  | ${ }^{661}$ | 1，421 |  |
| New York |  |  |  |  |  | 428 |  | 3，72 | 6，229 | 3，78 |  | 9,466 |
| New Jersey |  |  |  |  |  | 59 | 957 |  | 2，580 | 1，33 |  | 3，145 |
| Pennsylvania |  |  |  | $\begin{array}{r} 154 \\ 110 \\ 110 \end{array}$ | $\begin{array}{r} 305 \\ 80 \\ 200 \end{array}$ | 459 |  | 6，005 | 8，620 | 211 | 5，322 | 8，020 |
| uth Atlantic |  | $\begin{aligned} & 372 \\ & 820 \\ & 820 \end{aligned}$ | $\begin{array}{r} 668 \\ 1,159 \end{array}$ |  |  |  |  |  |  |  |  |  |
| Marrland |  |  |  |  |  |  | 0 | 353 | 706 |  | 1；36 |  |
| Dist．of C |  |  |  |  |  | 89 <br> 24 |  | 59 | 1，195 | 976160163 |  |  |
| West Vir | 3060 |  |  | 128 | 6114 |  | $\begin{aligned} & 627 \\ & 153 \end{aligned}$ | 1,021 <br> 25 <br> 36 | $\begin{array}{r} 1,648 \\ 406 \\ 73 \end{array}$ |  | 1,274331211 | 2，250535374 |
| North Car |  |  | 161 |  |  |  |  |  |  |  |  |  |
| South Carolin |  |  | 714 |  |  |  |  | 374 | 649 | 380 | 1，284 |  |
| Georgia |  | （183 1,019 |  |  |  |  |  | 1，245 | 2,006443 | ${ }_{276} 78$ |  | 2，043 |
| Florida | 1787827826017322392382315702205258 |  |  |  |  |  |  |  |  |  | 286 |  |
| Fentuck |  |  |  |  |  | 77 397 | 169 689 |  |  |  | （ $\begin{array}{r}734 \\ 1,457 \\ 445 \\ 637\end{array}$ |  |
| Tenness |  |  | 1,4831,2081,567 | 15541558 |  |  |  | ， 844 |  |  |  | 1，963 |
| Alabama |  |  |  |  |  |  |  | 47 844 <br> 654  | ${ }^{9} 1,106$ |  |  |  |
| Mississip |  |  |  |  |  |  |  |  |  |  |  |  |
| Loui |  |  | 1，567 | 58 | 481 | 888 | 1， 398 |  | 905 |  | 687 |  |
| Texas． |  |  | 5，079 |  |  |  |  | 2，035 | 1，008 |  |  | 12 |
| Arkans |  |  | 1，5 | 17 | 124 |  |  |  |  |  | － 551 |  |
| Indian |  |  |  |  |  |  |  |  |  |  |  | ${ }_{74}$ |
| tht Centr |  |  |  |  |  |  |  |  |  |  |  |  |
| Ohio－ | 6，18222,2023,227 | $\begin{aligned} & 8,200 \\ & 2,757 \\ & 1 \end{aligned}$ | 14， 382 | $\begin{aligned} & 380 \\ & 320 \\ & 180 \end{aligned}$ | $\begin{aligned} & 588 \\ & 451 \\ & 381 \end{aligned}$ | $\begin{gathered} 978 \\ 7781 \end{gathered}$ | $\begin{aligned} & 4,430 \\ & 3,242 \\ & 3,242 \end{aligned}$ | 6， 492 4， 491 | $\begin{aligned} & 10,922 \\ & 7,733 \end{aligned}$ | $\left\|\begin{array}{l} 4,359 \\ 2,594 \\ , 29 \end{array}\right\|$ | $\begin{aligned} & 6,065 \\ & 3,484 \end{aligned}$ | 10,4246,0788,348 |
| Indiana |  |  |  |  |  |  |  |  |  |  |  |  |
| Milinois |  | ${ }^{4,448} 3$ | 7，675 | 164216410 | 312413712 | － $\begin{array}{r}476 \\ 1,122\end{array}$ |  | ${ }^{6,469}$ | 5， 854 | － 2,635 | 4， 172 |  |
| Wisconsi | 1，680 | 2，119 | 3，799 |  |  |  |  | 1，574 | 2，642 |  | 2，10 | 6，707 |
| Minneso | 1，109 | 1,786 <br> 4,274 | 7，${ }_{7}^{2,895}$ | 180 | 33816876 | 153 | 1 | 1,7554,560 | 2,8487,711 | 2， 1,786 | 1，948 | ¢，870 |
| Towa． | 2，953 |  |  |  |  |  |  |  |  |  |  |  |
| Missou | 2，62 | 3,6132413460 | 6，236 | 355 |  | 1，231 | 2，390 | 4， 154 | $\begin{array}{r} 6,711 \\ 6 ; 544 \\ 327 \end{array}$ | $\begin{array}{r} 1,994 \\ 190 \\ 172 \end{array}$ | 3，126 | $\begin{array}{r} 5,120 \\ 443 \\ 381 \\ 3,134 \end{array}$ |
| North | 191 |  | ${ }^{432}$ |  | 876 |  |  |  |  |  |  |  |
| South |  |  |  |  |  | 34 |  | 24 |  |  |  |  |
| Nansas | 1，442 | 2，057 | 3，499 |  |  | 625 |  |  | 2，884 |  | 1，947 |  |
| stern Di |  |  |  |  |  |  |  |  |  |  |  | 3，251 |
|  |  | $\begin{gathered} 171 \\ 63 \end{gathered}$ | 262 |  |  | 13 |  | 178 89 |  | 118 |  | 06 |
| yom |  |  |  |  |  |  |  |  | 1，258 |  |  |  |
| New Me |  |  | 89 |  |  |  |  |  |  |  |  |  |
| Arizo |  |  |  |  |  |  |  |  |  |  | 20 | 33 |
| Utah |  |  |  |  |  |  |  |  |  |  |  | 80 |
| Nevad |  |  |  |  |  |  |  |  | 74 |  |  | 10 |
| Washi |  |  |  |  |  |  |  |  |  | － | ${ }^{39}$ |  |
| Oregon | 112 | 159 |  |  |  |  | 120 |  | 371 | 184 |  |  |
|  | 463 |  | 1，031 |  |  |  | 2，662 | 3，600 | 6，328 | 2，495 | 3，631 | 0，128 |

Table 7.-Public high schools-Proportion of mate and female students, per cent of students pursuing certain courses, per cent of graduates, etc., in 1895-96.

| State or' 'Territory. | Total number of secondary students. | Per cent to total number. |  |  |  |  | $\begin{aligned} & \text { Per cent } \\ & \text { of grad- } \\ & \text { uates } \\ & \text { prepared } \\ & \text { for } \\ & \text { college. } \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Males. | Females. | College classical preparatory students. | College scientific preparatory students. | $\begin{gathered} \text { Grad- } \\ \text { uates in } \\ 1896 . \end{gathered}$ |  |
| United StatesNorth Atlantic Division.-.South Atlantic Division...South Central Division.North Central Division.Western DivisionWe..... | 380, 493 | 41.51 | 58.49 | 7.68 | 6.14 | 12. 05 | 29.28 |
|  | 114, 731 | 42.07 | 57.93 | 9.75 | 5.39 | 13. 26 | 22.55 |
|  | 20,816 | 41.07 | 58.93 | 10.81 | $\stackrel{\text { 2. }}{23}$ | 18.78 | 36.87 |
|  | 27, 892 | 42.75 | 57.25 | 12.70 | 5. 69 | 7.54 | 36.39 |
|  | 195, 634 | 41.09 | 58.91 | 5.47 | 6.31 | 12.34 | 30.83 |
|  | 21, 420 | 41.16 | 58.84 | 7.25 | 13.03 | 12.07 | 43.21 |
| North Atlantic Division: |  |  |  |  |  |  |  |
| New Hampshire | 3,159 | 43.18 | 56.82 | 14. 53 | 10.70 | 14.34 | 22.08 |
| Vermont. | 2,987 | 43. 29 | 56.71 | 10.45 | 13.63 | 12. 05 | 36.94 |
| Massachusetts | 28,627 | 44.34 | 55.66 | 14.68 | 4.76 | 13. 99 | 23. 12 |
| Rhode Island | 2,719 | 40.86 | 59. 14 | 22. 10 | 1.43 | 14. 16 | 26. 49 |
| Connecticut | 6,160 | 44.27 | 55.73 | 9.76 | 6.79 | 13.99 | 2.54 |
| New York | 34,206 | 43.07 | 56.93 | 8.10 | 6.13 | 10. 59 | 27.08 |
| New Jersey | 7,801 | 38.75 | 61.25 | 4.51 | 6. 68 | 14.78 | 19.17 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |
| Maryland | 3,330 | 43.72 | 56.28 | 2.97 | 0.36 | 10.60 | 11. 33 |
| District of Columb | 2,383 | 37.14 | 62.86 | 1.76 | 1.22 | 6. 76 | 16. 77 |
| Virginia | 3,831 | 43.36 | 56.64 | 9.84 | 1.31 | 6.87 | 28.14 |
| West Virginia | 1,036 | 37.64 | 62.36 | 3.28 | 1.64 | 14.19 | 23. 81 |
| North Carolina | 769 | 43. 82 | 56.18 | 11. 31 | 3.12 | 15.21 | 64.10 |
| South Carolina | 2,079 | 46.90 | 53.10 | 22.80 | 4.86 | 9.24 | 98.96 |
| Georgia | 5,273 | 37.23 | 62.77 | 20.60 | 3. 68 | 7.19 | 54. 35 |
| Florida -----.-. | 1,018 | 41.36 | 58.64 | 1.18 | 2.46 | 4.32 | 2.27 |
|  |  |  |  |  | 3.47 |  |  |
| Tennessee | 4, 363 | 42.61 | 57.39 | 19.12 | 7.31 | 8.69 | 39.84 |
| Alabama | 2,404 | 40.56 | 59.44 | 11.90 | 6.91 | 7.82 | 2.00 |
| Mississippi | 3,150 | 46.63 | 53.37 | 15. 65 | 9.97 | 7.17 | 59.29 |
| Louisiana | 1, 437 | 34.93 | 65.07 | 3. 55 | 2.44 | 12. 67 | 13.74 |
| Texas | 9,741 | 42.74 | 57.26 | 11. 40 | 4.26 | 5.88 | 40.66 |
| Arkansas | 2,510 | 45.50 | 54.50 | 20.76 | 6. 49 | 7.25 | 50. 55 |
| Oklahoma | 203 | 36.45 | 63.55 |  | 0 | 5.42 | 100.00 |
| Indian Territory .-. | 160 | 68.75 | 31.25 | 2.50 | 25.00 | 5.63 | 0 |
|  |  |  |  |  |  |  |  |
| Indiana | 18,984 | 42.76 | 57.24 | 4.31 | 4.36 | 12. 76 | 2.5. 68 |
| Illinois .- | 29,526 | 38.34 | 61.66 | 5.02 | 5. 40 | 12. 92 | ${ }^{23.36}$ |
| Michigan | 23,581 | 41.70 | 58.30 | 3.64 | 7.56 | 11.19 | 37.89 |
| Wisconsin | 14,299 | 42.63 | 57.37 | 4.86 | 6.19 | 12.53 | 33.17 |
| Minnesota | 10,813 | 40.11 | 59.89 | 4.22 | 15.68 | 9.48 | 59.32 |
| Iowa | 23,779 | 41. 29 | 58.71 | 6.39 | 4.95 | 13. 90 | 28.56 |
| Missouri | 15,224 | 39.08 | 60.92 | 5.20 | 5. 72 | 10. 29 | 32. ${ }^{\text {¢ }}$ |
| North Dakota | 933 | 43.19 | 56.81 | 9.65 | 19.40 | 11. 15 | 36. ${ }^{4}$ |
| South Dakota | 1,430 | 40.56 | 59.44 | 4.20 | 18.78 | 12.31 | 36. 36 |
| Nebraska | 10,589 | 40.81 | 59.19 | 9.79 | 7.53 | 11.75 | 46.38 |
| Kansas | 10,177 | 40.40 | 59.60 | 8.40 | 7.22 | 13.45 | 42.15 |
| Western Division: Montana |  |  |  |  |  |  | 62.65 |
| Wyoming | 1,046 | 39.93 | 60.07 | 19.81 | 6.31 0.37 | 4.03 | 36.36 |
| Colorado | 3,840 | 39.69 | 60.31 | 6. 93 | 20.16 | 11.93 | 40.39 |
| New Mexi | 231 | 37.66 | 62.34 | 0.43 | 0.87 | 7.36 | 29.4 |
| Arizona | 120 | 40.83 | 59.17 | 10.00 | 0 | 4.17 | 60.00 |
| Utah | 588 | 38.95 | 61.05 | 20.07 | 6.80 | 9.69 | 31. is |
| Nevada | 293 | 35.15 | 64.85 | 14.68 | 5.12 | 13. 99 | 29. 27 |
| Idaho | 250 | 43.60 | 56.40 | 17.60 | 9.60 | 22.40 | 48.21 |
| Washington | 2,340 | 41.88 | 58.12 | 7.01 | 7.44 | 12.31 | 20. 40 |
| Oregon | 1,464 | 40.78 | 59.22 | 0.20 | 0 | 10.72 | 19.11 |
| California | 10,975 | 42.27 | 57.73 | 7.08 | 15.44 | 12.87 | 51.1:3 |

Table 8.-Public high schools-Percentages of secondary students pursuing certain studies in 1895-96.

| State or 'Territory. | Per cent to total number of secondary students. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Latin. | Greek. | French. | German. | $\begin{aligned} & \text { Alge- } \\ & \text { bra. } \end{aligned}$ | Geometry. | Trigo-nometry. | Astronomy. |
| United States, - ---- <br> North Atlantic Division South Atlantic Division. South Central Division. North Central Division Western Division | 46.18 | 3.11 | 6.99 | 12.00 | 54.64 | 26.23 | 2.48 | 4.40 |
|  | 46.17 | 6.33 | 15.67 | 14.81 | 50.82 | 27.19 | 2.31 | 5.38 |
|  | 63.80 | 3.07 | 9.78 | 12.34 | 67.59 | 33.41 | 7.59 | 4.15 |
|  | 50.90 | 1.80 | 4.79 | 4.89 | 67.71 | 29.23 | 5.27 | 3. 90 |
|  | 43.38 | 1.39 | 2.20 | 11.31 | 53.04 | 23.51 | 1. 65 | 4.05 |
|  | 48.52 | 3.24 | 4.37 | 12.24 | 60.12 | 35.05 | 2.39 | 3.81 |
| North Atlantic Division: <br> Maine $\qquad$ <br> New Hampshire $\qquad$ <br> Vermont <br> Massachusetts $\qquad$ <br> Rhode Island <br> Connecticut $\qquad$ $\qquad$ <br> New York $\qquad$ <br> New Jersey <br> Pennsylvania $\qquad$ | 45.8 | 11.30 | 18.20 | 0.89 | 49.83 | 24.83 | 0.77 | 28 |
|  | 52.93 | 7.82 | 19.97 | 2.91 | 46.03 | 33.11 | 0.73 | 8.48 |
|  | 42.55 | 7.63 | 10.78 | 4.45 | 48.88 | 20.39 | 0.40 | 12.59 |
|  | 51.60 | 10.13 | 37.90 | - 9.23 | 45.25 | 29.50 | 1.17 | 6.16 |
|  | 49.69 | 10.63 | 24.46 | 10.74 | 65.72 | 26. 63 | 2.02 | 6.03 |
|  | 60.47 | 8.26 | 13.70 | 20.97 | 52.29 | 28.78 | 5.62 | 6.43 |
|  | 34.58 | 4.36 | 5.49 | 18. 49 | 40.34 | 21.55 | 2. 60 | 4. 24 |
|  | 39.29 | 3.27 | 5.26 | 27.20 | 72.88 | 27.15 | 2.72 | 5.81 |
|  | 54.78 | 2.42 | 4.92 | 18.39 | 65.63 | 33.49 |  | 2.98 |
| South Atlantic Division: | 79.85 | 0 | 0.09 | 3.28 | 71.29 | 26.71 | 6.84 | 0 |
| Maryland | 66.70 | 3.84 | 8.95 | 30.69 | 76.10 | 66.43 | 9.94 | 7.00 |
| District of Columb | 46.37 | 3.23 | 10.91 | 31.98 | 34.75 | 27.91. | 2.94 | 0 |
| Virginia - | 67.24 | 1.04 | 8.72 | 16.31 | 61.99 | 28.77 | 10.39 | 1.83 |
| West Virginia. | 27.70 | 0 | 0.77 |  | 74.03 | 29.34 | 3.19 | 1.54 |
| North Carolina | 85.83 | 2.08 | 2.21 | 2.99 | 71.13 | 16.51 | 0 | 9. 62 |
| South Carolina | 57.96 | 4.33 | 9.91 | 1.88 | 71.04 | 18.28 | 1.15 | 1.49 |
| Georgia | 71.21 | 5.12 | 16.39 | 0.83 | 77.58 | 30.67 | 10.92 | 7.47 |
| Florida --.- | 58.55 | 1. 77 | 4.72 | 1.67 | 65.72 | 25.05 | 7.17 | 4.42 |
| South Central Division: |  |  |  |  |  |  |  |  |
| Tennessee | 44.05 | 1. 86 | 2.34 | 1.63 | 64.43 | 23.81 | 2.82 | 8.14 |
| Alabama | 59.23 | 3. 79 | 8.44 | 8.99 | 67.05 | 35.73 | 7.70 | 4.99 |
| Mississipp | 42.29 | 2.19 | 0.63 | 1.94 | 64.57 | 18.41 | 4.70 | 6.18 |
| Louisiana | 81.14 | 0.84 | 58.59 | 8. 48 | 67.36 | 36.46 | 5. 43 | 0.84 |
| Texas... | 45. 63 | 0.91 | 0.63 | 3.05 | 72.04 | 34.25 | 5. 30 | 8. 41 |
| Arkansas | 44.82 | 0.72 | 1.83 | 2.79 | 71.35 | 2375 | 5.22 | 2.31 |
| Oklahoma | 38.92 |  | 2.96 | 10.84 | 38.99 | 8.87 |  | 0 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Ohio -...-. | 50.08 | 2.11 | 1.54 | 10.70 | 57.34 | 26.81 | 3.38 |  |
| Indiana | 58.10 | 0.65 | 0.68 | 8. 47 | 61.39 | 25.12 | 1. 45 | 2. 25 |
| Mlinois .-. | 45.87 | 1.68 | 5.30 | 13. 11 | 48. 99 | 23.12 | 1.54 | 5.81 |
| Michigan: | 32.11 | 1.84 | 8. 33 | 14. 33 | 48.72 | 18.68 | 0.82 | 3.97 0.87 |
| Wisconsin Minnesota | 21.16 54.12 | 0.67 2.39 | 0.38 4.46 | 12. 08 | 44.76 47.65 | 22.84 28.23 | 0.36 0.16 | 0.87 3.51 |
| Iowa..... | 36.68 | 0.28 | - 0.70 | 6. 93 | 49.04 | 20.97 | 0.95 | 5.98 |
| Missouri | 42.50 | 1.73 | 2.46 | 10.14 | 60.05 | 21.67 | 2.85 | 8. 05 |
| North Dakota | 50.70 | 0.43 | 0.86 | 0.43 | 65.06 | 31.83 | 6.65 | 9.5 |
| South Dakota | 32.66 | 0.56 | 0.98 | 3.71 | 48.32 | 18.11 | 1.96 | 3.85 |
| Nebraska | 40.92 | 1. 43 | 1.44 | 4.85 | 58.96 | 25.94 | 1.28 | 1.61 |
| Kansas | 50.48 | 0.57 | 0.16 | 9.69 | 58.61 | 23.22 | 1.23 | 3.71 |
| Western Division: |  |  |  |  |  |  |  |  |
| Wyoming | 46.15 | 0 | 0 | 9.89 | 37.00 | 25.27 | 1.47 | 4.76 |
| Colorado | 57.27 | 4.82 | 5.55 | 23.07 | 53.75 | 38.18 | 4.09 | 5.31 |
| New Mexic | 28.84 | 0 | 0 | 0 | 60.17 | 14.72 | 0 | 6.49 |
| Arizona | 35.00 | 0 | 0 | 0 | 58.33 | 15. 83 | 2.50 | 0 |
| Utah | 42.86 | 1.70 | 6.29 | 13.61 | 63.44 | 30.10 | 5. 10 | 3.5 |
| Nerad | 89. 59 | 0 | 0 | 0 | 80.89 | 25.60 | 0 | 5.80 |
| Idaho | 80.40 |  | 0 | 0 | 62.40 | 28.40 | 0 | 10.40 |
| Washingt | 88.54 | 0.47 | 0 | 16.92 | 65.81 | 40.17 | 1.32 | 8. 33 |
| Oregon | 22.47 | 0.48 | 0 | 14.00 | 69.54 | 23.09 | 1.91 | 3. 42 |
| California | 53.23 | 4.88 | 6.25 | 9.00 | 62.28 | 39.98 | 2.30 | 2.34 |

Table 9.-Public high schools-Percentages of secondary students pursuing certain studies in 1895-96-Continued.

| State or Territory | Per cent to total number of secondary students. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Physics. | Chemistry. | Physical geography. | Geology. | Physiology. | Psy-chology. | Rhetoric. | History. |
| United States........ <br> North Atlantic Division South Atlantic Division South Central Division North Central Division. Western Division. | 22.08 | 8.95 | 25.54 | 4.80 | 31.94 | 3.00 | 32.34 | 35.28 |
|  | 20 | 10.64 | 21 | 6.57 | 30.76 | 4 |  | 37.72 |
|  | 29.29 | 7.71 | 30.10 | 3.32 | 33.61 | 4.12 | 35.81 | 52.20 |
|  | 30.34 | 8.89 | 37.81 | 6.59 | 47.93 | 6.53 | 39. 55 | 40.90 |
|  | 20.86 | 7.65 | 26.64 | 3. 69 | 31. 84 | 3. 38 | 31.37 | 29.41 |
|  | 23.24 | 13.00 | 17.66 | 4.67 | 16.70 | 1. 79 | 46.50 | 52.04 |
| North Atlantic Division: | 19.07 | 9.85 | 18.40 | 8.01 | 19.08 | 2.34 | 26.78 | 36.24 |
| New Ham | 23.33 | 10.86 | 15.54 | 6.84 | 16.21 | 0.92 | 23.90 | 35.26 |
| Vermont | 16. 67 | 10.88 | 25.54 | 9.31 | 22.03 | 3.38 | 30.30 | 31.27 |
| Massachuse | 21.47 | 13.35 | 8.87 | 5.23 | 18.45 | 0.81 | 32.32 | 48.61 |
| Rhode Island | 25.52 | 11.84 | 10.26 | 4.60 | 4.49 | 4.49 | 39. 32 | 59.43 |
| Connecticut | 19.17 | 13.72 | 16.07 | 7.82 | 20.93 | 2.68 | 31.20 | ${ }^{40.00}$ |
| New York | 13. 37 | 6.90 | 24.95 | 8.03 | 40. 74 | 1.25 | 18.21 | 27.67 |
| New Jersey | 25.75 | 12.52 | 28.45 | 7. 45 | 40.10 | 0.76 | 33.07 | 40.32 |
| Pennsylvania ---- | 29.49 | 11.46 | 33.50 | 4.76 | 41.06 | 2.10 | 39.36 | 36.62 |
| Delaware-.------- | 28.90 | 11.30 | 45.40 | 0 | 60.89 | 0.82 | 29.99 | 44.94 |
| Maryland | 54.53 | 6.70 | 20.39 | 1.17 | 34.80 | 9.58 | 21.20 | 70.51 |
| District of | 21.02 | 7.68 |  | 0.97 |  |  | 50.15 | 57.74 |
| Virginia | 28.14 | 10.78 | 45.31 | 2.22 | 39.00 | 2.32 | 43.02 | 58.73 |
| West Virgi | 25.29 | 6. 95 | 48.17 | 2.41 | ${ }^{45.95}$ | 2.32 | 39.19 | 51.64 |
| North Carol | 15. 34 | 1.69 | 18.21 | 6.11 | 59.95 |  | 9.49 | ${ }_{44}^{48} 63$ |
| South Caro | 17.70 | 1.97 | 39.15 | 3. 22 | 34. 34 | 1.59 |  | 44.93 |
| Georgia Florida | 27.29 19.55 | 9.35 4.13 | 29.26 35.07 | 7.32 1.96 | 30.76 39.49 | 5.82 | ${ }_{43}^{38.04}$ | 380.74 50.29 |
| South Central Division: |  |  |  |  |  |  |  |  |
| Kentucky | ${ }_{20}^{26.04}$ | 12.82 | 19:04 | 4.18 | ${ }^{40.01}$ | 10.12 | 45.92 34.06 | 34.63 42.70 |
| Tennessee | 20.54 28.96 | $\begin{array}{r}3.83 \\ 13.89 \\ \hline\end{array}$ | 28.63 28.29 | 12.88 4.91 | 33.99 50.25 | 2.84 <br> 1.54 | 34.06 46.01 | 32.11 |
| Mississipp | 43.05 | 5.27 | 40.10 | 4.48 | 49.75 | 3.97 | 36.60 | 35.17 |
| Louisiana | 47.53 | 32.29 | 58.87 | 0.70 | 55.74 | 0.42 | 62.98 | 63. 40 |
| Texas.. | 32. 39 | 6. 71 | 44.96 | 6.64 | 52.14 | 8.60 | 35.24 | 44.27 |
| Arkanaas | 24.42 | 7.65 | 49.52 | 6. 45 | 61.16 | 9.60 | 40.16 |  |
| Oklahoma | 30.05 | 0 | 43.84 | 12.32 | ${ }^{26.60}$ | 5.91 | 29.06 50.00 | 25.12 46.25 |
| Indian Territory | 18.13 | 0 | 30.00 | 5.00 | 45.00 | 25.00 | 50.00 | 46.25 |
| Ohio -... | $20.14{ }^{\prime}$ | 7.93 | 29.22 | 3.11 | 39.62 | 2.69 | 30.09 | 28.72 |
| Indiana. | 24.71 | 8.05 | 30.45 | 3.66 | 26.12 | 4.06 | 40.73 | 32.02 |
| Tllinois.- | 21.36 | 10.83 | 20.53 | 4. 20 | 25. 99 | 1. 61 | 34.47 | 28.27 |
| Michigan | 18.32 | 8.46 | 177.26 | 3.48 | ${ }^{26.86}$ | 2. 79 | 24.83 18.48 | 28.44 |
| Minnesota | 16.57 13.88 | 3.54 9.48 | 37.58 16.13 | 1.88 2.28 | ${ }_{28.77}^{28.57}$ | 7.85 0.49 | 18.48 28.34 | 29.41 |
| Iowa | 21.37 | 4.18 | 30.88 | 5.40 | 30.39 | 2.11 | 32.43 | 28.89 |
| Missouri | 22.84 | 8.06 | 20.15 | 3.81 | 40.96 | 8.09 | 42.98 |  |
| North Dak | 34.41 | 14.68 | 41.91 | 7.50 | 46.30 | 8. 79 | 35. 05 | 47.48 28.64 |
| South Da Neloraska | 17.90 | 3.50 9.25 | 34.69 33.30 3. | 5.52 3.47 3. | 37.13 40.76 | 2.38 0.72 | 28.74 27.24 | ${ }_{29} 28.64$ |
| Kansas | 25.35 | 4.45 | ${ }_{35.85}$ | 4.22 | 34.38 | 6.14 | $32.5 \%$ | 31.94 |
| Western Division: Montana | 18. |  |  |  |  |  |  | 29.2 |
| Wyoming | 19.41 | 5.13 | 38.46 | 0.37 | 34.43 | 1.24 | 47.25 | 14.65 |
| Colorado | 27.68 | 18. 69 | 18.31 | 12. 24 | 18.07 | 4.74 | 32.76 | 64. 32 |
| New Mex | 12.99 |  | 39.83 | 5. 19 | 38.53 | 0 | 46. 75 | 28.14 |
| Arizona | 15.00 | 15.00 | 46.67 |  | 41.67 | 0 | 50.00 | ${ }_{31}^{27.50}$ |
| Nevada | 12.59 50.85 | 16.72 | 14.63 | 5.10 | 4.76 14.33 | 8.16 1.02 | 83.33 25.28 | ${ }_{71} 31.63$ |
| Idaho | 81.60 | 7.20 | 42. 40 | 8.09 | 14.30 44.80 | 1.02 | 60.80 | 41.00 |
| Washin | 28.42 | 9.40 | 44.19 | 7.44 | 38.42 | 4.78 | 30.60 | 44.79 |
| Oregon-- | 20.22 | 9.29 | 28.84 | 1.71 | 18.85 | 0.89 | 25.34 | 37.77 |
| California | 21.48 | 14. 62 | 7.99 | 1.86 | 9.39 | 0.11 | 57.66 | 55.82 |

Table 10.-Public high schools-Equipment, income, benefactions, and en'dowments.


TABLE 10.-Public high schools-Equipment, income, benefactions, and endowments-Continued.


Table 11．－Private high schools and academies－Number of schoois，secondary instructors，secondary students，and elementary pupils in 1895－96．

| State or Territory． | stooqos до лequmn | Number of secondary instructors． |  |  | Number of secondary students． |  |  | Colored second－ ary students （included in preceding column）． |  |  | Elementary pupils，including all below second－ ary grades． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \dot{\Phi} \\ & \text { 感 } \end{aligned}$ |  |  | $\begin{gathered} \text { ®. } \\ \text { 国 } \end{gathered}$ | 喏 |  | 䢞 |  | $\begin{aligned} & \text { ت్ఞं } \\ & \text { E } \\ & \text { E } \end{aligned}$ | ＊ |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| North Atlantic Di | 671 | 1，758 |  |  |  | 19，297 | 40，915 | 105 | 237 | ${ }_{1}^{312}$ | 12，936 | 13， 701 | 26， 637 |
| South Atlantic Di | 443 | 643 | 7401 | 1，383 | 9， 385 | 9， 199 | 18， 584 | 533 | 715 | 1，248 | 11， 618 | 13， 753 | 25，371 |
| South Central N （iv | 489 | 657 | 7341 | 1，391 | 10，655 1 | 11，592 | 22， $24{ }^{4}$ | 243 | 249 | 492 | 16，649 | 18，533 | 35， 182 |
| North Central Di | 378 | 735 | 9421 | 1，677 | 9， 4261 | 10，213 | 19， 639 | 32 | 28 |  | 9，140 | 13，584 | 22， 724 |
| Western Division | 125 | 191 | 283 | 474 | 2，407 | 2，862 | 5，269 | 33 | 9 | 42 | 4，730 | 6，120 | 10，850 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Maine． | － 35 | 68 | 89 | 157 | 1，551 | 1，590 | 3，141 | 1 |  | 2 | 57 | 06 | \％ |
| New Hampshire． | － 25 | 87 | 56 | 143 | 1，127 | 714 | 1，841 | 7 |  | 10 | 155 | 272 | 427 |
| Vermont | 26 | $5 \%$ | 83 | 140 | 1，159 | 1，058 | 2，217 | － | 0 | 0 | 570 | 528 | 1，098 |
| Massachusetts．．． | － 98 | 235 | 352 | 587 | 3，163 | 2，758 | 5，921 | 14 | 3 | 17 | 740 | 994 | 1，734 |
| Rhode Island | － 11 | 24 | 48 | 72 | ， 354 | ， 344 | ， 698 | 0 | 0 | ， | 179 | 197 | 376 |
| Connecticut | － 59 | 107 | 158 | 265 | 1，129 | 1，490 | 2，619 | 10 | 15 | 25 | 516 | 812 | 1，328 |
| New York | － 202 | 567 |  | 1，256 | 5， 181 | 5，468 | 10，649 | ， | 93 | 102 | 5，727 | 6，522 | 12，249 |
| New Jersey． | － 70 | ） 204 | 203 | ${ }^{4} 407$ | 2，441 | 1，516 | 3，957 | 1. | 0 | 1 | 1，117 | 1，130 | 2，247 |
| Pennsylvania．．．． | － 145 | 409 | 391 | 800 | 5，513 | 4，359 | 9，872 | 73 | 122 | 195 | 3，675 | 3，040 | 6，715 |
| South Atlantic Div： |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Maryland | 45 | 583 | 3144 | 4227 | 824 | 1，162 | 1，986 | 4 | 5 |  | 945 | 823 | 768 |
| Dist．of Columb |  | 6.24 | 4.79 | 9 103 | 3157 |  | ${ }^{7} 17$ | 0 | 0 |  | 241 | 1，127 | 1，368 |
| Virginia |  | 138 | 8127 | 7265 | 1，689 | 1，438 | 8 3，127 | 45 | 59 | 104 | 1，403 | 1， 617 | 8，020 |
| West Virginis |  | 18.29 | 9.33 | 36 | $2{ }^{2} 465$ | 5475 | 5.940 | 0 | 0 |  | 297 | 346 | 643 |
| North Carolina | 13 | 188 | 134 | 432 | 2 3,039 | 2，100 | ．5， 148 | 8.96 | 164 | 260 | 3，593 | 3， 432 | 7，025 |
| South Caro |  | 3844 | $4{ }^{57}$ | $7-10$ | 1701 | 1.806 | 6 1，507 | 780 | 79 | 159 | 960 | 1，077 | 2，037 |
| Georgia |  | 12 | 130 | 025 | 1 2，297 | 7，278 | 8 4，575 | 5268 | 346 | 614 | 8， 727 | 4，583 | 8，310 |
| South Central Div．： |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tennessee ．．．．．．．．． | ．－ 114 | 1161 | 1129 | 9290 | 2，700 | 2，428 | 5，128 | 39 | 60 | 99 | 4， 457 | 4，499 | 56 |
| Alabama |  | 786 | 6.79 | 9165 | 5 1，a06 | 1，306 | 2， 812 | 21 | 23 | 44 | 2，232 | 2，390 | 22 |
| Mississippip |  | 58 | 292 | 2174 | 4 1，417 | 1，708 | 3，125 | 54 | 85 | 139 | 2，452 | 2，798 | 5，250 |
| Louisiana | 27 | 7 19 | 1972 | 291 | 302 | －772 | 1，074 | 18 | 14 | 32 | 599 | 1，051 | 1，650 |
| Texas | 79 | 9132 | 149 | 281 | 2，254 | 2，560 | 4， 814 | 86 | 44 | 130 | 2，930 | 3，642 | 6，572 |
| Arkansas | 32 | 243 | 32 | 75 | 5651 | 634 | 1，285 | 25 | 23 | 48 | 1，222 | 1，289 | 2，511 |
| Oklahoma |  | $2{ }^{2}$ | 3 | 35 | 5 17 | 37 | 54 | 0 | 0 | 0 | 112 | 52 | 164 |
| Indian Territory |  | $9 \quad 9$ |  | 9 | 102 | 134 | 236 | 0 | 0 | 0 | 473 | 434 | 907 |
| North Central Div．： Ohio 56 <br> 107 <br> 148 <br> 255 <br> 981 <br> 1，312 2，293 0 <br> 5 <br> 5 1，110 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Indiana |  |  | 75 | 112 | 541 | 1， 312 |  |  |  |  | 131 | 1，808 |  |
| Illinois | 59 | 9115 | 171 | 286 | 1，525 | 1，823 | 8，348 | 3 | 0 |  | 1，532 | 2，714 | 4，246 |
| Michigan | 17 | 728 | 65 | 93 | 481 | －684 | 1，165 | 0 |  | 0 | 753 | 1，565 | 2，318 |
| Wisconsi | 24 | 470 | 68 | 138 | 894 | 586 | 1， 480 |  |  |  | 415 | 544 | 959 |
| Minne | 29 | 969 | 75 | 144 | 881 | 622 | 1，503 |  | 0 |  | 850 | 840 | ， 690 |
| Iowa | 38 | 870 | 78 | 148 | 1，105 | 1，031 | 2，136 | 0 |  | 0 | 1，401 | 1，350 | 2，751 |
| Missouri | 87 | 7144 | 165 | 309 | 2，075 | 2，288 | 4，363 | 23 | 22 | 45 | 1，485 | 2，106 | 3，591 |
| North Dakota |  | 4 4 | 5 | ． | $9{ }^{43}$ | 30 | 73 | 0 | ， | 0 | 250 | 13 | 385 |
| South Dakota |  | 713 | 16 | 29 | － 124 | 106 | 230 | 0 |  | 0 | 207 | 287 | 494 |
| Nebraska | 14 | 432 | 34 | 86 | － 243 | 314 | 557 | 0 |  | 0 | 295 | 36 | 657 |
| Kansas． | 1 | 146 | 42 | 88 | 533 | 488 | 1，016 |  |  | 3 | 511 | 500 | 1，011 |
| Western Division： 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  | 85 46 | 0 |  | 0 |  |  |  |
|  |  |  |  |  |  |  | Colorado．．．．．．．．．． 8 13 16 29 114 247 361 0 0 0 346 400 746 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stah | － 14 | 4 |  | 47 | 671 | 532 | 1，203 | 0 | － | 0 | 882 | 762 | 844 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Oregon | 15 | 51 | 36 | 67 | 329 | 340 | 669 | 0 |  | 0 | 481 | 573 | 1，054 |
| Californ |  |  |  |  | 903 | 1，184 | 2，087 | 1 | 0 | 1 | 2，579 | 3，525 | 6，104 |

Tably 12.-Private high schools and academies-Number of secondary students in college preparatory courses, number of graduates and college preparatory students in graduating class in 1835-96.


Table 13.-Private high schools and academies-Number of secondary students pursuing ancient and modern languages in 1895-96.


Table 14．－Private high schools and academies－Number of secondary students pursuing certain mathematical studies in 1895－96．

| State or Territory． | Algebra． |  |  | Geometry． |  |  | Trigonometry． |  |  | Astronomy． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \dot{0} \\ & \text { 感 } \end{aligned}$ |  |  | $\begin{aligned} & \dot{\oplus} \\ & \text { 由゙ } \end{aligned}$ |  |  | $\begin{aligned} & \dot{A} \\ & \text { 感 } \end{aligned}$ |  |  | 囟 |  | F̈ng H |
| United States | 28， 189 | 2， 3085 | 52， 497 | 14， 621 | 10，800 | 25， 421 | 3，650 | 2，230 | 5，880 | 2，608 | 5，911 | 8，519 |
| North Atlantic Division | 11，122 | 8，166 | 19，288 | 6，909 | 4，263 | 11，172 | 1，404 | 348 | 1，752 | 1，086 | 2，144 | 3，230 |
| South Atlantic Division | 5，537 | 4，676 1 | 10，213 | 2，214 | 1， 657 | 3， 871 | 1，647 | 411 | 1，058 | 1，251 | 2， 822 | 1，073 |
| South Central Division． | 6，211 | 6，2281 | 12， 439 | 2，675 | 2，560 | 5，235 | 784 | 882 | 1， 666 | 538 | 1，410 | 1，948 |
| North Central Division | 3，996 | 4，019 | 8，015 | 1，968 | 1，737 | 3，705 | 590 | 478 | 1， 068 | 617 | 1，121 | 1，738 |
| Western Division．． | 1，323 | 1，219 | 2，542 | 855 | 583 | 1， 438 | 225 | 111 | 336 | 116 | 414 | 530 |
| North Atlantic Division： Maine $\qquad$ | 581 | 575 | 1，156 | 283 | 294 | 577 | 22 | 9 | 31 | 90 | 160 | 250 |
| New Hampshire | 431 | 285 | 1716 | 240 | 133 | 373 | 65 | 20 | 85 | 54 | 49 | 103 |
| Vermont | 299 | 272 | 571 | 201 | 181 | 382 | 29 | 6 | 35 | 73 | 101 | 174 |
| Massachusetts | 1，649 | 1，102 | 2，751 | 1，145 | 670 | 1，815 | 168 | 66 | 234 | 166 | 188 | 354 |
| Rhode Island | 169 | 129 | 298 | 143 | 58 | 201 | 25 | 4 | 29 | 8 | 35 | 43 |
| Connecticu | 690 | 574 | 1，264 | 470 | 349 | 819 | 68 | 10 | 78 | 65 | 204 | 269 |
| New York | 2，780 | 2，240 | 5，020 | 1，807 | 1，240 | 3， 047 | 460 | 60 | 520 | 232 | 741 | 973 |
| New Jersey | 1， 700 | 658 | 2，358 | 1，992 | 1292 | 1，284 | 194 | 16 | 210 | 111 | 146 | $25 \%$ |
| Pennsylvania－－－．．． | 2，823 | 2，331 | 5， 154 | 1，628 | 1，046 | 2，674 | 373 | 157 | 530 | 287 | 520 | 807 |
| South Atlantic Division： Delaware | 47 |  | 77 | 25 |  | 41 | 11 |  |  |  |  |  |
| Maryland | 603 | 691 | 1，294 | 350 | 308 | 658 | 111 | 45 | 156 | 3 | 118 | 121 |
| District of C | 86 | 226 | $\bigcirc 312$ | 51 | 98 | 149 | 0 | 11 | 11 | 0 | 169 | 169 |
| Virginia | 1，076 | 653 | 1， 729 | 485 | 215 | 700 | 162 | 81 | 243. | 38 | 100 | 138 |
| West Virginia | 200 | 202 | 402 | 62 | $6 \dot{5}$ | 127 | 30 | 10 | 40 | 19 | 49 | 68 |
| North Carolina | 1，441 | 898 | 2，339 | 456 | 183 | 639 | 74 | 39 | 118 | 79 | 76 | 155 |
| South Carolina． | 1，547 | 461 | 1，008 | 162 | 222 | 384 | 5 | 30 | 35 | 9 | 105 | 114 |
| Georgia | 1，470 | 1，406 | 2，876 | 604 | 516 | 1，120 | 247 | 188 | 430 | 91 | 157 | 248 |
| Florida | 67 | 109 | 176 | 19 | 34 | 1， 53 | 7 | 12 | 19 | 12 | 48 | 60 |
| South Central Division： |  |  |  |  |  |  |  |  |  |  |  |  |
| Kentucky | 986 | 843 | 1，829 | 391 | 257 | 648 | 140 | 111 | 251 | 84 | 238 | 322 |
| Tennessee | 1，429 | 1，340 | 2，769 | 527 | 504 | 1，031 | 140 | 1.65 | 305 | 116 | 212 | 328 259 |
| Alabama | 1，044 | 839 | 1， 883 | 491 | 376 | 867 | 161 | 168 | 329 | 104 | 155 | 259 226 |
| Louisiana | 175 | 876 | 1，600 | 270 39 | 1200 | 570 163 | 19 | 130 26 | 222 | 66 16 | 167 | 223 |
| Texas | 1，446 | 1，500 | 2，946 | 833 | 877 | 1，710 | 183 | 227 | 410 | 130 | 324 | 454 |
| Arkansas | 1352 | 1， 320 | ${ }_{672}$ | 113 | 93 | 1， 206 | 47 | 38 | 85 | 22 | 23 | 45 |
| Oklahoma | 2 | 12 | 14 | 1 | 12 | 16 | 2 | 11 | 13 | 0 | 15 | 15 |
| North Central Division：${ }_{\text {N }}$ |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Indiana | 165 | 259 | 424 | 96 | 133 | 229 | 38 | 54 | 92 | 29 | 101 | 130 |
| Illinois | 585 | 750 | 1，335 | 256 | 346 | 602 | 54 | 79 | 133 | 40 | 168 | 208 |
| Michigan | 176 | 255 | 1，431 | 94 | 94 | 188 | 5 | 15 | 23 | 47 | 96 | 143 |
| Wisconsin | 326 | $20 \%$ | 533 | 213 | 74 | 287 | 58 | 16 | 74 | 62 | 47 | 109 |
| Minneso | 273 | 249 | 522 | 152 | 118 | 270 | 8 | 8 | 16 | 42 | 57 | 99 |
| Iowa． | 493 | 389 | 882 | 282 | 213 | 495 | 173 | 54 | 227 | 159 | 73 | 232 |
| Missori | 1，212 | 1，017 | 2，229 | 485 | 372 | 857 | 150 | 146 | 296 | 151 | 258 | 409 |
| North Dakota | 24 | 127 | 51 | 1 | 10 | 11 |  | 1 | 1 |  |  |  |
| South Dakota | 54 | 48 | 102 | 33 | 15 | 48 |  |  |  |  |  |  |
| Nebraska． | 91 | 135 | 226 | 38 | 51 | 89 | 4 | 17 | 21 | 12 | 49 | 61 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Colorado | 30 | 67 | 97 | 3 | 1 |  | 1 |  |  |  | 4 | 16 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Utah | 211 | 190 | 401 | 143 | 87 | 230 | 24 | 9 | 33 | 19 | 19 | 38 |
| Nevad |  | 13 | 13 |  | 13 | 13 |  |  |  |  |  |  |
| Idaho | 18 | 29 | 47 | 15 | 8 | 23 |  |  |  |  |  |  |
| Washingt | 112 | 162 | 274 | 43 | 51 | 94 | 29 | 32 | 61 | 10 | 77 | 87 |
| Oregon | 173 | 155 |  | 94 | 58 | 152 | 41 | 26 | 67 | 19 | 32 | 51 |
| California | 747 | 563 | 1，310 | 519 | 324 | 843 | 112 | 34 | 146 | 48 | 258 | 306 |

Table 15.-Private high schnols and academies-Number of secondary students pursuing certain science studies in 1895-96.


Table 16．－Private high schools and academies－Number of secondary students pursuing certain studies in 1895－96．

| State or Territory． | Physiology． |  |  | Psychology． |  |  | Phetoric． |  |  | History． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 器 | $\begin{aligned} & \dot{\otimes} \\ & \text { む్ } \\ & \text { g్ర } \\ & \text { E } \end{aligned}$ |  | $\begin{aligned} & \text { 㕀 } \\ & \text { 岂 } \end{aligned}$ |  |  | 坒 | 9 |  |  |  | ̈ ¢ H． |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| North Atlantic Division． | 3，800 | 4，577 | 8，377 | 6071 | 1，525 | 2，132 | 5．779 | 6，760 | 12，589 | 6，886 | 8，492 | 15， 383 |
| South Atlantic Division． | 2，297 | 2,746 4,593 | 5,043 8,601 | 851 | 1， 541 | 792 2,069 | 2， 754 | 3,138 4,263 | 5， 8 7，42 | 3,518 3,081 | 3,804 $4,40 r$ | 7，322 |
| North Central Division | 2， 409 | 3，430 | 5，839 | 733 | －957 | 1，690 | 2，642 | 3，580 | 6，222 | 3,215 | 4，124 | 7，339 |
| Western Division．．．－． | 628 | 1，386 | 2，014 | 126 | 380 | 506 | 784 | 1，241 | 2，025 | 952 | 1，350 | 2，302 |
| North Atlantic Division： |  |  |  |  |  |  |  |  |  |  |  |  |
| New Hamps | 155 | 131 | 286 | 12 | 33 | 45 | 210 | 179 | 389 | 336 | 266 | 602 |
| Vermont | 116 | 142 | 258 | 35 | 39 | 74 | 202 | 214 | 416 | 188 | 243 | 431 |
| Massachusett | 353 | 551 | 904 | 53 | 188 | 241 | 817 | 1，20\％ | 2，02t | 1，045 | 1，265 | 2，310 |
| Rhode Island | 75 | 54 | 129 |  | 33 | 33 | 141 | 185 | 326 | 105 | 202 | 317 |
| Connecticut | 242 | 355 | 597 | 15 | 87 | 102 | 378 | 515 | 893 | 548 | 766 | 1，314 |
| New York | 1，080 | 1，385 | 2，465 | 93 | 496 | 598 | 1，255 | 1，864 | 3，119 | 1，893 | 2， 707 | 4， 600 |
| New Jersey | 473 | 289 | 762 | 56 | 102 | 158 | 1868 | 581 | 1，449 | 1，754 | 722 | 1，476 |
| Pennsylvania | 1，158 | 1，432 | 2，590 | 259 | 433 | 692 | 1，620 | 1，662 | 3，282 | 1，726 | 1，933 | 3，659 |
| South Atlantic Division： |  |  |  |  |  |  |  |  |  |  |  |  |
| Delaware． |  | 283 | 414 |  | 43 | 44 | 289 | 446 | 735 | 407 | 749 | 1，156 |
| Maryland | 131 | 283 | ${ }_{133} 14$ | 0 | 43 | 44 | 289 | ${ }_{27} 4$ | 735 | 99 | 393 | 1，156 |
| Vistrict of |  | 427 |  | 28 | 110 | 138 | 532 | 518 | 1，050 | 697 | 572 | 1，269 |
| Virginia－－－ | 108 | 147 | 25 | 17 | 110 | 138 | 85 | 11.4 | 199 | 164 | 164 | －1288 |
| North Carolina | 771 | 572 | 1，343 | 70 | 82 | 152 | 756 | 489 | 1，245 | 1，003 | 603 | 1，606 |
| South Carolina | 271 | 385 | 656 | 13 | 48 | 61 | 220 | 211 | 431 | 351 | 405 | 756 |
| Georgia | 614 | 645 | 1，259 | 85 | 147 | 232 | 735 | 949 | 1，684 | 698 | 778 | 1．， 476 |
| Florida． | 70 | 139 | 209 | 37 | 42 | 79 | 31 | 114 | 145 | 49 | 113 | 162 |
| South Central Division： |  |  |  |  |  |  |  |  |  |  |  |  |
| Kentucky | 641 | 698 | 1，339 | 193 | 286 | 479 | 617 | 748 | 1，365 | 603 | 856 | 1，378 |
| Alabama | 551 | 510 | 1，061 | 61 | 84 | 145 | 543 | 543 | 1，086 | 376 | 509 | 885 |
| Mississipp | 602 | 800 | 1，402 | 40 | 116 | 156 | 377 | 518 | 895 | 357 | 515 | 872 |
| Louisiana | 107 | 322 | 429 | 31 | 80 | 111 | 47 | 410 | 457 | 144 | 556 | 700 |
| Texas． | 960 | 1，112 | 2，072 | 292 | 365 | 657 | 730 | 94.8 | 1，678 | 710 | 9.21 | 1，631 |
| Arkansas | 396 | 345 | 741 | 156 | 91 | 247 | 195 | 215 | 410 | 236 | 227 | 463 |
| Oklahoma | 0 | 18 | 18 | 0 | 18 | 18 | 7 | 23 | 30 | 3 | 19 | 22 |
| Indian Territory．．．－ | 32 | 52 | 84 |  | 8 | 10 | 18 | 42 | 60 | 35 | 43 | 78 |
| North Central Division： |  |  |  |  |  |  |  |  |  |  |  |  |
| Indian | 100 | 238 | 338 | 14 | ${ }^{10}$ | 70 | 108 | 286 | 394 | 251 | 293 | 544 |
| Illinois | 297 | 480 | 777 | 61 | 167 | 228 | 505 | 586 | 1，091 | 627 | 717 | 1，344 |
| Michigan | 74 | 224 | 298 | 14 | 17 | 85 | 164 | 302 | 1，466 | 163 | 355 | 518 |
| Wisconsin | 172 | 192 | 364 | 41 | 34 | 75 | 224 | 217 | 441 | 290 | 224 | 514 |
| Minnesota | 126 | 308 | 434 | 28 | 28 | 56 | 209 | 256 | 465 | 258 | 251 | 509 |
| Iowa | 369 | 322 | 691 | 154 | 59 | 213 | 401 | 314 | 715 | 369 | 229 | 598 |
| Missouri | 676 | 836 | 1，512 | 211 | 316 | 527 | 530 | 734 | 1，264 | 685 | 919 | 1，604 |
| North Dakot | 36 | 35 | 71 |  | 3 | 3. | 10 | 12 | 22 | 8 | 20 | 28 |
| South Dako | 61 | 76 | 137 | 9 | 9 | 18 | 18 | 34 | 52 | 22 | 41 | 63 |
| Nebraska | 40 | 98 | 138 | 15 | 29 | 44 | 57 | $13 ; 3$ | 190 | 52 | 137 | 189 |
| Kansas | 174 | 235 | 409 | 30 | 53 | 83 | 101 | 154 | 255 | 120 | 180 | 300 |
| Westoru Division： |  |  |  |  |  |  |  |  |  |  |  |  |
| Montana | 6 | 51 14 14 | 54 20 | 0 | 0 | 0 | 4 | 19 | 19 | 5 | 18 | $\stackrel{10}{23}$ |
| Colorado | 21 | 76 | 97 | 0 |  | 4 | 24 | 100 | 124 | 28 | 69 | 97 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Arizona |  |  |  |  |  |  |  |  |  |  |  |  |
| Utah | 90 | 99 | 189 | 95 | 194 | 289 | 154 | 182 | 333 | 116 | 121 | 237 |
| Nevada |  | 13 | 13 |  |  |  |  | 6 | 6 |  | 6 | 6 |
| Idaho | 74 | 38 | 112 | － 8 | 4 | 12 | 11 | 31 | 42 | 1.5 | 28 | 43 |
| Washington | 90 | 185 | 275 | 10 | 20 | 30 | 55 | 156 | 211 | 100 | 139 | 235 |
| Oregon | 55 | 110 | 165 | 13 | 13 | 26 | 85 | 108 | 193 | 105 | 119 | 224 |
| California | 268 | 776 | 1，044 |  | 145 | 145 | 421 | 607 | 1，028 | 553 | 826 | 1，379 |

Table 17.-Private high schools and aeademies-Proportion of male and-female students, per cent of students pursuing certain courses, per cent of groduates, etc., in 1895-96.

| State or ${ }^{\text {Territory }}$. | Total number of secondary students. | Per cent to total number. |  |  |  |  | Per cent of graduates prepared for college. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Male. | Fermale. $\left.\right\|_{\text {c }} ^{\text {cl }}$ | College <br> classical <br> preparatory students. | College scientific preparatory students. | Graduates in 1896. |  |
| United State | 106,654 | 50.15 | 49.85 | 18.50 | 10.78 | 10.58 | 46.55 |
| North Atlantic Division. South Atlantic Division South Central Division North Central Division... Western Division. | 40,915 | 52.83 | 47.17 | 18.48 | 11.42 | 12.82 | 49. 10 |
|  | 18,584 | 50.50 | 49.50 | 19.08 | 6.09 | 7.60 | 50.99 |
|  | 22, 247 | 47.89 | 52.11 | 20.07 | 11.34 | 7.50 | 39.60 |
|  | 19,639 | 48.00 | 52.00 | 16.95 | 12.79 | 12. 27 | 41. 99 |
|  | 5,269 | 45.69 | 54.31 | 16.02 | 12.53 |  |  |
| North Atlantic Division: | 3,141 | 49.37 | 50.63 | 20.53 | 8. 56 |  |  |
| New Hampshire | 1, 841 | 61.22 | 38.78 | 33.62 | 18:96 | 18.85 | 52.45 |
| Vermont- | 2,217 | 52.28 | 47. 72 | 13. 58 | 7.67 | 13. 08 | 32.76 |
| Massachusetts. | 5,921 | 53.42 | 46.58 | 22.19 | $-18.12$ | 15.57 | 63.77 |
| New York | 10,649 | 48.65 | 51.35 | 15. 07 | 9.34 | 11.01 | 48.71 |
| New Jersey | 3,957 | 61.69 | 88.31 | 29.01 | 18.12 | 12.51 | 70.71 |
| Pennsylvania | 9,872 | 65. 85 | 44.15 | 13.18 | 11.98 | 11.98 | 40.91 |
|  | 265 | 44.91 | 55.09 | 10. 56 | 8.30 | 12.08 | 78.13 |
| Maryland | 1,986 | 41.49 | 58.51 | 11.13 | 1.40 | 9.37 | 45.70 |
| District of Columbi | 717 | 21.80 | 78.10 | 23.43 | \%. 53 | 8.37 | 28.67 |
| Virginia | 3,127 | 53.84 | 48.18 | 18.84 | 8. 29 | 6.38 | 48.50 |
| West Virginia | 940 | 49.47 | 50.53 | 8.62 | 8.40 | 6.91 | 50.77 |
| North Carolina | 5,148 | 59.03 | 40.97 | 25.14 | 6.74 | 6. 12 | 57.46 |
| South Carolina | 1,507 4,575 | 46.52 50.21 | 53.48 49.79 | 13.27 <br> 19.74 <br> 18.6 | 4.71 <br> 4.35 | $\begin{array}{r}11.75 \\ 7.08 \\ \hline\end{array}$ | 48.59 56.17 |
| Florida | +319 | 29.47 | 770.53 | 15.67 |  | 16.61 | 28.30 |
| South Central Division: |  |  |  |  |  |  |  |
| Kentucky. <br> Tennessee | 3,719 <br> 5 <br> 128 | 45.87 52.66 | 54.13 | - ${ }_{2}^{18.61}$ | 12.48 | 6.80 8.19 | $28.63$ |
| - Alabama | 2,812 | 53.54 | 46.46 | 22.65 | 13.16 | 7.08 | 40.70 |
| Mississippi | 3,125 | 45.34 | 54.68 | 16.77 | 15.23 | 7.74 | 3 5. 54 |
| Louisiana. | 1,074 | 28.12 | 71.88 | 21.79 | 5.31 | 10.61 | 29.82 |
| Texas. | 4,814 | 46.82 | 53.18 | 15.62 | 10.01 | 6.90 | 26.81 |
| Arkansas | 1,285 | 50.68 | 49.34 | 25.60 | 5.84 | 6.85 | 35.23 |
| Oklahoma | 54 | 31.48 | 68.52 | 51.85 | 5.56 | 20.37 | 100.00 |
| Indian Territory        <br> North Central Division:  238 43.22 56.78 27.12 1.69 3.39 |  |  |  |  |  |  |  |
| Morthiontar............ | 2,293 | 42.78 | 57.22 | 13.26 | 10.68 | 13.48 | 48.54 |
| Indiana | 1,475 | 36.68 | 63.32 | 2.37 | 2.71 | 9.22 | 33.82 |
| Ilinois . | 3,348 | 45.55 | 54.45 | 17.14 | 8.90 | 11.23 | 48.67 |
| Michigan | 1,165 | 41.28 | 58.72 | 19.57 | 16. 67 | 10.47 | 48.38 |
| Wisconsin | 1; 180 | 60.41 | 39.59 | 34.52 | 21.76 | 18.85 | 81.18 |
| Minnesota | 1,503 | 58.62 | 41.38 | 11.11 | 13.84 | 15.57 | ${ }^{43.59}$ |
| Mowa .-.. | 2,138 | 51.78 |  | 18.68 | 15.07 | 10.14 | 45.36 |
| Missouri North Dakota | 4,363 | 47.55 | 52.45 | 17.65 | 11.80 | 10.29 | 30.29 |
| North Dakota | 73 230 | 58.91 53.91 | 41.09 46.09 | 16.44 <br> 10.43 <br> 184 |  | 12.61 | 62:07 |
| Nebraska .-. | 557 | ${ }_{43.63}$ | 68.37 | 14.54 | 14.00 | 10.05 | 42.86 |
| Kansas. | 1,016 | 52.46 | 47.54 | 4 21.95 | - 28.25 | 11.61 | 59.32 |
| Western Division: |  |  |  |  |  |  |  |
| Montana | 85 48 | 39.14 | 100.00 60.86 | 6-17.64 | 218.04 |  |  |
| Colorado. | 361 | 31.58 | 68.42 | 2 13.29 | 9 23.82 | 10.80 | 53.85 |
|  |  |  |  |  |  |  |  |
| Arizona.......- | 1,208 | 55.78 | - - - 4.22 | 2 7.15 |  | 4.57 | 65.45 |
| Nevada | 13 |  | ) 100.00 |  |  | 15.38 |  |
| Washin | 140 | 55.00 | - 40.00 | 0.8 |  |  | 5 |
| Oregon | 669 | 49.18 | 50.82 | $2{ }^{16.74}$ | 4.15 .40 | 14.85 | 58.00 |
| California. | 2,087 | 43.27 | 56.73 | 383.04 | 411.88 | 14.37 | 7 52.67 |

Table 18.-Private high schools and academies-Percentages of secondary students pursuing certain studies in 1895-96.

| State or Territory. | Per cent to total number of secondary students. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Latin. | Greek. | French. | German. | Algebra. | $\begin{aligned} & \text { Geome- } \\ & \text { try. } \end{aligned}$ | Trigonom. etry. | Astronomy. |
| United States <br> North Atlantic Division. South Atlantic Division . South Central Division North Central Division. Western Division......... | 46.36 | 9.83 | 21.31 | 17.46 | 49. 22 | 23.84 | 5.51 | 7.99 |
|  | 50.95 | 14.96 | 32.70 | 24.46 | 47.14 | 27.31 | 4.28 | 7.89 |
|  | 52.76 | 6. 79 | 18.78 | 8.32 | 54.96 | 20.83 | 5. 69 | 5. 77 |
|  | 41.52 | 5. 53 | 9.21 | 7.33 | 55.91 | 23.53 | 7.49 | 8.76 |
|  | 39.05 | 7. 65 | 13.51 | 23.57 | 40.81 | 18.87 | 5.44 | 8.85 |
|  | 35.89 | 6.98 | 22.00 | 15. 41 | 48.25 | 27.29 | 6.38 | 10.06 |
| North Atlantic Division: |  |  |  |  |  |  |  |  |
| Maine Hamp | 34.51 57.85 | 11.43 28.30 | 11.81 | 2. 10 | 36.80 38.89 | 18.37 20.26 | 0.99 4.62 | 5.50 |
| Vermont | 33. 78 | 7.76 | 14.43 | 6.54 | ${ }_{25}{ }^{36} 76$ | 17. 23 | 1.58 | 7.85 |
| Massachusetts | 60.63 | 21.48 | 48.34 | 22.24 | 46.46 | 30.65 | 3.95 | 5.98 |
| Rhode Island. | 61.03 | 12.75 | 59.87 | 11. 60 | 42.69 | 28.80 | 4.15 | 6. 16 |
| Connecticut | 60.63 | 15. 12 | 35. 47 | 25. 89 | 48.26 | 31.27 | 2. 98 | 10.27 |
| New York | 45.05 | 12.43 | 41. 96 | 33.27 | 47.14 | 28.61 | 48.83 | 9.14 |
| New Jersey | 59.11 | 22.90 | 33.00 | 31.01 | 59.59 | 32.45 | 53.07 | 6. 49 |
|  |  |  |  |  |  |  |  | 8.17 |
| Delaware...........-. | 56.98 | 12.08 | 35.09 | 11.70 | 29.06 | 15.47 | 4.15 | 0 |
| Maryland | 61.68 | 7.40 | 42.15 | 30.97 | 65.16 | 33.13 | 7.85 | 6. 09 |
| District of Columb | 43.79 | 4.32 | 57.18 | 17. 71 | 43.51 | 20.78 | 1.53 | 23.57 |
| Virginia | 56.42 | 5. 48 | 23.94 | 11.44 | 55.12 | 22.31 | 7.75 | 4.40 |
| West Virginia | 38.51 | 7.44 | 9.36 | 7.77 | 42.77 | 13. 51 | 4. 26 | ${ }_{3} 7.23$ |
| North Carolin | 48.00 | 7.75 | 7.25 | 3.28 | 45.44 | 12. 41 | 2. 20 | 3.01 |
| South Carolina | 55.74 | 8. 63 | 27.87 | 4.51 | 66.89 | 25. 48 | 2.32 | 7.56 |
| Georgia | 54.84 | 5.73 | 10.21 | 2.01 | 62.86 | 24.48 | 9.40 5.96 | 5.42 18.81 |
| South Central Division: | 50.78 | 5.64 | 15.99 | 3.76 | 55.17 | 16.61 | 5.96 | 18.81 |
| Kentucky --...-....... | 40.79 | 6. 86 | 11.21 | 13.28 | 49.18 | 17.42 | 6. 75 | 8. 66 |
| Tennessee | 48.91 | 9.07 | 4.72 | 4.37 | 54.00 | 20.11 | 5. 95 | 6. 9.21 |
| Alabama | 48.36 | 6.58 | 12.48 | 6.93 | 66.96 | 30.83 | 11.70 | 7.23 |
| Mississipp | 29.60 | 2.24 | 2.66 | 1.18 | 51.20 | 18. 24 | 7.10 | ${ }^{77}$ 7.23 |
| Louisiana | 27.84 | 2.05 | 53.54 | 3. 35 | 57.64 | 15. 18 | 4.19 | ${ }_{9} 9.43$ |
| Texas. | 40.09 | 3.80 | 6.90 | 10.28 | 61.20 | 35.52 | 8. 52 |  |
| Arkansas | 44.90 | 2.96 | 3.58 | 9. 81 | 52. 30 | ${ }_{29} 16.63$ | 6.61 24.07 | 3.50 27.78 |
| Oklahoma --...- | 75.93 33.47 | 18.52 0.85 | 3.70 0 | 37.04 1.27 | 25.93 45.34 | 29.63 10.17 | 24.07 2.54 | 27.54 |
|  |  |  |  |  |  |  |  |  |
| Ohio -... | 43. 61 | 8.68 | 24.99 | 35. 89 | 39.77 | 21.02 | 6. 06 |  |
| Indiana | 41.83 41.46 | 5.08 7.50 | 14.44 <br> 18.55 | ${ }_{2}^{25.20}$ | 28.75 <br> 39.87 | 15.53 17.98 | 6.24 3.97 | 8.81 6.21 |
| Michigan | 31.42 | 4.12 | 16.39 | 15. 02 | 37.00 | 16.14 | 1. 97 | 12.27 |
| Wisconsin | 38.78 | 12. 36 | 6.62 | 38.72 | 36.01 | 19.39 | 5.00 | 7.36 |
| Minnesota | 31.20 | 5.12 | 15. 10 | 27.88 | 34.73 | 17.96 | 1.06 | 6. 59 |
| Iowa | 40.03 | 12.73 | 5.66 | 21.68 | 41.29 | 23.17 | 10.63 | 10. 86 |
| Missouri | 39.65 | 5. 87 | 10.18 | 17.28 | 51.09 | 19.64 | 6.78 | 9.37 |
| North Dakota | 13.70 | 2.74 | 16.44 | 13.70 | 69.86 | 15.07 | 1.37 | 0 |
| South Dak | 35. 65 | 10.00 | 8.65 | 18.26 | 44.35 | 20.87 | 0 |  |
| Nebraska | 38.06 | 9.87 | 8.98 | 17.41 | 40.57 | 15. 98 | 3.77 | 10.95 8.86 |
| Western Division: ${ }_{\text {W }}$ |  |  |  |  |  |  |  |  |
| Montana -..... | 4.71 | 0 | 28.24 | 5.88 | 12.94 | 2.35 | 0 |  |
| W yoming | 41.30 | 0 |  | 13. 04 | 28.28 | 8. 70 | 0 | 4. |
| Colorado <br> New Mex | $\stackrel{26.32}{ }$ | 5. 26 | 12.74 | 18.01 | ${ }_{36}^{26.87}$ | 12.19 | 5.54 20.30 | 24.06 |
|  |  |  |  |  |  |  |  |  |
| Utah | 17.46 | 2.66 | 3.99 | 12.64 | 33.33 | 19.12 | 2.74 | 3.16 |
| Nevada |  |  | 0 |  | 100.00 | 100.00 | 0 | 0 |
| Idaho. | 26. 43 | 2.14 | 0 | 6. 43 | 33.57 | 16. 43 | 0 | - |
| Washing | 47.56 | 9.59 | 35.15 | 23.12 | 51.50 | 17.67 | 11.47 | 16.35 |
| Oregon Californ | 50.52 | 15. 10 | 21.67 | 30.64 | 49.03 | 22.72 | ${ }^{10.01}$ | 7.62 14.66 |
| Californ | 43.22 | 7.43 | 33.97 | 11.74 | 62.77 | 40.39 | 7.00 | 14.60 |

## Table 19.-Private high schools and academies-Percentages of secondary students pursuing certain studies in 1895-96-Continued.

| State or Territory: | Per cent to total number of secondary students. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Physics. ${ }^{\text {Cl}}$ | Chemistry. | $\underset{\substack{\text { Physical } \\ \text { geogra. } \\ \text { phy. }}}{ }$ | Geology. P | $\begin{gathered} \text { Physiol- } \\ \text { ogy. } \end{gathered}$ | $\begin{gathered} \text { Psychol- } \\ \text { ogy. } \end{gathered}$ | Rhetoric. | History. |
| United States....... <br> North Atlantic Division. Sonth Atlantic Division South Central Division North Central Division Western Division. | - 21.02 | 9.89 | 22.77 | 6.61 | 28.01 | 6. 74 | 32.01 | 37.35 |
|  | 20.31 | 11.22 | 18. 62 | 6.15 | 20.47 | 5.21 | 30.65 | 37.60 |
|  | - 17.96 | 8.24 | 25. 73 | 4.51 | 27.14 | 4.26 | 31. 70 | 39. 40 |
|  | - 24.28 | 7.92 | 26.52 | 8.36 | 38.66 | 9.30 | 33.56 | 33. 66 |
|  | - 21.12 | 10.64 | 23.15 | 7.41 | 29.73 | 8.61 | 31.68 | 37. 37 |
|  | - 23.25 | 11.01 | 27.44 | 7.21 | 38.22 | 9.60 | 38.43 | 43.69 |
| North Atlantic Division : |  |  |  |  |  |  |  |  |
| New Hamp | 13. 178 | 11.35 | 11. 84 | 6. 24 3. 69 | 15. 53 | 6. 2.44 | 20.41 21.13 | 21.78 32.70 |
| Vermont. | 15.87. | 7.04 | 14.98 | 8.66 | 11. 64 | 3. 34 | 18.76 | 19.44 |
| Massachusetts | 20.05 | 12. 70 | 11. 45 | 5.10 | 15. 27 | 4.07 | 34.18 | 39.01 |
| Rhode Island | 19.04 | 7.74 | 15. 47 | 8.60 | 18.48 | 4.73 | 46. 70 | 43.98 |
| Connecticut | 14.85 | 10. 08 | 12. 91 | 10.96 | 22.79 | 38. 95 | 34.10 | 50.17 |
| New Xork | 23.29 | 12.19 | 22.02 | 6.91 | 23.15 | 55.31 | 29. 29 | 43. 20 |
| New Jersey, | 21. 63 | 10.82 | 20. 95 | 4.98 | 19. 26 | 3. 99 | 36. 62 | 37. 30 |
|  |  |  |  |  |  |  |  |  |
| Delaware.......... | 16. 23 | 8.68 | 10.18 | 0 | 14.72 | 2.64 | 21.89 | 29.06 |
| Maryland | 25.18 | 13. 09 | 27.90 | 6.29 | 20.85 | 2.22 | 37. 01 | 58.21 |
| District of | 37.10 | 20.78 | 36. 96 | 9.07 | 18.55 | 4.74 | 48.12 | 68.62 |
| Virginia ... | 16. 93 | 9.95 | 22. 09 | 5. 20 | 23.43 | 4.40 | 33.47 | 40.45 |
| West Virginia | 12.13 | 6. 60 | ${ }^{24.04}$ | 4.36 | ${ }^{27.13}$ | 4.79 | 21.17 | 34. 89 |
| North Carolina | 13.46 | 4.39 7.43 | 23.66 ${ }_{36.76}$ | 2.86 2.65 | 26.09 43.53 | 2.95 | ${ }_{28}^{24.18}$ | 31.20 |
| Georgia. | 16.39 | 7.61 | 1 $\begin{array}{r}\text { 22. } \\ \hline 19\end{array}$ | 4.87 | ${ }_{27.52}$ | 5.07 | 36.81 | 32. 26 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Tennesseo | 15. 56 | $6 \quad 5.27$ | 718.33 | 11.49 | 28.37 | - 4.80 | 28.98 | 26.87 |
| Alabama. | 24.64 | 4 7.93 | $3 \quad 25.89$ | $9 \quad 8.72$ | -37.73 | - 5.16 | 38.62 | - 31.47 |
| Mississipp | 35.97 | $7 \quad 6.50$ | 0 21.41 | 1 6. 05 | - 44.86 | 8 4.99 | 28. 64 | - 27.90 |
| Louisian8 | 41. 62 | 215.08 | 8 39.01 | $1 \quad 9.50$ | 39.94 | 410.34 | 42.55 | -65.18 |
| Texas.. | 30.00 | - 12.36 | 64.69 | $9 \quad 9.66$ | - 43.04 | 13.65 | 34.86 | - 33.88 |
| Arkansas | 23. 74 | 4 2.96 | $6 \quad 39.61$ | 12.88 | 57.67 | 19.22 | 31. 91 | 36.03 |
| Oklahoma. | 55. 56 | 6 | 0 70.73 | 27.78 | 33. 33 | 33. 33 | 55.56 | - 40.74 |
| Indian Territory. | 18.22 | 2.12 | 15.68 |  | 35. 59 | 4.24 | 25.42 | 33.05 |
| North Central Division: |  |  |  |  |  |  |  |  |
| Indiana | 16.00 | 11.05 | 18.92 | 7.59 | 22.92 | 12.55 4.75 | 26.71 | 36.88 |
| Illinois | 18.34 | 8.36 | - 19.38 | 5.85 | 23.21 | 6.81 | 32. 59 | 40.14 |
| Michigan | 16. 14 | 12.10 | 16.82 | 9.61 | 25. 58 | 7.30 | 40.00 | 44. 46 |
| Wisconsin | 22. 70 | - 9.39 | - 26.35 | 6. 08 | 24.59 | 5. 07 | 29.80 | 34.73 |
| Minnesota | 17.30 | - 37.26 | 21.56 | 4. 46 | 28.88 | 3. 73 | 30.94 | 33.87 |
| Towa | 23.97 | 714.65 | - 21.25 | 11.56 | 32.35 | 9. 97 | 33.47 | 7 28.00 |
| Missouri. | 23.17 | $7 \quad 12.06$ | 6 24.09 | 8.23 | 34.66 | 12.08 | 28.97 | - 36.76 |
| North Dak | 9. 59 | 9 | 0 <br> 18.57 |  | 97. 26 | 4.11 | 30.14 | 4 38.36 |
| South Dak | 22.60 | 0.43 | 3 25.65 | - 0 | ) 59.57 | 7 7.83 | 22.61 | 1 27.39 |
| Nebrask | 24.42 | 25.57 | 7 19.21 | 1 3. 59 | 9 24.78 | 8 7.90 | 34.11 | 1 33.93 |
| Kansas ....... | 21.85 | $5 \quad 9.55$ | $5 \quad 32.68$ | 8 8.56 | - 40.26 | - 8.17 | 25.10 | 0 29.53 |
| Western Division: |  |  |  |  |  |  |  |  |
| W yoming | 8.70 |  | 0 13.04 |  | 0 43.48 | 8 | 30. 43 | 3 50.00 |
| Colorado | 13. 57 | $7 \quad 6.93$ | 322.99 | 9 2.77 | $7 \quad 26.87$ | 1.11 | 34. 35 | $5 \quad 26.87$ |
| New Mex | 33.83 | 26.32 | $32 \quad 39.10$ | 10 4. 51 | 1 33.83 | 30 | 39.10 | 0 36.09 |
| Arizona | 9.39 | 59.32 | $32 \quad 26.18$ | 18 6.32 |  | 1 24.02 | 27.93 | 319.70 |
| Nevada | 46.15 |  | $0 \quad 100.00$ |  | 0 100.00 |  | 46.15 | 5 46.15 |
| Idaho. | 7.86 |  | 13. 57 |  | $0 \quad 80.00$ | 0 | - 30.00 | $0{ }^{30.71}$ |
| Washington | 30. 45 | $45 \quad 11.84$ | . $84 \quad 34.96$ | 96 17.11 | $1{ }^{51.68}$ | - 59.64 |  | 36 ${ }^{44.17}$ |
| Oregon | 18.54 33.25 | 54 10.46 <br> 25 15.48 | 48 25.41 <br> 88.78  | 1 3.14 <br> 79 8.29 | 14 24.66 <br> 50.02  | 86 3.89 <br> 2 6.95 | - $\begin{array}{r}28.85 \\ 49.26\end{array}$ | 85 33.48 <br> 6.08  |

Tablef 20.--Prirate high schools and academies-Equipment, income, benefactions, and endowments.

| State or Territory. | Libraries. |  | Grounds, build. ings, scientific apparatus, etc. |  | State and municipal aid. |  | Tuition fees. |  | Productive funds. |  | Income from other sources and unclassified. |  | Total income from other sources. |  | Benefactions. |  | Total money value of endowment. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Volumes. |  | Talue. | $\begin{aligned} & 0 \\ & 0 \\ & 0.0 \\ & 0.0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | Amount. | $\begin{aligned} & \text { min } \\ & \text { on } \\ & \text { on } \\ & \text { on } \\ & \text { on } \end{aligned}$ | Amount. |  | Amount. |  | Amount. |  | Amount. |  | Amount. |  | Amount. |  |
| U'nited States | 1,369 | 1,594, 605 | 1,476 | \$55, 680, 935 | 309 | \$222, 777 | 1,363 | \$5, 623, 550 | 310 | \$1, 863, 867 | 435 | \$894, 114 | 1,422 | \$8,604, 308 | 197 | \$1, 121, 579 | 345 | \$38, 849, 434 | ※ |
| North Atlantic Division | 488 | 802, 270 | 434 | 30, 781, 784 | 76 | 67, 977 | 410 | 2, 890, 815 | 160 | 1, 507, 090 | 148 | 384.025 | 428 | 4, 849, 907 | 77 | 573, 751 | 168 | 32, 328, 548 |  |
| South Atlantic livision | 209 | 159, 834 | 332 | 7, 351,668 | 90 | 50, 701 | 279 | 486, 450 | 43 | 185, 185 | 53 | 145, 591 | 7 | 867, 827 | 35 | 360, 856 | 46 | 3, 954, 436 |  |
| South Ceutral Division. | 276 | 201, 448 | 360 | 4, 638, 680 | 135 | 68,789 | 352 | 755, 793 | 36 | 58, 920 | 97 | 120, 170 | 0 | 1, 003, 672 | 22 | 71,729 | 43 | 996, 658 |  |
| North Contral Divisio | 209 | 3.19, 329 | 279 | 9, 852, 368 | 6 | 29,310 | 259 | 1, 196, 368 | 55 | 95,502 | 109 | 185, 847 | 67 | , 507, 027 | 18 | 70,729 44,514 | 73 | 793,908 875,884 |  |
| Western Division | 97 | 81,724 | 71 | 3, 056, 435 | 2 | 6,000 | 63 | 294, 124 | 16 | 17, 270 | 29 | 58, 481 | 67 | 375, 875 | 18 | 44,514 | 15 | 875, 884 |  |
| Nortl Atlantic Divisio |  |  |  |  |  |  | 98 | 44,415 | 19 |  |  | 3,006 | 28 | 85, 266 | 7 | 31, 020 | 17 | 555, 428 |  |
| Maine ${ }_{\text {New }}^{\text {Namp }}$ | $\stackrel{29}{23}$ | 31,674 42,632 | 20 | 447,360 629,000 | 19 | 11,910 | 16 | 32, 965 | 13 | 59,369 | 7 | 8,006 | 19 | 95,450 | 8 | 122, 000 | 10 | 1, 754, 570 | - |
| Vermost....... | 20 | 21, 504 | 18 | 617, 550 | $\stackrel{1}{2}$ | 196 | 17 | 43, 430 | 16 | 18,685 | 12 | 24, 315 | 17 | 86, 626 | 6 | 121, 102 | 14 | 515,000 |  |
| Massachusett | 76 | 116, 375 | 71 | 4, 850, 012 | 3 | 2, 025 | 76 | 671, 215 | 34 | 152, 179 | 25 | 98, 084 | 81 | 923, 503 | 14 | 74, 022 | 41 | 5, 875, 727 | - |
| Ihhodo Island | C | 7,700 | 6 | 254, 500 |  |  | 7 | 36, 482 | 2 | 2,481 | 2 | 19, 981 | 7 | 58, 944 |  |  |  | 31, 964 | - |
| Conaecticut | 37 | 48, 456 | 30 | 1,173, 800 | 2 | 1,200 | 24 | 152. 374 | 8 | 52, 280 | 5 | 5, 014 | 25 | 210, 868 | 1 | 50 | 11. | 1, 361, 750 | - |
| New York | 159 | 275, 402 | i 43 | 11, 372, 521 | 46 | 19,266 | 128 | 1,119,577 | 37 | 97, 748 | 59 | 161, 055 | 131 | 1,397, 646 | 28 | 137, 582 | 42 | 2, 845, 531 |  |
| Now Jersey | 45 | 74, 293 | 40 | 2, 157, 801 | 3 | 33, 270 | 29 | 241, 564 | ${ }_{9}^{9}$ | 9,543 $1,088,870$ | ${ }_{21}^{9}$ | 30,791 <br> 38 | 30 90 | 1315,168 $1,666,436$ | 6 7 | 14,800 73,175 | 12 | $2,971,450$ $16,417,128$ |  |
| Pennsylvauia...... South Atlautic Dirision | 93 | 184, 244 | 84 | 9, 279, 240 |  |  | 85 | 538, 793 | 22 | 1,088, 870 | 21 | 38,773 | 90 | 1, 666, 436 | 7 | 73, 175 | 20 |  | ¢ |
| Delararo. | 2 | 1,700 | 2 | 130, 000 |  |  | 2 | 19,500 | 1 | 1,000 |  |  | 2 | 20, 500 |  |  | 1 | 80, 000 |  |
| Maryland. | 31 | 43, 256 | 26 | 1, 586, 884 | 8 | 10,200 | 28 | 137, 510 | 4 | 106, 493 | 5 | 15,047 | 31 | 269, 250 | 3 | 265, 350 | 4 | 3, 085,582 |  |
| 1istriet of Columbi | 10 | 18,700 | 7 | 355, 200 |  |  | 4. | 20,500 | 3 | 4, 800 | 1 | 200 | 5 | 25, 500 | , | 3, 207 | 2 | 175,000 |  |
| Virgivir........ | 38 | 20, 189 | 59 | 3, 143, 300 | 5 | 2,033 | 50 | 113, $16 \overline{3}$ | 5 | 1,966 | 9 | 27, 735 | 53 | 144, 899 | 2 | 5,500 | 7 | 35, 000 |  |
| West Virgini | 9 | 6, 300 | 11 | 178, 500 |  |  | 10 | 19,640 | 3 | 2,372 | 2 | 5, 003 | 10 | 27,015 | 1 | 8, 000 | 7 | 103,500 49,920 |  |
| North Caroli | 54 | 20,308 | 111 | 551, 716 | 20 | 2, 183 | 85 | 55, 731 | 10 | 50, 205 | ${ }_{2}^{22}$ | 18, 223 | 90 | 126,342 63,217 |  | 20,810 21,000 | 7 | 49, 920 |  |
| South Car | $\stackrel{21}{39}$ | 16,140 27 2741 | -88 | 371,200 964,568 |  | 5,825 29,660 | 73 | 31,176 84,839 | ${ }_{15}^{2}$ | 1,781 16,386 | ${ }_{2}^{8}$ | 24,435 54,948 | 24 79 | 63,217 185,833 | $\stackrel{2}{16}$ | 21, 3600 | 5 | 46,300 377,334 |  |
| Floridia. | ${ }^{39}$ | 27,41 3,800 | 83 | 967,068 70,300 | 4 | $\begin{array}{r}29,660 \\ \hline 800\end{array}$ | 1 | 81,839 4,389 | 15 1 | 16, 88 | 2 | 51,948 | 19 3 | 185, 271 | 1 | -80, 82 | 15 | 1, 300 |  |
| South Central Division: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Kentucky | 53 | 41, 287 | 59 | 1, 069, 450 | 9 | 4,789 | 62 | 169, 541 | 7 | 4, 731 | 16 | 40,555 | 63 | 219, 616 | 5 | 16, 050 | 8 | 100, 500 |  |
| Tennessee | 61 | 42, 206 | 91 | 655, 729 | 27 | 11, 287 | 77 | 138, 680 | 7 | 4,291 | 22 | 11, 046 | 81 | 165, 304 | 5 | 2, 800 | , | 106,550 |  |
| Alabama | 27 | 19,300 | 60 | 418, 378 | 37 | 11,079 | 58 | $6 \pm, 604$ | 6 | 12,723 | 14 | 25, 150 | 62 | 113, 556 | 1 | 75 | 5 | 289, 848 |  |
| Mississipp | 45 | 26, 525 | 57 | 362, 575 | 30 | 15, 036 | 51 | 70, 889 | ${ }_{9}^{4}$ | 8,870 | 14 | 4, 55\% | 54 | 99,347 | 6 | 49,800 |  | 51, 455 |  |
| Lonisiana | 20 40 | 19,990 39,198 | 16 | 157,800 $1,574,900$ | $\stackrel{2}{23}$ | 1,260 15,452 | 12 57 | 41, 313 214,427 | 7 | 3,600 21,525 | 4 4 | 5,315 18,858 | 13 <br> 59 | 51,488 |  |  | 2 | 40,005 202,750 |  |
| Texas.... | 40 <br> 20 | 39,198 8,872 | 37 30 | $1,574,900$ 214,900 | r | 15,452 3,850 | $\xrightarrow{27}$ | 21,42 45,509 | 7 | 21, 2,230 | 10 | 18, 6,238 | 59 29 | $\begin{array}{r}\text { 270, } \\ \text { 57, } \\ \hline\end{array}$ | 3 | $\begin{aligned} & 1,615 \\ & 1,339 \end{aligned}$ | 7 | 202, 77,650 |  |



Table 21.-Denominational schools included in the tables of private high schools and academies.


Table 22.-Denominational schools inoluded in the tables of private high schools and academies.


Table 23.-Averages of number of teachers, students, and graduates to the public high school, and like averages for the private high school and academy.

| State or Territory. | Public high schools. |  |  |  |  | rate high schools and academies. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { í } \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & \hline \\ & \hline \\ & 0 \\ & H \end{aligned}$ |  |  |  |  |  |  |  | $\begin{gathered} \text { Elementary pupils } \\ \text { to a school. } \end{gathered}$ |  |
| United States <br> North Atlàntic Division. | 3.1 | 76.4 | 24.2 | 51.0 | 9.2 | 4.1 | 50.6 | 12.1 | 57.3 | 5.3 |
|  | 4.0 | 96.8 | 24.1 | 69.0 | 12.8 | 5.7 | 60.9 | 10.6 | 39.6 | 7.8 |
| South Atlantic Division. | 2.5 | 56.8 | 22.0 | 49.3 | 4.9 | 3.1 | 41.9 | 13.4 | 57.2 | 3.1 |
| Sonth Central Division. | 2.4 | 52.0 | 21.4 | 52.1 | 3.9 | 2.8 | 45.4 | 15.9 | 71.9 | 3.4 |
| North Central Division | 2.9 | 73.1 | 24.8 | 45.7 | 9.0 | 4.4 | 51.9 | 11.7 | 60.1 | 6.3 |
| Western Division | 3.8 | 100.5 | 25.9 | 17.8 | 12.1 | 3.7 | 42.1 | 11.1 | 86.8 | 4.4 |
| North $\Lambda$ tlantic Division: |  |  |  |  |  |  |  |  |  |  |
|  | 2.2 | 59.7 | 26.6 | 14.2 | 8.1 | 4.4 | 89.7 | 20.0 | 13. 2 | 12.9 13.8 |
| New Hampsh | 2.6 | 64.4 | 24.1 | 18.2 | 9.2 | 5.7 | 73.6 | 12.8 | 17.0 | 13.8 11.1 |
| Vermont...... | 2.5 | 58.5 | 22.6 | 78.7 | 7.0 | 5.3 | 85.2 | 15.8 | 42.2 | 11.1 9.4 |
| Massachusett | 5.1 | 130.7 | 25.4 | 6.1 | 18.2 | 5. 9 | 60.4 | 10.0 | 17.6 | 9.4 |
| Rhode Island | 8.5 | 194. 2 | 22.8 | 14.5 | 27.5 | 6.5 | 63.4 | 9.6 | 34.1 | 6.7 |
| Connecticat | 4.1 | 93.3 | 22.6 | 32.3 | 13.0 | 4.4 | 44. 3 | 9.8 | 22.5 | 5. 2 |
| New York | 4.3 | 99.7 | 23.1 | 149.6 | 10.5 | 6.2 | 52.7 | 8.4 | 60.6 | 5.8 |
| New Jersey | 4.6 | 106.8 | 23.1 | 70.7 | 15.7 | 5.8 | 56.5 | 9.7 | 32.1 | 7.0 |
| Peunsylvania. | 3.5 | 87.6 | 24.4 | 60.1 | 13.5 | 5.5 | 68.0 | 12.3 | 46.3 | 8.1 |
| South A tlantic Division: |  |  |  |  |  |  |  |  |  |  |
| Delaware | 3.0 2.9 | 84.3 74.0 | 28.1 24.8 | 86.6 77.8 | 13.2 7.8 | 6.3 5.0 | 88.3 44.1 | 13.9 8.7 | 73.3 39.2 | 10.6 4.1 |
| District of C | 24.2 | 595.7 | 24.5 |  | 40.2 | 6. 4 | 44.8 | 6.9 | 85.5 | 3.7 |
| Virginia | 2.4 | 51.0 | 20.7 | 51. 1 | 3.5 | 3. 0 | 36.0 | 11.8 | 34.7 | 2.2 |
| West Virgini | 2.0 | 47.0 | 22.5 | 11.5 | 6. 6 | 3.4 | 52.2 | 15.1 | 35.7 | 3. 6 |
| North Carolina | 2.0 | 54.9 | 26.5 | 45.9 | 8. 3 | 2.3 | 37.5 | 15.9 | 51.2 | 2. 2 |
| South Carollna | 1.9 | 34.0 | 17.4 | 41.8 | 3.1 | 2.6 | 39.6 | 14.9 | 53.6 | 4.6 |
| Georgia. | 2.2 | 48.8 | 21.7 | 47.2 | 3.5 | 2. 8 | 51.4 | 18.2 | 93.3 | 3. 6 |
| Florida | 2.2 | 42.4 | 19.2 | 44.2 | 1. 8 | 3.3 | 31.9 | 9.6 | 98.0 | 5.3 |
| South Central Division : |  |  |  |  |  |  |  |  |  |  |
| Kentucky | 2. 8 | 67.0 | 23.6 | 45.5 | 6. 0 | 3. 4 | 44. 2 | 12.7 | 54. 1 | 3. 0 |
| Tennessee | 2. 0 | 4 4 .9 | 22.9 20.3 | 48.9 45.5 | 4. 0 | 2.5 | 44.9 | 17.6 17.0 | 78.5 60.0 | 3.6 2.5 |
| Alabama. | 2.0 | 42.1 <br> 37.5 <br> 1.8 | 20.3 17.6 | 45.5 | 3. 2 | 2.1 | 36.5 | 17. 0 | 60.0 80.7 | 2.5 3.7 |
| Mississipp | 3. 3 | 37.5 71.8 | 17.6 19.1 | 61.2 53.3 | 2.6 9.1 | 2.6 3.3 | 48.0 39.7 | 17.9 11.8 | 80.7 61.1 | 3.7 4.2 |
| Texas | 2. 7 | 58.6 | 21.6 | 51.5 | 3.4 | 3.5 | 60.9 | 17.1 | 83.1 | 4.2 |
| Arkansas | 2.0 | 48.2 | 23.4 | 61.9 | 3.4 | 2.3 | 40.1 | 17.1 | 78.4 | 2.7 |
| Oklahoma | 2.6 | 67.6 | 25.3 |  | 3. 6 | 2.5 | 27.0 | 10.8 | 82.0 | 5.5 |
| Indian Territory | 3.3 | 53.3 | 16.0 | 60.0 | 3.0 | 2.1 | 26.2 | 12.4 | 100.7 | 0.8 |
| North Central Division: |  |  |  |  |  |  |  |  |  |  |
| Ohio.. | 2. 6 | 65.0 | 24.8 | 62.3 | 8. 3 | 4. 5 | 40.9 | 8. 9 | 53.3 | 5. 5 |
| Indiana | 2.6 | 60.2 | 23.0 | 45.7 | 7.6 | 5. 0 | 67.0 | 13.1 | 74. 2 | 6. 1 |
| Illinois | 3.4 | 92.5 | 26.6 | 41.4 | 11.9 | 4.8 | 56.7 | 11.7 | 71.9 | 6.3 |
| Michigan | 3.3 | 83.9 | 24.8 | 73.7 | 9.3 | 5.4 | 68.5 | 12.5 | 136. 3 | 7.1 |
| W isconsin | 3. 0 | 77.4 | 25.3 | 37.5 | 9.6 | 5. 7 | 61.6 | 10.7 | 39.9 | 11.6 |
| Minnesota | 4.4 | 107.0 | 23.9 | 20.8 | 10.1 | 4.9 | 51.8 | 10.4 | 58.2 | 8.0 |
| Iowa. | 2.9 | 72.2 | 24.6 | 36.2 | 10.0 | 3.8 | 56. 2 | 14.4 | 72.3 | 7.9 |
| Missouri | 3.4 | 90.0 | 26.1 | 30.5 | 9.2 | 3.5 | 50.1 | 14.1 | 41.2 | 5.1 |
| North Dak | 2.3 | 44.4 | 19.0 | 21.8 | 4.9 | 2.2 | 18.2 | 8.1 | 96.2 |  |
| South Dak | 2.0 | 46.1 | 22.0 | 5.8 | 5.6 | 4. 1 | 32.8 | 7.9 | 70.5 | 4. 1 |
| Nebrask | 2.2 | 53.7 | 24.3 | 40.2 | 6. 2 | 4. 7 | 39.7 | 8.4 | 46. 9 | 4.0 |
| Kansas. | 2.4 | 60.5 | 24.3 | 26.3 | 8.1 | 4.1 | 48.3 | 11.5 | 48.1 | 5.6 |
| Western Division : |  |  |  |  |  |  |  |  |  |  |
| Montana ...... | 2. 6 | 65.3 | 24.3 |  | 5.1 | 1.6 | 28.3 | 17.0 | 94.0 |  |
| W yoming | 2. 8 | 54.6 | 19.5 |  | 2. 2 | 3. 0 | 23.0 | 7.6 | 41.5 |  |
| Colorado. | 4.4 | 93.6 | 21.2 | 21.1 | 11.1 | 3. 6 | 45.1 | 12.4 | 93.2 | 4. 8 |
| New Mexic | 2.2 | 33.0 | 14.4 |  | 2.4 | 2.6 | 26.6 | 10.2 | 33.6 | 2.4 |
| Arizona | 3. 0 | 60.0 | 20.0 |  | 2.5 |  |  |  |  |  |
| Ctah | 10.5 | 204.0 | 28.0 |  | 28.5 | 3.3 | 85.9 | 25.5 | 117.4 | 3. 9 |
| Nevada | 2.5 | 73.2 | 29.3 |  | 10.2 | 1.0 | 13.0 | 13.0 | 52.0 | 2.0 |
| Ifaho... | $\stackrel{2}{2.1}$ | 35.7 | 16.6 | 53.4 | 8. C | 2.3 | 46. 6 | 20.0 | 17.0 |  |
| Washing | 3. 0 | 75.4 | 25.1 | 43.4 | 9.2 | 3.1 | 38. 0 | 12.0 | 47.5 | 3.2 |
| Oregon... | 3.5 4.4 | 112.6 129.1 | 31.8 28.9 | 16.1 | 12. 0 | 4. 4 | 44.5 | 9.9 | 70.2 | 6. 6 |
| California |  | 129.1 | 28.9 | 11.8 | 16.6 | 4.2 | 34.7 | 8.1 | 101.7 | 5.0 |

Table 24.-Combined statistics of publio high schools and private high schools and acadomies-Number of schools, instructors, and studerts in 1895-96.

| State or Territory. | Total number of schools. | Total number secondary teachers. | TotaI number secondary studenis. | Male. |  | Female. |  | Classical preparatory students. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Number. | $\begin{array}{c\|c} \text { Per } \\ \text { cent. } \end{array}$ | Number. | Per cent. | Number. | Per cent. |
| United States. .... | -7, 08024 | 24,452 48 | 487, 147 | 211, 433 | 43.40 | 275, 714 | 56.60 | 48,955 | 10.05 |
| North Atlantic Division | 1,856 | 8,587 1 | 155, 646 | 69, 881 | 44.90 | 85, 765 | 55.10 | 18, 747 | 12.04 |
| South Atlantic Division | 809 | 2, 327 | 39, 400 | 17,935 | 45.52 | 21,465 | 54. 48 | 5,786 | 14.69 |
| Soutlr Central Division | 1,025 | 2,693 | 50,139 | 22,578 | 45.03 | 27, 561 | 54.97 | 8,005 | 15.96 |
| North Central Division | 3,052 | 9,547 2 | 215, 273 | 89, 816 | 41.72 | 125, 457 | 58. 28 | 14, 020 | 6.52 |
| Western Division | 338 | 1,298 | 26,689 | 11, 223 | 42.05 | 15, 466 | 5795 | 2, 397 | 8.98 |
| North Atlantic Division: <br> Maine. <br> 155 <br> 426 <br> 10, 310 <br> 4, 643 <br> 45.03 <br> 5, 667 <br> 54.97 <br> 1, 681 <br> 16. 30 |  |  |  |  |  |  |  |  |  |
| New Hampshire..... | 74 | 274 | 5,000 | 2,491 | 49.82 | 2,509 | 50, 18 | 1,920 | 18. 40 |
| Vermont | 77 | 272 | 5, 204 | 2,452 | 47. 12 | 2, 752 | 52.88 | 613 | 11. 78 |
| Massachuset | 317 | 1,710 | 34,548 | 15,857 | 45.32 | 18, 691 | 54. 68 | 5,516 | 15.97 |
| Rhode Island | 25 | - 191. | 3,417 | 1,465 | 42.87 | 1, 952 | 57.13 | 713 | 20.87 |
| Connecticut | 125 | 537 | 8,779 | 3,856 | 43. 92 | 4,923 | 56.08 | 1,117 | 12. 73 |
| New York | 545 | 2,736 | 44, 855 | 19,913 | 44. 39 | 24,.942 | 55. 61 | 4,374 | 9.75 |
| New Jersey | 143 | 744 | 11, 758 | 5,464 | 46.47 | 6,294 | 53.53 | 1,500 | 12. 76 |
| Pennsylvania ....... | 395 | 1,697 | 31,775 | 13, 740 | 43.24 | 18,035 | 56,76 | 2,313 | 7.28 |
|  |  |  |  |  |  |  |  |  |  |
| Maryland | 90 | 361 | 5,316 | 2.280 | 42.89 | 3, 036 | 57. 11 | 320 | 6. 02 |
| District of Colv | 20 | 200 | 3,100 | 1,042 | 33.61 | 2, 058 | 66. 39 | 210 | 6.77 |
| Virginia | 162 | 450 | 6,958 | 3,350 | 48.15 | 3, 608 | 51.85 | 968 | 13.91 |
| West Virgin | 40 | 108 | 1,976 | 855 | 43.27 | 1,121 | 56.73 | 115 | 5.82 |
| North Carolin | 151 | 351 | 5,917 | 3,376 | 57.06 | 2,541 | 42.94 | 1,381 | 23.34 |
| South Carolin | 99 | 220 | 3,586 | 1,676 | 46.74 | 1,910 | 53. 26 | , 674 | 18.79 |
| Georgia. | 197 | 493 | -9,848 | 4,260 | 43. 26 | 5,588 | 56.74 | 1,989 | 20.20 |
| Florida............. | 34 | 4.86 | 6 1,337 | - 515 | 38.52 | 5,822 | 61.48 | - $\cdot 62$ | 4.64 |
|  |  |  |  |  |  |  |  |  |  |
| Kentucky.. | 142 | 2457 | 7 7,643 | 3 3, 335 | 43. 63 | 4,308 | 56.37 | 934 | 12. 22 |
| Tennessee | 207 | $7 \quad 480$ | 0 9,491 | 1 4,559 | 48.03 | 4,932 | 51.97 | 2, 038 | 21.47 |
| Alabama | 134 | $4 \quad 283$ | 5,216 | 6 2,481 | 47.57 | 2,735 | 52.43 | -923 | 17.69 |
| Mississipp | 149 | 9 352 | 2 6,275 | 5 2,886 | 45.99 | 3,389 | 54. 01 | 1, 017 | 16. 21 |
| Touisiana | 47 | 7166 | 6 2,511 | 1 804 | 32. 02 | 1, 707 | 67.98 | 1, 285 | 11. 35 |
| Texas. | 245 | 5731 | 1 14,555 | -6,417 | 44.09 | 8, 138 | 55.91 | 1,862 | 12.80 |
| Arkansas | 84 | $4{ }^{182}$ | 3 3,795 | 1,793 | 47. 25 | 2, 002 | 52.75 | - 850 | 22. 40 |
| Oklahoma. | 5 | 5 13 | 3 - 257 | 9 91 | 35. 41 | -166 | 64.59 | 28 | 10.89 |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  | 6.05 |
| Indiana | 337 | 7 - 938 | 7 20,459 | 88,658 | 42. 32 | 11,801. | 57.68 | 2, 853 | 4.17 |
| Tllinois | 378 | 1 1,392 | 2 32,874 | 4. 12,846 | 39.08 | 20,028 | 60.92 | 2,056 | 6. 26 |
| Michigan. | 298 | 1, 041 | 1 24,746 | 10,315 | 41.68 | 14,431 | 58.32 | 1, 1,086 | 4.39 |
| Wisconsin | 209 | - 702 | 2 15,779 | 6,990 | 44. 30 | 8,789 | 55.70 | 1,206 | 7.64 |
| Minnesot | 130 | 0595 | 5 12, 16. | - 5,218 | 42.37 | 7,098 | 57. 63 | -623 | 5. 06 |
| Towa. | 367 | 7 1,112 | 2 25,915 | 10,923 | 42.15 | 14,992 | 57.85 | 1,918 | 7.40 |
| Missouri | 256 | 6 - 892 | 2 19,587 | 8,024 | 40.97 | 11,563 | 59.03 | 1, 562 | 7.97 |
| North Dakot | 25 | 5 58 | 8 1,006 | - 446 | 44. 33 | 3560 | 55.67 | ${ }^{102}$ | 10.14 |
| South Dakota | 38 | - 94 | 4 1, 1,660 | 704 | 42.41 | 1.956 | 57.59 | 84 | 5. 06 |
| Nebraska | 211 | 1.500 | 0 11, 146 | 6 4,564 | 40.95 | 5 6,582 | 59.05 | 1,118 | 10.03 |
| Kansas....... | 189 | - 506 | 6 11, 193 | 3 4,645 | 41.50 | -6,548 | 58.50 | 1,078 | 0. 63 |
| Western Diviston: |  |  |  |  |  |  |  |  |  |
| Wontana | 19 | 9 48 <br> 7 20 | 8 1,131 <br> 19  | 1.390 | - 34.48 | 8 -741. | 65.52 | 87 | 7.69 |
| Colorado | 49 | $9 \quad 210$ | 10 4,201 | 1 1,638 | 39.8 <br> 38.99 | 9 2,563 | 60.19 61.01 | 314 | 17.56 7.48 |
| New Mexi |  | $2 \quad 29$ | 29 | 174 | 47.80 | 0190 | 52. 20 | 20 | 7.14 |
| Arizona |  | 26 | $6 \quad 120$ | 2049 | 40.83 | $3 \quad 71$ | 5917 | 12 | 10.00 |
| Utah |  | 6 68 | 88 1,791 | 1900 | - 50.25 | 5891 | 49.75 | 204 | 11.39 |
| Nevad |  | $5 \quad 11$ | 11.300 | 103 | 33.66 | 6203 | 66.34 | 43 | 14. 05 |
| Idaho |  | 10.29 | 29 390 | - 186 | 6 47.69 | 9204 | 52.31 | 57 | 14. 61 |
| Washing |  | 45 13 | $3^{\circ}$ 2, 872 | 72 1,188 | 811.36 | 6 1,684 | 58.64 | 225 | 7.81 |
| Oregon |  | 28 113 | 13 2,133 | 33 -926 | 6 43.41 | 1 1,207 | 7 56.59 | 115 | 5.39 |
| California.. | - 145 | 15.634 | 34 13,062 | 52 5,542 | 2.42 .43 | 3 7,520 | - 57.57 | 1,258 | -9.63 |

Table 25.-Combined statistics of public high schools and private high schools and acade-mies-College preparatory students and graduates in 1895-96.

| State or Territory. | Scientific preparatory students. |  | Total college preparatory students. |  | Graduates in 1896. |  | Graduates prepared for college. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number. | $\begin{gathered} \text { Per } \\ \text { cent. } \end{gathered}$ | Number. | Per cent. | Number. | Per cent. | Number. | Per cent. |
| United States. | 34, 873 | 7.16 | 83, 828 | 17. 21 | 57, 153 | 11.73 | 18,683 | 32.69 |
| North Atlantic Division | 10, 856 | 6.98 | 29,603 | 19. 02 | 20, 457 | 13.14 | 6, 006 | 29.36 |
| South Atlantic Division | 1, 596 | 4. 05 | 7, 382 | 18.74 | 3,240 | 8. 22 | 1, 394 | 43.02 |
| South Central Division. | 4,111 | 8.20 | 12, 116 | 24.16 | 3,771 | 7.52 | 1, 426 | 37.81 |
| North Central Division. | 14,859 | 6.90 | 28,879 | 13.42 | 26,546 | 12. 33 | 8,453 | 31.84 |
| Western Division ... | 3,451 | 12.93 | 5,848 | 21.91 | 3, 139 | 11.76 | 1,404 | 44.73 |
| North Atlantic Division Maine | 512 | 4.97 | 2,193 | 21.27 | 1,433 | 13. 90 | 389 | 27.15 |
| New Hampsh | 595 | 11. 90 | 1,515 | 30.30 | 1, 800 | 16. 00 | 282 | 35.25 |
| Vermont. | 577 | 11. 09 | 1,190 | 22.87 | 650 | 12. 49 | 228 | 35. 08 |
| Massachusetts | 2, 140 | 6. 19 | 7,656 | 22.16 | 4, 927 | 14.26 | 1,514 | ${ }^{30.73}$ |
| Rhode Island. | 87 | 2.54 | 800 | 23.41 | 459 | 1.3. 43 | 145 | 31.59 |
| Connecticut | 678 | 7.72 | 1,795 | 20. 45 | 1,169 | 13.32 | ${ }^{366}$ | 31. 31 |
| New York. | 3,155 | 7.04 | 7,529 | 16.79 | 4,795 | 10.69 | 1,546 | 32.24 |
| New Jersey | 1,238 | 10.53 | 2,738 | 23. 29 | 1,648 | 14, 02 | 571 | ${ }^{34.65}$ |
| Pennsylvania.... | 1,874 | 5.90 | 4,187 | 13.18 | 4,576 | 14.40 | 965 | 21.09 |
| South Atlantic Divisio | 34 | 2.50 | 101 | 7.42 | 204 | 14.98 | 51 | 25.00 |
| Maryland. | 112 | 2. 11 | 432 | 7.42 8.13 | 539 | 10.14 | 125 | 23.19 |
| District of | 83 | 2. 68 | 293 | 9.45 | 221 | 7.13 | 43 | 19.46 |
| Virginia | 310 | 4.46 | 1,278 | 18.37 | 463 | 6. 65 | 171 | 36. 93 |
| W est Virgin | 96 | 4.86 | 211 | 10.68 | 212 | 10.73 | 68 | ${ }_{59}^{32.08}$ |
| North Carolina | 371 | 6. 27 | 1,752 | 29. 61 | 432 | 7.30 | 256 276 | 59. 26 |
| South Carolina | 172 | 4.80 | 846 | 23.59 | 369 | 10. 29 | $\begin{array}{r}276 \\ 388 \\ \hline\end{array}$ | 74. 19 |
| Georgia... | 393 | 3. 99 | 2, 382 | 24. 19 | 703 97 | 7.14 7.26 | 388 16 | 55.19 16.49 |
| Florida ............ | 25 | 1. 87 | 87. | 6.51 | 97 | 7.26 | 16 |  |
| Kentucky ........ | 600 | 7.85 | 1,534 | 20.07 | 607 | 7.94 | 145 | 23.89 |
| Tennessee | 911 | 9. 60 | 2, 949 | 31. 07 | 799 | 8.42 | 403 | 50. 44 |
| Alabama | 536 | 10. 28 | 1,459 | 27. 97 | 387 | 7.42 | 128 | 33. 07 |
| Mississippi | 790 | 12. 59 | 1, 807 | 28. 80 | 468 | 7.46 | 220 59 | $\stackrel{47.01}{19.93}$ |
| Louisiana. | 92 | ${ }^{3.66}$ | 377 | 15. 01 | 296 905 | 11.79 | $\begin{array}{r}59 \\ 322 \\ \hline\end{array}$ | ${ }_{35.58}$ |
| Texkas ... | 897 238 | 6.16 6.27 | 1, 2,088 | 18.96 ${ }^{\text {28. }} 6$ | 905 270 | 6.22 7.11 | 123 | 45.56 |
| Oklahoma | 3 | 1.17 | 1, 31 | 12. 06 | 22 | 8.56 | 22 | 100.00 |
| Indian Territory | 44 | 11.11 | 112 | 28.28 | 17 | 4.29 | 4 | 23.53 |
| North Central Divisio | 1,851 | 4.79 | 4,185 | 10.84 |  | 12. 92 | 1,174 | 23.54 |
| Indiana. | 1,867 | 4. 24 | 1, 720 | 18.84 | - 2,558 | 12.50 | 1,668 | 26.11 |
| Illinois | 1,894 | 5.76 | 3,950 | 12.02 | 4, 191 | 12.75 | 1, 074 | 25. 63 |
| Michigan. | 1, 976 | 7. 98 | 3, 062 | 12.37 | 2, 761 | 11. 16 | 1, 059 | 38. 36 |
| Wisconsin | 1, 207 | 7. 65 | 2,413 | 15.29 | 2, 070 | 13. 12 | ${ }_{710}^{681}$ | 32.90 56.39 |
| Minnesota | 1, 903 | 15. 45 | 2,526 | 20.51 | 1,259 | 10.22 | 710 | 56. 297 |
| Iowa | 1,500 | 5. 79 | 3,418 | 13.19 | 3,607 | 13. 92 | 1, 081 | 29.97 |
| Missouri. | 1, 386 | 7.08 | 2,948 | 15. 05 | 2, 016 | 10.29 | 638 | 31.65 36.54 |
| North Dakota | 181 | 17.99 | 283 | 28.13 | 104 | 10.34 | 38 | 36.54 40.00 |
| South Dakota | 197 | 11.87 | 281 | 16. 93 | 205 | 12.35 | 82 | ${ }_{46.00}^{40}$ |
| Nebraska | 875 | 7.85 | 1,993 | 17.88 | 1,300 | 11. 66 | 601 | 46. ${ }^{43}$ |
| Kansas. | 1,022 | 9.13 | 2, 100 | 18.76 | 1,487 | 13.29 | 647 | 43.51 |
| Western Division : | 84 | 7.43 | 171 | 15.12 | 83 | 7.34 | 52 | 62.65 |
| W yoming | 84 | 2. 19 | 63 | 19.75 | 11 | 3. 45 | 4 | 36. 36 |
| Colorado | 860 | 20.47 | 1, 174 | 27.95 | 497 | 11.83 | 206 | 41.45 |
| New Mex |  | 1. 10 | 30 | 8.24 | 29 | 7.97 | 12 | 41.38 |
| Arizona | 0 |  | 12 | 10. 00 | 5 | 4.17 |  | 60.00 |
| Utah | 114 | 6.37 | 318 | 17.76 | 112 | 6.25 | 54 | 48.21 |
| Nevada | 15 | 4.90 | 58 | 18.95 | 43 | 14. 05 | 12 | 27. 91 |
| Idaho.. | 115 | 29.49 | 172 | 44. 10 | 56 | 14.36 | 27 | 48. 21 |
| W ashington | 204 | 7. 10 | 429 | 14.94 | 334 | 11. 63 | 86 | 25.75 26.46 |
| Oregon.... | 103 1,945 | 4.83 14.89 | 218 3,203 | 10.22 14. 52 | 257 1,712 | 12.05 13.11 | 68 880 | 26. 51.40 |
| California | 1,945 | 14.89 | 3,203 | 24.52 | 1,712 | 13.11 | 880 | 51.40 |

TABLE 26.-Combined statistios of public high schools and private high schools and academies-Secondary students in ancient and modern languages in 1895-96.

| State or Territory. | Latin. |  | Greek. |  | French. |  | German. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number. | Per cent. | Number. | $\begin{gathered} \text { Per } \\ \text { cent. } \end{gathered}$ | Number. | Per cent. | Namber. | Per cent. |
| United S | 225, 164 | 46. 22 | 22,304 | 4.58 | 49,327 | 10. 13 | 64, 293 | 13.20 |
| North Atlantic Divisi | 73 | 47 | 13, 380 | 8.60 | 31, 364 | 20.15 | 26, 998 | 17.35 |
| South Atlantio Division | 23, 085 | 58.59 | 1,900 | 4.82 | 5,526 | 14. 03 | 4, 114 | 10.44 |
| South Central Division | 23, 434 | 46.74 | 1,733 | 3.46 | 3, 384 | 6.75 | 2,994 | 5.97 |
| North Central Division | 92, 543 | 42.99 | 4, 229 | 1.96 | 6,958 | 3.23 | 26,753 | 12.43 |
| Western Division. | 12, 283 | 46. 02 | 1,062 | 3.98 | 2,095 | 7.85 | 3,434 | 12.87 |
|  | 4,374 | 42.42 | 1,169 | 11. 34 | 1,676 | 16. 26 | 130 | 12.61 |
| New Hampshire | 2, 737 | 54.74 | 1, 768 | 15.36 | 1,040 | 20.80 | 308 | 6.16 |
| Vermont.. | 2, 020 | 38.82 | 400 | 7.69 | 642 | 12.34 | 278 | 5. 34 |
| Massachusett | 18,362 | 53.15 | 4, 171 | 12. 07 | 13,712 | 39. 69 | 3,960 | 11. 46 |
| Rhode Island | 1,777 | 52.00 | 378 | 11. 06 | 1,083 | 31. 69 | 373 | 10.92 |
| Connecticut | 5, 313 | 60.52 | 907 | 10.33 | 1,773 | 20.20 | 1,970 | 22,44 |
| New York | 16, 624 | 37.06 | 2,817 | 6. 28 | 6,347 | 14. 15 | 9,869 | 22. 00 |
| New Jersey | 5,404 | 45.96 | 1,161 | 9.87 | 1,716 | 14.59 | 3, 349 | 28.48 |
|  |  |  |  |  | 3,375 | 10.62 | 6, 761 | 21.28 |
|  |  |  |  |  | 94 |  |  | 4.92 |
| Maryland. | 3,446 | 64.82 | 275 | 5. 17 | 1,135 | 21. 35 | 1,637 | 30.79 |
| District of Colum | 1,419 | 45.77 | 108 | 3.48 | 670 | 21. 61 | 889 | 28.68 |
| Virginia | 4,346 | 62.46 | 212 | 3.05 | 1,085 | 15. 59 | 984 | 14.14 |
| West Virgin | 649 | 32.84 | 70 | 3.54 | 96 | 4.86 | 73 | 3. 69 |
| North Carolina | 3, 131 | 52.92 | 415 | 7.01 | 390 | 6. 59 | 192 | 3.24 |
| South Carolin | 2, 045 | 57.03 | 220 | 6.13 | 626 | 17.45 | 107 | 2.98 |
| Georgia. | 6,264 | 63.61 | 532 | 5.40 | 1,331 | 13.52 | 136 | 1.38 |
| Florida | 758 | 56.69 | 36 | 2. 69 | 99 | 7.40 | 29 | 2.17 |
| South Central Division: |  |  |  |  |  |  |  |  |
| Kentucky <br> Teunessee | 4,137 4,430 | 54.13 46.68 | $\begin{array}{r} 398 \\ 546 \end{array}$ | 5.21 5.75 | 473 <br> 344 | 6.19 3.62 | 1,191 | 15.58 3.11 |
| Alabama. | 2,784 | 53.37 | 276 | 5. 29 | 554 | 10.62 | 291 | 5. 58 |
| Mississipp | 2,257 | 35.97 | 139 | 2. 22 | - 103 | 1. 64 | 98 | 1. 57 |
| Louisiana | 1,465 | 58. 34 | . 34 | 13. 54 | 1,417 | 56. 43 | 86 | 3. 42 |
| Texas.. | 6, 375 | 43. 80 | 272 | 1.87 | 393 | 2.70 | 792 | 5. 44 |
| Arkansa | 1,702 | 44.85 | 56 | 1. 48 | 92 | 2.42 | 196 | 5. 16 |
| Oklahoma | 120 | 46. 69 | - 10 | 3.89 | 8 | 3.11 | 42 | 16. 34 |
| Indian Territory | 164 | 41. 41 |  | 0. 51 | 0 |  | 3 | 0.76 |
| North Central Division: |  |  |  |  |  |  |  |  |
| Indiana | 11, 646 | 56. 92 | 199 | 2. 07 | 1,131 | 1. ${ }^{2 .} 97$ | 4,708 | 12.20 9.32 |
| Tllinois | 14, 933 | 45. 42 | 748 | 2.28 | 2, 186 | 6.65 | 4,638 | 14.11 |
| Michigan | 7, 938 | 32. 08 | 483 | 1.95 | -976 | 3. 94 | 3,555 | 14.37 |
| W isconsin | 3, 671 | 23.27 | 279 | 1.77 | 152 | 0.96 | 3, 730 | 23. 64 |
| Minnesot | 6,321 | 51.32 | 335 | 2.72 | 709 | 5.76 | 1,895 | 15. 39 |
| Iowa. | 9,576 | 36.95 | 338 | 1.30 | 288 | 1.11 | 2,110 | 8.14 |
| Missouri | 8,200 | 41.86 | 520 | 2.65 | 818 | 4.18 | 2,297 | 11.73 |
| North Dakota | 483 | 48.01 | 6 | 0.60 | 20 | 1. 99 | 14 | 1. 39 |
| South Dakota | 549 | 33.07 | 31 | 1.87 | 34 | 2.05 | 95 | 5. 72 |
| Nebraska | 4,545 | 40.78 | 206 | 1.85 | 203 | 1.82 | 611 | 5.48 |
| Kıпвав | 5,504 | 49.17 | 120 | 1.07 | 99 | 0.88 | 1,194 | 10.67 |
| Western Division: |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Montana.... } \\ & \text { Wroming... } \end{aligned}$ | $\begin{aligned} & 422 \\ & 145 \end{aligned}$ | 37.31 45.45 |  |  | 24 0 | 2.12 | 45 33 | 3.98 10.34 |
| Colorado. | 2, 294 | 54.61 | 1204 | 4.86 | - 259 | 6.17 | 951 | 22.64 |
| New Mex | 95 | 26. 10 | - 7 | 1.92 |  |  | 2 | 0. 55 |
| Arizona | 42 | 35.00 |  |  |  |  |  |  |
| Utah... | 462 | 25. 80 | 0 | 2.35 | 58 | 4.75 | 232 | 12.95 |
| Nevada | 116 188 | 37.91 |  |  |  |  |  |  |
| Washing |  | 48. 21 38.58 | $\begin{array}{r} 3 \\ 62 \end{array}$ | 2.77 |  |  | 9 519 |  |
| Oregon. | $\begin{array}{r}1,108 \\ \hline 667\end{array}$ | 38.58 31.27 | $7 \begin{array}{r}\text { r } \\ \hline 108 \\ \hline\end{array}$ | 5.06 | 6 145 | 6.80 | 410 | 19.22 |
| California | 6,744 | 451.63 | $33 \quad 636$ | 4.87 | 7 1,395 | 10.68 | 1,233 | 9.44 |

Table 27.-Combined statistics of public high schools and private high schools and academies-Secondary students in certain mathematical studies in 1895-96.

| State or Territory. | Algebra. |  | Geometry: |  | Trigonometrs. |  | $\Delta$ stronomy. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number. | Per cent. | Number. | Per cent. | Number. | $\begin{aligned} & \text { Per } \\ & \text { cent. } \end{aligned}$ | Number. | Per cent. |
| United States | 200, 409 | 53.40 | 125, 237 | 25.71 | 15, 2.28 | 3.15 | 25,272 | 5.19 |
| North Atlantic Division. | 77,592 | 49.85 | 42,373 | 27.22 | 4,406 | 2.83 | 9, 406 | 6.04 |
| South Atlantic Division. | 24, 283 | 61.63 | 10, 826 | 27.48 | 2, 638 | 6. 70 | 1,936 | 4.91 |
| South Central Division.. | 31, 326 | 62.48 | 13,389 | 26.70 | 3,137 | 6. 26 | 3, 035 | 6. 05 |
| North Central Division. | 111, 788 | 51.93 | 49,703 | 23.09 | 4,298 | 2.00 | 9,657 | 4.49 |
| Western Division. | 15,420 | 57.78 | 8,946 | 33.52 | 849 | 3.18 | 1,238 | 4.64 |
| North Atlantic Division : |  |  |  |  |  |  |  |  |
| Maine | 4,728 | 45.86 | 2,357 | 22. 86 | 86 | 0.84 | 915 | 8.87 |
| New Hampshire | 2,170 | 43.40 | 1,419 | 28. 38 | 108 | 2. 16 | 371 | 7. 42 |
| $\checkmark$ ermont | 2, 031 | 39. 03 | 991 | 19.04 | 47 | 9. 03 | 550 | 10.57 |
| Massachnsett | 15,704 | 45.46 | 10, 261 | 29.70 | 569 | 1. 65 | 2, 116 | 6. 12 |
| Rhote Isiand | 2, 085 | 61.02 | 925 | 27.07 | 81 | 2.46 | 207 | 6. 06 |
| Connerticut | 4,485 | 51.09 | 2,592 | 29.53 | 424 | 4.83 | 665 | 7.57 |
| Now York | 18,817 | 41.95 | 10,417 | 23.22 | 1,408 | 3.14 | 2, 423 | 5. 40 |
| New Jersey | 8,043 | 68.40 | 3,402 | 28.93 | 423 | 3.59 | 710 | 6. 04 |
| Peunsylvania | 19, 529 | 61.41 | 10, 009 | 31.50 | 1,258 | 3.96 | 1,449 | 4.56 |
| Sonth Atlantic Dirision: |  |  |  |  |  |  |  |  |
| Delaware | 859 | 63.07 | 334 | 24.52 | 86 | 6.31 |  |  |
| Maryland | 3,828 | 72.01 | 2,870 | 53.99 | 487 | 9.16 | 354 | 6. 66 |
| District of | 1,140 | 36. 77 | 814 | 26. 26 | 81 | 2. 61 | 169 | 5. 45 |
| Virgin!a. | 4,104 | 58.98 | 1,802 | 25.90 | $6+1$ | 9. 21 | 208 | 1. 99 |
| West Virgini | 1,169 | 59.16 | 431 | 21.81 | 73 | 3.69 | 84 | 4. 25 |
| North Carolina | 2,886 | 48.77 | 766 | 12.95 | 113 | 1.91 | 229 | 3.87 |
| South Caroli | 2, 485 | 69.30 | 764 | 21.31 | 59 | 1. 65 | 145 | 4. 05 |
| Georgia. | 6,967 | 70.75 | 2,737 | 27.79 | 1,006 | 9. 40 | 642 | 6. 52 |
| Florida | 845 | 63.20 | 308 | 23.04 | 92 | 6.88 | 105 | 7.85 |
| South Central Division: |  |  |  |  |  |  |  |  |
| Kentucky | 4, 335 | 56. 72 | 1,855 | 24.27 | 53.5 | 7. 00 | 555 | 7. 26 |
| Tennessee | 5,580 | 58.79 | 2,070 | 21.81 | 428 | 4. 51 | 465 |  |
| Alabama. | 3, 495 | 67. 01 | 1,726 | 33.09 | 514 | 9. 85 5.90 5. | ${ }_{421}{ }^{379}$ | 7. 61 |
| Mississippi | 3, 634 | 57.91 | 1,150 | 18. 33 | 370 | 5. 90 4.90 | ${ }_{305}$ | 6. 12.15 |
| Lonisiana | 1,587 | 63. 20 | 687 | 27.36 | 123 | 4. 90 | 305 786 |  |
| Texas.. | 9, 963 | 68.45 | 5, 016 | 34. 67 | 926 | 6. 36 | 786 | 5.40 2.71 |
| Arkansas | 2, 463 | 64.90 | 777 | 20. 47 | 216 | 5. 69 | 103 |  |
| Oklahoma. | 83 | 32.30 | 34 | 13.23 | 13 | 5. 06 | 15 | 5. 1.54 |
| Indian Territory | 186 | 46.97 | 44 | 11.11 | 12 | 3.03 | 6 | 1.52 |
| North Central Division: |  |  |  |  |  |  |  |  |
| Ohio | 21,725 | 56.29 | 10, 212 | 26.46 | 1,367 | 3.54 | 2, 015 | 5. 22 |
| Indiana | 12, 079 | 59.04 | 4, 997 | 24.42 | 368 | 1. 80 | 558 | 2.73 |
| Illinois | 15,799 | 48. 06 | 7,427 | 22.59 | 587 | 1. 79 | 1,923 | 5.85 |
| Michigan | 11,920 | 48.17 | 4,594 | 18.56 | 216 | 0.87 | 1,080 | 4. 36 |
| Wisconsin | 6, 933 | 43.94 | 3, 553 | 22.52 | 126 | 0.80 | 234 | 1. 48 |
| Minnesota | 5, 674 | 46. 07 | 3,322 | 26.97 | 33 | 0.27 | 478 | 3. 88 |
| Iowa.. | 12,543 | 48.40 | 5,481 | 21.15 | 452 | 1.74 | 1,653 | 6. 38 |
| Missonri | 11, 371 | 58. 05 | 4, 156 | 21.22 | 730 | 3. 73 | 873 | 4. 46 |
| North Dako | 658 | 65.41 | 308 | 30.62 | 63 | 6.26 | 89 | 8. 85 |
| South Dak | 793 | 47.77 | 307 | 18.49 | 28 | 1.69 | 55 | 3. 31 |
| Nebraska | 6, 469 | 58. 04 | 2, 836 | 25.44 | 157 | 1.41 | 231 | 2. 07 |
| Kansas | 5,824 | 52. 03 | 2,510 | 23.42 | 171 | 1. 53 | 468 | 4.18 |
| Western I)ivision: Montana....... |  |  |  |  |  |  |  |  |
| Montana. | 362 | 32. 01 | 130 | 11.49 | 8 | 0.71 | 27 | 2. 39 |
| Wyoming | 114 | 35.74 | 73 | 22.88 | 4 | 1. 25 | 13 | 4. 08 |
| Colorato | 2,161 | 51. 44 | 1,318 | 31.37 | 159 | 3. 78 | 220 | 5. 24 |
| New Mex | 187 | 51.37 | 67 | 18.41 | 27 | 7.42 | 47 | 12. 91 |
| Arizona | $6 \pm$ | 53. 33 | 19 | 15.83 | , | 2. 50 |  |  |
| Vtah | 774 | 43.22 | 407 | 22.72 | 63 | 3.52 | 59 | 3. 29 |
| Nevala | 250 | 81.70 | 88 | 28.76 |  |  | 17 | 5. 56 |
| Itaho. | 203 | 52.05 | 89 | 22.82 |  |  | 26 | 6. 67 |
| Washington | 1,814 | 63.16 | 1,034 | 36.00 | 92 | 3.20 | 165 | 5. 75 |
| Oregom | 1,346 | 63.10 | 490 | 22.97 | 95 | 4.45 | 101 | 4. 74 |
| Calitornia | 8,145 | 62. 36 | 5,231 | 40.05 | 398 | 3.05 | 563 | 4.31 |

Table 28:-Combined statistics of public high schools and private high schools and academies-Secondary students in certain science studies in 1895-96.

| State or Territory | Physics. |  | Chemistry. |  | Physical geog. raphy. |  | Geology. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number. | Per cent. | Number. | Per cent. | Number. | Per cent. | Namber. | Per cent. |
| United States | 106, 427 | 21.85 | 44, 597 | 9.15 | 121, 464 | 24.93 | 25, 330 | 5.20 |
| North Atlantic Division | 31, 974 | 20.54 | 16,797 | 10.79 | 32, 090 | 20.62 | 10,058 | 6. 46 |
| South Atlantic Division. | 9,436 | 23.95 | 3,135 | 7.96 | 11, 047 | 28. 04 | 1,530 | 3. 88 |
| South Central Division. | 13,864 | 27.65 | 4,241 | 8.46 | 16, 444 | 32. 80 | 3, 696 | 7.37 |
| North Central Divisio | 44,950 | 20.88 | 17, 059 | 7.92 | 56, 655 | 26.32 | 8,666 | 4. 03 |
| Western Division | 6, 203 | 23.24 | 3,365 | 12.61 | 5,228 | 19.59 | 1,380 | 5.17 |
| North Atlantic Division : |  |  |  |  |  |  |  |  |
| Maine | 1, 803 | 17. 49 | 1, 048 | 10.16 | 1,744 | 16.92 | 770 | 7.47 |
| New Hamps | 985 | 19. 70 | 552 | 11.04 | 709 | 14.18 | 284 | 5. 68 |
| Vermont. | 850 | 16. 33 | 481 | 9.24 | 1, 095 | 21.04 | 470 | 9.03 |
| Massachuse | 7, 333 | 21.23 | 4, 573 | 13. 24 | 3,218 | 9.31 | 1,798 | 5.20 |
| Rhode Island | 827 | 24. 20 | 376 | 11.00 | 387 | 11. 33 | 185 | 5.41 |
| Connecticat | 1,570 | 17.88 | 1,109 | 12.63 | 1,328 | 15.13 | - 769 | 8.76 |
| New York | 7,053 | 15. 72 | 3,657 | 8.15 | 10,879 | 24. 25 | 3,484 | 7.77 |
| New Jersey | 2,865 | 24.37 | 1,405 | 11.95 | 3,048 | 25.92 | 778 | 6.62 |
| Pennsylrania ......... | 8,688 | 27.34 | 3,596 | 11. 32 | 9,682 | 30.47 | 1,520 | 4.78 |
| South Atlantic Division: | 360 | 26. 43 | 147 | 10.70 | 525 | 38. 55 |  |  |
| Maryland. | 2,316 | 43. 57 | 483 | 10. 9.09 | 1,233 | 38.55 23.19 | 164 | 3.09 |
| District of Columbia | 2, 767 | 24.74 | 332 | 10.71 | 1,265 | 8.55 | 88 | 2,84 |
| Virginia | 1,609 | 23.12 | 725 | 10.42 | 2,429 | 34.91 | 248 | 3. 56 |
| West Virginia | 376 | 19.03 | 134 | 6.78 | 725 | 36. 69 | 66 | 3.34 |
| North Carolina | 811 | 13.71 | 239 | 4.04 | 1,358 | 22.95 | 194 | 3.27 |
| South Carolina | 709 | 19.77 | 153 | 4.27 | 1,368 | 38. 15 | 107 | 2.98 |
| Georgia. | 2,189 | 22.23 | 841 | 8.54 | 2,572 | 26.12 | 609 | 6.18 |
| Florida -............. | 299 | 22.36 | - 81 | 6.06 | 572 | 42.78 | 54 | 4.04 |
| South Central Division: |  |  |  |  |  |  |  |  |
| Kentucky | 1,539 | 20.14 | 5 768 | 10.05 | 1,636 | 21.41 | 437 | 5.72 |
| Tennessee | 1,694 | 17.85 | 15 437 <br> 157  | 4. 60 | 2,189 | 23. 06 | 1,151 | 12.13 |
| Alabama. | 1,341 | 25.71 | 1 - 557 | 10.68 | 1, 408 | 26.99 | 307. | 5.88 |
| Mississipp | 2, 480 | - 39.52 | $2 \quad 369$ | 5.88 | - 1,932 | 30.79 | 330 | 5.26 |
| Louisiana. | 1, 130 | 45.00 | 0626 | 24.93 | 1,265 | 50.38 | 112 | 4.46 |
| Texas.... | 4,599 | 31.60 | 1 1, 249 | 8.58 | 6,050 | 41.57 | 1,112 | 7.64 |
| Arkansas | 918 | 24.19 | 9230 | 6.06 | 1,752 | 46.17 | 199 | \$. 24 |
| Oklahorua. | 91 | 35.41 |  |  | 127 | 49.42 | 40 | 15.56 |
| Indian Territory.... | ... 72 | 18.18 | 8. 5 | 1. 26 | 85 | 21.46 | 8 | 2.02 |
| North Central Division: $\quad$ 年 |  |  |  |  |  |  |  |  |
| Ohio.................. | 7, 886 | 20.43 | 3,221 | 8.35 | 11,279 | 29.23 | 1,295 | 3. 36 |
| Indiana | 4,926 | 24.08 | 1,692 | 8.27 | 6,059 | 29.62 | 807 | 3.94 |
| Illinois | 6,922 | 21.06 | - 3,477 | 10.58 | 6, 711 | 20.41 | 1,436 | 4.37 |
| Michigan | 4,508 | 18. 22 | 2,136 | -8.63 | 4,265 | 17. 24 | 1,933 | 3.77 |
| W isconsil | 2,706 | 17.15 | 5 645 | 4.09 | 5,764 | 36.53 | 359 | 2. 28 |
| Minnesot | 1, 761 | -14.30 | 1, 081 | 8. 78 | 2,068 | 16. 79 | 314 | 2.55 |
| Iowa. | 5,594 | 21.59 | 1,306 | 5.04 | 7,798 | 30.09 | 1,531 | 5.91 |
| Missouri | 4,488 | 22.91 | 1 1,753 | 8.95 | - 4,118 | 21. 02 | 939 | 4. 79 |
| North Dakota | 328 | 32.60 | - 137 | 13.62 | $4{ }^{5} 25$ | 42. 25 | 70 | 6. 96 |
| South Dakota | 308 | 18.55 | 5 51 | 3.07 | 7555 | 33.43 | 79 | 4.76 |
| Nebrask | 2,721 | 24. 41 | 1 1,010 | 9.06 | 3 3,633 | 32.59 | 387 | 3.47 |
| Kansas. | 2,802 | . 25.03 | 3 550 | 4.91 | 1 3,980 | 35.56 | 516 | 4.61 |
|  |  |  |  |  |  |  |  |  |
| Montana. | 211 | 18.66 | 670 | 6.19 | $9 \quad 237$ | 20.95 | -67 | 5.92 |
| Wyoming | 57 | 17.87 | $7 \quad 14$ | 4. 39 | $9 \quad 111$ | 34.80 | 11 | 0.3 |
| Colorado | 1,112 | - 26.47 | $7 \quad 666$ | 15.85 | - 786 | 18.71 | - 480 | 11.43 |
| New Mexico | 75 | -20.60 | 30 | 9.62 | 2144 | 39.56 | - 18 | 4. 05 |
| Arizona. | 18 | - 15.00 | 10 | 15.00 | 0 - 56 | 46. 67 |  |  |
| Utah. | 187 | $7 \quad 10.44$ | $44 \quad 79$ | 4.41 | $1 \quad 401$ | 22.39 | 106 | 5.9 |
| Nevada | 155 | $5 \quad 50.65$ | $65 \quad 49$ | 16.01 | 128 | 41.83 |  |  |
| Idaho | 90 | 0 23.08 | 0818 | 4.62 | 2125 | 32.05 | - 20 | 5.13 |
| Washington | 827 | $7 \quad 28.80$ | $80 \quad 283$ | 9.85 | 5 1,220 | 42.48 | 265 | 9.2 |
| Oregon | 420 | 0 19.69 | $69 \quad 206$ | 9. 66 | 6 - 563 | 26.39 | 96 | 2.1 |
| Calitornia. | 3, 051 | 123.36 | 36 1,927 | 14. 76 | 6 1,457 | 11.15 | 5377 | 2.8 |

Table 29.-Combined statistics of public high schools and private high schools and academies-Necondary students in certain studies in 1895-96.

| State or Territory | Physiology. |  | Psychology. |  | Rhetoric. |  | History. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number. | Per cent. | Number. | $\begin{aligned} & \text { Per } \\ & \text { cent. } \end{aligned}$ | Number. | Per cent. | Number. | Per cent. |
| United States | 151, 391 | 31.08 | 18,621 | 3.82 | 157, 208 | 32.27 | 174, 070 | 35.73 |
| North Atlantic Division | 43, 667 | 28.06 | 3, 894 | 2.50 | 45,790 | 29.42 | 58, 660 | 37. 69 |
| South Atlantic Division | 12, 039 | 30.56 | 1,650 | 4.19 | 13,347 | 33.88 | 18, 187 | 46.16 |
| South Central Division | 21, 970 | 43.82 | 3, 889 | 7.76 | 18,499 | 36. 90 | 18, 895 | 37.69 |
| North Central Divisio | 68, 124 | 31.65 | 8, 299 | 3.86 | 67, 586 | 41.30 | 64, 879 | 30.14 |
| Western Division. | 5, 591 | 20.95 | 889 | 3. 33 | 11, 986 | 44.91 | 13, 449 | 50.39 |
| North Atlantic Division : |  |  |  |  |  |  |  |  |
| Maine | 1,754 | 17.01 | 366 | 3.55 | 2, 561 | 24.84 | 3, 282 | 31.83 |
| New Hamp | 798 | 15.96 | 74 | 1.48 | 1, 144 | 22.88 | 1,716 | 34.32 |
| Vermont. | 916 | 17.60 | 175 | 3. 36 | 1,321 | 25.38 | 1,365 | 26. 23 |
| Massachusett | 6, 187 | 17.91 | 472 | 1.37 | 11, 275 | 32.64 | 16, 227 | 46.97 |
| Rhode Island | 251 | 7.35 | 155 | 4.54 | 1,395 | 40.83 | 1, 923 | 56.28 |
| Connecticut | 1, 886 | 21.48 | 267 | 3.04 | 2,815 | 32.07 | 3,781 | 43.07 |
| New York | 16, 402 | 36.57 | 1,017 | 2.27 | 9, 348 | 20.84 | 14, 066 | 31.36 |
| New Jersey | 3, 890 | 33. 08 | 1,217 | 1.85 | 4,029 | 34. 27 | 4,621 | 39. 30 |
| Pennsylvania............ 11,583 36.45 1,151 3.62 11,902 37.46 11,679 36.76 |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Maryland | 1,573 | 29.59 | 363 | 6.83 | 1,441 | 27.11 | 3,504 | 65.91 |
| District of Columb | 133 | 4. 29 | 34 | 1.10 | 1,540 | 49.68 | 1. 868 | 60.26 |
| Virginia | 2, 229 | 32.04 | 227 | 3.26 | 2, 698 | 38.17 | 3,519 | 50.57 |
| West Virginia | 731 | 36.99 | 69 | 3. 49 | ${ }^{2} 605$ | 30.62 | 863 | 43. 67 |
| North Carolina | 1,804 | 30.49 | 152 | 2.57 | 1,318 | 22.27 | 1,980 | 33. 46 |
| South Carolina | 1,370 | 38.20 | 94 | 2. 62 | 1,080 | 30.12 | 1,690 | 47. 13 |
| Georgia. | 2, 881 | 29.25 | 539 | 5.47 | 3, 690 | 37.47 | 3,519 | 35. 73 |
| Florida. | 611 | 45.70 | 156 | 11.67 | 588 | 43.98 | 674 | 50.41 |
| Tentuessee | 2,909 | 38.96 30.96 | 876 370 | 11.46 3.90 | 3, 167 2,972 | 41.44 31.31 | 2, 21218 | 36.87 34.15 |
| Alabama. | 2, 269 | 43.50 | 182 | 3. 49 | 2, 192 | 42.02 | 1, 657 | 31.77 |
| Mississippi | 2,969 | 47.31 | 281 | 4.48 | 2, 048 | 32.64 | 1, 980 | 31.55 |
| Louisiana | 1,230 | 48.98 | 117 | 4.66 | 1, 362 | 54.24 | 1, 611 | 64.16 |
| Texas. | 7, 151 | 49.13 | 1,495 | 10.27 | 5,111 | 35.12 | 5, 943 | 40.83 |
| Arkansas | 2, 276 | 59.97 | 1, 488 | 12. 86 | 1,418 | 37. 36 | 1,420 | ${ }^{37.42}$ |
| Oklahoma | 72 | 28.02 | 30 | 11.67 | 89 | 34. 63 | 73 | 28.40 38.38 |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Indiana. | 15,052 5,297 | 39.00 25.89 | 1, 266 | 3. 28 | 11,789 | 30.55 39.72 | 11, 6.622 | 29.37 |
| Illinois | 8,452 | 25.71 | 704 | 2.14 | 11,269 | 34. 28 | 9, 692 | 29.48 |
| Michigan | 6, 632 | 26.80 | 744 | 3.01 | 6,320 | 25. 54 | 7, 225 | 29. 20 |
| Wisconsin | \&, 163 | 26.38 | 1, 197 | 7.59 | 3, 083 | 19.54 | 4,118 | 26.10 |
| Minuesota | 3, 329 | 27.03 | 109 | 0.89 | 3, 313 | 26.90 | 3, 689 | 29.95 |
| Iowa | 7,918 | 30.55 | 715 | 2.76 | 8,426 | 32.51 | 7,468 |  |
| Missouri. | 7,748 | 39.56 | 1,758 | 8.98 | 7, 808 | 39.86 | 6, 724 | 34. 33 |
| North Dakota | 503 | 50. 00 | 85 | 8.45 | , 349 | 34. 69 | 471 | 46. 82 |
| South Dakota | 668 | 40.24 | 52 | 3.13 | 463 | 27. 89 | 444 | 26. 75 |
| Nebrask | 4, 454 | 39.96 | 120 | 1.08 | 3, 074 | 27.58 | 3, 323 | 29. 81 |
| Kansas ... | 3, 908 | 34.91 | 708 | 6.33 | 3,565 | 31.85 | 3, 5 ¢1 | 31.73 |
| Western Division: <br> Montana....... | 316 | 27.94 |  | 1.15 |  | 25.99 | 316 | 27.94 |
| W yoming | 114 | 35. 74 | ${ }_{0}$ |  | 143 | 44.83 | 63 | 19.75 |
| Colorado | 791 | 18.83 | 186 | 4.43 | 1,382 | 32.90 | 2, 567 | 61. 10 |
| New Mex | 134 | 36.81 |  |  | 1, 160 | 43. 96 | 113 | 31.04 |
| Arizona | 50 | 41.67 |  |  | 60 | 50.00 | 33 | 27.50 |
| Utah | 217 | 12.12 | 337 | 18.82 | 826 | 46. 12 | 423 | 23.62 |
| Nerada | 55 | 17.97 | , | 0.98 | 80 | 26. 14 | 216 | 70.59 |
| Idaho. | 224 | 57.44 | 12 | 3.08 | 194 | 49.74 | 153 | 39. 23 |
| Waslingt | 1,174 | 40.88 | 142 | 4.94 | 927 | 32. 28 | 1,283 | 44. 67 |
| Oregon | 441 | 20.68 | 39 | 1. 83 | 564 | 26.44 | 777 | 36. 43 |
| California | 2, 075 | 15. 89 | 157 | 1. 20 | 7, 356 | 56.32 | 7, 505 | 57.46 |

Table 30.-Distribution of secondary students in public and private institutions of all classes reporting to the United States Bureau of Education for the soholastio year 1895-96.-(See also Table 31.)

| State or Territory. | Total public and private secondary students. |  |  | In public institations. |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | In pablic high sohools. |  |  | In preparatory departments of public universities and colleges. |  |  | Secondary students in public normal achools. |  |  | Total public secondary students. |  |  |
|  |  |  |  |  |  |  |  | Female. | Total. | Male. | Female. | Total. |
|  | Male. | Female. | Total. |  |  |  | Male. | Female. | Total. | Male. | Female. | Total. | Male. | temale. |  |  |  |  |
|  |  |  |  |  |  |  |  |  | 6,219 | 1,522 | 4,495 | 6,017 | 163, 802 | 228, 927 | 392, 729 |
| United States | 253, 902 | 305, 101 | 559, 003 | 157, 942 | 222, 551 | 380,493 | 4,338 | 1,881 | $\frac{6,219}{795}$ | $\frac{1,522}{465}$ |  |  | 49,515 | 68, 755 | 118, 270 |
| North Atlantio Division | 77, 501 | 91, 028 | 168,529 | 48,263 | , 66, 468 | 114, 731 | 787 | 8 101 | 795 681 | 465 60 | $\begin{array}{r}2,279 \\ 214 \\ \hline 235\end{array}$ | $\begin{array}{r}2,744 \\ 274 \\ \hline\end{array}$ | 49,515 9,190 | 12, 581 | $\begin{array}{r} 21 ; 771 \\ 29,916 \end{array}$ |
| Sonth Atlantio Division | 21,978 | 24, 294 | 46, 272 | 8,550 | 12, 266 |  | 580 | 101 | 1,427 | 262 | ${ }^{3135}$ | + 597 | 13, 151 | 16,765 117,356 | $\begin{array}{r} 29,916 \\ 199,331 \end{array}$ |
| South Central Division. | 29, 129 | 33, 402 | 62, 531 | 11,923 | 15, 969 | 20,819 | 966 | 461 | 1,375 | 704 | 1,618 | 2, 322 | 81,975 9,971 | 117,356 13,470 | $\begin{array}{r} 199,331 \\ 23,441 \end{array}$ |
| North Central Division | 110, 362 | 138, 620 | 248, 982 | 80,390 8,816 | 115, 244 | 195,634 | 881 1 124 | 817 | 1, 941 | 31 | 49 | 80 | 9,971 |  |  |
| Western Division.. | 14,932 | 17, 757 | 32, 689 | 8,816 | 12,604 | 21, 420 |  | 817 | 1, |  |  |  |  |  |  |
| North Atlantic Division: |  |  |  |  |  |  |  |  | 0 | 12 | 20 | 32 | 3,104 | 4, 097 | 7, 201 |
| Maine | 4,733 | 6, 006 | 10,739 | 3, 092 | 4,077 | 7,169 | 0 | 0 | 0 | 27 | 44 | 71 | 1,391 | 1,839 | 3, 2397 |
| New Hampshire... | 2,518 | 2, 682 | 5, 200 | 1,364 | 1,795 | 3,159 | 0 | 0 | 0 | 5 | 5 | 10 | 1,298 | 1,699 | 28,819 |
| Vermont ........ | 2,457 | 2,757 | 5,214 | 1,293 | 1,694 | 2,987 | 0 | 0 | 0 | 30 | 162 | 192. | 12,724 | 16,095 1,608 | 2, 2179 |
| Massachusette | 16,369 | 18,959 | 35,328 3,747 | 12,694 | 15,933 | 28, 627 | 0 | 0 | 0 | 0 | 0 | 0 | 1, 111 | 1,608 | 6,160 |
| Rhode Island. | 1,555 | 2,192 | 3,747 8,779 | 1,111 | 1,608 | 2,719 | 0 | 0 | 0 | 0 | - $\begin{array}{r}0 \\ 1\end{array}$ | - $\begin{array}{r}0 \\ 2\end{array}$ | $\begin{array}{r}2,727 \\ 15 \\ \hline\end{array}$ | $1,4,433$ 21,326 | 36,926 |
| Connecticut | 1,856 21,089 | 4,923 28,162 | 8,779 62,251 | 2,727 14,732 | 3,433 19,474 | 6,160 34,206 | 0 670 | 0 | 670 | 198 | 1,852 | 2, 050 | 15,600 3,133 | 21,326 4,856 | 7,989 |
| New York. | 24, 089 | 28,162 6,427 | 52, 251 12,380 | 14,732 3,023 | 19,474 4,778 | 34, 206 | 670 40 | 0 | 40 | 70 | + 78 | 148 | 3, 133 | 4,856 13,802 | 22,229 |
| Now Jersey . | 5,953 | 6,427 | 14, 891 | 8,023 | 4,778 13,676 | 7,801 | 77 | 8 | 85 | 123 | 118 | 241 | 8,427 | 13, 802 |  |
| Pennsylvania ... | 15,971 | 18,920 | 34, 891 | 8,227 | 13, 676 | 21, 903 | 1 |  |  |  |  |  | 494 | 641 | 1,135 |
| South Atlantio Divi Delaware. | 613 | 787 | 1,400 | 462 | 635 | 1, 097 | 32 | 6 0 | 38 32 | 0 | 0 | 0 | 1,488 | 1, 874 | 3,362 |
| Maryland | 2,841 | 3, 206 | 6, 047 | 1,456 | 1,874 | 3, 330 | 32 | 0 | 0 | 0 | 0 | 0 | 1,885 | 1,498 | 2, 383 |
| District of Columb | 1,476 | 2, 094 | 3,570 | , 885 | 1, 498 | 2, 383 | 0 33 |  | 33 | 32 | 2 | 34 | 1, 726 | 2,172 | 3, 898 |
| Virginia....... | 4,019 | 4,097 | 8, 116 | 1,661 | 2,170 | 3,831 | 33 145 | 0 | 145 | 4 | 6 | 10 | - 539 | 652 | 1,191 |
| West Virginia | 1, 016 | 1,158 | 2,174 7,450 | 390 337 | 646 | 1, 036 | 145 55 | 15 | 70 | 22 | $\stackrel{27}{ }$ | 49 | 414 | $\begin{array}{r}474 \\ \hline 1,214\end{array}$ | 2,888 |
| North Carolina | 4, 211 | 3,239 2,327 | 7,450 4,399 | 337 975 | 432 1,104 | 769 2,079 | r 172 | 0 | 172 | 0 | 110 | 110 | 1,147 | 1, 3149 | 2,361 |
| South Carolin | 2,072 | 2,327 6,323 | 4,399 11,218 | 975 1,963 | 1,104 3,310 | 2,079 5,273 | 172 35 | 22 | 57 | 0 | 67 | 67 | 1,998 | 3, 399 | 5,397 1,156 |
| Georgia | 4,895 835 | 6,323 1,063 | 11,288 1,898 | 1,963 | 3, 310 | 5, 273 1,018 | 76 | 58 | 134 | 2 | 2 |  | 499 | 657 | 1,156 |
| South Central Division: |  |  |  |  |  |  |  |  | 95 | 6 | 0 | 6 | 1,707 | 2,318 | 4,025 |
| Kentucky | 4,289 | 5,118 | 9,407 | 1,629 1,859 | 2, 295 | 3, 924 | 72 0 | 0 | 0 | 106 | 234 | 340 | 1,965 | 2,738 | 4,703 |
| Tennessee. | 6,369 | 6, 837 | 13,206 6,161 | $\begin{array}{r}1,859 \\ \hline 975\end{array}$ | 2,504 | 4, 363 | - 3 | 0 | 33 | , 67 | 60 | 127 | 1, 075 | 1,489 | 2,564 |
| Alabsma | 2,908 | 3, 253 | 6,161 | 1,975 1,469 | 1,429 | 2,404 3,150 | 378 | 215 | 593 |  |  |  | 1,847 | 1, 896 | 3, 713 |
| Mississippi | 3,639 1,443 | 4, 069 2,320 | 7,708 3,763 | 1,469 $\mathbf{5 0 2}$ | 1,681 | 3,150 1,437 | 126 | 0 | 126 | 0 | 0 | 0 | 628 | 5 935 | 1, 563 |
| Texasiana | 1,443 | 2, 320 | 3, 16,077 | 4,163 | 5,578 | 9,741 | 0 | 0 | 0 | 0 | 0 | 0 | 4,163 | 5,578 | 9, 741 |
| Arkansas | . 2,649 | 2,552 | 5,201 | 1,142 | 1,368 | 2,510 | 240 | 122 | 362 | 83 | 41 | 124 | 1, 465 | 1, 231 | 2,996 |
| Oklahoma | 208 | 267 | 475 | 74 | 129 | 203 | 117 | 101 | 218 |  |  |  | 110 | 50 | 160 |
| Indian Territo | 284 | 249 | 533 | 110 | 50 | 160 | 0 | 0 | 0 |  |  |  |  |  |  |

Table 30.-Distribution of secondary students in public and private institutions of all classes reporting to the United States Bureau of, Education for the scholastio year 1895-96.-(Seo also Table 31.)-Continued.

| State or Territory. | Total publio and private secondary students. |  |  | In public institutions. |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | In publio high schools. |  |  | In preparatory departments of public universities and colleges. |  |  | Secondary students in public normal schools. |  |  | Total public secondary students. |  |  |
|  | Male. | Female. | Total. | Male. | Femala: | Total. | Male. | Fumale. | Total. | Male. | Female. | Total. | Male. | Female. | Total. |
| Forth Central Division: |  |  |  |  |  | 36, 299 | 192 | 81 | 273 | 111 | 102 | 213 | 15, 805 | 20,980 | 36, 785 |
| Ohio................... | 20,793 11,598 | 23,910 13,126 | 44,703 24,724 | 15,502 8,117 | 20,797 10,867 | 18,984 | 192 | 81 0 | 0 | 2 | 2 | 4 | 8, 1119 | 10, 869 | 18, 988 |
| Illinols. | 16, 086 | 21,922 | 38,008 | 11,321 | 18, 205 | 29,526 | 119 | 32 | 151 | 0 | 0 | 0 | 11, 440 | 18,237 | 29,677 |
| Miuhigan. | 11, 352 | 15,477 | 26,829 | 9,834 | 13,747 | 23,581 | 0 | 0 | 0 | 33 | 125 | 108 | 801 | 13, 872 | 23,739 |
| Wisconsin | 7,717 | 0,088 | 16,805 | 6,096 | 8, 203 | 14, 299 | 0 | 0 | 0 | 5 | 4 | 9 | 6,101 | 8,207 | 14, 308 |
| Minnesots. | 5,748 | 7, 417 | 13,165 | 4,337 | 6,476 | 10, 813 | 0 | 0 | 0 | 0 | 0 | 0 | 4,337 | 6,476 | 10, 813 |
| Iowa... | 18,077 | 16,600 | 29, 677 | 9,818 | 13,961 | 23,779 | 0 | 0 | 0 | 57 | 70 | 127 | 9,875 | 14,031 | 23,906 |
| Missouri | 10,949 | 14,219 | 25, 168 | 5,949 | 9,275 | 15, 224 | 0 | 0 | 0 | 455 | 1,164 | 1,619 | 6, 404 | 10, 439 | 16,843 |
| North Dakota | , 742 | 783 | 1,525 | 403 | 530 | 933 | 228 | 144 | 372 |  |  |  | 631 | 674, | 1,305 |
| South Dakota | 1,004 | 1, 234 | 2,238 | 580 | 850 | 1,430 | 104 | 104 | 208 | 0 | 0 | 0 | 684 4,559 | 6, 954 | 1,638 10,960 |
| Nobraska. | 5,454 | 7, 174 | 12, 628 | 4,321 | 6,268 | 10,589 | 238 | 133 0 | 371 | 0 41 | ${ }^{0}$ | 0 192 | 4,559 4,153 | 6,401 $+6,216$ | 10,960 10,369 |
| Kansas... | 5,842 | 7,670 | 13,512 | 4,112 | 6,065 | 10,177 | 0 | 0 | 0 | 41 | 151 | 192 | 4,153 | 1 6,216 | 10,369 |
| Western Division: <br> Montana | 551 | 848 | 1,399 | 390 | 656 | 1,046 | 65 | 31 | 96 |  |  |  | 455 | 687 | 1,142 |
| Wyoming | 162 | 254 | 1,416 | 109 | 1164 | 1,273 | 35 | 62 | 97 |  |  |  | 144 | 226 | 1, 370 |
| Colorado | 2, 044 | 2, 801 | 4, 845 | 1,524 | 2, 316 | 3,840 | 150 | 149 | 299 | 0 | 0 | 0 | 1, 674 | 2,465 | 4,139 |
| New Mexico | 2, 253 | 255 | 508 | - 87 | 144 | 231 | 46 | 48 | 94 |  |  |  | 133 | 192 | 325 |
| Arizona.... | 98 | 98 | 196 | 49 | 71 | 120 | 49 | 27 | 76 | 0 | 0 | 0 | 98 | 98 | 196 |
| Utah. | 1,464 | 1,300 | 2,764 | 229 | 359 | 588 | 381 | 282 | 663 |  |  |  | 610 | 641 | 1,251 |
| Nevada | 141 | 213 | 354 | 103 | 190 | 293 | 38 | 10 | 48 |  |  |  | 141 | 200 | 341 |
| Idaho | 337 | 298 | 035 | 109 | 141 | 250 | 141 | 83 | 224 | 10 | 11 | 21 | 260 | 235 | 495 |
| Washingt | 1,661 | 1,998 | 3,659 | 980 | 1,360 | 2, 340 | 101 | 63 | 164 | 0 | 0 | 0 | 1,081 | 1,423 | 2,504 |
| Oregon. | 1,477 | 1,632 | 3,109 | 597 | 867 | 1,464 | 118 | 62 | 180 | 21 | 38 | 59 | 736 | 967 | 1,703 |
| California | 6,744 | 8, 060 | 14,804 | 4,639 | 6,336 | 10,975 | 0 | 0 | 0 | 0 | 0 | 0 | 4,639 | 6,336 | 10,975 |

Table 31.-Distribution of secondary students in publio and private institutions of all classes reporting to the United States Bureau of Education for the scholastic year 1895-96.


Tam, 31.-Distribution of secondary students in public and private institutions of all classes reporting to the United States Bureau of Education for the scholastic year 189j-90-Contimmed.

| State or Territory. | In private institutions. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | In private high schools. |  |  | In preparatory departments of private universities and colleges. |  |  | In preparatory departments of colleges for women. | Secondary students in private normal schools. |  |  | Secondary students in manual training schools. |  |  | Total private secondary students. |  |  |
|  | Male. | Female. | Total. | Male. | Female. | Total. |  | Male. | Female. | Total. | Male. | Female. | Total. | Male. | Female. | Total. |
| Sonth Central Division-Contid. <br> Oklahoma | 17 | 37 | $\begin{array}{r}54 \\ \hline 36\end{array}$ | 0 -2 | 0 | 0 137 | 0 |  |  |  |  |  |  | 17 174 | 37 199 | 54 373 |
| Indian Territory North Central Division: | 102 | 134 | 236 | 72 | 65 | 137 | 0 |  |  |  |  |  |  |  |  |  |
| Norto................ | 981 | 1,312 | 2, 293 | 2, 811 | 1,140 | 3,951 | 243 | 1, 027 | 235 | 1, 262 | 169 | 0 | 169 | 4,988 | 2,930 | 7,918 |
| Indiana | 541 | -934 | 1,475 | 1,014 | , 352 | ],366 | 75 | 1, 924 | 896 | 2,820 |  |  |  | 3,479 | 2, 257 | 5,736 |
| Illinois | 1,525 | 1,823 | 3,348 | 2, 716 | 1, 424 | 4, 140 | 266 | 142 | 172 | 314 | 263 | 0 | 263 | 4, 646 | 3,685 | 8, 331 |
| Michigan | 481 | 684 | 1,165 | -940 | - 598 | 1,538 | 0 | 64 | 99 | 163 | 0 | 224 | 224 | 1,485 | 1,605 | 3, 090 |
| Wiscousin | 894 | 586 | 1,480 | 717 | 150 | 867 | 145 | 5 | 0 | 5 |  |  |  | 1,616 | 881 | 2,497 |
| Minnesota | 881 | 622 | 1,503 | 460 | 277 | 737 | 5 | 70 | 37 | 107 |  |  |  | 1, 411 | 941 | 2,352 |
| Iowa... | 1,105 | 1,031 | 2,136 | 1, 517 | $98 \pm$ | 2,501 | 0 | 580 | 554 | 1,134 |  |  |  | 3, 202 | 2, 569 | 5,771 |
| Missouri. | 2, 075 | 2,288 | 4,363 | 2, 024 | 1, 020 | 3, 044 | 307 | 154 | $165^{\circ}$ | 319 | 292 | 0 | 292 | 4,545 | 3, 780 | 8,325 |
| North Dakota. | 43 | 30 | 73 | 68 | 79 | 147 | 0 | .... |  |  |  |  |  | 111 | 109 | 220 |
| South Dakota. | 124 | 106 | 230 | 196 | 174 | 370 | 0 | 0 | 0 | 0 |  |  |  | 320 | 280 | 600 |
| Nebraska... | 243 | 314 | 557 | 592 | 403 | 995 | 0 | 60 | 56 | 116 |  |  |  | 895 | 773 | 1,668 |
| Kansas. | 533 | 483 | 1,016 | 1, 056 | 801 | 1,857 | 85 | 100 | 85 | 185 |  |  |  | 1, 689 | 1, 454 | 3,143 |
| Western Division: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Montana. | 0 | 85 | 85 | 96 | 76 | 172 | 0 |  |  |  |  |  |  | 96 | 161 | 257 |
| W yoming | 18 | 28 | 46 | 0 | 0 | 0 | 0 |  |  |  |  |  |  | 18 | 28 | 46 |
| Colorado. | 114 | 247 | 361 | 256 | 89 | 345 | 0 |  |  |  |  |  |  | 370 | 336 | 706 |
| New Mexico | 87 | 46 | 133 | - 33 | 17 | 50 | 0 |  |  |  |  |  |  | 120 | 63 | 183 |
| Arizona. | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  | 0 | 0 | 0 |
| Utah. | 671 | 532 | 1, 203 | 183 | 127 | 310 | 0 | 0 | 0 | 0 |  |  |  | 854 | 659 | 1,513 |
| Nerada | 0 | 13 | 13 | 0 | 0 | 0 | 0 |  |  |  |  |  |  | 0 | 13 | 13 |
| Idaho. | 77 | 63 | 140 | 0 | 0 | 0 | 0 |  |  |  |  |  |  | 77 | 63 | 140 |
| Washington .................. | 208 | 324 | 532 | 372 | 251 | 623 | 0 |  |  |  |  |  |  | 580 | 575 | 1,155 |
| Oreron | 329 | 340 | $\begin{array}{r}669 \\ \hline 808\end{array}$ | -412 | 325 | $\begin{array}{r}737 \\ \hline\end{array}$ | 0 |  |  |  |  |  |  | $\begin{array}{r}741 \\ \hline\end{array}$ | 665 | 1, 406 |
| California. . . . . . . . . . . . . . . . | 903 | 1,184 | 2,087 | 1,102 | 396 | 1.498 | 92 | 0 |  | 2 | 100 | 50 | 150 | 2,105 | 1,724 | 3,829 |

Table 32.-Number secondary students to each 1,000 inhabitants in each State in 1896, also number students in higher education to each 1,000 of population.

| State or Territory. | Estimated total population in 1896. | Total number secondary students in 1896. | Number secomdary students to each 1,000 inhabitants. | Total number students in higher education in 1896. | Number students in higher education to each 1,000 inhabitants. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| United States | 70,595,321 | 559,003 | 7.92 | 139, 611 | 1.98 |
| North Atlantic Division | 19,520, 400 | 168, 529 | 8. 06 | 44, 570 | 2.28 |
| South Atlantic Division | 9,667, 000 | 46, 272 | 4.79 | 18, 497 | 1. 91 |
| South Central Division | 12, 747, 200 | 62, 531 | 4.91 | 18,429 | 1. 45 |
| North Central Division | 24, 827, 541 | 248, 982 | 10. 03 | 50,290 | 2.03 |
| Western Division | 3,833, 180 | 32,689 | 8.53 | 7,825 | 2.04 |
| North Atlantic Division: <br> Maine | 655, 600 | 10,739 | 16.37 | 1,210 | 1.84 |
| New Hampshire (1894) | 389, 000 | 5, 200 | 13. 37 | 1, 646 | 1. 66 |
| Vermont .-.-............ | 332,500 | 5,214 | 15. 66 | 595 | 1.79 |
| Massachusetts | 2, 547, 000 | 35, 328 | 13. 87 | 10, 608 | 4.16 |
| Rhode Island | 393, 400 | 3, 747 | 9.53 | 963 | 2.45 |
| Connecticut | 817, 900 | 8,779 | 10.73 | 3, 019 | 3.69 |
| New York. | 6,722, 000 | 52, 251 | 8.22 | 13,986 | 2. 20 |
| New Jersey | 1,716, 000 | 12,380 | 7.21 | 2,306 | 1.34 |
| Pennsylvania | 5, 947, 000 | 34, 891 | 5.87 | 11,237 | 1. 89 |
| South Atlantic Division: |  |  |  |  |  |
| Delaware (1892) | 173,200 | 1,400 | 8. 09 | -87 | 0.50 3.18 |
| Maryland - Columbia | 1, 159,000 | 6, 047 | 5. 22 13.03 | 3, 683 | 3.18 7.61 |
| District of Columbia | 273,600 $1,697,000$ | 3,570 8,116 | 13.03 4.78 | 2,086 3,936 | 7.61 2.32 |
| West Virginia | 1, 849,300 | 2,174 | 2.56 | - 411 | 0.48 |
| Nortb Carolins | 1,763, 000 | 7,450 | 4.23 | 2,599 | 1.47 |
| Soutb Carolina | 1,256, 000 | 4,399 | 3. 50 | 2,032 | 1.62 |
| Georgia | 2, 015, 000 | 11, 218 | 5. 57 | 3,403 | 1. 69 |
| Florida.............. | 480,900 | 1,898 | 3. 95 | 260 | 0.54 |
| South Central Division: |  |  |  |  |  |
| Kentucky - ${ }^{\text {Tennessee }}$ (1895) | $1,993,000$ $1,857,000$ | 9,407 13,206 | 4.72 <br> 7.11 | 4,067 | 2.04 2.73 |
| Alabama...... | 1, 709, 000 | 6,161 | - 3.06 | 2, 205 | 1. 29 |
| Mississippi (1895) | 1, 431, 000 | 7,708 | 5. 39 | 1,596 | 1. 12 |
| Louisiana. | 1, 234, 000 | 3,763 | 3.05 | 1,619 | 1. 31 |
| Texas... | 2, 979, 000 | 16, 077 | 5. 40 | 2,611 | 0.88 |
| Arkansas | 1, 270, 000 | 5, 201 | 4.10 | 1, 158 | 0.91 |
| Oklahoma | 274, 200 | 475 | 1. 73 | 82 | 0.30 |
| Indian Territory. |  | 533 |  | 18 |  |
| North Central Division: |  |  |  |  |  |
| Ohio ... | 3, 855, 000 | 44, 703 | 11. 60 | 8,530 | 2. 21 |
| Indiana | 2, 289, 000 | 24,724 | 10.80 | 4,026 | 1.76 |
| Tllinois... | 4,509, 000 | 38, 008 | 8.43 | 11, 543 | 2. 56 |
| Michigan (1895) a | 2, 241, 641 | 26,829 | 11.97 | 5,149 | 2. 30 |
| Wisconsin .... | 2, 054, 000 | 16,805 | 8.18 | 2,599 | 1. 27 |
| Minnesota. | 1,641,000 | 13, 165 | 8.02 | 3, 201 | 1. 95 |
| Towa. | 2,088, 000 | 29,677 | 14.21 | 4, 071 | 1. 95 |
| Missouri | 3, 005, 000 | 25, 168 | 8.38 | 6, 381 | 2. 12 |
| North Dakota | 303600 | 1,525 | - 5.02 | 131 | - 0.43 |
| South Dakota (1894) | 401,300 | 2,238 | - 5.58 | 418 | 1.04 |
| Nebraska | 1, 111, 000 | 12,628 | - 11.37 | 1,741 | - 1.57 |
| Kansas. | 1,329, 000 | 13,512 | 210.17 | 2, 500 | 1. 88 |
| Western Division: |  |  |  |  |  |
| Montana | 209,800 | 1,399 | 9 6.66 | 59 | 0.28 |
| Wy yoming | 98, 700 | - 416 | 6 - 4.16 | 21 | 0.21 |
| Colorado | 544, 200 | 0 4,845 | 5 8.91 | 1,109 | 2.04 |
| New Mexico | 177, 200 | 0508 | - 2.87 | 39 | 0.22 |
| Arizona | 78, 380 | 0196 | 6 2.51 | 24 | - 0.31 |
| Utah | 258, 500 | 0 2,764 | $4 \quad 10.67$ | 358 | 1, 1.38 |
| Nevada | 41, 500 | 0354 | $4 \quad 8.48$ | 139 | 3 31 |
| Idaho | 143, 400 | $0 \quad 635$ | 5 4.44 | 42 | - 0.28 |
| W ashington | 479, 700 | - 8,659 | 9 7.62 | 822 | 1.71 |
| Oregon. | 378,800 | 0 8,109 | 9 8.20 | 943 | $3 \quad 2.49$ |
| California | 1, 422,000 | 0 14,804 | 410.41 | 4,269 | - 3.00 |


the Unitell Statcs for the scholastio year 1895-96.


Table 33.-Statistics of public high schools in the

| a |  | Name. | Principal. | Department or independent. | Instructors for secondary students. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2 | 3 | 4 | 5 | 6 |
|  | ARKANSAS. |  |  |  |  |  |
| 60 | Augusta. | High Scho | B. D. Rivers | Dept.-- | 1 |  |
| 61 I | Bellefonte | .....do.*.. | S. E. Potts. | Ind... | 1 | 0 |
| 62 | Benton | - do | J. A. Kimbrough | Dept.. | 1 | 0 |
| 63 | Booneville | Training School* .......-...... | S. T, Lane ................ | Ind... | 1 | 1 |
| 64 | Brinkley. | High School ..... | J. T. Roach............... | Dept.. | 1 | 0 |
| 65 | Bryant. | . . . . | J. T. Kirklin ............. | Ind... | 1 | 0 |
| 66 | Buckner ..... | do. | Miss Meadows .......... | Ind...- | 0 | 1 |
| -67 | Center Ridge |  | W. F. Chanmers | Dept.- | 1 | 1 |
| 68 69 | Charieston. Clarendon | . do | G. T. Cass ............... | Ind... | 0 | 2 |
| 69 | Clarendon Clarksville | - do | Arthur T. Ramsey ...... | Dept.- | 1 | $\frac{1}{4}$ |
| 71 | Conway... | do | J.H. McCulloch.......... | Ind... | 2 | 0 |
| 72 | Dardanelle | Graded School | P. L. Burrow ............. | Ind... | 1 | 1 |
| 73 | Eureka Springs | .High School*. | C. S. Barnett | Dept.- | 1 | 1 |
| 74 | Evening Shade | ......do.*... | Eugene A. Shaver.....- | Ind...- | 1 | 1 |
| 75 | Fordyce ....... | \#..do. | R. G. Brown | Dept.. | 0 | 4 |
| 76 | Greenwood | Normal Colleg | Miss Minnle A. Brice .. | Ind... | 0 | 2 |
| 77 | Hardy | High School* | D.C. Billingsley......... | Ind...- | 1 | 0 |
| 78 | Harrison | .....do | C. L. Scott <br> Chas. F. Cole | Dept.. | 1 | 1 |
| 80 | Holly Springs | Judson High School | Robt. B. De Vine.......... | Dept.. | 1 | 2 |
| 81 | Hot Springs. | Central High School.......... | Mrs. B. W. Hallom ..... | Dept.. | 1 | 3 |
| 82 | Huntsville.. | High School ................... | H. F. Mintera ........... |  | 2 | 1 |
| 83 | Judsonia. | -...do ...... | W. F. Condray, L. I. .... | Dept.- | 1 | 1 |
| 84 | La Grange | Lee High School* | R. A. Blount ............ | Dept.. | 1 | 0 |
| 85 | Lead Hill | High School ...... | M. J. Russell, A.B...... | Ind.... | 1 | 1 |
| 86 | Little Rock | Peabody High School........ | Lewis Rhoton............ | Dept.- | 2 | 2 |
| 87 | -...do | Union High School* .......... | J.O.W. Alexander | Dept.. | 2 | 0 |
| 88 | Lonoke | High School .......... | J.J. Doyne ................ | Dept.. | 2 | 0 |
| 89 | Magazirie | -....do.*-... | J. D. Arbuckle .......... | Ind... | 1 | 1 |
| 90 | Magnolia | do | Alexander Lowe ....... | Ind... | 1 | 1 |
| 91 | Malvern. | do | W. D. Lsiper . . . . . . . . . | Dept.. | 2 | 0 |
| 92 | Marianna. | Male and FemaleInstitute. | Thos. A. Futrall | Dept. | 2 | 2 |
| 93. | Morrilton | High School .................. | W.J. McIlwain | Dept.. | 1 | 0 |
| 94 | National. | .....do.*.... | J. E. Watson | Ind... | 1 | 1 |
| 95 | Newpor | do | R. M. Copenhaver ....... | Dept.- | 1 | 0 |
| 96 | Osceola | .do.* | Mrs. Sarah S. Prewitt | Dept.. | 0 | 1 |
| 97 | Ozark. | Graded and High School.... | D. F. Withers ............ | Dept.. | 1 | 0 |
| 98 | Paragould | High School* ............. | Geo. R. Hopkins. . . . . . . | Dept.. | 2 | 0 |
| 99 | Paris .... | Paris Academy .................. | G. S. Minmier | Ind... | 3 | 0 |
| 100 | Perryville | High School ..................... | C. A. Bayless............ | Ind... | 1 | 0 |
| 101 | Pine Blaff | ....do ..... | Jas. H. Witherspoon, A. B. | Dept. - | 1 | 2 |
| 102 |  | Merrill High School ......... | M. R. Perry | Dept.. | 3 | 0 |
| 103 | Prescott | Tom Allen High School .... | W.C. Parham | Dept.. | 1 | 2 |
| 104 | Russeliville | High School * ............ | J. G. Smyth ............. | Dept.. | 1 | 1 |
| 105 | Salem... | .....do ....... | J. H. and B. H.Caldwell. | Ind... | 2 | 0 |
| 106 | Springdale. | Graded School | J. B. Les ................. | Dept.. | 1 | 2 |
| 107 | Springfield | Springfield Academy**..... | J. M. C. Vaughter ...... | Dept.- | 1 | 0 |
| 108 | Van Buren | High School .-.................. | A. L. Peacher .......... | Dept.. | 2 | 0 |
| 109 | Waldron. | ....do ...... | H. J. Hall ... | Dept.. | 1 | 2 |
| 110 | Wheetley | do | Miss Gray Taylor ....... | Ind... | 0 | 1 |
| 111 | Wilmar.. |  | Robt, F. Bond ........... | Ind... | 1 | 0 |
|  | CALIFORALA. |  |  |  |  |  |
| 112 | Alameda. | High School................... |  |  | 4 | 3 |
| 118 | Arroyo Grande | Union High School ............ | Arthur W. Scott <br> A. F. Parsons | Dept.. | 1 | 1 |
| 114 | Aruas <br> Bakerafiald | Citrus Union Figh Sichool.. | C. T. Meredith | Ind. | 1 | 1 |
| 116 | Bakersfiald | Kern County High Sohool.. | J. B. Newell ............... | Ind | 1 | $\frac{1}{5}$ |
| 117 | 7 Borkoley . | High School ................. | B. D. W atermsin ........ | Dept.. | 5 | 5 |
| 118 | 8 Cambria............... | . Union High School .......... | W. W. Payne. <br> Albert L. Jones |  | $1 \begin{aligned} & 1 \\ & 1\end{aligned}$ | 0 |

*Statistics of 1894-95.

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the

\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \& State and post-office. \& Name. \& Principal. \&  \& Instr
ors
secon
stad \& ruct-
for
dary
ents.

a <br>
\hline \& 1 \& 2 \& 3 \& 4 \& 5 \& 6 <br>
\hline \& CALIFORNA-cont'd. \& \& \& \& \& <br>
\hline 119 \& Clo \& Union High \& E. E. Hollope \& Ind \& 1 \& 1 <br>
\hline 120 \& Col \& High School \& W. F. Bliss. \& Dept.. \& 2. \& 1 <br>
\hline 121 \& Colusa \& \& Jno. E. Hayma \& Ind. \& , \& 1 <br>
\hline 122 \& Coronado \& do \& H.J. Baldwin \& Dept. \& 2 \& 2 <br>
\hline 123 \& Crescent City \& Dol Norte County High School. \& G. F. Foster ............. \& Ind... \& 1 \& 1 <br>
\hline 124 \& Dixor \& Union High School . . . . . . . . \& Geo. C. Russell \& Ind... \& 1 \& 1 <br>
\hline 125 \& Easton \& Washington Union High School. \& A. Sorensen \& In \& 1 \& 0 <br>
\hline 126 \& Elk Grove \& Union High School ......... \& R. T. McKisick \& \& 1 \& 1 <br>
\hline 127 \& Elmira.. \& Onion Hig \& Jas. E.Duncan \& In \& 1 \& 0 <br>
\hline 128 \& Elsinor \& \& A.J. Ladd... \& Ind \& 1 \& 0 <br>
\hline 129 \& Escondid \& High School \& Cbas. H. Meeker \& Ind \& - 1 \& 1 <br>
\hline 130 \& Esparto. \& Union High School .......... \& J. A. Metzler \& \& 1 \& 0 <br>
\hline 132 \& Fairfield. \& Armijo Ünion High School. \& Chester Wetmor \& Ind. \& 1 \& 1 <br>
\hline 133 \& Fallbrook \& Union High School \& I. C. Adams ... \& Dept.. \& 1 \& 1 <br>
\hline 134 \& Fresno \& High School \& T. L. Heaton \& Dept.. \& 1 \& 3 <br>
\hline 135 \& Fullert \& Union High \& W. B. Carpente \& Ind... \& 1 \& 1 <br>
\hline 136
137 \& Gilroy Grass Valley \& High School \& \& Dept.. \& $\stackrel{2}{2}$ \& 1 <br>
\hline 137 \& Grass Valley \& ....do do ............ \& H. T. Wallace, A. B., L. I. $B$. \& Dept. \& 2 \& 1 <br>
\hline 138
139 \& Gridley \& Union High Scho \& J. T. Bevan \& Ind \& $\frac{1}{2}$ \& 0 <br>
\hline 139 \& Hanford \& .do \& E. H. Walker John Gamble \& Ind \& 4 \& 2 <br>
\hline 141 \& Healdsburg \& High Sch \& H. R. Bull .. \& In \& , \& 2 <br>
\hline 142 \& Hemet.... \& Union High \& F. A. Whito \& Ind \& 1 \& 1 <br>
\hline 143 \& Eolliste \& High School \& T. D. M. Slaven \& Ind \& 2 \& 0 <br>
\hline 144 \& Julian. \& Cuyamaca Union High School. \& J. W.Keene.. \& Ind. \& 1 \& 0 <br>
\hline 145 \& Livermore \& Union High School No. $1^{*}$. \& J. M. Patton \& Ind... \& 2 \& 0 <br>
\hline 146 \& Lompoc..... \& Union High School * \& Joseph S. Dent \& Ind... \& 2 \& 0 <br>
\hline 147 \& Los Angeles \& High School ...... \& W. H. Housh.. \& Dept. \& 8 \& 13. <br>
\hline 148 \& Los Gatos. Marysville \& .....do.*. \& A. E. Shumate. G. H. Stokes. \& Dept.. \& 1
1 \& 1 <br>
\hline 150 \& Mendocino \& .....do \& G. H. Stokes.. \& \& 1 \& 1 <br>
\hline 151 \& Menifee.. \& Vale Urion High School.... \& G. H Wilkinso \& \& 1 \& 0 <br>
\hline 152 \& Monrovia \& City High School ....... \& J. H. Strine... \& Dept. \& 2 \& 1 <br>
\hline 153 \& Nevada City \& High Sohool *. \& A. M. Gray. \& Dept.. \& 2 \& 1 <br>
\hline 154 \& Oakdale \& Union High Sch \& W.L. Webster \& Ind... \& 1 \& 15 <br>
\hline 155 \& Oakland. \& High School .................. \& J. B. McCliesney \& Dept.. \& 1 \& 15 <br>
\hline 156 \& Oroville.... \& Onion High School . . . . . . . . \& Joel A. Snell ... \& \& 2 \& 0 <br>

\hline 157 \& | Pasadena.. |
| :--- |
| Paso Robles | \& Wilson High School \& Jas. D. Graham. \& Dept.. \& 3 \& 4 <br>

\hline 159 \& Paso Robles Petaluma .. \& High School. \& J. F. West... \& Dept.. \& 1 \& 4 <br>
\hline 160 \& Placerville \& Union District \& S. B. Wilson.. \& Ind... \& 1 \& 0 <br>
\hline 161 \& Pomona. \& High School. \& F. A. Molypeaux \& Dept.. \& 3 \& 3 <br>
\hline 182 \& Redland \& Union High School ........... \& Lowis B. Avery \& Ind... \& , \& 4 <br>
\hline 163 \& Riversid \& \#igh School .................. \& Miss Eugenie \& Dept.. \& 3 \& 8 <br>
\hline 185 \& Sacrame \& \& Jas. H. Pond \& Dept.- \& $\frac{2}{2}$ \& 2 <br>
\hline 168 \& San Bernardin \& do \& A. A. Richardso \& Dept.. \& 2 \& 2 <br>
\hline 167 \& San Diego ..... \& do \& N. P. Davidson \& Dept.. \& 4 \& 8 <br>
\hline 168 \& San Franc \& Girls' High School. \& Elisha Brooks. \& Mept.. \& , \& 15 <br>
\hline 169 \& do \& Lowell Figh School ......... \& Frank Morton. \& Dept.. \& 13 \& 2 <br>
\hline 171 \& San Joas. \& Polytechnia High School . . \& Walter N. Bush \& Dept.. \& 7 \& <br>
\hline 172 \& San Luis Obiapo. \& th. .da ..... \& Le Roy D. Brown, A. \& Dept... \& 2 \& 1 <br>
\hline 173 \& 3 San Rafaol. \& \& Geo. Ph. Boke. \& Dept.. \& 2 \& <br>
\hline 174 \& 5 Santa Ana.... \& \& F. E. Perham . \& Dopt. \& 2 \& <br>
\hline 175 \& $5{ }^{\text {S }}$ Santa Barbara \& \& C. Y. Roop.. \& Dopt. \& 4 \& <br>
\hline
\end{tabular}

Enited States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of publio high schools in the


Statistics of 1894-95.

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of publio high schools in the


United States for the scholastic year 1895－96－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Coloxed secondarystudents included incol－ 7 and 8. 7 and 8. |  | Elemen－tarypupils，includingall belowsecondarygrades． |  | Preparing for college． |  |  |  | Gradu－ ates in 1896. |  | College prepara dents in the class uated in 1896. |  |  |  |  |  |  |
| seconda studen |  |  |  | $\begin{gathered} \text { Clas. } \\ \text { sical } \\ \text { course. } \end{gathered}$ | Scien．tific course． |  |  |  |  |  |  |  |  |  |  |
| 秐 |  | 胃 |  |  |  | $\begin{aligned} & \text { む゙ } \\ & \text { ت̈̉ } \end{aligned}$ |  |  |  |  |  | 品 |  |  |  |  |  |  |  |  |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 84 |  |
| $\begin{aligned} & 15 \\ & 34 \\ & 35 \\ & 56 \end{aligned}$ | $\begin{aligned} & 14 \\ & 43 \\ & 38 \\ & 99 \end{aligned}$ | $\begin{aligned} & 0 \\ & 1 \\ & 0 \end{aligned}$ | $\left.\begin{aligned} & 0 \\ & 1 \\ & 0 \\ & 1 \end{aligned} \right\rvert\,$ | $\begin{array}{r} 58 \\ 0 \\ 0 \\ 0 \end{array}$ | $\begin{array}{r} 52 \\ 0 \\ 0 \\ 0 \end{array}$ | 0 | 0 | 15 <br> -7 <br> 28 <br> 28 | 14 -8 66 | 3 <br> 1 <br> 2 <br> 10 | 1 8 3 11 | 6 | 0 | 3 4 4 3 |  | 100 500 75 200 | Stuk \＄300 | 234 235 236 237 |
| 28 | 55 | 0 |  | 0 |  |  |  |  | 0 |  |  | 2 |  |  |  | 2，500 |  | 238 |
| $\stackrel{29}{7}$ | $\begin{array}{r}35 \\ 36 \\ \hline\end{array}$ | 0 | 0 | － | 0 | 2 | 0 | － | 0 | 5 | 5 | 1 | 1 | 3 |  | 2， 226 | 9，000 | 239 |
| 133 | 200 |  | 0 |  | 0 | 19 | 0 | 25 | 0 | 22 | 25 | 7 | 2 | 4 |  | 1，035 | 94， 500 | 241 |
| ${ }^{46}$ | ${ }_{2}^{63}$ | ${ }^{0}$ |  | 0  <br> 0 16 <br> 06  | ${ }^{17}$ | ${ }_{3}$ | 2 | 2 | 2 | 3 | 13 | 2 | 1 | 4 |  | 1，807 | 37， 250 | 242 |
| ${ }_{2}^{18}$ | ${ }_{28}^{22}$ | ${ }^{0}$ |  | $\begin{array}{ll}0 & 62 \\ 0 & 6\end{array}$ | ${ }_{12}^{68}$ |  |  |  |  | ${ }_{0}^{3}$ | 7 |  |  |  |  | 70 300 | 4,000 10,000 | ${ }_{244}^{243}$ |
| ${ }_{33}^{22}$ | 79 | － | ${ }_{0}$ | ${ }_{0}^{0}{ }^{0}$ | 12 | 0 ${ }^{15}$ | 10 | 8 | 0 | ${ }_{9}$ | 16 | 4 | 2 | ${ }_{3}^{4}$ |  | 300 300 | 10,000 1,000 | ${ }_{245}^{245}$ |
| 28 | 35 | 5 | 0 | 0 0 |  | 5 |  | 7 | 0 | 4 | 8 | 1 | ${ }_{3}$ |  |  | 850 | 35， 000 | 216 |
| 20 | ${ }_{28}^{28}$ |  | 0 | $\begin{array}{lll}0 \\ 0 & 0 \\ 0\end{array}$ |  |  |  |  |  | 5 | $\stackrel{4}{4}$ | ${ }_{4}^{2}$ | 4 1 1 | 4 |  | 1,200 300 | 12， 000 | 247 |
| 2 |  | 4 | 0 | 20 | ${ }_{36}$ | 0 |  |  |  |  |  | 4 | 1 | 4 |  | 300 100 |  | 248 249 |
| 22 |  | 88 |  | 8 | 24 | 4 |  |  |  | 4 | i |  |  | 3 |  |  | 15，000 | 250 |
| ${ }_{8}^{8}$ | 3 10 <br>  11 | 10 | 0 | 0 0 | 5 | 0 | 0 | 1 | ． 0 |  | 4 | 0 | 0 | 3 |  | 250 300 | 15,000 15,000 | ${ }_{252}^{251}$ |
| 18 |  | 2 |  | 0 0 |  |  | 1 | 14 | 21 | － | 0 |  |  | 2 |  | 1，056 |  | ${ }_{253}^{252}$ |
|  |  | 34 |  | 0 | 0 | 0 ．．． |  |  |  | 2 | 0 | 0 | 2 | 4 |  | ${ }^{1}, 300$ | 3，500 | 254 |
| ${ }^{356}$ | ${ }^{411}$ | $1{ }^{1}$ | 3 | 3 0 <br> 0 100 | 80 | 79 | 18 | 20 | 0 | 34 | 75 | 17 | 14 | 4 |  | 4， 700 | 300,000 12000 | ${ }^{255}$ |
| 16 | 14 | 4. | 0 | 0 | 0 | － |  | 5 | ${ }^{-}$ | ${ }_{0}^{2}$ | 0 | 0 |  | 2 |  | 40 |  | ${ }_{257}^{256}$ |
| 24 | 16 | $1{ }^{6} 1$ | 0 | 0 | 90 | 1 | 0 | 2 | 0 |  | ． 0 | 0 | 0 | 4 |  |  |  | 258 |
| 10 140 | ${ }_{146}^{14}$ | 4 | 0 | 0 | 0 | ${ }^{1} 2$ | ${ }_{8}^{0}$ | ${ }_{10}$ | 0 | 13 | 0 |  |  |  |  | 400 |  | ${ }_{260}^{259}$ |
| 105 | ${ }^{103}$ | 5 | 10 | ${ }_{0} 1$ | 0 | ${ }^{12}$ |  |  | ．．．． | 13 | 15 | ${ }_{0}$ | ${ }_{0}$ | 4 |  | ${ }^{2,000}$ | 70，000 | ${ }_{261}^{260}$ |
| ${ }^{30}$ | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 0 | 0 |  |  | 300 |  | 288 |
| ${ }_{20}^{11}$ | ${ }_{23}^{12}$ | 2 <br> 0 <br> 0 | 0 | 0  <br> 0 40 <br> 0 0 | 6 | 0 |  |  |  |  | 3 <br> 3 <br> 2 | ${ }_{3}$ | 0 | 4 |  | 30 36 | 6，000 | 263 284 |
| 21 | ${ }_{26}^{23}$ | 6 | ． | ． 0 | 0 | 3 |  | ${ }_{10}^{4}$ | 18 | ${ }_{0}^{6}$ | ${ }_{0}^{2}$ | 3 | 0 | 4 |  | 1，000 |  | ${ }_{285}^{284}$ |
| 123 | ${ }^{154}$ | $4{ }^{0}$ | 0 | 0 | 0 | 015 |  | 20 | 2 | 11 | 27 | 8 |  | 4 |  |  | 125，000 | ${ }^{268}$ |
| ${ }_{3}^{26}$ | 35 <br> 9 |   <br> 9 0 | 0 | ${ }_{22}^{46}$ | ${ }_{23}^{43}$ |  | 0 |  | ． |  | 1 | 0 | 0 | ${ }_{2}^{4}$ |  | 153 75 |  | ${ }_{268}^{267}$ |
| 97 | 65 | 5 | 3 | 30 | 0 | 0 | 0 | 0 | － | 0 | 0 | 0 | 0 | 3 |  | 350 | 150，000 | 269 |
| 350 | 410 | 0 | 4 | 40 |  | 116 | 132 | 156 | 0 | 71 | 109 | 53 | 25 | 4 |  | 3， 000 | 150， 000 | ${ }_{27}^{270}$ |
| 18 15 | 18 20 | 8 |  | 0  <br> 0 60 | 70 0 | 0 0 | ${ }_{0}^{2}$ | 15 |  | 0 | 0 |  | 0 0 |  |  | 579 300 | 25， 000 | ${ }_{272}^{271}$ |
| 23 | 40 | 0 | 0 | 0 | 0 | 0 | 1 | ${ }_{3}$ | 4 | 1 | 7 | 1 | 3 | 4 | 75 | 370 | ¢， 00 | 273 |
| 9 | ${ }_{24}^{13}$ | 13.0 | 0 | 0 |  |  |  |  |  | －${ }^{2}$ | 1 |  |  |  |  | 75 |  | ${ }_{275}^{274}$ |
| ${ }_{8}^{16}$ |  |   <br> 13 0 <br> 0  | $\begin{array}{lll}0 \\ 0 & 1 \\ 0\end{array}$ | 0 35 | ${ }^{0}$ | 0 |  |  |  | 0 | 3 | 0 | 0 |  |  | 75 |  | ${ }_{276}^{275}$ |
| 15 | 7 | 7 | 0 | 0 |  | 30 | 0 | 0 | 0 |  | 0 | 0 | 0 |  |  | 64 |  | 277 |
| ${ }_{30}^{14}$ | 22 52 | 2 | 0 | 0 |  | 0  <br> 0 7 | ${ }^{1}$ | 3 | 0 | － | 5 | ${ }_{2}^{2}$ | 0 | 4 |  | ${ }_{500} 6$ |  | ${ }^{278}$ |
| 62 | 71 | 1.0 | 0 | 0 |  | 0 11 |  |  |  | 7 | 13 | 2 | 3 | 4 |  | 1，000 | 50， 000 | 280 |
| 7 |  | 7 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  | 281 |
| $\stackrel{9}{9}$ | 11 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |  |  | 3 |  |  | 50，000 | ${ }_{283} 8$ |
| 1.1 |  | 170 | 0 | $\stackrel{2}{2}$ | $\stackrel{14}{14}$ | 0 |  | 1 | 0 | 4 | ${ }_{3}^{7}$ | 1 | 1 | 4 |  | 350 | 50，000 | ${ }_{284}^{283}$ |
| 56 | 90 | 0 | 0 | ， |  | 3 | ${ }^{0}$ | 1 | 0 | 7 | 12 | 2 | 0 |  | $\ldots$ | 700 | 12，000 | 285 |
| 53 40 | ${ }_{40}^{48}$ | 8 | 1 | 1 |  | ${ }_{2}^{6}$ | 6 ${ }^{3}$ | 7 | 0 | ${ }_{3}^{5}$ | ${ }_{3}^{6}$ | $\stackrel{4}{1}$ | 0 | 4 |  | 1． 200 |  | －286 |
| 30 | ${ }_{40}$ | 0 | 1 | 10 | 0 | ${ }_{0}{ }^{0}$ | 0 | 3 | 0 | 3 | 3 | 1 | 1 | 4 |  | 1，500 | 20，000 | ${ }_{288}^{287}$ |
| 79 | 108 | 8 | 1 | 1 |  | 7 | ${ }^{6}$ |  | 0 | 8 | 17 | ${ }^{3}$ | 1 | 4 |  | 805 | 90， 000 | 289 |
| ${ }_{21}^{11}$ | 25 18 | 8 0 | 0 | 0 0 | ${ }_{70}^{0}$ | 0 | ． 0 | ${ }_{2}$ | 1 | 3 | 0 | 2 | 1 | 3 |  | 200 |  | 290 291 |
| 11 | 17 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |  | 1 | 3 |  | ${ }_{105}$ | 2，500 | ${ }_{292}^{291}$ |
| 20 | 30 | － 0 | 0 | 0 0 | 0 | － 5 | ） 6 | 2 |  | 2 | 2 | 0 |  |  |  | 1，400 |  | 293 |

Table 33.-Statistics of public high schools in the

|  | State and post-office. | Name. | Principal. | Department or independent. | Instructors for secondary students. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  |  |  |  |  |  |  |
| 294 | Torrington | High School | Ed. H. Forbes, Ph, D... | Dept.. | 2 | 4 |
| 295 | Wallingford | Central District High School | Frank W . Eaton ....... | Ind... | 2 | 2 |
| 296 | Wapping | High School .................. | Susie M. Lindsey....... | Ind... | 0 | 1 |
| 297 | W aterbury | -...do...... | Henrs S. Gulliver, M. A. | Dept.. | 5 | 4 |
| 298 | Westchester. | Day High Sohool | Rev. Ed. G. Stone, M. A. | Ind... | 1 | 0 |
| 299 | West Hartford...... | High School | Alfred F. Howes .......- | Ind... | 1 | 1 |
| 300 | West Haven. | -..do. | A. M. Drummond, A.M. | Ind... | 1 | 2 |
| 302 | Willimantic | Windham High School | S. Hale Baker, A. ${ }^{\text {B. }}$ | Dept.. | 2 | 5 |
| 303 | Windsor Locks..... | Union High School. . . | Daniel Howard.......... | Ind... | 1 | 1 |
|  | delaware. |  |  |  |  |  |
| 304 | Delaware City. | High School | Norris W. Wilkinson... | Dept.. | 1 | 0 |
| 305 | Dover ....... |  | Jas. E. Carroll. | Dept.. | 1 | 1 |
| 306 | Felton | do | James W. Lattomus | Ind... | 1 | 0 |
| 307 | Georgetown | ...do .... | Roman Tammany | Dept.. | 1 |  |
| 308 | Lewres ...... | Union High School -........ | Walter Sparklin ....... | Ind... | 1 | 1 |
| 309 | Middletown | Academy and High School.. | De Keller Stamey ...... | Dept.. | 1 | 0 |
| 310 311 | Milford | North High School * | Daniel S. Ells. | Dept.. | 1 | 7 |
| 311 312 | Newark | South High School............ | C. B. Morris | Ind... | 1 | 0 |
| 313 | New Castle | .....do | Geo. W. Andrew | Dept.. | 1 | 0 |
| 314 | Seaford | do | A. C. Brower ... | Dept.. | 1 | 1 |
| 316 | Smyrna | do | Chas. H. Le Feve | Dept.. | 0 | 1 |
|  | Wilmington |  | A. H, Berlin... | Dept.. | 5 | 13 |
|  | dist. of collumbia. |  |  |  |  |  |
| 317 | W ashingto | Central High School. | Francis R. Lane, M. D.. | Dept.. | 16 |  |
| 318 | do | Eastern High School. | C. M. Lacey Sites...... | Dept. | ${ }_{16}$ | 12 8 8 |
| 319 | do | Seventh and Eighth Divisions Righ School. | F. L. Cardozo | Dept.. | 16 | 8 |
| 320 | do | Western High School....... | Edith C. Westcott....... | Dept.. | 2 | 10 |
| 321 | Ancilla | High School | W. H. Cassela | Ind... | 1 | , |
| 322 | Apalachicol | do.* | Theo.J. McBeath....... | Dept. | 2 | 0 |
| 323 | Bartow | Summerlin Institute......... | William Hood........... | Dept. | 2 | 0 |
| 324 | Braiden Town | County High School | Thos, C. Walton. ........ | Ind... | 1 | 2 |
| 325 | Brooksville. | Hernando High School...... | J. T. Mallicoat. .......... | Dept.. | 1 | 1 |
| 326 | Dade City | Pasco County High School*. | L. C. Ray ................ | Ind... | 1 | 0 |
| 327 | Eustis. | High School | Mrs. B. B. Phillips...... | Dept.. | 0 | 2 |
| 328 | Ferasndina | High School No. 1. | J. H. Gans. | Ind... | , | 0 |
| 329 | Gainesville | East Florida Seminary | Edwin P. Cater .......... | Ind... | 5 | 0 |
| 330 | Inverness | High School | A. M. Linhart ........... | Dept.. | 1 | 0 |
| 331 | Jacksonville | Duval High School | Frederick Pasco......... | Dept.. | 3 | 2 |
| 332 | Kissimmee | Osceola High Scho | D. L. Ellis ................ | Dept.. | 2 | 0 |
| 333 334 | Lake City | High School | E.F. Whson | Dept.. |  | 0 |
| 335 | Live Oal | Suwsnnce High | Professor ${ }^{\text {H }}$ | Ind.. | 0 | 3 |
| 336 | Milton. | Santa Rosa A cademy | Theo. Fulks MeBeath.......... | Dept.. | 1 | 1 |
| 337 | Monticello. | Jefferson Collegiate Insti. | Sam'l J. Halley . . . . . . . . | Ind... | 1 | 1 |
| 338 | Ocala | High School ** | John J. Ear |  | 2 | 1 |
| 339 | Palattra. | Putnam High Schoo | I. I. Finem | Ind... | 1 | 1 |
| 340 | Rochelle | Martha Perry Institato | W.J. Odom, A. M...... | Ind. | 1 | 1 |
| 342 | St. Augustine | High School | H. O. Hamm. ........... | Dept.. | 2 | 1 |
|  | 8tarke. | Bradford County High school. | A. Hercules .............. | Dept.. | 3 | 0 |
| $\begin{aligned} & 343 \\ & 844 \end{aligned}$ | 3 Tampa............. | Hillsboro High School... | B. C. Graham. | Dept.. | 1 | 1 |
|  |  | High School | -Woodberr | Ind. | 1 |  |

Tnited States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of publio high schoots in the

*Statiatics of 1894-95.

United States for the scholastic year 1895－96－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | －Sxbaq！ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total secondarystudents． |  | Coloredsecondarygtudentsincludedincedin col－umns7 and 8. |  |  | Elemen．tarypupils，includingall belowsecondarygrades． |  | Preparing for college． |  |  |  |  | Gradua－ ates in 1896. |  | College prepara－tory stu－ dents in the class uated in 1896. |  |  |  |  |  |  |
|  |  | Clas－ course． | $\begin{aligned} & \text { Scien- } \\ & \text { tific } \\ & \text { cifere. } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| $\dot{\dot{G}}$ |  |  |  |  | $\underset{\sim}{x}$ |  |  | $\begin{aligned} & \dot{\otimes} \\ & \text { 俞 } \end{aligned}$ |  |  |  |  |  | 器 |  |  |  |  |  |  | 島 |  |  |
| 7 | 8 | 3 |  | 10 | 11 | 12 |  | 131 | 141 | 151 | 161 | 17 | 18 | 19 | 30 | 21 | 22 | 23 | 24 |  |
|  |  | 15 | 0 | 0 | 53 | 45 |  |  |  |  |  |  |  |  |  |  |  |  | \＄800 |  |
| 28 |  | 32 | 0 | 0 | 25 | 19 |  | － | 3 |  |  |  |  |  |  |  |  |  | 2，500 | 346 |
| 30 |  | 35 | 0 | 0 | 109 | 109 |  | 2 | 4 |  |  |  |  |  |  | 4 |  | 50 |  | 347 |
| 4 |  | 14 <br> 80 | 0 | 0 | 44 | 32 |  | 2 | 4 | 4 | 0 | 0 | 0 | 0 | 0 3 | 4 |  | ${ }_{35}^{25}$ | 1,200 3,750 | 348 349 |
| $\stackrel{4}{2}$ |  | 15 | 2 | 5 | 12 | 18 |  | 0 | 7 |  |  |  |  |  |  | 1 |  | ${ }_{72}$ | $\begin{array}{r}3 \\ \hline 600\end{array}$ | 350 |
| 7 |  | 11 | 0 |  | － 13 |  |  | 1 | 3 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  | 351 |
| 15 |  | 14 | 15 | 14 | 0 |  | 0 | 15 | 14 |  |  | 1 | 2 | 1 | 2 | 3 |  | 350 | 4，000 | 352 |
| ${ }_{3}^{0}$ |  | $\begin{array}{r} 410 \\ 5 \end{array}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |  |  | ． 1 | 5 |  |  |  |  |  |  |  |  | 4 |  | 2，000 | 37，500 | 353 354 35 |
| ${ }_{0}$ |  | 220 | 0 |  | 0 | 0 |  | － | 41 | 0 | 0 | 0 | ${ }^{5}$ | 0 | 39 | 4 |  |  | 15，000 |  |
| 15 | 5 | 46 | 15 |  | 46 | 0 | 0 | 2 | 1 |  |  |  | 1 | 2 | 1 | 4 |  | 300 | 15，000 | ${ }^{355}$ |
| ${ }_{6}^{25}$ | ${ }_{6}$ | 25 0 | 0 |  | 0 | 0 | － | 10 2 1 | 8 | 0 | 0 | 5 | － | － | 0 | $\stackrel{2}{4}$ |  | 300 | 2，500 | 357 |
| 13 |  | 27 |  |  | 0 | 7 | 43 | 10 | 26 |  | 0 |  |  |  |  |  |  |  | 4， 5000 | 359 359 |
| 6 |  | 4 | 0 |  | 0 | 9 | 19 | 2 |  | 3 |  |  |  |  |  |  |  |  |  | 360 |
| 15 | 5 | ${ }_{13}^{21}$ | 0 |  | 0 | 0 |  | ${ }_{2}^{4}$ | 8 | 1 | 2 | 2 | 3 | 1 | 2 | 4 |  | 250 | 6,000 | 361 369 |
| ${ }_{35}^{11}$ | 1 | 13 47 | 0 |  | 0 | 1 | 81 | $\stackrel{2}{2}$ | 4 |  |  | i | ． 5 |  |  | 4 |  | 100 100 | 1,000 10,000 | 362 363 |
| 10 |  | ${ }_{8}$ | 0 |  |  | 0 |  | 1 | 0 |  |  |  |  |  |  | 3 |  |  | 10，000 | 363 364 3 |
| 26 | 6 | 40 | 0 |  | 0 | 4 | 50 |  |  |  |  | 8 | 17 |  |  | 6 |  |  | 28，000 | 365 |
| ${ }_{16}^{28}$ |  | ${ }_{26}^{35}$ | 0 |  | 012 | 2 | 15 | 18 1 1 | 2 | 2 | 3 |  |  |  |  | ${ }_{4}^{3}$ |  |  | 2，500 | ${ }_{367}^{366}$ |
| ${ }_{25}^{16}$ |  | ${ }_{35}^{26}$ | 0 |  |  | 0 | 0 | 1 | 0 |  |  |  |  |  | 0 | 3 | $\ldots$ | 100 | 10，000 | ${ }_{368}^{367}$ |
| 30 | 0 | 45 | 0 |  |  | 0 | 0 | 8 | 7 | 2 | 1 | 7 | 8 | 5 | 4 |  |  | 200 | 10，00 | 369 |
|  | 5 | 10 10 | 0 |  | $\begin{array}{lll}0 & 42 \\ 0 & 40\end{array}$ | 2 | 40 |  |  |  |  |  |  |  |  | 4 |  |  | 500 | 370 371 |
| 11 |  | 12 | 0 |  | ${ }_{0}^{0}$ |  | 39 | 2 | 1 | 2 | 3 |  |  |  |  |  |  |  | 1，400 | ${ }_{372}^{37}$ |
| 18 | 8 | 38 | 0 |  | 0 | 0 | 0 |  |  |  |  | 7 | 13 |  |  | 2 |  |  | 10，000 | 373 |
| 11 15 | 1 | 10 15 | 0 |  | 11 | 0 | 11 | 5 | ${ }_{3}^{1}$ | 0 | 0 | 5 | 2 | 5 | ， | 3 |  | 0 |  | 374 375 |
|  | 15 | 25 | 0 | 0 | 1 | 0 | 0 | 8 | 10 |  |  |  |  |  |  |  |  |  | 15，000 | ${ }^{376}$ |
|  | 8 | －8 | 0 | 0 |  | 9 | 21 | ${ }^{8}$ | 0 |  |  | 0 | 0 | 0 | 0 | 4 |  |  | 500 | ${ }^{377}$ |
|  | 15 | 17 6 | 0 | 0 |  | 10 | 11 | ${ }_{0}^{6}$ | ${ }_{2}^{5}$ |  | $\cdots$ | 0 | － | 0 | 0 | ${ }^{4}$ |  | 0 | 3， 000 | 378 379 |
|  | 40 | 30 | 0 | 0 |  | 0 | 0 | 10 | 15 | 4 | 5 |  |  |  |  | － 4 |  |  | 1，000 | 380 |
|  | 34 | 34 | 0 | 0 |  | 38 | ${ }_{41}^{51}$ | 5 | 3 |  |  |  | 3 | 5 | 3 | 1 |  | 165 | 4，000 | 381 382 |
|  | 24 87 | ${ }_{98}^{32}$ | 0 | 0 |  | 32 | 41 | ${ }^{3}$ | 5 5 | ． 2 |  |  | ${ }^{3}$ |  |  |  |  | 0 | 1,500 10,000 | － |
|  | 20 | 17 |  | 0 |  | 24 | 29 | ${ }^{6}$ | 5 |  |  |  |  |  |  | ${ }^{4}$ |  |  | ${ }_{8}{ }^{1}, 000$ | $38 \pm$ |
|  | 24 10 | 26 8 8 |  |  |  | 24 | 27 | 20 | 10 | ${ }_{0}^{4}$ |  |  | 5 | $\stackrel{4}{0}$ | 5 | 2 |  | 400 | 3,000 3，000 | 385 <br> 388 |
|  | 20 | 25 |  |  |  |  | 15 | 2 | ${ }_{11}^{2}$ |  |  |  |  |  |  |  |  |  |  | 386 387 |
|  |  |  |  |  | 0 | ${ }_{33}^{17}$ | ${ }_{23}^{22}$ |  | 1 | ． |  |  |  |  |  |  |  |  |  | 388 |
|  |  | 8 |  |  | ${ }_{0}^{0}$ | ${ }_{35}^{33}$ | ${ }_{29}^{26}$ |  | ${ }_{0}$ |  | 0 | 01 | 12 | 1 | 2 | 2 |  | 0 | 2，000 | 389 390 |
|  |  |  |  | 0 | 0 |  | ${ }^{36}$ |  |  |  |  |  |  |  |  |  |  |  |  | 391 |
|  | 46 40 | ${ }_{40}^{48}$ |  |  | 1 | 100 | 71 |  |  |  |  |  |  |  |  |  |  | 35 |  | ${ }_{393}^{392}$ |
|  | 40 13 13 | ${ }_{9}^{40}$ |  |  |  | 50 | 5 | 18 | 4 | 48 | － 0 | 2 | $3{ }^{3}$ | $5 \quad 3$ |  | 5 |  | 50 | 15,000 3,000 | 393 394 |
|  | 18 | $\stackrel{12}{12}$ |  |  | 0 | 28 4 | 30 47 | － | 3 | 3 |  |  | 0 0 |  |  | 2 |  |  | 3,000 1,000 | ${ }_{398}{ }^{395}$ |
|  | 15 | 11 |  |  | 0 | 17 | 24 |  |  |  |  |  |  |  |  |  |  |  | 1，000 | 398 397 |
|  | 9 | 12 |  |  | 0 | 32 | 40 |  |  |  |  |  |  |  |  |  |  |  |  | 398 |
|  | 45 | 48 |  |  |  | ${ }_{37}$ | 30 | ${ }_{3}^{38}$ |  |  |  |  |  |  |  |  |  | 45 | 3，000 | 399 400 |
|  |  | 20 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 300 | 401 |
|  | 15 | ${ }^{23}$ |  |  | 0 | 15 | 14 |  |  | $\begin{array}{lll}2 & \\ 1 & 1\end{array}$ | 10 | 0 |  |  |  |  |  | 0 | 4,000 1,000 | 402 403 |
|  | 8 | 15 |  | 0 | 0 | 42 | 50 |  |  | 7 | 0 | 0 | $4{ }^{4} 8$ | 6 |  |  |  | 0 | 1，000 | 404 |
|  |  | 14 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 6，000 | 405 408 |

Table 33.-Statistics of public high schools in the


United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the


United States for the sholastic year 1895-95-Continued.


Tablé 33.-Statistics of public high schools in the

|  | State and post-office. | Name. | Principal. |  | Instructors for secondary students. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | ILLINOIS-cont'd. |  |  |  |  |  |
| 525 | Clinton | High School |  | Dept.. | 1 | 3 |
| 526 | Coffeen | ....do ....... | Jacob L. Traylor | Dept.. | 1 | 0 |
| 527 | Colcheste |  | John MnClenahan...... | Dept.. | 1 | 0 |
| 528 | Colfax. | do | L. W. Haviland | Dept.. | 1 | 1 |
| 529 | Coulterville | do | E. A. MacMillan ....... | Dept.. | 1 | 1 |
| 530 531 | Creston. | . . do | Miss EleanorS. Calligan | Ind... | 1 | 1 |
| 531 | Cuba ${ }^{\text {Danville }}$ | .do do | J. R. Rowland ........... | Dept.. | 2 | 1 <br> 4 |
| 533 | Decatur | do | J.J. Sheppard | Dept.. | 6 | 10 |
| 534 | De Kalb | do | John T. Bowles | Dept.. | 1 | $\stackrel{2}{2}$ |
| 535 | Delevan | do | F. L. Calkins.. | Dept.. | 1 |  |
| 536 | Dixon | do | Mary S. Porteous. | Dept.. | 1 | $\stackrel{4}{2}$ |
| 537 538 | Downers Grove Dundee | do | J. K. Rassweiler. | Dept.. | 1 | $\stackrel{2}{3}$ |
| 538 | Dundee... Du Quoin | do | S. M. Abbott . . . | Ind... | 1 2 1 | 3 <br> 1 |
| 540 | Durand. | do | Thos. A. Gallagher | Dept.. | 1 | 0 |
| 541 | Dwight. | do | Leila Britt ....... | Dept.. | 1 | $\stackrel{2}{1}$ |
| 542 | Earlville | do | H. H. Robinson | Dept.. | 1 | $\frac{1}{5}$ |
| 543 | East Dubuque. | do | Jas. A. Farrell. | Dept.. | 0 | 5 <br> 3 |
| 544 545 | East St. Louis Edinburg. | do | Chas. L. Manners | Dept.. | 3 1 | 3 1 1 |
| 546 | Effingham. | do | G. E. Marker | Dept.. | 2 | 1 |
| 547 | Elgin.... | do | W. F. Lewis. | Dept.. | 1 | 6 |
| 548 | Elizabeth | do. | O. E. Taylor | Dept.. | 1 | 0 |
| 549 | Elkhart | do | W. A. Lucas | Ind... | 1 | 0 |
| 550 | Elmhurst. |  | R. F. Barmel. | Dept.. | 1 |  |
| 551 552 | Elmwood. |  | L. E. Flanegin. | Dept.. | 1 | 2 1 1 |
| 552 553 | El Paso. | East Side High S | Herbert Bassett | Ind... | 1 | $\frac{1}{2}$ |
| 553 <br> 554 <br> 5 | - E ....do | West Side High <br> High School .... | Anna E. Hill <br> B. B. Melton. | Ind.... | 1 | 1 |
| 555 | Evanston. | -....do.*. | B. B. Meltion L. ........... | Ind... | 3 | 0 |
| 556 | Fairbury. |  | Alice J. Batterson....... | Ind... | 1 | 1 |
| 557 | Fairmount. | do | W. D. Fairchild ... | Dept.. | 1 | 0 |
| 558 | Farmer City | do | C. C. Covey .... | Dept.. | 2 | 6 |
| 559 | Farmington | . ...do | Elizabeth Williams. | Ind... | 2 | 6 |
| 560 | Flora ...... | do | J. L. Hughes . . . . . | Dept.. | 1 | 0 |
| 561 |  | - do | F. M. Wood........ | Dept.. | 1 | 1 |
| 562 | Forreston. Folton | do | Lyman H. Coleman..... | Dept.- | 1 | 1 |
| 563 | Fulton Galena. | .do | Miss Ella M. Brophy ... <br> F. G. Mutterer | Dept.. | 1 | $\stackrel{2}{2}$ |
| 565 | Galesburg | do | G. Mutterer | Dept.. | 3 | 5 |
| 566 | Galva..... | do | Miss Hedwig M. Maul. | Dept.. |  | 2 |
| 567 | Geneseo | do | Miss Ada M. Schnäbele. | Dept.. | , | 3 |
| 568 | Geneva. | do | F. E. Hamlin ............ | Dept.. | 1 | 1 |
| 569 | Genoa | do | Joseph Gray ............. | Ind... | 1 | 2 |
| 570 | Georgetown | do | W. T. Crow.............. | Dept. | 1 | 0 |
| 571 | Gibson City. | do | J. D. Shoop ............. | Dept.- | 2 | 1 |
| ${ }_{573} 5$ | Gillespie..... | do | Miss Rosa A. Burke.... | Ind... | 0 | 2 |
| 574 | Glen Ellyn. | .do | Harry M. Shafer......... | Ind... | 1 | 0 |
| 575 | Good Hope | do | J. R. Kenneday .......... | Ind... | 1 | 0 |
| 576 | Grayville. | do | R. W. Jennings........... | Ind.... | 2 | 0 |
| 577 | Greenfleld | do | A. D. Snyder ...... | Dept.. | 2 | 0 |
| 578 | Greenup. <br> Greenvi. | do.* | L. B. Odell............... | Ind... | 1 | 1 |
| 580 | Greanville | do | J. C. South ............... | Dept.. | 1 | 0 |
| 581 | Griggaville | do | H. C. McCarrel -........... | Dept.. | 1 | 1 |
| ${ }_{583} 88$ | 3 Hamilton. | do | Geo. C. Baker............ | Dept.. | 1 | 1 |
| ${ }_{584} 88$ | 3 Hampshire | do | C. F. Hobert............... | Dept.. | 1 | 1 |
| ${ }^{685}$ | Harvey. |  | Anns M. Morrow........ | Dept.. | 1 | 2 |
| ${ }_{587} 88$ | 7 Havania. |  | Sara E. Pierce............. | Dept.. | 1 | 1 |
| 687 | 7 Hebron |  | Wells Hulbert. ........... | Ind... | 1 |  |

United States for the soholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the

|  | State and post-office. | Name. | Principal. | Department or independent. |  | ructfor daxy nts. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | ILLINOIS-cont'd. |  |  |  |  |  |
| 588 | Henry | High School | W. S. Wallac | Dept.. | 1 | 2 |
| 589 | Heyworth | ....do ..... | G.W.Winchel | Dept.. | 1 | 2 |
| 590 | Highland | Township High | W. A. Wilson | Ind | 1 | 1 |
| 591 | Hilisboro ... | High School... | Mattie Hunt | Dept.. | 2 | 1 |
| 592 | Hinsdale | Hi.do ..... | Miss Emma C. Bates... | Ind... | 1 | 2 |
| 593 | Hoopeston |  | S. Cass. | Dept.. | 2 | 0 |
| 594 | Hnntley. | do | A. A. Ebersolo | Dept.. | 1 | 1 |
| 595 | Slliopolis | do | Geo. E. Clendenen. | Dept.. | 1 | 4 |
| 596 | Ipava... | do | I. C. Flanegin........... | Ind... | 1 | 0 |
| 597 | Jackson | Washington Hig | Virginia Grares......... | Dept.. | 1 | 2 |
| 598 | Joliet. | High School .-............ | J. Stanley Brown....... | Dept.. | 4 | 6 |
| 599 | Kankakee | . . . . do ...... | Eugene C. Crosby .-.... | Dept... | 1 | 3 |
| 600 | Kansas.. | do | W. L. Goble . . . . . . . . . . | Dept.. | 1 | 1 |
| 601 | Kewance | -.... do do | A. S. Satham . . . . . . . . . . . | Dept... | 1 | 0 |
| 603 | Kinmundy | do | H, C. Miller | Dept.. | 1 | 1 |
| 604 | Kirkwood |  | John M. Cathear | Dept.. | 1 | 0 |
| 605 | Knoxville | do | E. S. Wilkinson. | Dept.. | 1 | 2 |
| 606 | Lacon | d | Grace Germain. | Dept.. | 1 | 1 |
| 607 | Lagrange ............. | Lyons Township High School. | E. G. Cooley............ | Ind. . . | 4 | 4 |
| 608 | Lanark | High Sehool ................... | E. S. Ha | Dept.. | 1 | 1 |
| 609 | La Salle. | ....do. . | T. C. Kohin | Dept.. | 2 | 2 |
| 610 | Leaf River | do | H. A. Cross | Dept.. | 1 | 2 |
| 611 | Lena. | do | Goo. N. Snapp... | Dept.. | 1 | 1 |
| 612 | Leroy | do | B.F. Templeton......... | Dept.. | 2 | 2 |
| 613 | Lewistown | do | Burton E. Nelson....... | Dept.. | 1 | 2 |
| 614 | Lexington | do | Jesse L. Smith.......... | Dept.. | 1 | 1 |
| 615 | Lincoln. | do. | Jennie Kidd... | Dept.. | 1 | 2 |
| 616 | Litchfield | do | J. E. Bryan ............... | Dept.. | 2 | 2 |
| 617 | Lockpert | . . . . do | J. E. Hooton. | Dept.. | 1 | 2 |
| 618 | Macomb. | -do | R. C. Rennick............ | Dept.. | 3 | 1 |
| 619 | Mansfield | do | L. B. Whito. . . . . . . . . . | Dept.. | 1 | 0 |
| 620 | Marengo | . . . . do | C. W. Hart. | Dept.. | 2 | 1 |
| 621 | Maroa | . . . . do | James Hodge. | Dept.. | 2 | 0 |
| 622 | Marseilles | do | Carla Fern Sargent | Dept.. | 0 | 2 |
| 623 | Marshall. | do | L. A. Wallace...... | Dept.. | 3 | 2 |
| 624 | Martinsvill | . do | F. N. Allen............. | Ind... | 1 | , |
| 625 | Mascoutah. | do | P. A, Mortenson........ | Dept.. | 2 | 1 |
| 626 | Mason City... | .... do | Miss Bel Denham... | Dept.. | 1 | 2 |
| 627 | Mattoon | - do......... | E. Kate Carman. | Dept.- | 1 | 3 |
| 628 | Mayfair | Jefferson High Scho | Chas. A. Cook... | Dept.- | 7 | 4 |
| 629 | Maywood | High School ........... | J. E. McKean..... | Dept.- | 1 | 2 |
| 630 631 | $\begin{aligned} & \text { Mazon... } \\ & \text { Modora. } \end{aligned}$ | . ....do. | Jacob W. Rausch | Ind... | 1 | 1 |
| 631 | Medora. | ..... do | C. W. Yorkes. | Dept.. | 1 | 0 |
| 633 | Mendota | East High Sc | W. R. Foster | Dept | 1 | 1 |
| 634 | Meredosia | High School | Richard Linder | Ind. | 1 | 1 |
| 635 | Metamora ..... | ....do do.... | J. A. Burke............. | Dept.. | 1 | 0 |
| 636 | Metropolis City | do | Joel M. Bowlby (supt.). | Dept.. | 2 | 2 |
| 637 | Milford.-...... | do | Frank Harry............ | Ind... | 1 | 1 |
| 638 | Milledgeville | do | John H. Shitk. | Dept.. | 1 | 1 |
| 639 | Minier. <br> Minonk | do | C. J. Posey... | Dept.. | 1 | 0 |
| 641 | Minonk. Minooka | O. | R. A. Beebo. | Ind... | 1 | , |
| 642 | Moline. |  | John Davies | Dept.. | 1 | 0 |
| 843 | Momence |  | F. A. Manny | Dept.. | 6 | 4 |
| 644 | Monmorth. | do | W. D. McDowell. | Dept.. <br> Dept. | 1 |  |
| 645 646 | Monticello. | $\begin{gathered} \text {-do } \\ \text { - do } \end{gathered}$ | W. D. McDowell. Enoch A. Fritter. | Dept.. <br> Dept. | 1 | 1 |
| 046 | Morris. |  | Mary B. Holderman | Dept.. | 2 | 2 |
| 648 | Morrison - . |  | P. F. Burtch. . . . . . | Dept.. | 1 | 3 |
| 640 | Mount Carmel |  | A. D. Dawkins. . . . . . . . . | Dept.. <br> Dept . | $\frac{1}{2}$ | 0 |

United States for the scholastic year 1895－96－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Colored <br> secordary <br> students <br> included <br> in col－ <br> umns <br> 7 and 8. |  | Elemen－ tary pupils， including secondary grades． |  | Preparing for college． |  |  |  | Gradn－ates in 1896. |  | College prepara－ tory stu－ the class that grad uated in 1896. |  |  |  |  |  |  |
| secom stude | dary nts． |  |  | Clas－ sical course． | Scien－ course course |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 兇 |  | 品 |  |  |  | $\begin{array}{\|l} \dot{\Xi} \\ \text { gig } \end{array}$ | $\begin{aligned} & \text { 品 } \\ & \text { 免 } \\ & \text { m } \end{aligned}$ |  |  |  |  |  | $\begin{aligned} & \text { 要 } \\ & \text { 制 } \end{aligned}$ |  |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
|  |  |  |  |  | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | ${ }_{25}^{25}$ | 0 | 0 | 0 |  |  |  |  |  | 1 | 1 | 0 | 0 | 3 |  | 30 | 4， 600 | 589 |
|  | 25 60 | 0 0 |  | － | 0 | 0 9 | 10 | 1 | 2 | 1 | 4 | 1 | $\stackrel{4}{2}$ | 4 |  | 100 | 400 20,000 | 590 591 |
|  | 15 | 0 | ${ }_{0}$ | 220 | 240 | 9 | 10 | 9 | 1 | 1 | ${ }_{0}^{6}$ | 1 | ${ }_{0}^{2}$ | 4 |  | 225 | 20， 000 | 592 |
|  | 21 | 0 | 0 | 2 | 0 |  |  |  |  |  |  | ． |  | 4 |  | 25 |  | 593 |
|  | ${ }_{34}^{10}$ | 0 |  | 0 | 0 |  |  |  |  | 3 | 3 | 2 | 0 | 3 |  |  |  | 594 |
|  | 34 <br> 27 | ${ }_{0}^{0}$ |  | 2 0 | 0 | 4 | 5 | 1 |  | 1 | 8 |  | 1 |  |  | 480 <br> 338 | O | ${ }_{596}^{595}$ |
|  | 128 | 8 |  | 20 | 0 | $3{ }^{\circ}$ | 65 | 40 | $10{ }^{\circ}$ |  | 8 | 2 |  | 4 |  | ${ }_{850}$ | 30，000 | ${ }_{597}^{596}$ |
|  | 212 | 2 |  | 0 | 0 |  |  | 12 | 15 | 10 | ${ }^{2}$ | 6 | 5 |  |  | 800 | 35， 000 | 598 |
|  | ${ }_{17}^{91}$ | $1{ }^{1}$ |  | 0 0 | 0 |  |  |  |  |  | 17 |  |  | 4 |  | 604 40 | 350 | 599 |
|  | 55 | 5 |  | $1{ }^{0}$ | 35 | 10 | 8 | $\frac{1}{5}$ | － |  | 5 | ．．． | ． | 4 |  | 756 | 50， 000 | ${ }_{601}^{600}$ |
|  | ${ }_{25}^{13}$ | 3 |  | 35 | 39 |  |  |  |  | 0 | 2 | 0 | 0 | 2 |  |  |  | 602 |
|  | 25 18 | 8 |  | 0 |  |  |  |  |  |  | 3 |  |  | －3 <br> 4 |  | 65 | 3,500 2,550 | 603 604 |
|  | 28 | 8 |  | 20 |  |  |  |  | ${ }_{3}$ |  |  | 0 | 0 | ${ }^{4}$ | $\cdots$ | 400 | 30， 000 | 605 |
|  | ${ }_{86}^{26}$ | 6 |  | 0 |  |  |  |  | 1 |  | 2 |  |  |  |  | 625 | 10， 000 | ${ }^{806}$ |
|  | 86 | 8 |  | 0 0 |  |  | 8 |  |  |  | 7 | 2 | 7 | 4 |  | 600 |  |  |
| $\begin{aligned} & 29 \\ & 34 \\ & 14 \\ & 30 \\ & 32 \\ & 41 \end{aligned}$ | 42 | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  | 200 |  | 608 |
|  | 57 | 7 |  |  |  | 3 | 8 | 2 | 3 | 3 | ${ }_{2}$ | 2 | 2 |  |  | 300 | 15， 000 | 609 |
|  | 13 45 | 3 0 <br> 5 0 |  | $\begin{array}{lll}0 & 0 \\ 0 & 0\end{array}$ | 0 |  |  |  |  | 1 | ${ }_{2}^{2}$ |  | 0 | 3 |  | $\begin{array}{r}80 \\ 250 \\ \hline\end{array}$ | 4,700 8,000 | ${ }_{611}^{610}$ |
|  | ${ }^{45}$ | 5 |  | 0 ． 0 | 0 | $\cdots$ | 6 | 10 | 7 | ${ }^{1}$ | 7 | 2 |  | 4 |  | 300 | 5，000 | 612 |
|  | 29 | ， |  | 0 | 0 | 7 | 5 | 2 | 0 |  | 12 | 2 | 2 | 4 |  | 520 | 2，000 | 613 |
| $\begin{aligned} & 41 \\ & 41 \\ & 19 \end{aligned}$ | 29 48 | 0 |  |  | 0 |  | 0 | 7 | 3 | $\stackrel{2}{4}$ | 5 |  |  | 4 |  | 121 |  |  |
| $\begin{aligned} & 19 \\ & 31 \\ & 38 \end{aligned}$ | 95 |  |  |  | 0 | 0 | 0 |  | 2 |  | 11 | 2 | 2 | 4 |  | 250 |  | 616 |
| $\begin{aligned} & 38 \\ & 35 \\ & 60 \end{aligned}$ | 40 |  |  | 0 | 0 |  |  | 12 | 18 | 0 |  |  |  | ， |  | 60 | 30， 000 | 617 |
|  | 12 | ${ }_{0}^{2}$ |  | $\begin{array}{ll}3 & 0 \\ 0 & 0\end{array}$ | 0 | 5 | 10 |  |  |  | － $\begin{aligned} & 8 \\ & 3\end{aligned}$ | 2 | 1 | ${ }_{3}^{4}$ |  | 400 70 |  | ${ }_{619}^{618}$ |
| 16 24 | 29 | 0 |  | 0 | 0 |  |  | 0 | 0 | 0 | 2 |  |  | 4 |  | 400 | 15,000 | 620 |
| 15 | 19 | 0 |  | 0 | 0 |  |  |  |  |  | 1 |  |  | 3 |  |  |  | ${ }_{622} 62$ |
| 1840 | 32 | 0 |  | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 5 | 0 | 2 | 4 |  | 243 110 | 15,000 50,000 | ${ }_{623}^{622}$ |
|  | $\stackrel{41}{25}$ | 0 |  | 0 | 150 |  |  |  |  | ${ }_{2}^{4}$ | 3 |  |  | 3 |  | 200 | 12，000 | ${ }^{624}$ |
| 25 52 | 5 | 0 |  | 0 | 0 |  |  |  |  | 0 |  |  |  |  |  | ${ }^{800}$ | 25， 600 |  |
| $8$ | ${ }^{38}$ | － |  |  | 0 |  |  |  |  | 1 |  |  | 15 | 3 |  | 300 | 5， 000 | ${ }^{628}$ |
|  | 140 | － |  | 5 0 0 | 0 | ${ }_{18}^{25}$ | ${ }^{30}$ | 15 | 24 |  | $2{ }^{20}$ |  |  | 4 |  | 1， 2827 | 16，500 | ${ }_{628} 627$ |
| 2825 | ${ }_{34}$ | 0 |  | 0 | － | 18 | 1 |  |  |  | 23 |  | ${ }_{0}^{4}$ | 4 |  | 150 | 1，500 | 629 |
|  | 27 | 0 |  | 0 | 48 |  |  | － 8 | 5 |  | 5 | 4 | 2 | 3 |  | 500 | 35， 000 | 630 |
| 7 | ${ }^{3}$ | 0 |  | ${ }^{0} 5$ | 58 |  |  |  |  |  | 2 |  |  | 2 |  | 125 | 2，500 | 631 |
| ${ }_{22}^{20}$ |  | 0 |  | 0  <br> 1 60 | ${ }_{0} 6$ |  |  |  |  | ${ }_{5}^{4}$ | ${ }^{6}$ |  |  | 4 |  | 100 80 | 35，000 | ${ }_{633}^{632}$ |
| 12 |  | 0 |  | 08 | 80 |  |  |  |  | 0 | 3 |  |  | 3 |  | 200 | 5，000 | 634 |
| 12 |  | $7{ }^{1}$ |  | 0 | 0 | 0 | 0 |  | 0 | ${ }^{0}$ | 7 |  | 0 | 4 |  | 25 |  | ${ }^{635}$ |
| $\stackrel{52}{25}$ | 76 30 30 | ${ }_{8}^{9}$ |  |  |  | 3 0 | ${ }_{0}^{4}$ |  | 3 | 10 5 | 18 |  |  | 4 |  | 150 | 25， | ${ }_{637} 036$ |
| 48 | 32 | 0 |  | 0 | 0 | 0 | 0 | 0 | － |  | 5 | 2 | 2 |  |  | 325 | 8，000 | ${ }_{638}$ |
| 12 | 20 | 0 |  |  |  | 0 | 0 |  | 0 | 3 | 6 |  |  | 3 |  | 150 | 3，300 | 639 |
| 355 |  | 3 |  | 250 | 300 | 0 | 6 | 5 | 10 | 2 | 6 | 2 | 0 | 4 |  | 500 | 20，000 | 640 |
|  |  | 析 |  | 0 | 0 |  |  |  |  | 2 |  |  |  | 2 |  | 200 | 1，000 | 641 |
| ${ }_{7} 7$ | ${ }^{123}$ |  |  | 0 | 0 | 18 | 12 |  |  | 5 | 15 |  |  | 4 |  | 1，200 | 70,000 47,000 | ${ }_{643}^{642}$ |
| ${ }_{60}^{45} 1$ | 132 | 2 | 4 | 40 | 0 | 35 | 60 | 10 | 30 | 9 | 20 |  | 16 | 3 |  | 20 | 250 | 644 |
| 41 |  | 0 |  | 0 | 0 |  |  |  |  | 4 | 12 | 4 | 12 | 4 |  | 200 |  | 645 |
| 16 | 53 79 |  |  | 0 | 0 |  |  |  |  |  | ${ }^{3}$ |  |  | 4 | $\ldots$ | 116 |  | ${ }_{617}^{646}$ |
| 14 |  |  | 0 | 0 | 0 | 14 | 18 |  |  |  | 1 |  |  | 4 |  | 200 | 15，000 | ${ }_{648}^{647}$ |
| 43 | 68 | $\bigcirc$ |  | ， | 0 |  |  |  |  |  | 8 |  |  | 4 |  | 133 | 15， 000 | 849 |

Table 33.-Statistics of public high schools in the


United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of publie high schools in the


United States for the seholastic year 1895－96－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Volumes in library． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total secondary students． |  | Colored secondary students included in col－ umns 7 and 8. |  | Elemen－ tary pupils， including all below secondary grades． |  | Preparing for college． |  |  |  | $\begin{gathered} \text { Gradu- } \\ \text { ates in } \\ 1896 . \end{gathered}$ |  | College prepara－ tory sta－ dents in the class that grad－ uated in 1896. |  |  |  |  |  |  |
|  |  | Clas－ sical course． | $\begin{aligned} & \text { Scien- } \\ & \text { tific } \\ & \text { course. } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { © } \\ & \text { ज犬゙̇̉ } \end{aligned}$ |  |  |  | $\begin{aligned} & \dot{\oplus} \\ & \text { (Ĭ } \end{aligned}$ |  |  | $\begin{aligned} & \dot{\#} \\ & \text { ヨ̈ } \\ & \text { Ï } \\ & \text { 䀛 } \\ & \hline \end{aligned}$ | 完 |  | $\underset{\text { gis }}{\substack{\text { ® }}}$ |  |  |  |  |  |  |  | $\begin{aligned} & \text { థí } \\ & \text { ज्ञा } \end{aligned}$ |  |  |
| g | 8 | 9 | 10 |  |  | 11 | 12 | 18 | 14 | 15. | 16. | 17 | 18 | 19 | \＄20 | 21 | 22 | 23 | 24 |  |
| 2430 |  | 51 |  | 0 | 0 |  |  |  |  | 2 | 2 |  |  | 4 |  | 300 | \＄17， 000 | 712 |
|  |  |  | 0 | －0 | 0 | 2 | 0 | 1 | 1 | 5 | 13 |  |  | 4 |  | 250 |  | 713 |
| 21 | 19 |  | 0 | 0 | 0 |  |  |  |  | 3 | 3 | 0 | 1 | 3 |  | 50 |  | 714 |
| 15 | 15 |  | 0 | 083 | 80 |  |  |  |  | 0 | 1 | 0 | 0 |  |  | 50 | 5，000 | 715 |
| 23 |  | 15 | 0.0 | 062 | 67 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |  |  | 20 | 7，000 | 716 |
| 32 |  | 41 | 0 | 1 | 0 |  |  |  |  | 2 | 7 | 1 | 2 | 4 |  | 50 | 30，000 | 717 |
| 15 |  | $\begin{aligned} & 15 \\ & 51 \end{aligned}$ | 0 | 0 | 149 | 0 | 0 | 0 | 0 | 2 | 3 |  |  |  |  | 80 | 5， 800 | 718 |
| 29 |  | $51$ | 0 | 0 | 0 |  |  |  |  |  | 9 |  |  | 4. |  | 200 | 22，750 | 719 |
| 11 |  | $\begin{aligned} & 13 \\ & 18 \end{aligned}$ | 0 | 0 65 | 85 | 2 | 0 | 1 |  | ＋3 | 2 | 1 | 0 | 3 |  | 20 | 12，000 | 720 |
| 21 |  |  | 0 |  | 13 |  |  |  |  |  | 7 |  |  | 3 |  | 400 |  | 721 |
| 36 |  | $\begin{aligned} & 18 \\ & 30 \end{aligned}$ | 0 | 0 | 0 | 0 | 0 | － 5 |  | $\square^{4} 3$ | 7 | 2 | 2 | 3 |  | 25 | 20，000 | 722 |
| 36 |  | $\begin{aligned} & 30 \\ & 15 \end{aligned}$ | 0 | 0 | 60 |  | 0 | 0 | 0 | ：4 | 3 | 0 | 0 | 4 |  | 200 | 4，800 | 723 |
| 14 |  | 15 23 | 0 | 0 |  |  |  |  |  | 2 |  |  |  | 4 |  | 250 | 14，000 | 724 |
| 10 |  |  | 0 | 0 | 5 | 9 |  |  |  | 2 | 3 |  |  | ． 3 |  | 300 |  | 25 |
| 9 |  | 212 | 0 | 0 | 0 |  | 5 |  |  | － 0 | ， | 0 | 0 | － 3 |  | 00 | 3， 600 | 26 |
| 20 |  | 25 | 0 | 0 | 0 |  |  |  |  |  | 4 | 0 | 1 | 3 |  | 100 | 6，000 | 727 |
| 37 |  | 50 |  | 2 | 0 | 0 |  |  |  | － 7 | ， |  |  | 3 |  | 470 | 4，000 | 728 |
| 30 |  | 40 | 0 | 0 | 0 | 0 |  |  |  | － $\begin{array}{r}2 \\ 2 \\ \hline\end{array}$ | 3 |  |  | 3 |  | 484 | 20，000 | 729 |
| 7 | 711 | 11 | 0 | 0 | － 8 | 8 | 26 |  |  | 2 3 3 | 6 |  |  |  |  | 400 |  | 730 |
|  | $7{ }^{6}$ | 12 | 0 | 0 | $0{ }^{4} 10$ | 0 | 2 |  |  | 3 2 2 | 3 |  |  | 2 |  | 112 | 6， 000 2,800 | 731 |
| 15 |  | 31 | 0 | 0 | 0 | 0 |  |  |  | ． 3 | 5 | $\cdots$ | 5 |  |  | 40 | 15，000 | 733 |
| 82 |  |  | 1 | 1 | 0 | 0 |  |  |  | 2 | 8 | 1 | 1 | 4 |  | 1， 000 | 5，000 | 734 |
| 130 |  | 231 | 3 | 6 | 0 | 0 |  |  |  | 11 | 36 |  |  | 4 |  | 500 | 20，000 | 735 |
| 18 |  | 36585 | 0 | 039 | 38 |  |  |  |  | － 4 | 9 |  |  |  |  | 160 |  | 736 |
| 35 | 58 |  | 0 | 0 31 | 293 |  | 12 | 8 | 15 | ． 11 | 11 |  |  | 4 | 50 | 300 | 50，500 | 737 |
| 12 |  | 15 | 0 | 0 | 2 |  | 1 | 3 | 2 | ． 5 | 9 | 3 | 1 | 3 |  | 284 | 10，000 | 738 |
| 8 |  | 21 | 0 | 0 | 70 | ， | 0 | 0 | 0 | － 1 | 3 | 0 | 0 | 3 |  | 15 | 5，000 | 739 |
| 85 |  | 17015 | 0 | 0 |  |  | 3 | 6 | 12 | － 4 | 25 | 3 | 5 | 4 |  | 1，245 | 40，000 | 740 |
| 25 | 15 |  | 0 | 0 |  | 0 |  |  |  | ， |  |  |  | 2 |  | 300 | 4，000 | 741 |
| 26 |  | 15 <br> 45 | 0 | 0 | 0 | 0 |  |  |  | $\therefore 2$ | 3 |  |  | 4 |  |  |  | 742 |
| 16 |  | 19 | 0 | 1 | 0 | 0 |  |  |  | 3 | 5 | 0 | 0 | 3 |  |  | 8， 000 | 743 |
| 25 |  | 27 | 0 | 0 | 0 | 0 |  | 3 | 2 | 2－8 | 8 | 3 | 2 | 3 |  | 700 | 10，000 | 744 |
| 20 | 25 |  | 0 | 0 | 0 | 0 |  |  |  | －1 | 0 |  |  |  |  | 300 |  | 745 |
| 9 | 95 | 15 | 0 | 0 | 17 | 5 |  |  |  |  | 3 |  |  | 3 |  |  |  | 748 |
| 51 |  | 86 | 0 | 1 | 0 | 0 |  |  |  | 3 | 8 |  |  | 4 |  | 425 | 40，000 | 747 |
| 10 |  | 11 | 0 | 0 | 0 | 4 |  |  |  | 0 | 2 |  |  | 3 |  | 100 | 3，000 | 748 |
| 5 |  | 9 | 0 | 0 | 0 | 0 |  |  |  | 1 | 4 |  |  | 3 |  | 20 | 15，000 | 749 |
| 14 |  | $31$ | 0 | 0 | 0 | 0 |  | 1 |  | 02 | 0 | 0 | 0 | 3 |  | 207 | 15， 000 | 730 |
| 30 |  | $\begin{aligned} & 35 \\ & 13 \end{aligned}$ | 0 | 0 | 2 | 7 |  |  |  | 0 | 0 | 0 | 0 | 3 |  | 92 |  | 751 |
| 58 | 5 13 |  | 0 | 0 | 0 | 0 | 0 |  |  |  |  | － 0 | 0 | 3 <br> 4 <br> 4 |  | 373 | 30，000 | 753 |
| 10 |  | 10. | 0 | 0 | 2 | 8 | 0.0 |  |  | 0.2 | 4 |  | 0 | 1 |  | 30 | 3， 000 | 754 |
| 34 |  | 43. | 1 | 0 | 4 | 4 |  |  | 3 | 4.4 | 8 | － | 0 | 3 |  | 1，000 |  | 755 |
| 30 |  | 26 | 0 | 0 | 0 | 0 | 218 |  |  | 3 | 6 | 2 | 4 | 4 |  | 1，000 | 30， 000 | 756 |
| 13 | $3-2$ | $21$ | 0 | 0 | 7 | 4 |  |  |  | 1 | 3 | ．．．．． |  |  |  | 200 | 4，600 | 757 |
| 10 | 0 15 | $15$ | 0 | 0 | 6 | 2 | ， | 0 | 2 | 2 | 0 | 1 | 0 | 4 |  | 350 | 4，500 | 758 |
| 40 | $0{ }^{1}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 75 | 7，000 | 759 |
| 21 | 1 29 <br> 5 30 | 49 3 3 | 0 | 0 | ${ }^{0} 10$ | 0 |  |  |  | － 1 | 3 4 4 | $3{ }^{1}$ |  | 3 |  | 400 200 | 30,000 10,009 | 760 761 |
| 15 | 5 30 <br> 9 2 | 30 21 | 0 | ${ }_{0}^{0} 1$ | 0 | 0 | ${ }^{8}$. |  |  | 4.1 | 4 | 4 1 | 4 | 4 |  | 200 | 10,009 8,000 | 761 762 |
| 19 | 93 | 34 | 0 | 0 | 0 | 0 | 2 | 4 |  | － 3 | 7 | ${ }^{2}$ | 5 | 3 |  | 700 | 20，000 | 763 |
| 25 | 5 | 30 | 0 | 0 | 0 | 0 |  |  |  | 5 | 7 | ．．．． |  | 3 |  | 300 |  | 764 |
| 2 | 42 | 28 | 0 | 0 | 0 | 0 |  |  |  | 0 | 0 |  |  | 3 |  | 100 |  | 765 |
|  | 419 | $19$ | 0 | 0 | 36 | 2 |  |  |  | 4 | 1 |  |  | 8 |  | 75 | 3，000 | 766 |
|  | $8{ }^{8}$ | 7 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  | 4 |  | 490 |  | 767 |
|  | 6  <br> 4 13 | 33 | 1 | 0 | 0 | 0 |  |  |  | $\stackrel{2}{3}$ | ${ }^{2}$ | 3 $\begin{aligned} & 0 \\ & 3\end{aligned}$ | 6 | 2 <br> 4 |  | 70 | 8，000 | 768 |
|  | 4 | 44 | 0 | 0 | 0 | 0 |  |  |  | 7 | 19 | 1 | 2 | － |  | 825 |  | 776 |
|  | 20 | 30 | 0 | 0 | 0 | 0 | 2 | 1 |  | 16 | － 3 | 3 | 1 | 3 |  | 650 | 35， 000 | 771 |
|  | 4 | 54. | 0 | 0 | 0 | 0 | － |  | 2 | 8.2 | 8 | 8 | 8 | 4 |  |  | 15， 000 | 772 |
|  | ${ }_{34}^{12}$ |  | 0 | 0 | 0 |  | 10 |  |  | 0 － 1 | 0 | － |  | 2 |  | 10 |  | 773 |
|  |  |  | 0 | 0 | 0 | 0 | 810 |  |  | 13 | 16 | 31 | 14 | 1 |  | 200 | 9，000 | 774 |

Table 33.-Statistics of publio high schools in the


[^83]United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high sckools in the

|  | State and post-office. | Name. | Principal. | Department or independent. | Inst ors secon stud $\qquad$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | INDIANA-cont'd. |  |  |  |  |  |
| 834 | Columbia | Township High Schoo | Geo. A. Osthoimer | Ind | 1 | 1 |
| 835 | Columbia City | High School ........... | Luella A. Melhinch | Dept. | 1 | 3 |
| 836 | Columbus.... | ....do..... | Samuel Wertz...... | Dept. | 2 | 2 |
| 837 | Connersville | do. | W. F. L. Sanders | Dept.. | 2 | 1 |
| 838 | Converse | do | M. F. Pearson . | Dept.. | 3 | 0 |
| 839 | Cortland | do | Thos. E. Sanders | Ind... | 1 | 0 |
| 840 | Corydon |  | Jesse W. Riddle. | Dept.. | 1 | 1 |
| 841 | Covington |  | Edna Hays... | Dept.. | 1 | 2 |
| 842 | Crawfordsvill | do | Miss Anna Wilson | Dept.. | 3 | 3 |
| 843 | Crothersville. | do | J. E. Payne-....... | Dept.. | 2 | 2 |
| 844 | Crown Point. | do | Elizabeth L. Horney | Dept.- | 1 | 2 |
| 845 | Dale......... | do. | F. F. Hostetter . . . . | Ind... | 1 | 0 |
| 846 | Dana | do | I. C. Renbelt.. | Ind... | 1 | 3 |
| 847 | Danville | do | Orville C. Pratt | Dept.. | 2 | 0 |
| 818 | Darlington | do | O. H. Greist ... | Dept.. | 1 | 0 |
| 849 | Decatur .. | do | A. D. Moffett | Dept.. | 1 | 3 |
| 850 | Delphí | do | F.C. Whitcomb | Dept.. | 2 | 1 |
| 851 | Dublin. |  | Samuel B. Plasket | Dept: | 2 | 0 |
| 852 | Dankirk | do | Amy L. Schoff. -- | Dept.. | 1 | 2 |
| 853 | Earl Park | do | W.J. Whinery | Dept.- | 1 | 1 |
| 854 | Fdinburg- | do | J.H. Hayworth ... | Dept.. | 1 | 3 |
| 855 | Edwardsport | de. | Wm. Hayes Johnson | Dept.. | 1 | 0 |
| 856 | Elizabethtown | d | H, C. Dixon .......... | Dept.. | 0 | 2 |
| 857 | Elkhart. | -do | S. B. McCracken. | Dept.. | 2 | 3 |
| 858 | Elwood | do | Daniol Freoman .. | Dept.. | 2 | 1 |
| 859 | English. |  | C. A. Robertson | Dept.. | 2 | $\frac{1}{2}$ |
| 860 | Evansville | Governor High School...... | John R. Black ${ }^{\text {aram }}$ | Dept.- | 2 | 2 |
| 861 | Everton | High School ${ }^{\text { }}$-................. | I. T. Trusler ........ | Ind... | 1 | 0 |
| 862 | Fairmount |  | M. Monahan. | Dept.. | 2 | 0 |
| 863 | Falmouth. | Fairview High School. ...... | James Sheedy. | Ind... | 0 | 3 |
| -864 | Farmland | Figh School................... | J. D. White | Dept.. | 1 | 2 |
| 865 | Fishers Switch | Fishers High School.......... | Clarence Randall. | Ind... | 2 | 0 |
| 866 | Fort Branch... | High School ...................... | Carlo Minton ... | Ind... | 1 | 0 |
| 867 | Fortville. |  | J.W.Jay ... | Dept.. | 2 | 0 |
| 868 | Fort Wayne | -....do | Chester T. Lane | Dept.. | 3 | 7 |
| 869 | Fountain Cit | do | Alf. L. Elabarger... | Ind... | 1 | 0 |
| 870 | Fowler -...... | do | B. B. Berry ....... | Dept-- | 1 | 1 |
| 871 | Frankfort |  | John A. Wood | Dept... | 4 | 2 |
| 872 | Franklin. |  | Kittio E. Palmer | Dept.. | 2 | 2 |
| 873 | ....do do ... | Hopewoll High Sehool....... | James V. Deer . | Ind... | 1 | 0 |
| 874 | Frankton | High School .................... | A, H. Beldon. | Dept.. | 1 | 0 |
| 875 | Freedom. |  | Jacob L. Arthur | Ind... | 1 | 0 |
| 876 | Fremont. | - . . do | F. Darwin Gray. | Dept.- | 1 | 0 |
| 877 | Garrett. |  | Geo. P. I'hielen. | Dept.. | 2 | 0 |
| 878 | Gas City | do | Edith F. Warrick | Dept.- | 1 | 1 |
| 879 | freners ...-- |  | J. E. Orr | Dept. | 1 | 2 |
| 880 | Goblesville. | Clearcreek Townohip High School. | A.W. Colclessor. | Dept.. | 1 | 0 |
| 881 | Goodland | Eigh School..................... | Fred. C. Weimer.... | Dept.. | 2 | 1 |
| 882 | Groshen | do | Lillian E. Mjchael. | Dept. | 1 | 3 |
| 883 | Gosport.... |  | Emma Stevenson | Dept.. | 1 | 1 |
| 884 | Grandviow | . do | John H. Carroll .... | Dept.. | 1 | 0 |
| 885 886 | Greencastle. | do | Miss M. J. Ridpath | Dept.- | 3 | 3 |
| 888 | Greenfield | do | Bessio R. Herrick . | Dept.. | 2 | 3 |
| 888 | Greensburg. |  | G. Soo. L. Roluerts |  | 2 | 2 |
| 899 | Greensfork | Clay Township Kigh school. | W. C. Reynolds | Ind... | 1 | 1 |
| 880 | 1 Greentown | High School................... | O. B. Hultz... | Dept.. | 1 | 0 |
| 891 | 2 Greenwood. | . ....-do .......................... | Elmer E. Tjner | Dept. | 2 | 0 |
| 882 | 3 Hagorstown |  | E. E, Vance... | Dept.. | 2 | 0 |
| 894 | 4 Hammand |  | W. A. Hill | Dept.. | 1 | 3 |
| 85 | 5 Harlan | Misyevile Graded School... | E. G. Bunnell. ..... |  | 1 |  |

"Statistics of $1894-05$.

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the


United States for the scholastic year 1895－96－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Volumes in library． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total secondary students． |  | Colored secondary students included in col－ umans 7 and 8. |  | Elemen－ tary pupils， including all below secondary grades． |  | Preparing for college． |  |  |  | Gradu－ atesin 1896. |  | College prepara－ tory stu－ dents in the class that grad uated in 1896. |  |  |  |  |  |  |
|  |  | Clas sical course． | Scien－ tific course． |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text {. } \\ & \underset{\sim 1}{7} \\ & \text { Hi } \end{aligned}$ |  |  |  | 稛 |  | 馬 | $\begin{aligned} & \text { 追 } \\ & \text { 思 } \\ & \text { 幷 } \end{aligned}$ | $\begin{aligned} & \dot{\Phi} \\ & \text { ज゙ } \end{aligned}$ |  | 稛 |  | 品 |  |  |  |  |  | 忽 |  |  |
| \％ | 8 | 9 | 10 |  |  | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 93 | 24 |  |
| 30 | 50 | 0 | 0 | 0 | 0 |  |  | 6 | 2 | 3 | 8 | 3 | 2 | 4 |  |  | \＄300 | 896 |
| 8 | 2 | 0 | 0 | 0 | 0 |  |  | 8 | 2 | 0 | 0 | 0 | 0 | 3 |  | 75 | 1，000 | 897 |
| 8 | 17 | 0 | 0 | 38 | 43 |  |  |  |  |  |  |  |  | 3 |  | 50 | 3，000 | 898 |
| 6 | 6 | 0 | 0 | 94 | 104 | 2 | 0 | 6 | 3 | 4 | 4 | 0 | 0 | 3 |  |  |  | 899 |
| 18 | 26 | 0 | 0 | 79 | 83 |  |  |  |  | 3 | 5 | 0 | 0 | 4 |  | 200 |  | 900 |
| 20 | 25 | 0 | 0 | 155 | 140 |  |  |  |  | 1 | 9 |  |  | 3 |  | 300 |  | 901 |
| 19 | 39 | 0 | 0 | 0 |  |  |  |  |  | 0 |  | 0 | 1 | 4 |  | 185 |  | 902 |
| 8 | 6 | 0 | 0 | 30 | 8 |  |  |  |  | 0 | 0 | 0 | 1 | 4 |  | 200 | 4，000 | 903 |
| 66 | 77 | 0 | 0 | 0 | 0 |  |  |  |  | 8 | 8 |  |  | 4 |  | 10，000 |  | 904 |
| 337 | 672 | 10 | 52 | 20 | 0 |  |  |  |  | 37 | 106 |  |  | 4 |  | 4， 600 |  | 905 |
| 382 | 343 | － 0 |  | 0 | 0 |  |  |  |  | 8 | 16 |  |  | 4 |  | 2， 000 | 230， 000 | 908 |
| 9 |  | 70 |  | 0 | 0 |  |  |  |  |  |  |  |  | 3 |  | 20 | 5， 000 | 907 |
| 5 | 12 | 0 |  | 0 | 0 |  |  |  |  | 1 | 3 |  |  | ， |  | 61 |  | 908 |
| 45 | 80 | 10 |  | 0 | 0 | 2 | 5 |  |  | 5 | 11 | 2 | 1 | 4 |  | 500 |  | 909 |
| 3 | 8 | 0 |  | 0 0 | 0 |  | 5 |  |  | 0 | 0 | 0 | 0 | 4 |  |  |  | 910 |
| 32 | 31 | 0 |  | 0 0 | 0 |  |  |  |  | 3 | 2 | 0 | ， | 3 |  | 150 | 20，000 | 911 |
| 33 | 50 | 0 |  | 1.0 | 70 |  |  |  |  | 4 | 7 |  |  | 4 |  | 1，100 |  | 912 |
| 4 | 5 | 0 |  | 10  <br> 0 76 <br> 0 0 | 70 0 |  |  |  |  | 0 | 0 | 0 | 0 | 2 |  | 109 23 | 1，500 | 913 914 |
| 14 | ${ }_{12}^{2}$ | 0 |  | 0 0 <br> 0 86 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |  |  | 4 |  | 23 | 5，000 | 915 |
| 41 | 44 | 0 | 0 | 0 | 0 |  |  |  |  | 6 | 7 | 0 | 3 | 4 |  |  | 5，000 | 916 |
| 8 | 12 | 0 |  | 0 0 | 0 | 1 | 1 | 2 | 0 | 1 | 0 | 1 | 0 | 3 |  | 100 | 15， 000 | 917 |
| 113 | 117 | 7 | 4 | 40 | 0 |  |  |  |  | 14 | 7 | 14 | ， | 4 |  | 180 | 36，000 | 918 |
| 20 | 36 | 0 | 0 | 0 | 0 | 3 | 2 | 4 | 1 | 5 | 0 | 3 | 0 | 4 |  | 744 | 1，800 | 919 |
| 105 | 210 | 3 | 2 | 0 | 0 |  |  |  |  | 4 | 13 |  | 4 | 4 |  |  |  | 920 |
| 12 | 10 | 0 | 0 | － 60 | 68 |  |  |  |  | 0 | 0 |  |  | 4 |  | 90 |  | 921 |
| 52 | 53 | 0 | 0 | 0 | 0 | 3 | 3 |  |  | 3 | 4 | 3 | 4 | 4 |  | 300 |  | 922 |
| 34 | 36 | 0 | 0 | 0 0 | 0 | 14 | 10 | 10 | 4 | 7 | 2 | 7 | 2 | 4 |  | 650 |  | 923 |
| 2 | 2 | 0 |  | 065 | 68 |  |  |  |  | 0 | 0 | ， | 0 | 4 |  | 141 | 5， 000 | 924 |
| 73 | 93 | － 0 |  | 0 | 0 | 0 | 0 |  | 0 | 9 | 10 |  |  | 4 |  | 3， 000 | 40， 000 | 925 |
| 10 | 14 | 40 |  | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 5 | 0 | 0 | 3 |  | 100 | 4，500 | 928 |
| 13 | 24 16 | 8 － 0 |  | 0 | 0 |  |  | 2 | 0 | 3 | 7 <br> 3 | 0 | 0 | 4 |  | 701 100 | 27，500 | 927 |
| 20 50 | 16 57 | 6 <br> 7 |  | $\begin{array}{ll}0 & 0 \\ 0 & 0\end{array}$ | 0 |  |  |  |  | 2 | 3 7 |  |  | 3 |  | 100 780 | 6，500 | 928 929 |
| 10 | 25 | 50 |  | 0 | 0 | 3 | 12 | 1. | 0 | 1 | 7 2 | 2 | 1 | 2 |  | 150 | 3，500 | 930 |
| 18 | 20 | 0 |  | 0 | 45 |  |  |  |  | 3 | 4 |  |  | 4 |  | 175 | 5，000 | 931 |
| 9 | 8 | 80 |  | 020 | 25 |  |  |  |  | 3 | 0 | 1 | 0 | 3 |  | 125 | 2， 000 | 932 |
| 45 | 30 | 0 |  | $0 \quad 30$ | 25 |  |  |  |  | 0 | 1 |  |  | 3 |  | 100 |  | 933 |
| 26 | 48 | 8 0 |  | 0 | 0 |  |  |  |  | 2 | 6 | 0 | 4 | 4 |  | 291 | 15，300 | 934 |
| 26 | 31 | 1.0 |  | 0 | 0 |  |  |  |  | 3 | 4 |  |  | 4 |  | 560 | 10， 000 | 935 |
| 25 | 35 | 50 |  | 75 | 90 |  |  | 25 | 35 | 5 | 8 | 5 | 8 | 4 | ．．．． | 200 | 1，800 | 936 |
| ${ }^{6}$ | 11 | 1 |  | 0 | 39 |  |  |  |  | 0 | 0 | 0 | 0 | 2 |  | 150 | 5， 000 | 937 |
| 13 | 10 | 8 | 0 | 0 61 <br> 0  | 69 |  |  |  | 1 | 4 | 1 | 1 | 1 | 3 3 3 |  | 72 200 | 8,500 7,000 | 938 939 |
| 17 96 | 178 | 8 | 1 | 0 3 | 0 |  |  |  |  | 0 | 12 |  |  | 4 |  | 200 | 7,000 50,000 | 939 940 |
| 9 |  | 2 | 0 | 0 | 13 | 3 | － | 0 | 0 | 0 | 0 | 0 | 0 | 2 |  |  | 50，000 | 941 |
| 14 | 20 | 20 | 0. | 01 | － | 9 |  |  | 3 | 2 | 5 | 1 | 1 | 3 |  | 200 | 5，000 | 942 |
| 10 | 13 | 3 | 0 | 0 | 0 |  |  |  |  | 5 | 6 | ， | 0 | 4 |  | 200 | 5， 000 | 943 |
| 22 |  | 8 | 0 | 0 | 5 |  |  |  |  |  |  |  |  | 4 |  | 100 | 10，000 | 944 |
| 4 |  | 8 |  | 0 | 60 |  |  |  | 8 | 0 | 0 |  |  | 3 |  |  | 4，500 | 945 |
| 3 |  | 7 | ） | 011 | 16 |  |  |  |  | 2 | 3 |  |  | 3 |  | 3 | 1，500 | 946 |
| 92 | 110 | 7 | 3 | 0 |  | 0 |  |  |  | 3 | 15 | 3 | 8 | 4 |  |  |  | 947 |
| 2 |  | 7 | 1 | 0 | 125 |  |  |  | 0 | 0 | 2 | 0 | 0 | 3 |  | 171 | 5，500 | 948 |
| 23 12 | 43 8 8 | 8 | 1 | 0 | 134 |  |  | 4 |  | 3 3 | 4 | 2 | 2 1 | 4 |  | 300 75 |  | 949 |
| 45 | 5888888 | 8 0 <br> 8 1 | 1 | 0 | 10 | 15 | 20 | 10 | 0 | 11 | 8 | 8 | 3 | 4 |  | 600 | 25，000 | 950 951 |
| 12 |  | 7 | 0 | 06 | 56 |  |  |  |  |  |  |  |  | 3 |  |  | 5，000 | 952 |
| 20 | 10 | 10 | 0 | 0 | 0 |  | 0 | 0 | 0 | 1 | 4 | 0 | 0 | 3 |  |  | 1，000 | 953 |
| 18 |  | 7 | 0 | 0 |  |  |  |  |  | － 5 | 4 | 2 | 0 | 4 |  | 600 | 13，000 | 954 |
| 20 15 |  | 26 | 0 | 0 90 <br> 0 0 | 90 | 10 |  | 8 | 12 | － 12 | 13 |  |  | 3 |  | 200 | 6，000 | 955 |
| 15 20 |  | 35 | 1 | 0 | 10 |  |  | 5 | 1 |  | 5 | 1 | 1 3 | 4 | ．． | 175 1,250 | 5．000 | 956 957 |

Table 33.-Statistics of public high sehonls in the

|  | State and post-office. | Name. | Principal. |  | ors for secondarystudents. - |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | induANA-continued. <br> Mitchell |  |  |  |  |  |
| ${ }_{959}^{958}$ | Mitche Monon. | $\begin{gathered} \text { High Schoo } \\ \cdots \\ \cdots \end{gathered}$ | F.E. Callinhan.. | Ind... | 1 | ${ }_{0}^{2}$ |
| 960 | Monroo City |  | Anna Prather. | Ind.... | 0 | 1 |
| ${ }_{962}^{961}$ | Monreeville |  | R. M. Vanatta. | Ind... | 1 | 2 |
| 963 | Montpelier |  | Lewis C. Johns | Dept.- | 1 | 0 |
| 964 | Monument City | Polk Township High School. | E. B. Heiney | Ind... | 1 | 0 |
| ${ }_{966}^{965}$ | Mooresville.. | High School . ${ }_{\text {Pleant }}$ | Theatore Lent | Dept.. | 2 | ${ }_{0}^{2}$ |
| ${ }_{967}^{966}$ | Morristo | Pligh School........... | H. B. Patteu.. | Ind... | 1 | 0 |
| 968 969 | Mount Sterlin | .....do | D. V. Lever | Ind... | 1 | 1 |
| 970 | Mulberry.- |  | J. B. Mortsolf | Tud... | 1 | 0 |
| 971 | Muncie. |  | W. H. Masters | Dept.. | 3 | 4 |
| ${ }_{973}^{972}$ | Nappanee .. |  | S. W. Baer. |  | 1 | 4 |
| 974 |  | Scribner High School....... | W. O. Vance | Dept. | 1 | 1 |
| 975 | Now Amstercam | High School................. | P. V. Tuell. | Dept.- |  | 0 |
| 976 | Newburg Carisle | do | D. A. Surdue | Dept.. | 1 | 0 |
| 978 | New Castle | do | Rosa R. Mikel | Dept.. | 2 | ${ }^{2}$ |
| 979 | New Harmony | ....do | Rose Grifith .i... | Dept.. |  | 1 |
| ${ }_{981}^{980}$ | New London. | -....do | C. R. Mendenhall. | Ind... | 1 | 0 |
| 982 | Nemport. |  | G. E. Willoughby | Ind... |  | 2 |
| 983 | Nineveh | d | M. J. Searles | Ind ... | 1 | 1 |
| 984 | Noah... | Marion High schoo | G. W. Kinsley. | Ind... |  |  |
| 986 | North Judson | -..do .... | Clarence E. Smith | Dept.. | 1 | 0 |
| 987 | North Manchester. |  | Miss Jennie E. Thomas | Dept.. |  | 2 |
| ${ }_{989}^{988}$ | North Vernon | .....do | Leva M. Foster | Dept.. | 1 | 3 |
| 990 | Orange ... | Township Graded School... | W.J. Paxton | Ind... | 1 | 0 |
| 991 | Orland. | High School* | A.J.Collins | Ind ... | 2 | 0 |
|  | Orleans |  | Frank Conder | Dept.. | 1 | 1 |
| 994 | Osgood | do.** | J. T. Momunis. | Tod... | 2 | 0 |
| 995 | Owensvill | do ..-...................... | J. E. Dame | Dept.. | 1 | 0 |
| ${ }_{997}^{996}$ | Oxford |  | M. Forear-. | Dept.. | 1 |  |
| 998 | Patokä |  | Edith cumas ${ }^{\text {R }}$ N. Chappelie | Ind... |  | 0 |
| 1999 | Patriot. | do | O. M. Given | Dept.. | 1 | 1 |
| 1000 | Pendieto |  | F. F. C Crowt.. | Dept.. | ${ }_{2}^{2}$ | 0 |
| 1002 | Petersburg |  | W. H. Foreman, ent | Dept.- |  | 0 |
| 1003 | Pierceton. | do | Wm. Eisenman | Dept.- |  | 0 |
| 1005 | Pine Village | Middle Township High | Chester G. Rossiter | Dept. <br> Dept. | 1 | 0 |
| 1000 | Pleasant Lake | School. <br> High School | H. G. Brown |  |  |  |
| 1007 | Plymouth |  | N. A. Chase | Dept. |  | 1 |
| 1008 | Portland. |  | Isanc E. Neff | Dept.. |  | , |
| 1010 | Proseyville |  | M. S. Woods. | Ind... |  | 2 |
| 1011 | Providenc |  | Chas. W. Whito | Ind... |  | 0 |
| 1013 | Raleigh. | Graded Schoo | ${ }_{\text {L }} \mathrm{A}$ A Hufferd. | Ind... |  | 0 |
| 1014 | Rensselaer | High School | M.P. Helm. | Dept.. | 2 | 0 |
| ${ }^{1015}$ | Richland | Towndhip High School..... | W. C. Burt | Ind... |  | 0 |
| 1017 | 7 Ridgevillo | High School............... | Daniel R. Ellabarger | Dept.- | 7 | ${ }_{0}^{4}$ |
| 1018 | 8 Riling Sum |  | R. L. Thieband | Dept.. | ${ }_{3}$ | 0 |
| 1020 | 20 Prachas .... |  | Samuel A. Harr |  |  | 0 |

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the


United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of publio high schools in the


Statistics of 1894-95.

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistios of public high schools in the


United States for the soholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the

|  | State and post-ofice. | Name |  | Inst ors seeen stud | uct- <br> for <br> dary <br> nts. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | $4{ }^{-1}$ | 5 | 6 |
|  | IOWA-continued. |  |  |  |  |
| 1197 | Estherville | High School | Dept.. | 1 |  |
| 1198 | Exira | ....do ...... | Dept.. | 1 | 0 |
| 1199 | Fairfield.... | -... do | Dept.. | 3 | 1 |
| 1200 | Farmington | do | Dept.. | 2 | 0 |
| 1201 | Farragut... | -do |  | 1 | 1 |
| 1202 | Fay ette | . 10 | Ind <br> Dept | 2 | 2 |
| 1204 | Fonda | do | Dept.. | 1 | 2 |
| 1205 | Fontanelle. | . . . . do | Dept. | 1 | 1 |
| 1206 | Forest City | do | Dept.. | 1 | 1 |
| 1207 | Fort Dodge.. | do | Dept.. | $\frac{2}{3}$ | 3 1 |
| 1208 | Fort Madison. | do | Dept.- | 3 | 1. |
| 1209 | Frederickstburg | do | Ind... | 1 | 0 |
| 1210 | Fremont. Gálva | do | Dept.. | 1 | 0 |
| 1211 | Galva... Garden | do | Dept.. | 1 | 1 |
| 1213 | Garnavillo. | . do | Dept.. | 1 | 2 |
| 1214 | Garner ... | do | Dept..- | 1 | 1. |
| 1215 | Gilman | do | Ind... | 1 | 2 |
| 1216 | Glenwood | do | Dept.. | 2 | 2 |
| 1217 | Glidden | do | Dept.. | 2 | 1 |
| 1218 | Goldfield | do | Dept.. | 1 | 1 |
| 1219 | Gowril | do.* | Dept.. | 1 | 0 |
| 1220 | Grand J unction | dlo | Dept.. | 1 | 0 |
| 1221 | Greene | do | Dept. | 1 | 2 |
| 1202 | Greenfield | . ${ }^{10}$ | Dept.. | 1 | 3 |
| 1223 | Grinnell | do | Dept. | 1 | 4 |
| 1224 | Griswold. | do | Ind... | 1 | 0 |
| 1225 | Grundy Center | -do | Dept. - | 2 | 0 |
| 1226 | Guthrie Center | . ${ }^{\text {do }}$ | Dept. - | 1 | 1 |
| 1227 | Guttenberg.... | . 10 | Dept..- | 2 | 0 |
| 1228 | Hamburg... | do | Dept.. | 1 | 1 |
| 1229 | Hampton. | do | Dept.- | 2 | 4 |
| 1230 | Harlan. | do | Dept. | 1 | 3 |
| 1231 | Hawarden | do | Dept.. | 1 | 1 |
| 1232 | Holstein. | do | Dept.. | 1 | 0 |
| 1233 | Hopkintom | do | Ind... | 1 | 1 |
| 1234 | Fubbard.. | do | Dept.. | 1 | 2 |
| 1235 | Hall | do | Dept.. | 1 | 0 |
| 1236 | Hrmboldt | . do | Dept.. | 1 | 1 |
| 1237 | Humeston | do | Dept. | 1 | 2 |
| 1238 | Ida Grove.... | do | Dept.. | 2 | 2 |
| 1239 | Independenco | -do | Dept. | 2 | 3 |
| 1240 | Indianola.... | do | Dept.. | 2 | 1 |
| 1241 | Iowa City | do | Dept.. | 3 | 6 |
| 1242 | Towa Falls | do.* | Dept.. | 1 | 2 |
| 1243 | Ireton.. | - do | Ind... | 1 | 0 |
| 1244 | Jefforson | . do | Dept. | 1 | 3 |
| 1245 | Kellogg. | do | Dept.. | 1 | 1 |
| 1246 | Keokuk .- | do. | Dept.. | 2 | 6 |
| 1247 | Keosanqua | do | Dept.. | 1 | 2 |
| 1248 | Keota.... | , | Dept.. | 1 | 1 |
| $\begin{aligned} & 1249 \\ & 1250 \end{aligned}$ | Kimgsley | . do. ${ }^{\text {d }}$ | Dept.. | 1 | 1 |
| 1250 | Krevilio. | do. * | Ind... | 1 | 1 |
| 1252 | Lake Clty. | do | Dept. | 3 | 1 |
| 1253 | Lake Mills. |  | $\begin{aligned} & \text { Dept.. } \\ & \text { Dept.. } \end{aligned}$ | 1 | 1 |
| 1254 1255 | Lake View. Tamoni | - . . . . . do | $\begin{aligned} & \text { Dept.. } \\ & \text { Ind... } \end{aligned}$ | 1 | 1 |
| 1255 | 5 Lamoni. |  | Dept. | 1 | 1 |
| 1256 |  | $.20$ | Dept.. | 1 | 1 |
| 1258 | 8 Laportens .... |  | Dept.. | 1 | 1 |
| 1259 | 0 , Lavler ..... | do | Dept. Dept. | 1 1 | 1 |

[^84]Uwited States for the sekolastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the


[^85]United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of publie highe schoota in the


United States for the sckolastic year 1895-96-Continued.


Table 33.-Statistics of publio high sehools in the

| 1 | State and post-office. | Name. | Principal. |  | Inst ors secon stud |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | IowA-continued. |  |  |  |  |  |
| 1385 | State Center. | High School | Lucy Curtis...... | Dept.. | 0 |  |
| $1386$ | Storm Lake. . | -....do ...... | Miss Laura Seals. | Dept.. | 2 | 3 |
| $1387$ | Story City. | ... . do | Frank W. Shultis | Dept. | 1 | 0 |
| 1388 | Stratford..... | do | C. W. Stanley... | Dept.. | 1 | 0 |
| 1389 | Strawberry Poin | do | F. H. Slagle...... | Dept.. | 1 | 1 |
| 1390 1391 | Stuart. Sumner | do. | Miss Elizabeth Wy | Dept.. | 2 1 | 1 |
| 1392 | 'labor | do | Miss A. L. Blakely | Dept.. | 0 | 1 |
| 1393 | Tama. | do | S. C. Huber. . . . | Dept. | 2 | 1 |
| 1394 | Thurman | do | J. S. Estes. | Ind... | 0 | 3 |
| 1395 | Tingley | do | E. F. Sanders | Ind... | 1 | 2 |
| 1396 | Toledo. | do | C.J. Cooper | Dept.. | 2 | 3 |
| 1397 | Traer. | do | R. A. Kletzing | Dept.. | 1 | 3 |
| 1398 | Union | do. | A. J. Cavana. | Dept.. | 2 | 1 |
| 1399 | Vail | d | Z. T. Hawk. | Dept.. | 1 | 0 |
| 1400 | Van Meter | do | D. S. Thompson | Dept.. | 1 | 0 |
| 1401 | Victor | do | S. T. May.... | Dept.. | 2 | 0 |
| 1402 | Villisca | do | A. F. Burton, B. S | Dept.. | 1 | 3 |
| 1403 | Vinton | do | H. C. Waddle.... | Dept.. | 1 | 4 |
| 1404 | W all Lak | do. | F. F. Strong. | Ind... | 1 | 0 |
| 1405 | Walnut. | do | M. E. Crosier | Dept.. | 1 | 2 |
| 1406 | Wapello | do | J.W. Cradler | Dept.. | 1 | 2 4 |
| 1407 | Wrashington | do | Goo. H. Mullin | Dept.. | 2 | 4 |
| 1408 | Washta. | - do | Wm. Durant | Dept.- | 1 | 0 |
| 1409 1410 | Waterloo | East High Schoo | Lydia Hinman | Dept.. | 2 | 7 3 |
| $\begin{aligned} & 1410 \\ & 1411 \end{aligned}$ | .... do .... | West High Scho | A: S. Newman. | Dept.. | 2 | 3 0 |
| 1411 | Waucoma | High School ... | Fred. E. Finch. | Dept.. | 1 | 0 |
| 1412 | Waukon. | . . . . do .... | E. L. Coffeen. | Dept.. | 1 | 2 3 |
| 1413 | Waverly | do | S. H. Sheakley | Dept.- | 1 | 3 5 |
| 1415 | Weldon.. | do | W. W. Palmer | Ind... | 1 | 1 |
| 1416 | West Branch | .do | J. E. Roberts. | Dept.. | 0 | 4 |
| 1417 | West Liberty | do.* | Lillian Lewis | Dept.. | 0 | 3 |
| 1418 | West Union. | do | G. E. Finch... | Dept.. | 1 | 1 |
| 1419 | What Cheer. | do | A. L. Shattuck | Dept.- | 1 | 1 |
| 1420 | Williamsbarg .. | do | A. T. Hakill. | Dept.. | 1 | 7 |
| 1421 | Wilton Junction. | do | A. L. Brower | Dept.. | 1 | 1 |
| 1422 | Winfield...... | do | H. W. Baker | Dept.. | 1 | 0 |
| 1423 | Winterset | do | T. H. Stone, supt | Dept.. | 1 | 1 |
| 1424 | Woodburn | do | Chas. Murray . | Ind... | 1 | 0 |
| 1425 | Wyoming | do | Lincoln Buchanan | Dept. | 1 | 1 |
|  | gansas. |  |  |  |  |  |
| 1426 | Alma... | High School | H. W. Jones | Dept.. | 2 | 0 |
| 1427 | Almena. |  | C. B. Walker | Dept.. | 1 | 1 |
| 1428 | Altamont. | Labette County | T. B. Hanna. | Ind... | 2 | 2 |
| 1429 | Americus. | High School | C. A. Kent | Dept.. | 1 | 1 |
| 1430 | Argentine | . . . . do .......... | S. M. Simmonds | Dept. . | 2 | 0 |
| $1431$ | Arcansas City | -....do | R. H. Ewing.... | Dept. | 2 | 3 |
| $1432$ | Atchison | . . . . . do | C. A. Shively | Dept.. | 1 | 2 |
| $1433$ | Angusta | -.... do | J. H. Findly. | Dept. | 1 | 1 |
| $\begin{aligned} & 1434 \\ & 1435 \end{aligned}$ | Baldwin.... Belle Plaine | do | İ W. Myler. | Dept.. | 0 | 4 |
| $\begin{aligned} & 1435 \\ & 1436 \end{aligned}$ | Belle Plaine Belleville | do | D. A. пiff....... | Ind... | 1 | 0 |
| 1436 | 7 Belleville. | do | Jamen Z. Gilhert | Dept.- | 2 | 0 |
| 1438 | 8 Brook ville |  | Lucy A. Arthur | Dept.. | 3 | 18 8 |
| 1439 | 9 Bunker Hill | do | Chas. Ellege. | Dept.. | 1 | 0 |
| 1440 | 1 Burder ..... | do | H. M. Means | Dept.. | 0 | 5 |
| 1411 | 12 Burliagame. | do | C. S. Fowler ....... | Dept.. | 2 | 0 |
| 1443 | 3 Burlingtum |  | Miss Kate B. Mil | Dept.. | 1 | 2 |
| 144 | 4 Burrton |  | D. J. Coy.. | Dept.. <br> Dent. | . 2 | 1 |
| 1415 | 15 Caldwell. |  | J. F. Clark | Dept.. | 1 | 1 |

[^86]United States for the scholastic year 1895－96－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  | Length of course in years． |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Coloredsecoudarystudentsincludedin col－umns7 and 8. |  | Elemen－ tary pupils， including all below secondary grades． |  | Preparing for college． |  |  |  | Gradu－ ates in 1896. |  | College prepara－ tory stu－ dents in the class that grad－ uated in 1896. |  |  |  |  |  |  |
| secondary students． |  |  | Clas－ sical course． | Scien－ tific course． |  |  |  |  |  |  |  |  |  |  |
|  | 姵 |  |  |  | 产 |  | $\begin{gathered} \stackrel{\text { ®. }}{\text { ® }} \end{gathered}$ |  | 器 |  | 号 |  |  |  |  |  | 馬 |  |  |
| 78 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
| 20 25 | 25 | 0 | 0 | 0 |  |  |  |  | 3 | 6 |  |  | 3 |  | 475 |  | 1385 |
| 56 | 72 | 0 | 0 | 0 | 1 | 4 | 1 | 0 | 2 | 4 | 2 | 4 | 4 |  | 1， 101 | \＄45， 000 | 1386 |
| 16 | 6 | 0 | 70 | 75 |  |  |  |  | 0 | 0 |  |  | 3 |  | 161 | 7，000 | 1387 |
| 20.22 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 3 |  | 75 | 2，000 | 1388 |
| $24 \quad 30$ | 30 | 0 | 0 | 0 |  |  |  |  | 3 | 3 |  |  | 4 |  | 234 | 10，000 | 1389 |
| $42{ }^{42}$ | 67 | 0 | 0 | 0 |  |  |  |  | 4 | 10 |  |  | 4 | 37 | 350 | 18，000 | 1390 |
| 16 | 26 | 0 | 0140 | 208 |  |  | 1 | 0 | 3 | 6 |  |  | 2 |  | 210 | 3，050 | 1391 |
| $7 \quad 11$ | 11 | 0 | 0 0 | 0 |  |  |  |  | 1 | 14 | 1 | 11 | 1 |  | 250 |  | 1392 |
| 18 | 36 | 0 | 0 | 0 | 3 | 7 |  |  | 1 | 15 | 1 | 6 | 3 |  | 400 |  | 1393 |
| 24 | 18 | 0 | 086 | 112 | 2 | 2 |  |  | 4 | 6 | 2 | 2 | 3 |  | 320 |  | 1394 |
| $15 \quad 2$ | 25 | 0 | 60 | 75 |  |  | 5 | 7 | 5 | 7 | 5 | 6 | 3 |  | 150 | 3，000 | 1395 |
| 40 | 55 | 0 | 0 | 0 |  |  |  |  | 8 | 15 |  |  | 3 |  | 535 | 34， 084 | 1396 |
| 60 | 60 | 0 | 0 | 0 | 0 | 1 | 5 | 5 | 17 | 3 | 3 | 2 | 4 |  | 553 | 1， 500 | 1397 |
| 40 | 30 | 0 | 0 | 0 |  |  | 17 | 10 | 6 | 4 | 5 | 1 | 1 |  | 96 |  | 1398 |
| 11 | 18 | 0 | 0 | 0 | 0 | 0 |  |  | 0 | 0 | 0 | 0 | 3 |  | 652 78 | 5，000 | 1399 |
| 7 15 | 11 23 | 0 | 0 | 0 |  | － 3 |  |  | 2 | 3 5 5 | 2 | 3 1 | 4 |  | 78 500 | 10,000 4,500 | 1400 1401 |
| 15 | 23 86 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 | 2 | 1 | 4 |  | 500 300 | 4,500 6,000 | 1401 |
| 57 | 63 | 0 | 0 | 0 | 0 |  |  |  | 10 | 4 | 2 | 5 | 4 |  | 350 | 4，500 | 1403 |
| 11 | 17 | 0 | 0 | 7710 |  | 0 | 5 | － 9 | 2 | 2 | 0 | 0 | 4 |  | 90 | 7，000 | 1404 |
| 29 | 34 | 0 | 0 | 0 |  | 1 | 2 | 2 | 3 | 6 | 1 | 1 | 4 |  | 200 |  | 1405 |
| 30 | 35 | 0 | 0 | 0 | 0 | 2 | 30 |  | 1 | 4 | 1 | 1 | 3 |  | 150 | 20，000 | 1406 |
| 631 | 100 | 6 | 10 | 0 | 0 |  |  |  | 17 | 27 |  |  | 3 |  | 100 | 40，000 | 1407 |
| 5 | 5 | 0 | 0 | 0 | 0 | ） 1 |  | 0 | － | 0 | 0 | 0 | 3 |  | 90 | 3， 000 | 1408 |
| 1041 | 134 | 0 | 0 | 0 | 0 |  | 45 | 80 | 9 | 12 | 4 | 8 | 4 |  | 500 | 2，500 | 1409 |
| 60 | 87 | 0 | 0 | 0 |  |  |  |  | 11 | 17 | 11 | 27 | 4 |  | 400 |  | 1410 |
| 21 | 27 | 0 | 0 | 0 |  | 0 | 2 | 3 | 1 | 6 | 1 | 1 | 2 |  | 75 | 4，000 | 1411 |
| 32 | 52 | 0 | 0 | 0 |  |  |  |  | 8 | 10 |  |  | 4 | 45 | 660 | 18，000 | 1412 |
| 43 | 63 | 0 | 0 | 0 |  | 5 | 10 | 21 | 2 | 4 | 1 | 2 | 4 |  | 1，700 |  | 1413 |
| 371 | 100 | 0 | 0 | 0 |  |  |  |  | 5 | 11 |  |  | 4 |  | 300 |  | 1414 |
| 25 | 30 | 0 | 0 3 | 35 | 5 | 0 | 0 | 0 | 0 | 0 |  |  | 3 |  | 208 | 4，500 | 1415 |
| 31 | 39 | 0 | 0 |  | 0 |  |  |  | 6 | 5 |  |  | 4 |  | 450 | 25， 000 | 1416 |
| 27 | 65 | 0 | 0 | 0 | 0 |  |  |  | 8 | 13 | 0 | 3 | 3 |  | 300 | 16， 000 | 1417 |
| 26 | 32 | 0 | 0 | 0 | 0 | 2 | 3 | 6 | 2 | ${ }^{4}$ | 2 | 1 | 3 |  | 200 | 20，000 | 1418 |
| 10 | 30 | 0 | 0 | 0 | 0 |  |  |  | － 2 | 10 | 1 |  | 3 |  | 300 | 4， 000 | 1419 |
| 58 | 55 | 0 | 0 | 0 | 0 |  |  |  | 3 | 5 | 2 | 5 |  |  | 200 | 15， 000 | 1420 |
| 22 | 36 | 0 | 0 | 0 | 0 |  |  |  | 3 | 7 |  |  | 3 |  |  | 10，150 | 1421 |
| 14 | 18 | 0 | 0 | 0 | 0 |  |  |  | 2 | 5 | 0 | 2 | 2 |  | 75 |  | 1422 |
| 30 | 48 | 1 | 0 | 0 | 0 | 4 | 8 |  | 3 | 24 | 1 | 3 | 3 |  | 100 | 25， 000 | 1423 |
| 3 | 3 | 0 | 0 | 60 |  |  | 0 | 00 | 1 | 0 | 0 |  | 3 |  | 0 | 2，000 | 1424 |
| 13 | 15 | 0 | 0 | 0 | 0 | 0 | 510 | 0 | 1 | 7 | 1 | 7 | 3 |  | 150 | 3， 000 | 1425 |
|  |  |  |  |  |  | 0 | 0 | 0 0 | 0 |  | 0 | 1 | ${ }^{3}$ |  |  |  | 1426 |
| 5 | 15 | 0 | 0 | 0 | 0 |  |  |  | 0 | 0 |  |  | － 3 |  | 356 | 8，000 | 1427 |
| 65 | 112 | 0 | 0 | 0 | 0 | 2 | 2 |  | 7 | 12 | 1 |  | 3 |  | 200 | 24，000 | 1428 |
| 16 | 17 | 5 | 2 | 0 | 0 | 4 | 7 | 0 | 0 | 5 | 0 | 0 | 2 |  | 204 | 8，000 | 1429 |
| 17 | 26 | 1 | 1 | 0 | 0 |  |  |  | 1 | 5 |  | 0 | 3 |  | 50 |  | 1430 |
| 47 | 97 | 11 | 19 | 0 | 0 |  |  | 37 | 75 | 15 | － 3 | 4 | 4 | 32 | 300 |  | 1431 |
| 35 | 92 | 4 | 7 | 0 | 0 | 4 | 0 | $2 \quad 15$ | 1 |  | ｜ 1 | 1 | 4 |  | 250 | 20，000 | 1432 |
| 30 | 34 | 0 | 0 | 0 | 0 | 4 | 5 ．． | ．． | 3 | 3 |  |  | 3 |  | 200 | 12， 000 | 1433 |
| 25 | 30 | 0 | 0 | 0 | 0 |  |  |  | 4 | 8 | 8 | 8 | 3 |  | 250 | 6，000 | 1434 |
| 10 | 9 | 0 | 0 | 941 | 11 |  |  |  | － 3 | 3 | 3 |  | 3 |  | 200 | 12， 000 | 1435 |
| 23 | 24 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 1 |  | 1 | ${ }_{2}$ | 8 |  | 500 |  | 1436 |
| 50 | 101 | 0 | 0 | 0 | 0 |  |  |  | 4 | 12 |  | 12 | 4 |  | 2，500 | 35， 000 | 1437 |
| 12 | 20 | 0 | 0 | 0 | 0 |  | 0 |  | 3 | 1 | 1－．．． |  | 3 |  | 400 | 6，000 | 1438 |
| ${ }^{3}$ | 3 | 1 | 0 | 46 | 5 |  |  |  |  |  |  |  | 2 |  | 1，025 | 8，000 | 1439 |
| 14 | 24 33 | 1 | 0 | 0 | 0 |  |  |  | 6－1 ${ }^{1}$ | －8 | － 0 | 0 | 2 |  | ${ }_{2} 175$ | 8，000 | 1440 |
| 14 20 | 33 <br> 32 | 1 | 2 | 0 | 0 |  |  |  | 3 | ${ }^{8}$ | 8 | 8 |  |  | 2，000 |  | 1441 |
| 20 | 25 | 0 | 0 | 38 | 4 |  |  |  | 0 | 8 | － 0 | 0 | 4 |  | 200 | 20， 00 | 1442 |
| 19 | 12 | 0 | 0 | 0 | 0 | 3 | 0 | $0 \quad 0$ | 0 |  | 3 | 0 |  |  | 500 | 10，000 | 1444 |
| 6 | 17 | 0 | 0 | 13 | 19 | 2 | 2 | 10 | 01 |  | 1 | 0 |  | － | 562 |  | 1445 |

Table: 33.-Statistics of public ligh sehools in the


[^87]United States for the scholaslic year 1895-96-Continued.


Table 33.-Statistics of publio high schools in the


* Statistics of 1894-95.


## United States for the scholastic year 1895-96-Continued.



Table 33:-Statistics of public high schoots in the

|  | State and post-office. | Name. | Principal. |  | Inst ors secon stat $\qquad$ | uct- <br> for <br> dary <br> nts <br> - -ruteg |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | Kawsas-continued. |  |  |  |  |  |
| 157.0 | Sedant. | High School | J. A. Ferrell | Dept.. | 2 | 0 |
| $\underline{1571}$ | Sedgwic | ....do...... | J. C.Moyer. | Dejt.. | 1 | 1 |
| $\pm 572$ | Seneca | do | Mrs. L.B. Wr | Dept.. | 1 | 2 |
| 1573 | Smith Center | do | J. N. Mosher ............. | Deprt-- | 2 | 0 |
| 1574 | Solomon | do | L. H. Wishard | Dept.. | 1 | ${ }_{0}^{1}$ |
| 157\% | Syracuse | d | Thee. B. Moo | Dept.. | 1 | 0 |
| 1577.7 | Thayer | High School | F. M. Abbott | Dept.. | 1 | 0 |
| 15768 | Topeka | High School*.................. | Q. W. Hickman . . . . . . . . | Dept.. | 4 | 8 |
| 1579 | Valley Falls | - .- do. . . . . | J. M. Nation............. | Depat.- | 1. | 1 |
| 1580 | Wa Keenoy | d | Mrs. Lucy S. Bes | Depas.. | 0 | 1 |
| 1581 | Waluat |  | J. B. MeClare |  | $\frac{1}{2}$ | 1 |
| 1583 | Washingto | do | E. L. Enochs | Depis.. | 3 | 4 |
| 1584 | Wathena. |  | 6. W. Kimkead | Ind ... | 1 | 1 |
| 1585. | Waverly | do | George R. Crisman | Dept.- | 1 | 0 |
| 1586 | Weir . | 10 | Geo. B. Deem ..... | Depm.. | 1 | 0 |
| 1587 | Wellingto | den. | T. W. Butcher............ | Depd.. | 3 | 1 |
| 1588 | Wellsvill |  | Francig A. Prather .... | Depd. - | $\pm$ | 0 |
| 1589 | Wichita. |  | Frank R. Dyer.......... | Dept.. | 5 | 4 |
| 1590 | Williamsburg |  | W. M. Soamen ............ | Dept.- | 1 | ${ }_{6}^{6}$ |
| 1591 | Wilson .-... |  | Dallas Griover ........... | Depd.. | 3 | 7 |
| 1592 | Winfield |  | M. E. Fickey ............ | Dept.- | 2 | 2 |
| 1508 | Yates Center <br> KENTUCKY. | .de |  | Dep*.. | 0 | 3 |
| 1594 | A dairvillo | Fingh Schoot | J. W. Marrison . . . . . . . . | Ind... | 2 | 0 |
| 1595 | Ashland. | ... do...... | H. M. Firrley .............. | Dept. | 2 | 2 |
| 1596 | - Augusta | do. | E. B. Brfington ........ | Dept.. | 1 | 0 |
| 1597 | Benton. | Marshall Eownty Sominary. | G.R. Throop ............. | Dept.. | 1 | 1 |
| 1598 | Carlisle... | Graded Scheol.................. | Wm. F. Ramey .......... | Depti.- | 1 | 1 |
| 1599 | Catlettsburg | High Schoad * .................. | J. B. Leeeh ................ | Dept. - | 1 | 1 |
| 1600 | Cloverport. |  | J. H, B, Logan........... | Ind... | 1 | 0 |
| 1601 | Corydon ..... | de | C. E. Dudiey .-.......... | Dept.- | 1 | 2 5 |
| 1602 | Covington .. | -- da ....-.................. | H. R. Blaisdell. . . . . . . . . | Dept-. | 1 | 5 |
| 1603 | Crittender... | Male and Fremale Instituto. | C. S. Ellis ............... | Ina ... | 1 | 0 |
| 1604 | Cynthiana | Graded Sehool....-............. | C. A. Leonard, A. M. .... | Dept.. | 1 | 1 |
| 1605 | Dayton .... | High Sehoot............. | R. M. Mitchell........... | Dept.. | 1 | 1 |
| 1606 1807 | Farmington.... | Farmington Institate * ..... | T. B. Wright ............. | Ind... | $\underline{1}$ | 1 |
| 1607 | Flemingsburg | High School* $\mathrm{Highland} \mathrm{High} \mathrm{School} \mathrm{*} \mathrm{....}$. | G. W. Leahy ............. | Dept... | 1 | 2 1 |
| 1609 | Frankfort ... | High School ........... | J. D. Codeman | Dept... | 2 | 1 |
| 1610 | -...do.... | High School (colored) ....... | Wm. H. Mayo | Dept.. | 1 | 0 |
| 1611 | Fulton | Carr Institute*...... | W. T. A ydelott........... | Ind... | 1 | 3 |
| 1612 | Ghent | High School . | C. H. Duncan..... | Ind.... | 1 | 1 |
| 1613 | Glasgow ... | ....dlo.* ...... | H. W. Barclay............ | Ind ... | 1 | 1 |
| 1614 | Harrodsburg- | do | Chas. W. Bell | Dept.. | 0 | 3 |
| 1615 | Hawesville. | - do ............ | Mrs. Mary H. Brook... | Dept.. | 0 | 1 |
| 1616 | Hickman. | Hickman College | J. C. Cheek. .............. | Dept.. | 1 | 0 |
| 1617 | Hiseville..... | High School ................... | G. P. Turner .-.......... | Ind... | 1 | 1 |
| 1618 1619 | Hopkinsville. | .....do .... | Livingstone McCsetuey | Dept.. | 1 | 3 |
| 1619 1620 | Hyden $\qquad$ <br> Lamasco |  | W. V.Thompson . . . . . . | Ind ... | $\frac{1}{1}$ | 0 |
| 1620 | Lamasco... | İamasco Academy | J.J. Tall: ................. | Ind ... | 1 | 0 |
| 1622 | Lewishurg | Graderl School <br> High School | B. S. Gowen <br> O. T. Sutton | Ind... | 2 | 0 |
| 1623 1624 | Limman Sondom | Shiloh Hich Echool | E. G. Thampaen | Ind ... | 1 | 0 |
| 1624 | London <br> Louisa | - Laurel Seminary* ............ | M. B. Jones ............. | Ind | 1 | 0 |
| 1623 | Louis ville | Hijgh School .................. | U. S. G. Anderson ....... | Dept.. | 1 | 1 |
| 1627 |  | Central High Schoo | A. E., Meyzeek .......... | Dept.- | 6 | 0 17 |
| 1628 | do. | - Male Figh Scheol | W. H. Bartholomew .... <br> Manice Kirby. | Dept.. <br> Dept.. | 10 | 17 |
| 1623 | , ..... do............ | - Manual Training High School. | H. G, Brownoli .......... | Dept.. | 12 | 0 |

"Stalistics of 1894-05.

United States for the scholastic year 189ジ-96—Continued.


Table 33.-Statistics of public high schools in the

*Statiatics of 1894-95.

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high scheols in the


United States for the scholastic year 1895－26－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  | －S．ienalit ur soumro $\Lambda$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total secondary students． | Colored secondary students included in col－ umns 7 and 8. |  | Elemen－ tary pupils， including all below secondary grades． |  | Proparing for college． |  |  |  | Gradu－ ates in 1896. |  | College prepara－ tory sta－ dents in the cless that grad uated in 1896. |  |  |  |  |  |  |
|  |  |  | Clas－ sical course． | Scien－ tific course． |  |  |  |  |  |  |  |  |  |  |
|  | $\begin{aligned} & \text { 馬 } \\ & \text { 気 } \end{aligned}$ |  |  |  | 感 |  | $\begin{aligned} & \dot{8} \\ & \text { 感 } \end{aligned}$ |  | $\begin{gathered} \text { @゙ } \\ \text { ®ing } \end{gathered}$ |  |  |  |  |  |  |  | 魀 |  |  |
| 78 | 9 | 10 | 11 | 12． | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 2 | 21 | 22 | 23 | 24 |  |
| $28 \quad 37$ | 37 | 0 | 0 | 0 | 12 | 15 | 2 | 0 | 0 | 5 | 0 |  | 4 |  | 60 | \＄2，000 | 1683 |
| 23 31 | 31 | 0 | 0 | 0 | 7 | 5 | 3 | 0 | 4 | 5 | 4 |  | 4 | 0 | 85 | 7，000 | 1684 |
| 26.34 | 34 | 0 | 0 | 0 | 12 | 3 |  |  | 1 | 9 | 1 |  | 4 | 0 | 500 | 3， 000 | 1685 |
| 19 13 | 13 |  | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 1686 |
| $9 \quad 12$ | 12 |  | 0 |  |  |  |  |  |  |  |  |  | 5 |  |  | 2，500 | 1687 |
| 3 | 6 |  | 013 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 4 | 0 | 0 | 2， 000 | 1688 |
| 18 40 | 40 |  | 0 | 1 | ．．．． |  | － |  | 2 | 10 | 1 |  | 4 |  | 0，000 |  | 1689 |
| $55 \quad 5$ | 54 | 0 | 0 | 0 | 16 | 7 | 2 | 0 | 9 | 10 |  |  | 4 |  | 275 | 40， 000 | 1690 |
| $24 \quad 2$ | 23 |  | 0 | 0 | 6 | 0 | 0 | 0 | 6 | 8 |  |  | 4 | 0 | 100 | 1，500 | 1691 |
| $42 \quad 6$ | 66 |  | 0 | 0 | 16 | 30 | 7 | 0 | 5 | 15 |  |  | 4 |  | 100 |  | 1692 |
| 14.3 | 30 | 0 | 0 | 0 | 0 |  | －．－ |  | 2 | 3 |  |  | 4 |  | 150 |  | 1693 |
| 62 | 78 | 0 | 0 | 0 | 0 | 2 | 12 |  |  |  |  |  | － 4 |  | 300 | 10，000 | 1694 |
| 54 | 68 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 3 | 3 |  |  |  |  | 0 | 20，000 | 1695 |
| 10 | 18 | 0 | 0 | 0 |  |  |  |  | ． 1 | 6 |  |  |  |  | 50 | 4，000 | 1696 |
| 33 | 52 | 0 | 0 | 5 | 2 | 2 | 0 |  | 7 | 7 |  |  |  | 4 ．．．． |  | 5， 000 | 1697 |
| 36 | 21 | 0 | 0 | 0. | 0 |  |  |  |  |  |  |  |  |  |  | 3， 000 | 1698 |
| 14 | 10 | 0 | 0 | 5 | 7 |  |  |  |  |  |  |  |  | $\cdots$ |  | 1，900 | 1699 |
| 14 | 15 | 0 | 0 | 48 | 59 | 3 | 2 |  | 0 | 0 |  |  | 0 | 0 | 20 | 6，000 | 1700 1701 |
| 6 | 21 | 0 | 0 | 25 | 33 |  |  |  | 1 |  |  |  |  |  |  |  | 1701 |
| 18 | 13 | 0 | 0 | 36 | 35 | 0 | 2 |  |  | 7 |  |  |  |  |  |  | 1702 |
| 38 | 56 | 0 | 0 | 0 | 0 | 5 | 2 |  | ， | 8 |  |  | 1 | 4 | 50 | 4， 000 | 1703 |
| 10 | 10 | 0 | 0 | 0 | 0 |  |  |  | － | 0 |  |  |  |  |  | 2，000 | 1704 |
| 33 | 27 | 0 | 0 | 0 | 0 |  |  |  | 1 | 0 |  |  |  | 4 |  | 16，000 | 1705 |
| 16 | 34 | 0 | 0 | 0 | 0 | 11 | 0 |  | 3 | 10 |  |  | 8 | 4 | 300 | 3，000 | 1706 |
| 12 | 16 | 0 | － | 6 | 1 | 0 |  |  |  |  |  |  |  |  | 0 |  | 1707 |
| 46 | 78 | 0 | 0 | 0 | 0 | 7 | 8 | 3 | 8 | 8 |  |  |  | 4 |  | 2，000 | 1708 |
| 26 | 25 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  | 6，000 | 1709 |
| 54 | 56 | 0 |  | 0 | 013 |  | 8 | 410 | 6 | 3 |  |  | 2 |  | 50 | 12，000 | 1710 |
| 6 | 10 | 0 | 0 | 21 | 14 |  |  |  | 2 | 1 |  |  |  |  |  | 1，000 | 1711 |
| 25 | 45 | 0 | 0 | 20 | 15 | 3 |  |  | 3 | 6 |  |  |  | ．．．． | 150 | 7，000 | 1712 |
| 29 | 41 | 0 |  | 0 | 0 | 3 | 8 |  | 3 | 8 |  |  |  | 4 ．．． | 520 |  | 1713 |
| 2 | 10 | 0 | 0 | 10 | 5 |  |  |  |  |  |  |  |  |  | 86 |  | 1714 |
| 62 | 76 | 0 |  | 0 | 0 1 | 51 | 0 | 6 | 10 | 11 |  |  | 4 |  | 100 | 30，000 | 1715 |
| 8 | 10 | 0 | 0 | 15 | 13 | 0 | 0 |  | 0 | 0 |  |  |  | 0 | 0 | 400 | 1716 |
| 37 | 34 | 0 | 0 | 0 | 01 | 9 |  |  | 0 | 5 |  |  |  |  | 125 | 11， 000 | 1717 |
| 17 | 18 | 0 | 0 | 0 | 0 | 0 |  |  | 0 1 | 2 |  |  | 0 | 5 | 0 | 800 | 1718 |
| 10 | 18 | 0 | 0 | 0 | 0 | 2 | 5 |  | 0 | 2 | 2 |  | 2 | 4 － | 500 | 15，000 | 1719 |
| 40 | 60 | 0 | 0 | 0 | 0 | 6 | 11 |  | ． | 10 |  |  | 5 | 40 | 110 | 5 5，000 | 1720 |
| 35 | 30 | 0 | 0 | 0 | 0 | 2 | 0 |  |  |  |  |  | 0 |  | 20 | 1，500 | 1721 |
| 18 | 19 | 0 | 0 | 7 |  |  |  |  | ．． |  |  |  | 0 | $\begin{array}{ll}4 & 0 \\ 3 & 0\end{array}$ | 0 | 4， 000 | 1722 |
| 5 | 7 | 0 | 0 | 43 | 45 |  |  |  | ． |  |  |  | 0 | $3{ }^{3} 0$ | 0 | 2，500 | 1723 |
| 10 | 8 | 0 | 0 | 26 | 12 | 0 | 0 |  |  | 0 |  |  | 0 |  | 0 |  | 1724 |
| 5 | 22 | 0 | 0 | 7 | 9 | 0 | 0 |  | 0 | 2 |  |  | 0 | 30 |  | 4,000 | 1725 |
| 12 | 8 | 0 | 0 | 28 | 20 | 0 | 0 |  |  | 0 | 4 | 0 | 0 | 0 | － | 2，500 | 1728 |
| 10 | 15 | 0 | － | 0 | 0 | 3 | 10 |  |  |  |  |  |  | ， |  |  | 1727 |
| 7 | 34 | 0 | － | 0 | 0 | 3 | 15 |  | 0 |  | 3 | 2 | 3 • | 4 | 0 | 5，000 | 1728 |
| 7 |  | 0 | 0 | 50 | 55 | 3 | 5 |  | －． |  | 5 |  |  |  |  |  | 1729 |
| 93 | 123 | 1 | 0 | 0 | 0 | 52 | 42 |  | 0 |  | 4 |  | 0 | ， | 467 |  | 1730 |
| 24 | 26 | 0 | 0 | 0 | 0 | 6 | 5 |  | ．．． |  | 8 |  |  | 4 | 5 30 | 10，000 | 1731 |
| 23 24 | 14 | 0 | 0 | 3 0 | 0 |  |  |  |  |  |  |  |  |  | 30 | 3，${ }^{5}$ | 1732 |
| 24 9 | 11 | 0 | 0 | 0 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 3 9 | 3 1 |  |  |  |  | 1 |  |  |  | 3,000 7,000 | 1733 1734 |
| $\begin{array}{r}9 \\ 12 \\ \hline\end{array}$ | 17 | 0 | 0 | 8 | － 14 | 9 | $\frac{1}{3}$ |  | 0 | 2 | 4 | 2 | 1 | 4. | 215 | 7，000 | ${ }_{1}^{1734}$ |
| 10 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 ． | 0 | 0 | 0 | 0 | 0 |  | 0 | 600 | 1736 |
| 13 | 21. | 0 | 0 | 0 | 0 | 6 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 125 | 5，000 | ． 1737 |
| 4 | 10 | 0 | 0 | 24 | 20 | 0 | 0 |  |  | 4 | 5 | 0 | 0 | 4 | 40 | 5，000 | ． 1738 |
| 34 | 40 | 0 | 0 | 8 | 5 |  |  |  | ．．． | 2 | 4 |  |  | 4 | 30 | 6，000 | 1739 |
| 22 | 26 | 0 | 0 | 0 | 0 | 2 | 1 |  | －． | 3 | 0 | 3 | 0 | 4 | 350 | 2，000 | 1740 |
| 27 | 23 | － | 0 | 0 | 0 | 5 | 3 | 1 | 0 | 3 | 4 | 1 | 0 | 4 ． | 150 | 4，000 | 1741 |
| 14 | 21 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 |  |  | 40 |  | 800 | 1742 |
| 12 | 20 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 |  | 1 |  | 4 |  |  | 1743 |
| 3 | 28 | 0 | － | 0 |  | 0 |  | 0 | 0 |  |  |  |  |  |  |  | 1744 |
| 25 | 15 |  | 0 | 0 | 0 | 6 |  |  | 3 |  |  | 0 | 0 |  |  | 2， 500 | 1745 |

Table 33.-Statistics of public high schools in the

|  | State and post-office. | Name. | Principal. | Department or independent. | Instruct ors for secondary students |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | MAINE-continued. |  |  |  |  |  |
| 1746 | North Parsonsfield.. | Parsonsfield Seminary | Isaiah Trufant, A. M | Ind... | 2 | 2 |
| 1747 | Norway............. | High School | Arthur G. Wiley-...... | Ind... | 0 | 1 |
| 1748 | Oakland .............. | Free High School............. | Lyman Kingman Lee, A. B. | Dept.. | 1 | 1 |
| 1749 | Oldtow | High School | H.B.Smith............. | Dept.. | 1 | 2 |
| 1750 | Oxford |  | Frank E. Hanscom | Dept.. | 1 | 1 |
| 1751 | Patten.... | Academy .-..... | William L. Bonney, A.B. | Ind... | 1 | 1 |
| 1752 | Pembrok | Free High School | D. L. Fisher | Dept.. | 0 | 1 |
| 1754 | Phillips | High School* | Warren W. Aus | Ind.... | $\frac{1}{6}$ | 11 |
| 1755 | Presque Isle | do ....------....-........ | Charles N. Per | Dept.. | 1 | 2 |
| 1756 | Princeton. | .do .-....................... | H. J. Dudley | Dept.. | 1 | 0 |
| 1757 | Richmond | do | C. C. Spratt- | Ind... | 1 | 1 |
| 1758 | Rockland | do | George F. Kenney | Dept.- | 2 | 3 |
| 1759 | Rockport | do | G. I. Mildrain, A. | Dept.- | 1 | 0 |
| 1760 | Sabbatus | do | E. J. Hatch | Dept.. | 1 | 1 |
| 1761 | Sanford. | do. | O. Howard Perkins | Dept.. | 1 | 1 |
| 1762 | St. Alban | do.*-....-.................. | E. P. Dyer. | Dept.. | 0 |  |
| 1763 | Sangervil |  | H. R. Williams -........ | Ind... | 1 | 0 |
| 1764 1765 | Scarboro <br> Searsport | do | James G. Morrell........ | Ind.... | 0 | 1 |
| 1766 | Sebec. |  | Daniel W. Hayes........ | Ind... | 1 | , |
| 1767 | Shapleigh |  | H.L.Springer........... | Ind. | 2 | 2 |
| 1768 | Sherman Mil |  | C. E. Perkins............ | Ind ... | 0 | 1 |
| 1769 | Skowhegan .......... | High School and Bloomfield Academy. | Winfred Nichols Donovan. | Dept.. | 1 | 3 |
| 1770 | South Norridgewock | High School | Clarence W. Pierce..... | Ind... | 1 | 1 |
| 1771 | South Paris. | $\cdots \text {...do }$ | F.T. Wingate | Dept.. | 1 | 1 |
| 1772 | South Thomaston... | T................ | Miss Isabel R. Lattie... | Ind... | 0 | 1 |
| 1773 | Southwest Harbor.. South Windham... | Tremont Free High School | Wm. W. A. Heath ...... Frod | Dept.. | 1 | 0 |
| 1775 | Spragues Mills.. | Eraston High School........ | Fred. Benson. | Ind... | 1 | 1 |
| 1776 | Strong-......... | High School | E. Clifford Butle | Ind... | 1 | 0 |
| 1777 | Thomasto |  | Percy Bartlett. | Dept.- | 1 | 1 |
| 1778 | Topsham | do | John A. Cone............ | Dept.. | 1 | 0 |
| 1779 | Tremont | Free High School* | Willard W. Rich....... | Dept.- | 1 | 0 |
| 1780 | Union -.. | -.do School | Leonard O. Packard.... | Ind ... | 1 | 0 |
| 1782 | Vinal Haven | ....do.*.. | Fred. L. Tapley | Dept.. | 1 | 1 |
| 1783 | Waldoboro. |  | C. W. A verell | Ind... | 1 | 1 |
| 1784 | Warren. | ....d | A. A. Badger, A. B...... | Dept.. | 0 | 1 |
| 1785 | W atervill |  | Dennis E. Bowman..... | Dept.. | 1 | , |
| 1786 | Wells. | Free High School | John Rankin | Dept. | 2 | 0 |
| 1787 | Westbrook | High School -.... | Fred. W. Freeman...... | Dept.. | 2 | 2 |
| 1788 | Wert Buxton | Eollis High School | W. H. Tibbetts ......... | Dept.. | 1 | 0 |
| 1789 | West Newfield | Newfield High School | Fred. C. Mitchell | Ind | 0 | 1 |
| 1790 | Winthrop .... | High School.......... | Loring Herriok | Ind. | 1 | 1 |
| 1791 | Wiscasset Marthand. | . ....do ...... | Elden P. Munsey ....... | Ind. | 1 | 1 |
| 1792 | Aberdeen. | High School | John S. Hill. | Ind ... | 1 | 1 |
| 1793 | Baltimore | City College | Francts A. Soper........ | Dept.. | 16 | 0 |
| 1794 | do | Colored High School.......... | Dr.Geo. Lewis Staley .. | Dept.. | 1 | 4 |
| 1795 | .....do .................... | Eastern Female High Sohool. | Wm. F. Wardenburg.. | Dept.. | 1 | 13 |
| 1796 | Bel Air . . . . | Western Female High School. | Andrew S. Kerr........ | Dept.. | 1 | 14 |
| $\begin{aligned} & 1797 \\ & 1788 \end{aligned}$ | Bel Air............ | Academy ................... | Albert S. Cook.......... | Ind. | 2 | 0 |
| 1799 | Borus .... | Buckingham High Sohool .. | Chas. R. Dryden.. | Ind. | 0 | 6 |
| 1800 | 0 Cambridgo. | Seminary | W. A. Hennoberger ..... | Ind. | 2 | 2 |
| 1801 | 2 Catonevilio | High school | Emory C. Chanoweth... | Ind... | 1 | 0 |
|  |  | Acs | N. G. Horley, Jr | Dept.. | 1 |  |

* Statiatice of 1894-95.

United States for the soholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the

|  | State and post-office. | Name. | Principal. |  | Instructors for secondary students. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | MARYLAND-cont'd. |  |  |  |  |  |
| 1803 | Chesapeake City.. | Prblic School...... | Milton S. Marper....... |  | 0 |  |
| 1804 | Clear Spring ..... | Tower Hill Academy ....... | John Aukeney ......... | Ind... | 1 | 0 |
| 1805 | Cumberland. | Allegany County High School.* | John T. White .......... | Dept.. | 1 | 2 |
| 1806 | Darlington | Academy .................... | A. F. Galbreath .. | Dept.. | 1 | 2 |
| 1808 | Easton | High Sc | Dr. E. M. Hardcastle, jr. | Ind.... | 2 | 3 |
| 1809 | Ellicott Cit |  | Elmer M. Ham ....... | Dept. | 1 | 1 |
| 1810 | Forest Hill | Graded School | Ella M. Stritehoff | Ind. | 0 | 1 |
| 1811 | Frederick | Male High School | Amon Burgee. | Dept. | 1 | 0 |
| 1812 | ....do | Female High Schnol | M. M. Robinson | Ind.. | 0 | 4 |
| 1813 | Galena | Shrewsbury Acanemy | Thos. B. Long . |  | 1 | 0 |
| 1814 | Hagerstown ......... | Washington County Male High School. | H. B. Twitmyer ........ | Dept.. | 2 | 0 |
| 1815 | Hancock. | High School................. | Geo. W. Craig. | Ind | 2 | 0 |
| 1816 | Havre de Grace | ....do | Chas. T. Wright. | vept | 2 |  |
| 1817 | Henderson | Acadeniy | Richard Merriken...... | Ind... | 1 | 0 |
| 1818 | Laurel... | High School | Miss Margaret Edmonston. | Dept.. | 0 | 1 |
| 1819 | Marion Station |  | Benjamin F. Haynes... |  | 1 | 1 |
| 1820 | Marydell ... | do | Joanna Valliant........ |  | 1 | 0 |
| 1821 | Middletown Oxford | $\begin{array}{r} \text { do } \\ -\mathrm{do} \end{array}$ | S. M. Wagaman......... | Ind.... | 1 | 1 |
| 1823 | Pocomoke City |  | H.J. Handy | Ind | 1 | 0 |
| 1824 | Preston....... | Academy | R. Wilson Allen | Dept.. | , | 1 |
| 1825 | Princess Anne | High School or W as lington Academy.* <br> High School | Richard K. Wimbrough, A. M. | Dept.. | 2 | 0 2 |
| 1826 | St. Michavls Salisbury | High School | Wm. S. Croase ${ }^{2}$ A. M... H. B. Freeny. | Dept... | 2 1 1 | 2 0 0 |
| 1828 | Sharpsburg | Grammar schoo | Jo. E. Wagaman | Dept.. | 1 | 0 |
| 1829 | Smíthsburg | High School | Eugene A. Spessard.... | Ind... | 1 | 0 |
| 1830 | Snow Hill. | ....do.*.... | J. ${ }^{\text {edward }}$ White.... | Ind.... | 1 | 1 |
| 1831 | Thurmont | .... . do ........................ | H. D. Beachley, A. B.. | Dept.. | 1 | 0 |
| 1832 | Towson | ..... do ......................... | R. Brent Crane. | Dept.. | 1 | 1 |
| 1833 | Trappe |  | D. Melvin Long Earle 13. Polk | Ind... | 1 | 1 3 |
| 1835 | Upper Marlboro | Academy ......... | Earle B. Polk .......... | Ind.... | 1 | 3 0 0 |
| 1836 | Vienna ........... | ....do.*.. | Richard Matthew Hamilton, A. M. | Ind... | 1 | 0 |
| 1837 | Abington........... | High School .................. | Christop'r G. Campbell. | Dept.- | 1 | 3 |
| 1838 | Adams .... | ....do .......................... | Johu C. Hull ............ | Dept.. | 1 | 4 |
| 1839 | Amesbury | do | Forrest Brown.......... | Dept.. |  | 4 |
| 1840 | Amherst | do | Charles A. Williams ... | Dept.. | 1 | 3 |
| 1841 | Ashby | do .- | Mise Winifred E. Hill... | Ind... | 0 | 1 |
| 1842 | Ashfield.. | Sanderson Academy........ | Orren H. Smith, A. M... | Dept.. | 1 | 1 |
| 1843 | A.thland. | High School ................. | Charles H. Sibley | Ind... | 1 | 1 |
| 1844 | Assinippi............ | Norwell High School ........ | E. F. Blood . . . . . . . . . . . | Ind.... | $\frac{1}{2}$ | 1 |
| 1846 | A yer ..... | ....do .. | Allen C. Cummings ..... | Ind... |  | 1 |
| 1847 | Baldwinsville. | do | Nathaniel A. Cutier.... | Dept.. | 1 | 0 |
| 1848 | Barre. | do | C. L. Randall ........... | Ind... | 1 | 1 |
| 1848 | Bedford..... |  | Minnio C. Potter ........ | Dept.- | 0 | 1 |
| 1851 | Beverly..... |  | Charies A. S. Hurd | Dept.. | 2 | 4 |
| 1855 | Blackstone | , | Edward W. Barrett | Dept... | 1 | 2 |
| 1853 | Bolton. | Houghton High School .... | Florence fr. Houghton... | Dept.. |  | , |
| 1854 | Boston. | Englieh High School for 1及07. | Robert Edward Babson. | Dept... | 25 | 0 |
| 1855 1856 | .do | Girlo' High School | John Tetlow | Dept.. | 2 | 24 |
| 1857 |  | Mectianic Arts High Scliool. | Chas. W. Parm | Dept.. Dept.. | ${ }_{10}^{3}$ |  |

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the

|  | State and post-office. | Name. | Principal. | Department or independent. | Inst ors $80 c 0$ stnd $\qquad$ | netfor dary onts. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | MASSACHUSETTIS-con- tinued. |  |  |  |  |  |
| 1858 | Boston | Public | Moses Merrill | Dept. . | 20 | 0 |
| 1859 | Bradiford | High School | Frank P. Morse | Ind... | 1 | 3 |
| 1860 | Braintree |  | Oliver R. Cook | Dept.. | 1 | 3 |
| 1861 | Bridgewater | do | Charles F. Harper. | Dept.- | 2 | 4 |
| 1862 | Brighton. | do | Benj. Wormello ........ | Dept-- | 1 | 4 |
| 1863 | Brockton | do | Edward Parker | Dept.. | 6 | 6 |
| 1864 | Brookfield | do | Edward B. Hale. | Ind... | 1 | 1 |
| 1865 | Brookline | do | Daniel S. Sanford | Dept.. | 4 | 11 |
| 1866 | Cambridg | English High School | Ray Greone Huling | Dept.. | 4 | 17 |
| 1867 1868 | .... do .......... | Manaal Training School for Boys. <br> Tatin School | Chas. H. Morse........... | Dept.. | 10 8 | 0 11 |
| 1868 1869 | Cambridgeport | Latin School. <br> High School | William F. Bradbury... | Dept.. | 8 | 11 |
| 1870 | Charlesto |  | John O. Norris | Dept.. | 2 | 6 |
| 1871 | Chatham |  | Geo. F. Babb ............. | Dept.. | 1 | 0 |
| 1872 | Chelmsford | Centre High School | Wilson R. Failing....... | Ind... | 1 | 0 |
| 1873 | Chelsea. | High School ........ | Alton E. Briggs ......... | Dept..- | 4 | 10 |
| 1874 | Cheshire | ....do ...... | A. E. Hitchcock ......... | Dept.. | 0 | 1 |
| 1875 | Clinton | do | Andrew E. Ford......... | Dept.. | 3 | 4 |
| 1876 | Cohasset | Osgood High School | C. F, Jacobs... | Dept.. | 1 | 4 |
| 1877 | Concord | High School ...... | William L. Eaton | Dept.. | 1 | 6 |
| 1878 | Conway | ....do - .... | Charles L. Simmons.... | Ind... | 1 | 1 |
| 1879 | Cammington | do.* | John Mason....... | Ind... | 1 | 0 |
| 1880 | Dalton....... | .... do | H. L. Allen ............... | Ind. | 1 | 2 |
| 1881 | Danvers | Holten High School* | E. Jay Powers........... |  | 2 | 5 |
| 1882 | Dedham | High School -........ | George F.Joyce, jr | Dept.. | 1 | 5 |
| 1883 | Dennis | North High School ............ | B. E. Holland............ | Ind.... | 1 | 0 |
| 1884 | Dorchester | High School ....... | Chas. J. Lincoln ......... | Dept.. | 2 | 7 |
| 1885 | East Boston | . . . . do ... | John F. Eliot. | Dept.. | 2 | 4 |
| 1886 | East Bridgewater | ....do.*....-.................. | Ralph A. Sturges ....... | Dept.. | 1 | 1 |
| 1887 | East Dennis | Dennis North High School. . | B. E. Holland. . . . . . . . . | Ind... | 1 | 0 |
| 1888 | East Douglass | Douglass High School ....... | F.J.Libby | Dept.. | 1 | 0 |
| 1889 | Easthampton.. | High School.................... | Alfred B. Morrili | Dept.. | 2 | 3 |
| 1890 | East Pepperell | Pepperell Hfgh School....... | J. H. Blaisdell ....... . . . | Ind... | 1 | 1 |
| 1891 | Tidgartown .......... | High School ................... | Granville Dunham ..... | Ind... | 1 | 1 |
| 1892 | Essex...... |  | J. Henry White......... | Ind... | 3 | 1 |
| 1893 | Everett... | -.... do | Wilbur J, Rockwood... | Dept.. | 3 |  |
| 1894 | Fairhaven | . do | Howard S. Freeman, A. B. | Dept.. | 1 |  |
| 1895 | Fall River | B. M. C. Darfee High School | Charies C. Ramsay ..... | Dept.- | 10 | 10 |
| 1896 | Falmouth. | Lawrence High School ..... | Leland B. Lane... | Ind... | 1 | 1 |
| 1897 | Fitohburg | High School ........... | Charles S. Chapin ....... | Dept.. | 9 | 15 |
| 1898 | Foxboro. |  | W. Edgar Horton ....... | Dept.. | 1 | $\frac{1}{5}$ |
| 1899 | Framingham | Academy snd High School.. | John H. Parsons ....... | Dept.. | 3 | 5 |
| 1900 | Franklin ... | Horace Mann High Sohool.. | E. D. Daniols, A. M ..... | Dept.. | 1 | 3 |
| 1901 | Gardner ... | High School ...-............... | Henry H. Folsom....... | Dept.. | 1 | 5 |
| 1902 | Georgetown |  | Charles Fialconer....... | Ind... | 1 | 1 |
| 1903 | Gloucester.. | . . . . do | Albert Wm. Bacheler .. | Dept.. | 2 | 11 |
| 1904 | Grafton. | . .... do | George Rugg | Dept. | 1 | 2 |
| 1905 | Granby ........... |  | Mabel Smith | Ind... | 0 | 1 |
| 1906 | Great Barrington |  | Sanford L. Cutler | Dept.. | 1 | 1 |
| 1907 1908 | Greenfield........ |  | W. H. Whiting. .. | Dept.. | 2 | 4 |
| 1908 1809 | Groton | Butler High School | John A. Manning ....... | Ind... | 1 | 1 |
| 1910 | ( Groveland | High School* | Norris E. Adams ..... | Ind. <br> Ind. | 1 | 1 |
| 1911 | 1 Harwlch. | -........ do | William E. Dixon ....... | Ind. | 1 | 0 |
| 1912 | 2 Haverhill ........ |  | Clarence E. Kelley ...... | Dept. | 3 | 8 |
| 1914 | 4 Hingham Center. | Hingham High School....... | Jacob O. Sanbora. | Ind... | 1 | 3 |
| 1915 | 5 Hollurnok | High School | Greo. J. Walsh ........... | Ind.. | 1 | 0 |
| 1916 | 6 Molilen. | Sumner High school.......... | R. Osborn Hopking. | Dept. . | 1 | 2 |
| 1917 | 7 Holyoke | High 8chool ............................. | Wlonzo K. Learned..... | Dept. Dept. . | $\frac{1}{5}$ |  |

- Statistics of 1894-05.

United States for the scholastic year 1895-96-Continued.


Table 33,-Statistics of public high sehools in the

|  | State and post-office. | Name. | Principal. |  |  | uctfor dary nts. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | MASSACHUSETTS-con- tinued. |  |  |  |  |  |
| 1918 | Hopedale | High S | Harland H. Ryder...... | Dept.. | 1 | 1 |
| 1919 | Hopkinto | ....do | Edgar M. Johnson ..... | Ind... | 1 | 2 |
| 1920 | Hubbardst | do | Miss B. F. Courtney .... | Ind... | 0 | 1 |
| 1921 | Hudson. | do | George H. Coffin .. | Dent.. | 1 | 4 |
| 1922 | Hyde Par | do | Jere. M. Hill .... | Dept.. | 4 | 6 |
| 1923 | Ipswich | Mauning High School | John P. Marston ........ | Dept.. | 1 | 2 |
| 1924 | Jamaica Plain | West Roxbury High School. | George C. Mann......... | Dept.. | 3 | 5 |
| 1925 | Kingston. | High School.................... | Lather Hatch........... | Ind... | 1 | 1 |
| 1927 | Lawrenc | do | James D. Horne......... | Dept... | 5 | 10 |
| 1928 | Lee .-. | do | John D. Seacord......... | Dept.. | 1 | 2 |
| 1929 | Lenox | . . . do | L. M. Rowland .......... | Ind... | 1 |  |
| 1930 | Lexington | d | Mark S. W. Jefferson .. | Dept.. | 1 | 2 |
| 1931 | Lincoln... | do | Ansel S. Richards...... | Dept.. | 1 | 0 |
| 1932 | Littleto |  | William Ervin Cate.... | Ind. | 1 | 1 |
| 1933 | Lowell. |  | Frank F. Coburn....... | Dept.. | 6 | 14 |
| 1934 | Lym | Classical High School | Eugene D. Russell ..... | Dept.. | 5 | 8 |
| 1935 |  | English High School ....... | Charles S. Jackson ..... | Dept.. | 6 | 10 |
| 1936 | Malden | High Sehool................... | George E. Gay .......... | Dept.. | 2 | 10 |
| 1987 | Manchester | Story High School ............ | W.S.C. Russell . . . . . . . | Dept.. | 1 | 1 |
| 1938 | Mansfield. | High School ...................... | James H. Johnson ..... | Dept.. | 1 | 1 |
| 1939 | Marblehea | .... do .-.......................... | H.A. Macgowan ........ | Dept... | 1 | $\frac{4}{7}$ |
| 1940 | Marlboro | do | Wm. Francis O'Connor. | Dept.. | 0 | 7 |
| 1941 | Marshfield | ...do ...................... | Charles R. Copeland.. | Ind... | 1 | 1 |
| 1942 | Mattapoise | Barstow High School........ | Albert S. Briggs ........ |  | 1 |  |
| 1943 | Maynard .. | High Sehool .................... | Elmer E. Sawyer........ | Ind... | 1 | 2 |
| 1944 | Meiford | ....- do .............. ............ | Iorin L. Dame.......... | Dept.. | 5 | 6 |
| 1945 | Medway | .do .......................... | Walter Bowen Waterman. | Ind... | 1 | 1 |
| 1946 | Melrose. | do | Alonzo G. Whitman ... | Dept.. | 3 | 5 |
| 1947 | Mendon | do | Emaily Alice Hall ...... | Dept.. | 0 | 1 |
| 1948 | Merrimac | do | C. C. Ferguson, A. M . . |  | 1 | 1 |
| 1949 | Methuen. | do. | C. A. Page .............. | Dept.. | 1 | 2 |
| 1950 | Middlebo | do | W alter Sampson ....... | Dept.. | 1 | 3 |
| 1951 | Milford |  | Eben Williams | Dept. | 1 | 3 |
| 1952 | Millbuxy | do | John F. Roache . . . . . . . | Ind... | 1 | 2 |
| 1953 | Milton. | . 10 | Hiram Tuell ............ | Dept.. | 3 | 4 |
| 1954 | Montag | Centre High School. | Eva L. Towex . . . . . . . . | Ind... | 0 | 3 |
| 1955 | Nahant. | High School ..................... | A. B. Crawford......... | Ind... | 1 | 1 |
| 1956 | Nantuck | -....do ....................... | Stanley Edwards Johnson. | Dept.. | 1 | 1 |
| 1957 | Nstick. |  | Emory L. Mead . . . . . . . | Ind... | 2 | 8 |
| 1958 | Needham .... | Kimball Figh School........ | C. L. Judkins............. | Dept.. | 1 | 1 |
| 1059 | New Bodford. | High School ........... | Charles Sturtevant Moore. | Dept.. | 5 | 8 |
| 1960 | Newburypor |  | E. C. Adams. ............. | Dept.. | 2 | 7 |
| 1961 | New Salem.... | -...................... | Emerson L. d dams...... | Dept.. | 1 | 15 |
| 1962 | Newtonville | - Newton High School ........ | Edward J. Goodwin.... | Dept.. | 0 | 15 |
| 1963 | Norfolk........ | High School | Miss E. D. Sturtevant.. | Dept.. | 0 | 1 |
| 1984 | North Adams . | Drury High Sichool ........... | Herbert H. Gadsby, Ph. D. | Dept.. | 4 | 2 |
| 1905 | North Andover... | Johnson High School | James Chester Flagg .. | Ind... | 2 | 4 |
| 1986 | North Attleboro. | High School | James W, Brehant ..... | Dept.- | 1 | 4 |
| 1967 | Northboro ....... | ....do do........................... | Nelson G. Howard ...... | Inc... | 1 |  |
| 1968 | North Brookfield |  | Edgar H. Grout......... | Dept.. | 1 | 1 |
| 1869 1970 | North Dartmouth | - Dartmonth High School | Henry H. Farriman.... | Dejt.. | 1 |  |
| 1971 | 1 North Raston..... | - Easton High School ......... | M. C. Lamprey .......... | Dept.. | 2 |  |
| 1972 | 2 Norwood....... | . High School | Clara B. Holden......... | Dept.. | 1 |  |
| 1973 | 3 Orange |  | W. allace E. M | Dept... | 1 | 3 |
| 1974 | 3 Oxford... | . .... do ........................... | 8. J. Nowell | Ind... | 1 |  |
| 1975 | 3 Palmer. | .do ............................. | A. W. Thayes | Dept... | 1 |  |

Statistics of 1894-95.

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high gohools in the

|  | State and post-office. | Name. | Principal. |  | Instruct-ors forsecondarystudents. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | MASSACHUSETTS-continued. |  |  |  |  |  |
| 1976 | Peabody. | High School |  |  |  |  |
| 1977 | Pembroke |  | Sumner A. Chapman ... Miss S. Gertrade Leon. | Ind... | 1 | 1 |
| 1979 | Pittsfield: |  | C. Ard. Byra | Dept.. | 2 | 5 |
| 1980 |  |  | W. A. Woo | Dept.. |  | 0 |
| ${ }_{1982}^{1981}$ | Plymouth |  | Marietta Kier. | Dept.. | 0 | \% |
| 1983 | Princeton.. |  | Lucy S. Peirce | Ind.... | 1 | 3 2 2 |
| 1984 | Quincy | do | Frederic Allison Tupper | Dept.. | 2 | 7 |
| 1985 | Randolph | Stetson High School | Hugh J. Molloy ........ | Dept. | 1 | ${ }_{4}^{2}$ |
| ${ }_{1987}^{1986}$ | Reading | High School | F. E. Whittemore | Dept.. | 2 | 4 |
| 1988 | Rockport |  | Wm. F. Eldriage | Dept.. | 1 | 1 |
| 1989 | Roxbury | do | Charles M. Clay | Dept. |  | 15 |
| 1990 | Ratland | Classical and High School. | Altred L. Saben........ | Dept.. | 5 | 7 |
| 1992 | Sandwich | High Sohool ................ | A. B. Wehber ... | Ind... | 1 | 1 |
| 1993 | Saugus. |  | F. E. Emrich, | Ind... | 1 | 1 |
| ${ }_{1995}^{1994}$ | Scituate | .do | Julins N. Mallony-..... | Dept.. | $\stackrel{1}{0}$ | 1 |
| 1996 | Shrewsbury |  | F. E Bragdon .......... | Ind.... |  | 0 |
| 19998 | Somerset Somervill | Oatin | Clara B. Count, A. B.... | Ind.... | 0 | 1 |
| 1999 | Southampt | High Grammar Scho | Ginnie H. Bridgman... | Ind... | 0 | 1 |
| 2000 | Southbridge....... | Public High School.......... | F. E. Corbin............ | Dept.- | 1 | 1 |
| 2001 | South Dartmouth | High School ............................ | M. D. Morris........... | Ind.... | 1 | 1 |
| 2003 | South Weymor | . do | Albert E. Kingsbury.... | Dept... | 2 |  |
| 2004 | Spencer- | David Prouty High School* | Edwin S. Terrell, A.M. | Dept.. | $\frac{1}{5}$ | ${ }_{16}$ |
| ${ }_{2006}^{2005}$ | Springtiel | High School ..................... | Fred. W. Atkinson..... | Dept... |  | 16 |
| 2007 | Stockbriage | ....d. do. | Alfred W. Rogers, A. ${ }^{\text {M }}$. | Dept.. | 1 | 1 |
| 2008 2009 | Stoneham |  | Charles J. Emerson .... | Dept.. | 1 | ${ }_{2}^{3}$ |
| 2010 | Stoug | Hale High Schoo | A. D. Arnold........... | Dept..: |  | ${ }_{0}^{2}$ |
| 2011 | Satton. | High Sehol. | Miss S. E. Wedge....... | Ind... | 0 | 1 |
| ${ }_{2012}^{2012}$ | Swampscot | Phillips High School | Gardner P. Balch....... | Dept.- | 1 | 1 5 5 |
| 2014 | Templeton | High school......... | John P. Swinerton, A.M. | Dept.. | 1 |  |
| ${ }_{2016}^{2015}$ | Tewksbuy | Foster High S | Fred P. Taxbury | Ind... | 1 | 1 |
| 2017 | Turners Fails | High schoo | Andrew P. A veril | Ind. | 1 | 2 |
| 2018 | Tyngsboro | Winslow High So | L. Miriam Beede........ | Ind. | 0 | 1 |
| ${ }_{2020}^{2019}$ | Upton | High School................ | Harry L. Pierce | In | 1 | 1 |
| 2021 | Wakefel | do | Chas. H. Howe | Dept.. | 1 |  |
| ${ }_{2022}^{2022}$ | Walpole. |  | Allen Latham. | Ind. | 1 |  |
| ${ }^{2023}$ | Waltham |  | Wilson R. Butler.. | Dept-- |  |  |
| 2025 | Ware |  | Frederic T. Farnsworth |  | 3 | 1 |
| 21226 | Warren.. |  | Clarence L. Mitcholl.. | Dept.. | 1 | 3 |
| 2227 | Watert | Philips High School ........ | Geo. R. Dwelley. | Dept. |  | 3 |
| 2120 | Wayland Webster. | High School............... | Miss Lelis 8. Taylor. | Ind... | 0 | 1 |
| 2330 | Wellesloy | Wivellesley HI | Seldon L. Brown | Dept. | 2 | , |
| 2032 | Werlitle | High School | Joseph S. Burns | Dept.. | 1 | 0 |
| 2033 | Weat Rosisto |  | H. $\mathrm{H} . \mathrm{D} . \mathrm{Galdron}$......... | Dept.. | 1 | ${ }_{1}^{2}$ |
| 2034 | Weat Brookil |  | Cora A. Durgim. | Ind... | 0 | 1 |
| 2036 |  | Dennis South High School. | Wellington Modgkivs.. | Dept.. | 1 | 6 |

*Statistics of 1894-95.

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of publio high soheots in whe


United States for the selvolastic year 1895-96-Continued.


Table 33.-Statistics of publio high schools in the


United States for the scholastio year 1895-96-Continued.


Table 33.-Statistics of public high sehools in the


* Statistics of 1894-05.

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the


United States for the scholastic yedr 1895-96-Continued.


Table 33.-Statistics of public Tigh schools in the


United States fer the scholastic year 1895-96-Continued.

'TABLE 33.-Statistics of public high schools in the


[^88]United States for the scholastic year 1895－96－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Volumes in library. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total secondar stadents |  | Coloredsecondarystudentsincludedin col－umns7 and 8. |  | Elemen．tarypapils，inctudingall belowsecondarygrades． |  |  | Preparing for college． |  |  |  | Gradu－ates in 1896. |  | College prepara－ dents in the class that grad uated in 1896. |  |  |  |  |  |  |
|  |  | $\begin{gathered} \text { Clas- } \\ \text { sical } \\ \text { course. } \end{gathered}$ | $\begin{gathered} \text { Scien- } \\ \text { tific } \\ \text { course. } \end{gathered}$ |  |  |  | $\begin{aligned} & \text { en- } \\ & \text { ic } \\ & \text { rese. } \\ & \hline \end{aligned}$ |  |  |  |  |  |  |  |  |  |
| 边 |  |  |  |  |  | 軔 |  |  | $\dot{\rightrightarrows}$ |  |  |  | $\stackrel{\otimes}{\dot{W}}$ |  |  |  |  |  | 稛 |  |  |
| 7 | 8 | 9 | 10 | 11 | 12 |  | 131 | 141 | 151 | 161 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10 21 | 8 43 8 | 8 |  | ${ }^{7}$ | 73 0 | 0 | 0 | 2 | ${ }_{21}{ }^{1}$ | － |  | $\begin{aligned} & 0 \\ & 4 \end{aligned}$ | 0 | 0 | 4 |  | 1，000 | －${ }^{\$ 45,000}$ | ${ }_{2345}^{2344}$ |
| 28 | 55 | 5 |  | 0 |  | 0 | 0 | 2 | 12 | 21 | 3. | 8 | 2 | 6 | 4 |  | 650 | 50，000 | 2346 |
| 0 |  | 6 |  | 82 | 92 | 2 | 0 | 2 |  |  | 0 | 0 | 0 | 0 | 4 |  |  | 5，000 | 2347 |
| 30 3 | 12 <br> 11 | 1 |  | 0 |  | 0 | 0 | 0 | 1 | 0 | 2 | 2 | 2 | 2 | 3 |  | 200 | 8，000 | ${ }_{2349}^{2348}$ |
| 18 |  | 2 |  | 0 |  |  |  |  | 18 | 22 |  |  |  |  | 4 |  | 1，500 | 21，000 | 2350 |
| 1 |  | 30 |  | 162 | 203 | 3 | 0 | 0 | 3 | 0 |  | 4 |  |  |  |  | 1850 | 17，000 | ${ }_{235}^{2351}$ |
| 20 |  | 39 |  | 0 |  |  |  |  | 10 | 16 | 0 | 0 | or | 10 | 4 |  | 1,400 600 | － 20,000 1,300 | ${ }_{2353}^{2352}$ |
| $\begin{array}{r}20 \\ 28 \\ \hline\end{array}$ |  | 49 | 0 | 0 |  |  | ${ }_{3}$ | ${ }_{3}$ |  |  | 4 | ${ }_{0}$ | 0 | － 1 | 4 |  | ${ }_{700}$ | 18，000 |  |
| 35 |  | 22 | 0 | 0150 | 13 | 36 | 0 | 0 | 8 | 4 | 4 | 0. | 0 | rio | 4 |  | 500 | 12， 000 | ${ }^{2355}$ |
| 11 |  | 15 | 1 | $0{ }^{0} 103$ |  |  |  |  |  |  | 3 | 3 |  |  | 4 |  | 134 | 1，105 | ${ }_{2357}^{2356}$ |
| 11 |  | 23 | 0 | 019 |  | 22 | 2 | 4 | 2 | 5 | 0 | 0 |  |  | 4 |  | 1，${ }_{500}$ | 28,000 10,000 |  |
| 239 |  | 20 | 0 | 0 |  | 0 | 6 | 4 | 22 | 20 | 21 | $8{ }^{8}$ | ．${ }_{8}^{2}$ | ． 9 | 4 |  | 2，500 | 10，000 | ${ }_{2359}^{2358}$ |
|  |  | 16 | 0 | 0 |  | 0 |  |  |  |  | 0 | 3 |  |  | 2 |  | 300 | ， 500 | 360 |
| 2 |  | 34 | 0 | 0 |  | 0 |  |  |  |  | 1 | ${ }^{6}$ | 0 | 4 | 4 |  | 497 |  | 2361 |
|  |  | 12 | 0 | 010 |  | 120 |  |  |  |  | ．${ }^{3}$ | 3 | $\cdots$ |  | ${ }_{4}^{2}$ | ． | 150 330 | 7，000 | ${ }^{2362}$ |
|  |  | ${ }_{84}^{26}$ | 0 | 0 |  | 0 | 12 1 1 | 15 4 | $\begin{aligned} & 3 \\ & 7 \end{aligned}$ | 18 | 3 | ${ }_{10}^{2}$ | －${ }_{2}^{2}$ | 4 | 4 | ．．． | 1，000 | 40，000 | 364 |
|  |  | 26 | 0 | 0 |  | － | 0 | 0 | 0 | 0 |  |  | 0 |  | 4 |  | 600 | 30，000 | 2365 |
|  |  | 83 | 0 | 0 |  | 0 | 14 | 49 | 16 | 35 | 2 | 9 |  | 0 | 4 |  |  |  | ${ }^{2366}$ |
|  | 8 | ${ }_{3}^{4}$ | 0 | 0 |  | 0 | 0 | 0 | 10 |  |  | 4 | 6 | ${ }_{4}$ | 4 |  | 2， $\begin{array}{r}260 \\ \hline 80\end{array}$ | 8,000 4,500 | ${ }_{2368}^{2367}$ |
|  | 5 | 37 10 | 0 | ${ }_{0}^{0}$ |  | 0 | 2 | － 3 |  |  | ${ }_{0}$ | 1 | ${ }_{0}$ |  | 4 |  | ${ }^{2} 400$ | 6， 000 | ${ }^{2369}$ |
|  | 2 | 35 | 0 | 0 |  | 0 |  |  |  |  | 0 | 1 | 0 | 1 | 4 |  |  |  | 2370 |
|  |  | 59 | 0 | 0 |  |  | 0 | 0 |  |  |  | 14 | 1 |  | 4 |  | 5， 000 | 32，600 | ${ }_{2372}^{2371}$ |
|  | 5 | ${ }^{35}$ | 0 | 0 |  | 0 | 0 | 0 | 8 | 7 | 2 | ${ }^{0}$ | 0 | 0 | 4 |  | 400 80 | 12，${ }_{\text {7，}} 400$ | ${ }_{2373}^{2372}$ |
|  | 7 | ${ }_{62}^{18}$ | 0 | ${ }_{0}^{0}$ |  | 5 |  |  | 20 |  |  |  | 0 |  | 4 |  | 1， 250 | 30，000 | ${ }_{2374}^{2375}$ |
|  | 5 | 50 | 0 | 0 | 0 | 0 |  |  | 3 | 4 |  | 9 |  |  | 4 |  | 800 400 | 3,000 7 | ${ }^{2375}$ |
|  | 20 | 31 25 | 0 | $0$ | 0 | 0 | $\left.\begin{array}{r} 3 \\ 0 \\ 0 \end{array} \right\rvert\,$ | 15 0 | ${ }_{10}{ }^{2}$ | 10 12 |  | ${ }_{6}^{4}$ |  | － 5 | ${ }_{4}^{4}$ | 60 |  | 7，500 | ${ }_{2377}^{2376}$ |
|  | 5 | ${ }_{16}^{25}$ | ${ }_{0}$ |  |  | 0 |  |  |  |  |  |  |  |  |  |  | 460 |  | 2378 |
|  | 34 | 47 | 0 |  | 0 | 0 |  |  |  |  |  |  |  | 3 |  |  | 800 |  | 2379 |
|  | 34 | 31 | 0 | 0 | 0 | 0 | 4 | 8 |  |  | 5 |  |  | 1 | －${ }^{4}$ |  | 400 |  | 2380 |
|  |  | $\stackrel{9}{24}$ | 0 | 0 | 0 | ${ }_{116}^{116}$ | ． $\begin{aligned} & 0 \\ & 8\end{aligned}$ | 8 | ${ }_{17}^{4}$ |  |  | 0 |  |  |  |  | 350 250 | 4，000 | ${ }_{-2382}^{2381}$ |
|  |  | ${ }_{66}^{24}$ | 0 | 0 | 0 | 0 |  |  |  | 36 |  |  |  |  |  |  | 358 | 30，000 | 2383 |
|  | 21 | 39 | 0 | 0 | 0 | 0 |  |  |  | $6{ }^{6}$ |  |  |  | ${ }_{8}$ |  |  | 510 | 20， 000 | 2384 |
|  | 19 | ${ }_{22}^{42}$ | 0 | 0 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 0 |  | 0 |  |  | ［｜c｜ | 3 |  |  |  |  | 680 500 | 86，000 | 2386 |
|  | 78 | 84 | 0 | 0 | 0 | 0 |  |  |  |  | 11 | 1 |  |  |  |  | 950 |  | 2387 |
|  | 18 | ${ }^{36}$ | 0 |  | 0 |  |  |  |  |  |  |  |  |  |  |  | ${ }_{800}$ |  | ${ }_{2389}^{2388}$ |
|  | $\begin{aligned} & 20 \\ & 42 \end{aligned}$ | 15 60 | 0 | 0 | 0 |  | ${ }_{0} 1$. |  |  | $4.0$ | $0$ |  |  |  |  |  | 800 500 | $\begin{array}{r} 5,000 \\ 27,800 \end{array}$ | ${ }_{2390}^{2389}$ |
|  | 498 | 904 |  | 10 | 0 |  | i5 | 15 14 | 70 | $0 \cdot 80$ | 98 | ${ }^{5} 5$ | 4 | 55 |  |  |  | 200， 000 | 2391 |
|  | 210 | 261 | 0 |  | 0 |  |  | ．．．． |  |  | 22 | 22 | 7 | 20 |  |  |  | 50，000 | 3392 |
|  | 125 | 3 | 1 | 0 |  |  |  | 1510 |  |  | 5 | 15 |  | － 20 |  |  |  | 75， 000 | 2393 |
|  | 275 | 200 | 0 | 0 |  |  | 0 | 158 | 8.60 | 5100 | 0 | 15 | 25 | 20 |  |  | 300 | 100， 000 | 2394 |
|  | 18 | 44 | 0 | 0 | 0 |  |  |  |  |  |  | 2 |  |  |  |  | ${ }_{250}^{311}$ | 12，000 | 23965 |
|  | 19 | 14 | 1 | 0 | 0 |  | 0 | 0 | 4 | 4 | 2 | 7 |  |  |  |  | 3，500 | 40， 000 | 2397 |
|  | 25 | 40 | 0 | 0 | 0 |  |  |  |  | 53 | 3 |  |  | 1 |  |  | 350 |  | 2398 |
|  | 4 |  |  | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 200 | 8，000 | 2398 |
|  | ${ }_{83}^{35}$ | $\begin{aligned} & 32 \\ & 75 \end{aligned}$ | 0 | 0 | $\begin{aligned} & 0 \\ & 0 \\ & 0 \end{aligned}$ |  | ， | ${ }_{5}^{0} 5$ |  | $7{ }_{7}{ }_{20}$ | 0 | ${ }_{3}^{6}$ | ${ }_{9}^{1}$ | ${ }_{9}^{1}$ |  |  |  | 33， 000 | 2400 |
|  | 15 | 17 | 0 | 0 | 0 |  | 0 | ${ }^{\circ}$ |  | 00 | 0 | 4 | 4 | Q ． 0 | 0 |  | ${ }^{1} 200$ | 10,000 | 2402 |
|  | 56 |  | 0 | 0 | 0 |  |  | 0 |  |  |  | 5 |  |  |  |  | 1，600 |  | 2403 |
|  | 20 40 | 26 50 | 0 | 0 | 0 |  | 0 ． 0 | 0 | 15 | B 10 |  | 0 |  |  |  |  | 150 300 | 15， 000 | ${ }_{2405}^{2404}$ |
|  | 13 |  |  |  | 80 | 157 |  |  |  |  |  |  |  | 2,6 |  |  | 400 | 16，5 | 2408 |

Table 33.--Statistics of public high schools in the


- Statistics of 1894-05.

Uniled States for the scholastic year 1805-96-Continued.


Table 33.-Statistices of public high schools in the

| - | State and postooffice. | Name, | Principal. | Department or independent. | Ins or seco stud $\left.\bullet ө]^{\ell}\right]$ | uct- <br> or <br> dary <br> nts. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 3 | 3 | 4 | 5 | 6 |
|  | MISSISSIPPI-cont'd. |  |  |  |  |  |
| 2466 | Gloster .. | High School | C. M. Shaw | Ind | 0 | 5 |
| 2467 | Grenada | --.do .-......................... | A. S. Morrison . . . . - - - . | Dept.. | 1 | 2 |
| 2468 | Hamlet. | Jasper Normal High School * | E. Parker ................ | Ind... | 1 | 0 |
| 2469 | Harrison | High School ................... | Jesse R. Barry, jr | Dept.. | 1 | 0 |
| 2470 | Hattiesburg | ....do. | E. J. Currie ... | Dept.- | 1 | 0 |
| 2471 | Hickory .-. |  | B. F. Hughes | Dept.. | 1 | 2 |
| 2472 | Holly Springs | Normal Inetitute | W. A. Anderson | Dept.- | 1 | 0 |
| 2473 | Hoalka | High School.* | R, A. Eubanks ........... | Ind... | 1 | 1 |
| 2474 2475 | Jacinto | ......do | J. R. Reynolds ........... | Ind... | 1 | 1 |
| 2476 | Kilmichael | do | J. W. Lucas | Ind... | 1 | 0 |
| 2477 | Lafayette Springs | Collegiate Insti | E. J. Gilmer | Ind. | 1 | 0 |
| 2478 | Lake Como | Lake Como Institu | Homer M. Knowles | Ind. | 1 | 1 |
| 2479 | Lauderdale | Training School | T. R. Shields | Dept.. | 1 | 1 |
| 2480 | Magnolia | Graded School. | W. K. Nettles | Dept.. | 0 | 3 |
| 2481 | Marietta. | High School. | Prof. J. C. Benedict. | Ind... | 1 | 1 |
| 2482 | Meridian | Central High School | W. P. Dobbins . . . . | Dept.. | 1 | 6 |
| 2483 | Mud Creek | Spring Hill High School.... | John A. Donaldson |  | 2 | 0 |
| 2484 | New Albany | High School................. | Wm. T. Smith ...... | Dept.. | 2 | 0 |
| 2485 | Nolen...... | Sylvarena High Sohool | G. W. Christian | Ind... | 1 | 1 |
| 2486 | Oakland | Graded School. ......... | H. W. Sanderson | Ind... | 1 | 0 |
| 2487 | Okolona | High School* | John Newbardt, A.M.. | Dept.. | 2 | 1 |
| 2488 | Oxford | Graded School | W. B. Cowan ........... | Dept.. | 2 | 3 |
| 2489 | Paulding | High School*. | J. E, Brown | Dept.. | 1 | 1 |
| 2490 | Phcenix. | .....dlo..... | R. Gildart... | Ind... | 1 | 0 |
| 2491 | Pickens .... | do | J. M. O'Briant ........... | Ind... | 1 | 0 |
| 2492 | Pleasant Hill | Masonic Male and Female Institute. | Miss Julia Sage.......... | Ind... | 0 | 2 |
| 2493 | Poplarville. | Hígh School. | W.I. Thames |  | 1 | 1 |
| 2494 | Port Gibsor | ...do do...................... | J. H. Owinge ............. | Dept.. | 1 | 2 |
| 24.95 | Potts Cump. | Roid's Instit | A. R. Colling .............. | Ind... | 1 | 1 |
| 2496 | Pulaski.... | High School | J. W. W ade .............. | Ind... | 1 | 1 |
| 2497 | Purvis. | ......do..... | Q. D. Sauls ............... | Ind.... | 1 | 1 |
| 2498 | Raymond .... | . do | C. B. G. Ross.............. | Ind.... | 1 | 2 |
| 2499 | Rocky Springs |  | W.I. McInnis ............. | Ind... | 0 | 1 |
| 2500 | Sardis .-.-... | Panola High School*....... | J. H. Richardson ........ | Dept.- | 1 | 1 |
| 2501 | Senatobia. | High School for Boys ....2... | C. B. Sisler ........... | Dept.. | 1 | 1 |
| 2502 | Starkvillle | High School*................... | W. H. Hooker | Dept.. | 1 | 0 |
| 2503 | State Line. | .....do.* . . . . . . . . . . . . . . . . . . | J. C. Ligger................ | Ind... | 1 | 0 |
| 2504 | Steen Creek | - ....do | H. L. Whitfield .......... | Ind... | 2 | 0 |
| 2505 | Strayhorn | Strayhorn Academy .......... | S. F. Clayton ............. | Ind... | 1 | 1 |
| 2506 2507 | Starges | High School ........ | S. W. Smith . | Ind... | 1 | 0 |
| 2507 | Terry..... | .....do. ${ }^{+}$.................... | J. A. Jones .- | Ind... | 1 | 0 |
| 2508 | Thompsom | Cleaveland High School | D. E. Clower | Ind.... | 1 | 1 |
| 2509 | Tilden... | High School*-................. | J. A. Senter . | Ind. | 1 | 0 |
| 2510 | Tupelo | High School. | D. A. Hill .- | Ind... | 1 | 1 |
| 2511 | Tyro.. | High School. | Ira G. Allen. | Ind... | 1 | 0 |
| 2512 | Utica... | -..do**........................ | Mrs. Dickson | Dept.. | 0 | 1 |
| 2513 | Vernon. | Blue Ridge Academy ........ | S. T. Gavin.. | Ind... | 1 | 1 |
| 2514 | Verona : | High School .................. | F. M. Street . . . . . . . . . . . | Ind... | 1 | 0 |
| 2515 | Vioksburg Woldo | High Sehool (3 schools)..... | J. P. Cart | Dept. | 3 | 3 |
| 2516 2517 | Waldo ........... | High School | J. M. Consley............. |  | 0 | 1 |
| 2518 | Wateon | ...... do do | G. O. Madge <br> B. H. Malone | Ind ... | 1 | 0 |
| 2519 | Wesson............... |  | W. R. Mabry | Dept.. | 2 | 1 |
| 2520 | Winona.............. |  | A.J. Warren.............. |  | 2 | 1 |
| 2521 | Yatoo City .......... Mssounl. | . .....do | Robert Torrey . . . . . . . . . . | Dept. | 2 | 1 |
| 2327 | Adrian | Eigh School | John K. Tailin |  | 1 |  |
| 2523 | Alhany Allendale. | -..do ...... | J. H. Markley............. |  | $\frac{1}{3}$ | 0 |
| 2524 | Allendale .......... | - Prblic Šchool | Gilbert M. Roberta....... |  | 8 2 | 0 |

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the

|  | State and post-office. | Name. | Principal. | Department or independent. |  | nct. <br> for dary nts. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 9 | 3 | 4 | 5 | 6 |
|  | MISSOURI-cont'd. |  |  |  |  |  |
| 2529 | Appleton City | High School | C. F. Van Benthusen. | Ind... | 1 | 1 |
| 2526 | Arrow Rock |  | Mrs. A. M. R. McMahan | Dept.. | 0 | 2 |
| 2527 | Aurora .- | do | J. W. Scott .............. | Dept.. | 3 | 8 |
| 2528 | Barnard |  | H. N. Stamper | Dept.. | 1 | 1 |
| 2529 | Belton.. | High School (dept.) | A. A. Wirt... | Dept.. | 0 | 3 3 3 |
| 2530 | Bethany | High School | J. R. Hale . | Dept. | 1 | 3 0 1 |
| 2532 | Bonne Terre | .do | J. H. Malngen | Dept.. | 1 | 1 |
| 2533 | Boonville... | Sumner High School (colored). | C. G. Williams...... | Dept.. | 1 | 0 |
| 2534 | Bowling Greene | High School ................... | W.J. Rowley. ........... | Ind... | 1 | 3 |
| 2535 | Braymer |  | Jno. E. Herriott . . . . . . . | Dept-. | 1 | 0 |
| 2536 | Breckenridg |  | C. A. Cook.. | Dept.. | 1 | 0 |
| 2537 | Brookfield. | Pablic High School | B. A. Jones.............. | Dept.. | 1 | 1 |
| 2538 | Bunceton | Centrak High School | D. R. Cully, A. M ....... | Dept.. | 1 | 0 |
| 2539 | Butler | High School ......... | J. F. Starr .-............ | Dept.. | 2 | 1 |
| 2540 | Cabool | - | W. F. Vaughan | Dept.. | 1 | 1 |
| $25 \pm 1$ | Cainsvill |  | J. I, Gallatin ........... | Ind... | 1 | 3 |
| -2542 | Calhoun. |  | Walter L. Finks . . . . . . | Dept.- | 0 | 3 |
| 2543 | California | Aurora High | H. A. Hollister. | Dept.. | 2 | 1 |
| 2544 | Cameron. | High School... | B. Riggs.................. | Dept.. | 1 | 2 6 |
| 2545 | Canton.... | do | A. O. Moore ............ | Dept.. | 1 | 6 |
| 2546 | Carrollton | . .... do | Mrs. A. R. Quisenberry. | Dept.. | 2 | 2 |
| 2547 | Carterville | do | A. A. Antles ............ | Dept.. | 1 | 1 |
| 2548 | Carthage | ....- do ........................... | E. E. Dodd . . . . . . . . . . . . | Depts.. | 2 | 4 |
| 2549 | Cassville. | do. | N. L. Maiden | Ind... | 4 | 1 |
| 2550 | Centralia. |  | J. A. Jones . | Dept.. | 3 | 1 |
| 2551 | Charleston | do | A. R. Boone | Ind... | 1 | 1 |
| 2552 | Chillicotho | Central High | S. E. Stout...... . . . . . . . | Dept.. | 2 | 4 |
| 2553 | Clinton.. | High School .................... | Mrs. U.D. Price | Dept.. | 2 | 3 |
| 2554 | Coffeysburg | Salem High School ........... | I. J. Vogelgesang | Ind... | 1 | 0 |
| 2555 | Columbia .. | High Schnol ................... | R. H. Emberson......... | Deps.. | 2 | 2 |
| 2556 | Craiz. | Pablic High School | F. L. Maxwell ........... | Ind... | 1 | 1 |
| 2557 | De Soto | High School .................. | D. B. Veazey ............. | Dept.. | 2 | 1 |
| 2558 | Edina......... | Public High Schoo | J.T. Magee.............. | Dept.. | 1 | 0 |
| 2559 | Eldorado Springs | High School .. | James A. Burke. . . . . . . . | Dept.. | 0 | 2 |
| 2560 | Faisberry | do. | A.O. Moore .............. | Ind... | 1 | 1 |
| 2562 | Farmingto |  | S. T. | De | 1 | 0 |
| 2563 | Forest City |  | C. G. Landon | Dept | 1 | 0 |
| 2564 | Fredericktown | do. | A. E. Jones | Dept. | 1 | 0 |
| 2565 | Fultom........ | Public High School. | J. C. Humphreys. | Dept.. | 2 | 1 |
| 2563 | Golden City .......... | High School ......... | Will R. Crowther. | Dept.. | 1 | 1 |
| 2567 | Granby ..... |  | Ralph F.George | Dept.. | 1 | 1 |
| 2568 2589 | Grant City |  | J. W.S. Dillon............ | Dept.. | 1 | 1 |
| 2570 | Greentity |  | A. E. Dent | Dept.. | 3 | 0 |
| 2571 | Hannibal | Donglas High School (colored). | J. H. Pelham............. | Dept... | 1 | 1 |
| 2572 | Fix do ... | High School | Gertrude Ashmore.... | Dept.. | 3 | 3 |
| $\begin{aligned} & 2573 \\ & 2574 \end{aligned}$ | Harris... | . ...-dlo,* -................... | Chas. S. Davis............ | Ind... | 1 | 0 |
| 2574 | Harrisonvi |  | A. F. Trenkle .... | Dept... | 2 | 1 |
| 2578 | Henderson |  | Chas. H. Simmone | Dept.. | 2 1 | 1 |
| 2577 | Hernann | High School | C. C. Thudium. | Dept... | 2 | 0 |
| 2578 2579 | Higginsville | - .ado ............. | H. B, Walker............. | Dept. | 1 | 2 |
| 2579 | Holden | Public High School | F.P.Sever .... | Dopt.. | 1 | 1 |
| 2581 | Humansvilio | High School. | Berriah Dimmitt | Dept.. | 1 | 2 |
| 25.62 | Independence. | Public School | M. W. Allison. | Dept.. | 1 | 6 |
| 2581 | Jameson | Bigh School | W. L. C. Palmer . . . . . . . | Dept.. | 1 | 3 |
| 2584 | Jamesport .............. | Public school. <br> Priblic High school. | Prof, Hickman .......... | Ind ... | 0 | 8 0 |
| 2585 | Jefferson City........ | High School sco.................. | A. R. Alexander......... | Dept. Dept. . | 2 3 | 0 |

*Statistics of 1894-05.

Uwitee States for the seliolastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the


* Statiatics of 1891-95.

United States for the scholastio year 1895-96-Continued.


Table 33.-Statistics of public high schools in the


United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high sehools in the


United States for the scholastic year 1895-96-Continued,


Table 33.-Statistics of public high schools in the

|  | State and post-office. | Name. | Principal. | Department or independent. | $\begin{aligned} & \text { Instruct- } \\ & \text { ors for } \\ & \text { secondary } \\ & \text { stadents. } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | NEBRASEA-cont'd. |  |  |  |  |  |
| 2770 | Floren | High School | W. B. Backus | Dept.. | 0 | 8 |
| 2771 | Franklin | do | Ed. M. Hussong | Dept.. | 1 | 1 |
| 2772 | Fremont | do | Eoline Clark | Dept.. | 1 | 4 |
| 2773 | Friend. | do.* | D. G. Hopkins. | Dept.. | 1 | 1 |
| 2774 | Fullerton | do | W. L. Stephens | Dept.. | 2 | 0 |
| $\begin{aligned} & 2775 \\ & 2776 \end{aligned}$ | Geneva Genoa | do | Robert J. Boyd. | Dept.. | 1 | 1 |
| $\begin{aligned} & 2776 \\ & 2777 \end{aligned}$ | Geno. Gibbon | $\begin{aligned} & \text { do } \\ & \text { do. } \end{aligned}$ | P. W. Hess .... | Dept.. | 1 |  |
| 2778 | Gordon |  | B. B. Smith | Dept.. | 1 | 1 |
| 2779 | Gothenbur | Columbian High School * | R. T. Boyd | 1) ept.. | 1 | 0 |
| 2780 | Grafton. | High School. | Walter M. Sheppard | Dept.. | 1 | 0 |
| 2781 | Grand Island | ....do | A. H. Waterhouse. | Dept.. | 2 | 3 |
| 2782 | Greeley. | .do ........................ | W. W. Remine. | Ind... | 1 | 0 |
| 2783 | Greenwoo | do | W. P. Killen. | Dept.. | 2 | 0 |
| 2784 | Gresham. | do | G. W. Gregg, jr | Dept.- | 1 | 0 |
| 2786 | Grardy |  | C. S. Nickerson........... | Ind | 1 | 0 |
| 2787 | Harrisburg | do | Merle S. Brown | Ind... | 1 | 0 |
| 2788 | Hartington | do | F. W. Button............ | Dept.. | 2 | 0 |
| 2789 | Harvard .. | do.*. ..... .-.........-. . | C. W. Mills.............. | Dept.. | 1. | 1 |
| 2790 | Hastings | do | J. D, Erench............. | Dept.. | 2 | 2 |
| 2791 | Hebron | do | W. HI. Wagner, B | Dept.. | 2 | 0 |
| 2792 | Hildreth. | do | T.S.Magorian .......... | Ind... | 0 | 2 |
| 2793 | Holdrege | do | Jos. R. Fulk ............. | Dept.. | 2 | 0 |
| 2794 | Hooper .... | do | O. Dooloy .... | Dept.. | 1 | 1 |
| 2795 2796 | Howell | .do | Charles Arnot. | Ind... | 1 | 0 |
| 2796 | Humboldt Humphrey | - do | J. W. Dinsmore ......... | Dept.. | 2 1 1 | 1 0 |
| 2798 | Indianola. | do | Lewis W. Smith | Dept... | 0 | 4 |
| 2799 | Johnson |  | J. H. Vioder... | Ind... | 1 | 0 |
| 2800 | Juniata. | Graded School | W. A. Julian | Dept.. | 1 | 0 |
| 2801 | Kearney | High School. | J. T. Morey. | Dept.. | 8 | 1 |
| 2802 | Kenesaw |  | S. H. Oxias.............. |  | 1 | 0 |
| 2803 | Kennard | do | D. H. Fair ................ | Ind... | 0 | 2 |
| 2804 | Leigh.. | do | J. T. Daly | Dept.. |  | 3 |
| 2805 | Liberty | ... . do ....... .................. | J. K. Campbel | Dept.- | 1 | 0 |
| 2806 | Lindsay .. | do | J.I. Paul ................ | Dept.. | 1 | 0 |
| 2807 | Long Pine |  | G. A. McKinley ........ | Dept.. | 0 | 4 |
| 2809 | Loup City | do | M. H. Mead | Ind... | 1 | 0 |
| 2810 | Lyons ... | do | D. W. Gilliland | Dept.. | 1 | 0 |
| 2811 | McCook |  | Wh. Valentine. | Dept.. | 2 | 1 |
| 2812 | Madison | Publio High School | Frank S. Perdue | Dept. | 1 | 1 |
| 2813 | Milligam | - . . do .......... | S. L. Kostoryr ........... | Ind... | 1 | 0 |
| 2815 | Minden | High School | Anson H.Bigelow...... | Dept... | 1 | 2 |
| 2816 | Nelson.... |  | Hattio Belle Swoezey .. | Ind... | 1 | 1 |
| 2817 | Nemaha. | do | Will L. Davenport ..... | Dept... | 1 | 0 |
| 2818 | Newpert. | ....do. | Hugh Miller ............ | Ind... | 1 | d |
| 2819 | Niobrara. | ... do | D. D. Feldman ........... | Ind... | 1 | 0 |
| 28201 | Norfolk.... | ....do | W.J.Dean .............. | Dept.. | 2 | 1 |
| 2822 | North Lond |  | J. F. Conver | Dept.. | 1 | , |
| 2823 | North Platte. | do | Walter Hirons .......... | Dept.. | 1 | 1 |
| 2824 | Oakdalo. |  | Charle T. Lang ........... | Dept.. | 1 | 1 |
| 2825 2828 | Oakland | do | Chas. T. Lang <br> D. E. Reese | Dept.. | 1 | 1 |
| 22828 | Odell Ohiowe |  | W. F. Hargrove |  | 1 | 0 |
| 2827 2828 | Ohiows Omalia | .....do | V.D. Zimmerman | Ind.... | 1 | 0 |
| 2828 2829 | Omaha. |  | Irwen Leviston. | Dept... | 9 | 23 |
| 2830 |  |  | C. L. Anderson .......... | Ind... | 1 | 1 |
| 2881 | Orleans |  | Geo. I. Kelley ............ | Dept.. | 1 | 2 |
| 2832 | Osceola | High School | Joseph Sparks <br> C. F. Lehr | $\begin{aligned} & \text { Ind.... } \\ & \text { Dept.. } \end{aligned}$ | $\frac{1}{2}$ | 1 |

* Statistics of 1894-95.

United S:ates for the schotastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the


United States for the scholastic year 1895－96－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total secondary students． |  | Coloredsecondarystudentsincludedin col－umns7 and 8. |  | Elemen－ papils， including all below grades． |  | Preparing for college． |  |  |  | Gradu－ ates in 1896. |  | $\begin{gathered} \text { College } \\ \text { prepara- } \\ \text { tory sta- } \\ \text { dents in } \\ \text { the class } \\ \text { that grad- } \\ \text { uated in } \\ 1896 . \end{gathered}$ |  |  |  |  |  |  |
|  |  | Clas－sicalcourse． | $\begin{gathered} \text { Scien- } \\ \text { sifie } \\ \text { tifurse. } \end{gathered}$ |  |  |  |  |  |  |  |  |  |  |
| 咅 |  |  |  |  |  | $\begin{aligned} & \text { © } \\ & \text { end } \end{aligned}$ |  | gig |  |  | 彩 <br> 嚚 |  |  |  |  |  |  | $\underset{\underset{\sim}{\omega}}{\stackrel{\oplus}{\omega}}$ |  |  |
| 7 | 8 | 9 | 10 |  |  | 11 | 12 | 13 | 114 | 15 | 16 | 171 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
|  |  |  |  |  |  |  | 10 |  |  |  | 0 |  |  |  |  |  | \＄12，000 | 2833 |
| 18 | 22 | 5 |  | 0 | 0 |  |  |  |  | 1 | 1 | 0 | 1 | ， |  | 150 | 8 8，000 | ${ }_{283}^{283}$ |
| 11 | 5 | 5 |  | $\stackrel{24}{0}$ | ${ }^{23}$ |  |  |  |  | ${ }_{2}$ | 5 |  |  | $\frac{1}{3}$ |  | 50 50 | 2， 2,000 | ${ }_{2836}^{2835}$ |
| 34 | 62 | 2 |  | 0 |  | 9 | 910 | 3 | 4 | 2 | 5 | 2 | 5 | 3 |  | 1，000 |  | 2837 |
| 29 |  |  |  | 0 |  |  |  | 1 |  | ． 2 | 5 | 1 | 2 | ， |  | 1， 30 | 25，000 | ${ }_{2838}^{2838}$ |
| 12 | 14 |  | 0 | 84 | 74 | 4 | 32 | 2 | 1 | ${ }^{2}$ | 2 | 3 | 2 | 3 |  | 100 | 5，${ }^{\text {5，}}$ ， 000 | ${ }_{2840}^{2839}$ |
|  |  | 66 | 0 | 0  <br> 0 45 <br> 0 0 |  | 4 | 10 | 1 | 0 | 1 | 0 | 1 | 0 |  |  | 0 40 50 | 3， 4,000 | － |
| 35 |  | ${ }^{66}$ | 0 | 0 |  |  |  |  |  | $\frac{4}{2}$ | 10 |  |  |  | 0 | 500 100 | 5，000 | ${ }_{2843}^{2842}$ |
| 13 |  | 20 | 0 | 0 |  | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 0 | 3 | 0 | 175 | ， 0 opo | 2844 |
|  |  |  | 0 | 0 | 0 |  |  |  |  | 0 | B |  |  |  |  | 32 | 6， 000 | ${ }_{2846}^{2845}$ |
| 30 |  | 23 | 0 | 0 | 0 | 0 |  |  |  | 3 | 4 | $\cdots$ | 4 | 3 |  | 0 | 3,000 | 2847 |
|  |  | 24 | 0 | 0 |  | 0 |  |  |  |  |  |  |  |  |  | 50 |  | ${ }_{2849}^{2818}$ |
| 15 |  | 21 | 0 | 12 | 137 | 37 | 0 | 2 | 0 2 | － | 0 1 |  | 0 1 | 2 <br> 2 | 0 | 160 38 | 2,500 15,000 | ${ }_{2850}^{2849}$ |
| 30 |  | 8 | 0 | 12 | $0{ }^{13}$ | 0 | 0  <br> 4 8 | ． 2 | 2 |  |  | ${ }_{2}^{2}$ | 1 | 2 | 0 | 38 150 | 15,000 8,000 | ${ }_{2851}^{2850}$ |
|  |  | 20 | 0 | 0 | 0 | 0 ．． |  |  |  |  |  |  |  |  |  | 50 | 10， 000 | ${ }^{2852}$ |
| ${ }_{3}^{32}$ |  | 50 | 0 | 0 | 0 | 0 －． |  |  |  | ． 5 | 11 | ． 5 | 11. | ${ }_{4}^{4}$ |  | ${ }_{200}^{200}$ | 14， 000 | ${ }_{2854}^{2853}$ |
|  |  |  | 0 | 0 | 0 | ${ }_{0}^{0} 11$ | ${ }_{11}^{0}{ }^{0} 20$ |  | － |  |  |  |  |  |  |  | 55，${ }^{\text {5，}} 000$ | ${ }_{2855}^{2854}$ |
| 14 |  | 4 | 0 | 0 | 0 |  |  | 29 | 44 | 0 | 3 | 0 | 3 | 4 |  | 100 | 14， 200 | ${ }_{2857}^{2856}$ |
|  |  | 22 40 | 0 | 65 | 57 | 77 | 20 |  | 0 |  |  |  | 0 | ${ }_{3}$ |  | ${ }_{60}^{90}$ |  | ${ }_{2858}^{2857}$ |
| 11 |  | 9 | 0 | 0 | 0 |  |  |  |  |  |  | ．．．． | ． |  |  | 100 | 2， 500 | 2859 |
| ， |  | 20 | 0 | 0 | 0 | 0 ． |  |  |  | － 5 |  | 4 | 1 | 3 |  | 182 | 20，000 | 2860 |
|  |  |  | 0 |  | 0 |  | ${ }_{0}^{6}$ | 1 | 0 |  |  | ${ }_{0}^{4}$ | 1 |  |  | 50 320 | 5,000 55,000 | ${ }_{2862}^{2861}$ |
|  |  | 18 | 0 | ${ }_{0}$ | 0 |  | ${ }^{8} 88$ |  |  |  | 3 | ${ }_{3}$ |  | ${ }_{2}^{4}$ | 0 | 200 | 8，000 | ${ }_{2863}^{2883}$ |
|  |  | 30 | 0 | 0 | 0 | 18 | 18 |  |  | －${ }^{3}$ | 1 | 1 | 0 | ${ }^{4}$ |  | ${ }_{35}^{25}$ |  | ${ }_{2865}^{2884}$ |
|  | 1 |  | 0 |  |  |  | 1 | 2 | 0 |  | $\frac{1}{5}$ | 1 | $\frac{1}{2}$ |  | $\cdots$ | 123 | 11，${ }^{\text {5，000 }}$ | ${ }_{2866}^{2865}$ |
|  | 9 | 13 | 0 | 4 | 48 | 35 |  |  |  |  | ， |  |  |  |  | 25 |  | ${ }^{2867}$ |
|  | $\stackrel{4}{15}$ | ${ }_{35}^{5}$ | 0 | 0 | ${ }^{46}$ | ${ }_{5}$ | 0 | 0 | ${ }^{0}$ |  | 0 | $\cdots$ |  |  |  | 300 |  | 2889 |
|  | 4 |  | 0 | 0 | 73 |  | 0 | 0 | 2 | 2 | 0 | 0 | 0 | ${ }_{2}^{4}$ | $\cdots$ | 500 | 10，800 | 2870 |
|  | 4 | ${ }_{6}{ }^{9}$ | 0 | 0 | ${ }^{5}$ | 51 |  |  |  |  | 0 |  |  |  |  |  |  | ${ }_{2872}^{2871}$ |
|  | 4 | ${ }_{62} 69$ | 0 |  |  | 0 |  |  |  | 5 | 5 7 | ${ }^{2}$ |  | ${ }^{4}$ | 4 |  | 31,000 20,000 | ${ }_{2877}^{2872}$ |
|  | 20 | 27 | 0 | 0 | 0 |  | 20.2 |  |  | ． 0 | ${ }^{6}$ | 0 | ${ }^{6}$ | 6 |  | $5{ }^{50}$ | 13， 000 | 2874 |
|  | ${ }_{24}^{26}$ | ${ }_{64}^{18}$ | 0 | 0 |  |  |  |  |  | ${ }^{8} 5$ |  | 5 | ${ }^{0}$ | －${ }^{8}$ | ${ }^{4} \ldots$ | 125 407 | ${ }^{4} 15,000$ | ${ }^{2875}$ |
|  | 30 | ${ }^{67}$ | － | － |  |  |  |  |  |  | 9 |  | 5 |  |  | 300 |  | 2877 |
|  | 12 | ${ }^{16}$ | 0 | 0 | 76 | 86 |  |  |  |  | 2 | 2 | ${ }^{2}$ | 2 |  | 220 | 5，000 | ${ }_{2878}^{2878}$ |
|  | ${ }_{9}^{10}$ | ${ }_{18}^{16}$ | 0 | 0 | 980 | ${ }_{0}^{88}$ | 2 |  |  | －． 2 | 7 | 5 | 12 | 2 ${ }^{3}$ |  | 124 | 6，000 | ${ }_{2880}^{2879}$ |
|  | 33 | 52 | 0 | 0 | 0 |  |  |  |  | 0 | 5 |  |  | 4 |  | 15 |  | 2881 |
|  | 12 | ${ }_{17}^{27}$ | 0 | 0 | ${ }_{68}$ | 71 | ．． |  |  | $\frac{1}{3}$ | 5 | 5 | ．．．．． | ．${ }^{2}$ |  | 40 150 | 2，853 | ${ }_{2883}^{2882}$ |
|  | ${ }_{8} 8$ | 11 | 0 | 0 | 0 | 0 |  |  |  | ${ }^{3}$ | ${ }^{1}$ | 1 |  |  |  | 200 | $\stackrel{\text { 2，} 200}{ }$ | ${ }_{2884}^{2883}$ |
|  | 11 | 19 | 0 | 0 | 0 | 0 |  |  |  | 4 | 1 | 1 |  |  |  | 40 | 2，500 | 2885 |
|  | 12 | 15 4 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  | 600 10 | 6,000 8,000 | ${ }_{2887}^{2888}$ |
|  | 63 | 75 |  | 0 | 0 | 0 | ${ }^{63}$ | 75 | 0 | 0 | 9 | 9 | 9 |  | － | 1，204 | 19，000 | ${ }^{2888}$ |
|  | 16 | 15 | 0 | 0 | 0 | 0 | 1 | 3 － |  |  | 7 | 7 | ${ }^{3}$ |  |  | 05 | 8，000 | 2888 |
|  | 10 | 28 | 0 | 0 | ${ }_{33}$ | 20 | 0 | $\because$ | 0. | 6 | ${ }^{8}$ | ${ }_{0}{ }^{2}$ |  | 2 | 2 | 125 | 8,500 20,000 | ${ }_{2891}^{2890}$ |
|  | ${ }_{23}^{20}$ | ${ }_{36}^{28}$ | 0 | 0 | 0 | 0 |  | ．．． 12 | 215 |  |  |  | 16 | 3 | 3 ．．． | 100 | 15， 000 | 382 |
|  | 23 12 | 36 12 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  | 103 | 13，300 | 2893 |
|  | 29 | 34 |  |  | 0 |  | $\cdots$ |  |  |  |  | 41 | $1) 2$ |  |  | 400 | 18，000 | $\left.\right\|_{2895} ^{2894}$ |

Table 33.-Statistics of public high schools in the


United States for the scholastic year 1895-96-Continued.


TABLE 33.-Statistics of public high schools in the


United States for the scholastic year 1895-96-Continued.


Table 33.—Statistics of public high schools in the

|  | State and post-oftice. | Name. | Principal. | Department or independent. | Instructors for secondary students. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | NEW JFiRSEY-cont'd. |  |  |  |  |  |
| 3012 | Somerville. | High S | J. S. Haynes | Dopt.. | 1 | 2 |
| 3013 | South Amboy | High | R. M. Fitch | Ind... | 1 | 2 |
| 3014 | South Orange | do | G.J. McAndrew, M. A., Ph. D . | Ind | 3 | 4 |
| 3015 | Summit. | do | E. Fred. Knapp ......... | Dept.- | 1 | 2 |
| 3016 | Tenafly | .do .......................... | Ralph S. Mangham | Ind... | 1 | 0 |
| 3017 | Toms Riv |  | F. A. North .-.... | Dept- | 1 | 0 |
| 3018 | Trenton |  | W. H. Brace, Ph. | Dept.- | 2 | 10 |
| 3019 | Trenton | Model School of State | James M. Green. | Ind... | 10 | 9 |
| 3020 | Union | Conn Farms High School | Ambrose B. Kline. | Ind | 1 | 0 |
| 3021 | Vineland | Approved High School.... | H.J. Wightman... | Dept.- | 2 | 3 |
| 3022 | Washington | High School .......... | Jas. H. Griffith. | Dept.. | 3 | 0 |
| 3023 | Weehauken. | Union High School | Nathan C. Billings | Dept. - | 5 | 4 |
| 3024 | Westfield..... | High School ..... | E. Francis. ......... | Ind... | 0 | 4 |
| 3025 | West Holoken | do | Mr. Robert Waters..... | Dept.- | 2 1 | $\frac{1}{3}$ |
| 3026 | West Orange |  | Edward Davidson McCollom. |  | 1 | 3 |
| 3027 | Woodbridg | do | John H. Love. . . . . . | Ind | 1 |  |
| 3028 3029 | Woodbury | do ......................... | Wiliam Milligan. | Ind. | 1 | ${ }_{1}^{2}$ |
| $\begin{aligned} & 3029 \\ & \text { 熤 } \end{aligned}$ | Woodstown.... NEW MEXICO. | .....do .......................... | Emily S. Sayre.......... | Dept.- | 0 |  |
| 3030 | Albuquerque | High Schoo | Martha M. Winslow.... | Dept.- | 2 | 3 |
| 3031 | Deming-............. | -1. ${ }^{\text {a }}$ | J. H. Hatton............. | Dept.. | 1 | 1 |
| 3032 | East Las Veg |  | J. A. Wood. | Dept.. | 1 | 2 |
| 3033 | Eddy ........ |  | G. W. Gilmore | Dept.. | 1 | 1 |
| 3034 | Raton. |  | W. W. Storms | Dept.. | 1 | 1 |
| 3035 | Santa Fe............. | Public High School | H. H. Brodie............. | Dept.. | 1 | 0 |
| 3036 | Socorro | High School. .................. | U. Francis Duff. ........ | Dept.. | 1. | 0 |
| \% | NEW YORK. |  |  |  |  |  |
| 3037 | Addison. | Free Academy and Union School. | C. B. Miller, A. M........ | Ind ... | 1 | 4 |
| 3038 | Afton. | Union School and Academy- | W. D. Morse. . | Ind | 1 | 4 |
| 3039 | Akron................ | High School .................. | Orson Warren | Ind... | 1 |  |
| 3040 | Albany ............... | .....do ......................... | Oscar D. Robinson, A. M., Ph. D. | Dept.. | 11 | 15 |
| 3041 | Albion. | ...do ......................... | Charles A. Hamilton, A. M. | Dept. | 1 | 4 |
| 3042 | Alexander.......... | Academy department of Union School. | J. Kowerth. ............. | Ind. | 1 | 1 |
| 3043 | Allegany | Union School ................. | Edgar W. Cartis........ | Dept.. | 1 | 0 |
| 3044 | Altmar.... | - $\sim^{\text {a }}$ do ${ }^{\text {do }}$ | Huse T. Skerritt ........ | Ind... | 1 | 0 |
| 3045 | Amsterdam. | High School | W. W. Grant ............. | Dept.. | 2 | $\stackrel{2}{2}$ |
| 3946 3047 | Andes | Union School and Academy- | George Nnwton Sleight. | Ind... | 1 | 2 |
| 3048 | Angols... | ....do ... | Charles W. Vandegrift, | Ind. | 1 | 2 |
| 3049 | Argyle | High Sc | A. M. |  |  |  |
| 3050 | Atwica. | H...do ... | tod win C. Hogmire | Ind | 1 | ${ }_{3}$ |
| 3051 | Auburn. | Academic High School..... | Floyd J. Bartlett........ | Dept.. | 6 | 6 |
| 3052 | Au Sable Forks. | Union Freo School............ | Herbert S. McCasland. | Ind... | 1 | 0 |
| 3053 | Avocs. | Union School | C. E. Button.... | Ind | 1 | 1 |
| 3054 3055 | Avon... | High School | R.J. Wallace | Ind | 2 | , |
| 3056 | Bajubrtage | Union School | W. W. Crumb A. |  | 1 | 3 |
| 3057 | Baldwinsville ...... | Free Academy and Union | Albert W. Emerson, | Dept.. | 1 | 3 |
| 3058 | Ballston Spa ........ | Union School, Academic, | M. S., Ph. M. <br> H. H. Southwick | Dept.. | 1 | 2 |
| 2059 | Batavia | department. | John Kennedy .......... | Dopt.. | 1 |  |

United States for the scho7astic year 1895-96-Continued.

| Students. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Volumes in library. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { Total } \\ & \text { secondary } \\ & \text { students. } \end{aligned}$ | Colored <br> secondary <br> students <br> included <br> incol. <br> in col- <br> umys <br> 7 and 8. |  | Elomen-tarypapils,includingall belowsecondarygrades. |  |  | Preparing for college. |  |  |  | $\begin{gathered} \text { Gradu- } \\ \text { atos in } \\ 1896 . \end{gathered}$ |  | College preparatory stuidents in the class uated in 1896. |  |  |  |  |  |  |
|  |  |  | $\begin{gathered} \text { Clas. } \\ \text { sical } \\ \text { courso } \end{gathered}$ |  | $\begin{aligned} & \text { Scien- } \\ & \text { tific } \\ & \text { course } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |
|  | $\stackrel{\circ}{9}$ |  |  |  |  |  | 俞 |  |  |  |  |  | ※ |  |  |  |  |  |  |  |  |
| 7 | 8 | 10 |  | 11 | 121 | 131 | 14 | 151 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
| 22 | 41 | - 1 |  | $a$ | 0 |  |  |  |  | 2 | 8 |  |  | 3 |  | 300 | \$20,000 | 3012 |
| 22 | 40 | 1 | 2 | 271 | 275 |  |  |  |  | 0 | 3 |  |  | 3 |  | 1,027 |  | 3013 3014 |
| 41 | 72 | 1. |  | 0 | 0 | 7 | 6 | 21 | 31 | 5 | 6 | 5 | 3 | 4 |  |  | 30, 000 | 3014 |
| 25 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 4 |  |  | 45,000 | 3015 |
| $\stackrel{5}{23}$ | ${ }_{18}^{2}$ | 1 |  | ${ }^{76}$ | 84 | 0 | 0 | 0 |  | 3 | 7 |  |  | 4 |  | 369 1,000 |  | ${ }^{3016}$ |
| 41 | 252 | 9 | 9 | 0 | 0 |  |  | 4 | 1 | 18 |  |  | 0 | 4 | 30 | ${ }_{396}$ | 31,406 | 3018 |
| 71 | 78 | 0 | 0 | 204 | 240 | 23 | 7 | 30 | 11 | 19 | 20 | 15 | 4 | 4 |  | 3,000 | 400, 000 | 3019 |
| $\begin{array}{r}3 \\ 4 \\ 4 \\ \hline\end{array}$ | $\stackrel{2}{6}$ | 0 |  | 0 | 0 |  |  |  |  |  | 0 | 0 4 4 | - | , |  | 300 1.500 | 3,500 | ${ }_{3021}^{3020}$ |
| 32 | 62 | 0 | 0 | ${ }_{0}$ | ${ }^{-}$ | 0 | 0 | 0 | 0 | 10 | 8 | 4 | ${ }_{0}$ | 3 | 0 | 1,500 | 30, 000 | ${ }_{3022}$ |
| 85 | 110 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  | 1,015 |  | 3023 |
| 30 12 | 50 22 | ${ }^{3}$ | $\stackrel{4}{0}$ | 70 0 | ${ }_{0}^{90}$ | ) | ${ }_{0}^{2}$ | 0 0 | $\stackrel{\square}{2}$ | 1 | 12 9 9 | 0 | ${ }_{0}^{2}$ | ${ }_{2}^{4}$ |  | , 500 1,260 | 40, 000 | 3324 3025 3025 |
|  | 20 | 0 | 1 | 172 | 200 | 1 | 0 | 2 | 10 | 1 | 3 | 0 | 0 | 4 | 0 | 1,260 800 | 37,000 | ${ }_{3026}$ |
| 12 | 17 | 0 | 0 | 238 | 138 | 8 | 0 | 0 | 0 | 2 | 7 | 0 | 0 | 3 |  | 225 | 0,000 | 3027 |
| $\begin{aligned} & 30 \\ & 30 \end{aligned}$ | 51 58 | ${ }_{0}^{0}$ | 0 | 0 | ${ }_{0}^{0}$ |  |  | - | 5 | $\bigcirc$ | 4 |  |  | $\frac{4}{2}$ |  |  | 14,000 3,000 | ${ }_{3028}^{3028}$ |
| 20 | 43 | 0 |  | 0 | 0 | 0 | 0 |  |  |  | 4 | 0 | 1 | 4 |  |  | 50,000 | 3030 |
| 17 | 15. | 0 | 0 | - | 0 |  |  |  |  | 8 | 0 |  |  | 3 |  | 150 | 15, 000 | 3031 |
| 14 | ${ }_{15}^{16}$ | 1 | 0 | $\stackrel{0}{0}$ | 0 |  |  |  |  |  | 2 0 | 3 0 | 1 | 3 |  | 25 200 | 14,000 13,940 |  |
| 4 | ${ }_{25}^{15}$ | 0 | 0 | 0 | 0 |  | 0 | 1 | 1 |  | 2 | ... | 0 | 3 |  | 25 | 30,000 | 3034 |
| 12 | 17 | 0 | 1 | 0 | a |  |  |  |  |  | 0 | 0 | 0 | 4 | 0 | 30 | 2,500 | 3035 |
| 10 | 13 | $\theta$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |  | 0 | 25 | ${ }^{3038}$ |
| 43 | 63 | 0 | 1 | 192 | 312 | 2 | 8 |  |  | 7 | 10 | 3 | © | 4 | 0 | 2, 203 |  | 3037 |
| 39 | ${ }^{44}$ | 0 | 0 |  |  | 8.2 | 0 |  |  | 0 | 0 | 0 | 0 |  |  | 750 | 4,500 | ${ }^{3038}$ |
| 183 | 19 489 | $\stackrel{0}{2}$ | 3. | 185 0 | 172 0 | $0{ }^{2} \times 10$ | ${ }_{489}$ |  |  | ${ }_{39}^{11}$ | ${ }_{6}^{9}$ | 0 19 | 68 | 3 |  | 751 | 14,000 250,000 | ${ }^{3039}$ |
| 50 | 58 | 1 | 0 | 0 |  | 0 0 10 | 6 | 6 |  |  | 4.0 | 3 | 7 | 4 |  | 300 | 30, 000 | 30.1 |
| 10 | 19 | 0 | 0 | 35 |  | 35 | 0 | 0 | 1.0 | - 2 | 26 | 6 | 6 | 4 |  | 1,200 | 10,000 | 3012 |
| 10 | 20 | 0 | 0 |  |  | 0 0 | 0 | 0 | 0 |  |  | - 0 | 0 | - 3 | 0 | 625 | 9,338 | 3043 |
| 7 | 7 ${ }^{9}$ | 0 | 0 |  |  | 61 <br> 0 <br> 0 <br> 10 | - ${ }^{0}$ | 0 0 | $\begin{array}{lll}0 \\ 0 & 0 \\ 0\end{array}$ | 0 | 0 | 0 | 0 0 | 4 <br> 4 |  | 400 300 | 3,503 10,000 | ${ }_{3045}^{3044}$ |
| 25 | ${ }^{22}$ | - | 0 | ${ }_{87} 3$ |  | 376 | $6{ }^{6}$ | $1{ }^{1}$ | 0 | 0 | $4{ }^{0}$ | 0 | 0 | - 4 | 0 | 552 | 10,600 2, | 3046 |
| ${ }_{25}^{11}$ | 18 <br> 5 | 0 | 0 |  |  | 71 |  |  |  |  |  | 5 | 0 | 4 | 0 | 300 305 | 7, 415 | 3047 |
| 25 | ${ }^{35}$ |  |  |  |  |  |  |  |  |  | $3{ }^{3}$ | 4 |  |  |  | 375 |  | $30 \leq 8$ |
|  | - 20 | 0 |  | 10 | ${ }^{65}$ | 65. | 43 | , |  |  | $2{ }^{2}$ | 3 | 0 |  |  | 250 |  | 3049 |
|  | ${ }^{750}$ | 0 | $\stackrel{0}{2}$ |  |  | 0 <br> 0 | 9 <br> 5 | 45 <br> 20 | 117 | 75 | 510 | 0 | 7 | 4 | 50 | 1,754 | 38,000 | 33050 |
| 155 | ${ }^{200} 7$ | 0 | ${ }_{0}^{2}$ | 100 |  | ${ }_{25}{ }^{2} 45$ | 0 | 0 | $0{ }^{2}$ |  |  |  |  |  | 150 | 875 | 120,000 2,200 |  |
| 8 | 14 | 0 | 0 | 100 |  | 78. | 0 | 0 | 0 | 0 | 3 | 3 | 0 | - |  | 400 | 7,000 | 3053 |
|  | - | 0 | $\bigcirc$ | 100 183 |  | 25 ${ }^{2}$ |  |  |  | 5 |  | 6 5 | 2 <br> 1 | 4 |  | 1,250 1,400 | 8, 000 | ${ }^{3054}$ |
| 97 | ${ }_{95}^{24}$ | 0 | 0 | 185 |  | 54 |  |  |  | 7 | 0 5 <br> 4 3 | 5 3 | 1 | 4 | $\cdots$ |  | - 24,000 | 3055 3056 |
| 57 | 78 | 1 | 1 |  | 0 | 2 | 2 | 210 | - | 9 10 | 0 | 0 | 5 |  |  | $965$ | 46, 000 | ${ }_{3057}$ |
| 20 | - 45 | 0 | 0 | 0 | 0 | 0 | 00 | 0 0 | 0.2 | 2.3 | 3 | 6 | 2 | 4 | 0 | 293 | 22,000 | 3058 |
| 96 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 11, 000 | 70,000 | 8059 |

Table 33.-Statistics of public high schools in the

|  | State and post-office. | Name. | Principal. | Department or independent. | Instructors for secondary students. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 2 | 3 | 4 | 5 | 6 |
|  | NEW YORK-cont'd. |  |  |  |  |  |
| 3060 | Bath-on-Hudson | Union School .......-.........- | William H. Good . . . . . . |  | 1 | 3 |
| 3061 | Bay Shore ............ | Union Academic department. | Claude A. Duvall. ....... | Ind... | 1 | 5 |
| 3062 | Belfast | High School ..................... | Fred W. Gra | Ind... | 1 | 2 |
| 3063 | Belmont | Academic department of Union School.* | Jay Crissey ............... | Ind... | 1 | 2 |
| 3064 | Bergen | Union School ................... | H. D. Bartlett | Ind... | 1 | 2 |
| 3065 |  | High School | George D. Sykes ....... |  | 1 | 1 |
| 3066 | Boonville............ | Union School, Academic, department. | C. H. Warfield, A. M.... | Ind... | 2 | 3 |
| 3067 | Brasher Falls......... | Academic department of Brasher and Stockholm Union School.* | Wm. H. Adams........... | Ind... | 1 | 2 |
| 3068 | Brewster | Union School ................... | Henry S. Purdy . . . . . . . | Ind... | 1 | 1 |
| 3069 | Bridgewat |  | Stanard D. Butler ....... | Ind... | 1 | 1 |
| 3070 | Brocton.... | Academy and Union School. | John Niles Gillies...... |  | 2 | 0 |
| 3071 | Brookfield | Union School and Academy . | O. S. Rogers | Dept.. | 0 | 3 |
| 3072 3073 | Brooklyn | Boys' High School. ........... | John Mick]eborough... | Dept.. | 37 | 0 |
| 3073 | - ...do | Girls' High School. | Calvin Patterson........ | Dept.. | 4 | 70 |
| 3074 | Buffalo | High School ... | Frederick A. Vogt | Dept.. | 10 | 47 |
| 3075 | Cambridg | Union School | Frnest E. Smith. | Ind... | 1 | 2 |
| 3076 | Camden. | High School. | D. D. Van Allen, M. A.. | Dept.. | 2 | I |
| 3077 | Campbell | Union School | Mr. F. Wilcox........... | Ind... | 1 | 1 |
| 3078 | Canajoharie | High School | Charles M. Bean. | Dept... | 2 | 2 |
| 3079 | Canandaigua | -...do ........ | J. Carlton Norris......... | Dept.. | 3 | 7 |
| 3080 | Canaseraga. | Union School | Henry Emerson Adams. | Ind... | 1 | 1 |
| 3081 | Canastota | High School.. | Groo. H, Ottaway .-...... | Dept.. | 1 | 4 |
| 3082 | Candor. | Free Academy | James W. Alexander... | Ind ... | 0 | 4 |
| 3083 | Canton. | Union School**................. | Arthur E. Chase......... | Ind... | 1 | 3 |
| 3084 | Carthage | High School. | M. F. Perry ................ | Dept.. | 1 | 3 |
| 3085 | Castile. | Union School |  | Ind... | 1 | 2 |
| 3086 | Catskill | Free Acadomy | Julia N, Bates............ | Dept.. | 2 | 5 |
| 3087 | Cattaraugus .. | Academy .-..-................... | F. I. W althart ........... | Ind... | 1 | 3 |
| 3088 | Central Squar | High School. | C. Orrin Du Bois......... | Ind... | 1 | 1 |
| 3089 | Charlotte............ | Union School .-................ | Edward J. Manly........ | Ind... | 1 | 1 |
| 3090 | Chateaugay | Union School and Academy. | William J. Deans....... | Ind... | 1 | 2 3 |
| 3092 | Chester................... | Union School* | F. M. Wilson ............ | Dept.. | 1 | 2 |
| 3093 | Chittenango .......... | Yates Union School and Academy. | William Marvin Foot... | Ind... | 0 | 5 |
| 3094 | Charehville.......... | Union School .................. | N. Lee. .-.................. |  | 1 | 1 |
| 3095 | Clarence.............. | Parker Union School | Geo. A. Bolles, A. B., B. Pd., A. M. | Ind... | 1 | 4 |
| 3096 | Clayton | Union School | Charleg A. Shaver ....... |  | 1 | 3 |
| 3097 | Clayville.............. | .... do .-........................ | Everett E. Edgerton. | Ind.... | 0 | 3 |
| 3098 | Clinton ................ | Union school, Academic department. | Percy L. Wight ......... | Ind... | 2 | 3 |
| 3099 | Clyde.... | Figh School .................... | Chas. E. Allen. | Dept.. | 1 | 2 |
| 3100 | Cobleskill ............ |  | W. H. Rysn, Ph. B....... | Ind... | 1 | 3 |
| 3101 | Cohoes...... | Egbert's High School........ | Geo. M. Strout. .......... | Dept.-. | 1 | 3 |
| 3102 | Cold Spring. | Holdane Union School, Acsdemic department. | Otis Montrose............ | Dept. | 1 | 1 |
| 3108 | Cooperstown. | High School.................... | W. D. Johnson |  | 1 | 4 |
| 3104 | Copentager | Union School .......... | T. A. Walker............ | Ind.... | 1 | 1 |
| 8106 | Corinth. | Union School, Academic department. | S. M. Mac Arthur ....... | Ind.... | 1 | 4 |
| 8107 8108 | Corning ---......... | Free Academy .................. | Loigh R, Hunt | Dept.. | 1 | 4 |
| 8108 | Cornvall-on-Eiudson | Union Pree School and | Lewis N. Crane, A. B... | Ind... | 1 | 2 |
| 3109 | Cortland |  |  |  | 1 |  |
| 8110 | Cosancle | High School ................... | George William F'air. grieve, A. M. | Dept.-- | 1 | 1 |

*Statistics of 1894-95.

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the


United States foy the scholastic year 1895-96-Continued.


Table 33.-Statistics of publio high schools in the


* Statistice of 1894-95.

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high sehools in the

-Enited States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the


United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of publio high sehoots in the


United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the


United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high sehools in the

| S | State and post-office. | Name. | Principal. | Department or independent. | Ins or seco stu $\qquad$ $\begin{gathered} \text { ※ } \\ \text { 密 } \end{gathered}$ | uct- <br> for <br> dary <br> nts. <br>  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | OHIO-continued. |  |  |  |  |  |
| 3430 | Ashtabula (Station A). | Harbor High School ........ | W. H. King. | Dept.- | 2 | 2 |
| 3431 | Ashville | Harrison Township High Scbool. | C. B. Shook | Dept.. | 1 | 2 |
| 3432 | Athens | High School . | Miss Kate Boy | Dept..- | 1 | 2 |
| 3433 | Attica. | ....do . | R.J. Kiefer ... | Dept.- | 2 | 0 |
| 3434 | Bainbridge | do.* | S. K. Smith | Ind... | 1 | 0 |
| 3435 | Baltimore. | .do | E. C. Hedrick | Dept.. | 1 | 0 |
| 3436 | Barberton | -..do | G. M. Korns . | Dept.- | 2 | 0 |
| 3437 | Barnesville. | High School | W.C. Bowers | Dept.. | 2 | 1 |
| 3438 | Bartlett. | Wesley Township High School. | A. W. Shinn. | Ind... | 1 | 0 |
| 3439 | Basil | High School.... . . . . . . . . . . | G. M. Morris | Dept.- | 2 | 2 |
| 3440 | Batesville | - - . do ... | H. K. Hastings | Dept.- | 1 | 0 |
| 3441 | Beach City | do | M. C. Heminger | Ind... | 1 | 1 |
| 3442 | Beaverdam | do | Amos Henry ... | Ind... | 1 | 0 |
| 3443 | Bedford | . do | J. L. Wright | Dept.. | 1 | 5 |
| 3444 | Bellaire. | . do | Alice Gunningham. | Dept.. | 1 | 3 |
| 3445 | Bellbrook | SugarcreekTownship High School. | S. O. Hale............ | Ind... | 1 | 1 |
| 3446 | Belle Center | High School .................... | D.O. Dean | Ind... | 1 | 4 |
| 3447 | Bellefontaine | -...do do .... | Henry A. Cassidy | Dept.. | 1 | 3 |
| 3448 | Bellvillo.... | do | W.S. Lynch.......... | Dept.- | 2 | 0 |
| 3449 | Bellerue | do | F. C. Bates. | Dept.. | 2 | 2 |
| 3450 | Belmont |  | S. C. Murphy | Ind... | 1 | 0 |
| -3451 | Belpre |  | E. K. Barnes. | Iept.. | 0 | 2 |
| 3452 | Berea. | do | E. E. Rayman | Dept.. | 1 | 2 |
| 3453 | Berlin | … do .-...-.... | E. A. Richardson | Ind... | 1 | 0 |
| 3454 | Berne. | Carlisle Special High School | C. R. Lowe..... | Ind.... | 1 | 0 |
| 3455 | Beverly.... | Highi School................... | J. F. Wagner | Dept.. | 0 | 4 |
| 3456 | Bladensburg. | ....do ..... | J. H. Dull... | Ind... | 0 | 2 |
| 3457 | Blanchester. | do | J. L. Car wallader | Dept.. | 1 | 2 |
| 3458 | Bloomingburg | do | T. Franklin Johnson | Ind..- | 1 | 0 |
| 3459 | Bloomville......... | =- do.* | O. J. Cory ............. | Dept.. | 1 | 0 |
| 3460 | Blue Croek | Jefferson Township High School. | H. S. Stevenson, supt. | Ind... | 1 | 0 |
| 3461 | Bluffton | High School................... | A. B. Kibler .......... |  | 2 | 0 |
| 3462 | Bolivar -.... | - ...do ............................... | L. G. Kıhn | Dept.. | 1 | 1 |
| 3463 | Bourneville | Township High School, No. 1 | F. E. C. Kirkendall . | Ind... | 1 | 0 |
| 3464 | Bowerston... | High School ................... | A. B. Wingate...... | Ind... | 1 | 0 |
| 3465 3466 | Bowersvílle... Bowling Graen | .....do.* <br> High School | Mrank P. Sayrs.... | Ind...- | 1 | 0 |
| 3467 | Bradford ............. | High School | M. L. Maier. . . . | Dept.. | 2 | 0 |
| 3468 | Bradner ............... | -..do ......................... | F. H. Bowers | Ind... | 1 | 0 |
| 3469 3470 | Brandt .... | Bethel Township High School. <br> Townght Hich School | J. E. Peterson.......... | Ind... | 2 | 0 1 |
| 3470 3471 | Brecksvillo | Township High School...... | J. F. Smith | Ind ... | 1 | 1 |
| 3472 | Brooklyn |  | Chas. M. Knight....... | Ind ... | 1 | 1 |
| 3473 | Bryan ................ | do | May Trumper........... | Dept.. | 1 | 2 |
| 3474 | Bucyrus. | do | G. M. Plumb.. | Dept.. | 2 | 1 |
| 3475 | Burbank... | do | Ira E, Houseman | Dept.. | 1 | 1 |
| 3476 | Burlington |  | E. S. McCall. ... | Dept.. | 1 | 0 |
| $3477$ | Burton |  | Cora McCallum . . . | Ind... | 1 | 1 |
| $\begin{aligned} & 3478 \\ & 3479 \end{aligned}$ | Butler | do | John F. Kramer. | Ind .-. | 1 | 0 |
| 3479 3480 | Caldwell. | $10 . .$. | Msude Potts ..... | Dept.- | 1 | 1 |
| 3481 | Calerlonia.. | High Sichool. . . . . . . . . . . | C. H. Conaway | Dept... | 2 | 0 |
| 3482 | Cambridge. | High school | A. B. Hall | Dept.. | 3 | 0 |
| $\begin{aligned} & 3483 \\ & 3484 \end{aligned}$ | Camilen ...... |  | J. E. Randall | Dept. . | 2 | 1 |
| 3484 | Canal Dover. |  | Miss Anna M. Eaton. | Dopt.- | 1 | 2 |
| 3486 | , Canal Winchester |  | John H. Focht . . . . . | Dept.. | $\frac{1}{1}$ | 1 |

Enited States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the

|  | Stateand post-office. | Name. | Principal. | Department or independent. | Instructors for secondarystudents.$\qquad$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | oHio-continued. |  |  |  |  |  |
| 3487 | Canton | High School | John M. Sarver | Dept.- | ${ }_{2}^{4}$ |  |
| ${ }_{3489}^{3488}$ | Cardington | Union School | N. D. O. Wilson. | Dept.. | ${ }_{1}^{2}$ | 5 2 |
| 3490 | Carlisie | - High School | C. H . Young | Ind... | 1 | 0 |
| 3491 | Carroll |  | Clarence Baltha |  | 1 | 0 |
| 3492 | Carrollton |  | W. H. Ray ... | Dept.. | ${ }_{2}^{2}$ | 0 |
| 3493 3194 | Carthage | do | J. R. F. Fortney | Ind.... | 1 | 0 |
| 3495 | Castalia | do | E. S. Stephens. | Ind... | 1 | 1 |
| 3496 | Cedarville |  | John H. Sayrs. | Ind... | 1 | $\frac{1}{2}$ |
| 3497 3498 | Centerburg |  | R. W. Maharry. | Ind... | 1 | 1 |
| 3499 | Centerville | WashingtonTownshipHigh School. | D. W. Klepinger | Ind... | 1 | 1 |
| 3500 3501 | Chagrin Falls. | High School. | F. P. Shuma | Ind | 1 | ${ }_{2}^{2}$ |
| 3502 | Chardon..... | ......do | E. S. Tilton...... | Dept.. | 1 | 3 |
| 3503 | Chester Cross-Roads | Geauga Somina | C.F. Easton. |  |  | 0 |
| 3504 | Chester Hill. | Chesterfield High School | S. H. Mott. | Dept.- | ${ }^{2}$ | 0 |
| 3505 3506 | Chesterville Chillicothe | High School | John B. Gordon | Dept.. | 2 | 5 |
| 3507 | Christiansbarg | Addison High School | Fee Naylor | Ind... |  | 1 |
| 3508 3509 | Cincinnati. | Woghes High School. | E. W. Coy.... | Dept.- | 8 | 11 |
| ${ }_{3510}^{3509}$ | Circlevilio. | Everts High School... | Geo. Wh. Harper | Dept.. | 2 | $\stackrel{2}{2}$ |
| 3511 | Clarington | High School. | Chas. Troy- | Dept.. | 3 | 1 |
| ${ }_{3513}^{3512}$ | Clarksburg | Deer Creek High Sohoo | J. W. Reynolds. | Ind |  | 0 |
| 3514 | Cleveland. | Central High Schooi. | Edward L. Harrie | Dept.. | 20 | 31 |
| 3515 | do | South High School. | G. A. Ruetenik. | Dept.. |  | 8 |
| 3517 |  | West High Sch | Theo. H. Johnst | Dept.. | 1 |  |
| 3518 | Clyde.. | ....do .. | A. H . Wieks. | Dept. | 2 | 1 |
| 3519 | Coalton. | do | W. T. Morgan | Dept.. | 1 | ${ }^{6}$ |
| 3521 | College Cor | Union Sch | W.G. Smith |  | 1 |  |
| 3522 | Columbiana | ...do ..... | Linda L. Snyder | Dept.. | 1 |  |
| 3523 | Columbus | Contral High School * | Abram Brown | Dept.. |  | 15 |
| ${ }_{3525}^{3524}$ | Columbus Grove | North High School | Chas. D. Evere | Dept.. | 8 | 10 |
| ${ }^{3528}$ | Congress | ....do .... | S.M. Ludwiok | Ind... | 1 | 0 |
| -3527 | Connearat. <br> Conover .. | Lena and Conover High | $\xrightarrow{\text { Lizzie E. Morrow }}$ | Dept.. <br> Ind. | 1 | ${ }_{0}^{2}$ |
| 3529 | Continental | School. <br> High School | L. E. Hington | Ind. | 1 |  |
| 3530 | Convoy. | do.* | Perry Fostnaught | Dept.. |  | 1 |
| 33532 | Corning |  | G. W. De Long | Dept.. | ${ }_{1}^{2}$ | 1 |
| ${ }_{3533}$ | Coshocton | do | D. F. Fenton. | Dept... | 3 | 1 |
| 3534 | Corington | do | Lee A. Dollinger | Dept. | 2 | 1 |
| ${ }_{3536}^{3535}$ | Crawtis College Crestline | Crawfis College | B. J. Beach. | Ind... | ${ }_{3}^{0}$ | 1 |
| 8537 | Creston. | -..do ..... | J. L. Raring. | Dept.: | 1 | 1 |
| ${ }_{3539}^{3538}$ | Cridersvile | do | G. E. Kelly . | Ind. | 1 | 0 |
| 3540 | Cumberland |  | Arthur Raynolds | Dept.. | ${ }_{2}^{2}$ | 0 |
| 3541 | Dalurn |  | L. W. Kimber | Ind... | 1 | 0 |
| 3543 | ${ }^{\text {Danv }}$ Dayto | Union Sohool | Frank H. Roberte | Dept.- | 1 | 0 |
|  | Daverto | High School* | Charles B. Stiver | Dept. | 15 | 7 |
| 3545 | 6 Deflatice |  | J. W. Haff | Dept.. | 1 |  |
| 3547 | 7 Delaware | Onion | C. J. Britton | Ind... | 1 | 2 |
|  |  | High Scho | Charion E. Copela |  |  |  |

" Statistics of 1804-95.

United States for the scholastic year 1895-96-Continued.



United States for the scholastic year 1895－96－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Volumes in Hbrary. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total secondary students． |  | Coloredsecondarystadentsincludedin col．umns7 and 8. |  | Elemen． tary pupis， all below secondary grades． |  | Preparing for college． |  |  |  | Gradu．ates in 1896. |  | College <br> prepara－ <br> troy stur－ <br> rents in <br> the class <br> that grad－ <br> uated in <br> 1896. |  |  |  |  |  |  |  |
|  |  | Clas－ courso． | $\begin{aligned} & \text { Scien- } \\ & \text { tifife } \\ & \text { coarse. } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |
| ※ٌ̈ |  |  |  |  |  | 鳥 |  | $\begin{aligned} & \text { 家 } \\ & \text { 酎 } \end{aligned}$ | $\begin{gathered} \text { di } \\ \text { did } \\ \text { di } \\ \text { an } \end{gathered}$ | 品 |  |  |  |  |  |  |  |  |  | 运 |  |
| \％ | 8 | 9 | 10 |  |  | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 81 | 19 | 20.1 | 21 | 22 | 23 | 24 |  |
| 30 |  | 3 |  |  | － | 2 | 0 |  |  |  |  |  | 2 | 1. |  |  | 100 | \＄8，700 | 3 3048 |
| 26 |  | 41. | 0 | 0 | 0 |  |  |  |  | 3 |  |  |  | ．．．．． | 3 |  | 800 |  | ${ }^{3549}$ |
| 21 14 |  | 16 | 0 | 15 | ${ }^{153}$ |  |  | 1 | 0 | 5 |  |  | 1 | 0 | 4 |  | 75 100 | 25,000 2， 500 | ${ }^{3550}$ |
| 5 |  | 15 | 0 |  |  | $\cdots$ |  |  |  | ${ }_{0}$ |  | 3 | 0 | i． | ${ }_{3}{ }^{3}$ |  |  | 10，000 | ${ }^{3552}$ |
| 8 |  | 15 | 0 | 0 | 20 | 2 |  |  |  |  |  |  |  |  |  |  |  | 1，000 | ${ }^{3553}$ |
| ${ }_{23}^{16}$ |  | ${ }_{30}^{17}$ | 0 | 0 |  | ${ }^{3}$ |  |  |  | 5 |  | 5 | 1 | 1 | 4 |  | 200 | 15， 000 | ${ }^{3554}$ |
| 20 |  | 18 | 0 |  | － 12 |  | 0 |  | 1 |  |  | ${ }_{3}$ | 2 | ${ }_{0}$ | 4 |  | 600 100 | 30， 000 | ${ }^{3555}$ |
| 20 | 0 | 36 |  | 0 2 | 82 |  | － 2 | 4 | 21 |  |  |  | 1 |  | 4 |  | 800 | ab， 0 | 3557 |
| ${ }_{29}^{18}$ | 8 | 30 <br> 42 | ？ | 2.4 |  | － |  |  |  |  |  | 6 | ${ }_{0}$ | 0 | 4 |  | 500 | 10,000 | ${ }^{3558}$ |
| 29 50 | ${ }_{0}$ | ${ }_{50}^{42}$ | 0 | 0 |  | $\stackrel{-1}{0}$ | 25 |  |  |  |  | 8 | 4 | 2 | 4 |  | 600 | 28,000 1,000 | 3559 3560 |
| 23 | 3 | ${ }_{28}^{28}$ | 0 |  | 0 |  |  |  |  |  | 8 | 2 |  |  | 4 |  | 50 | 13，000 | ${ }^{3561}$ |
| 18 | 8 | 18 | 0 |  | 48 | ${ }^{66}$ | 0 |  |  |  |  | 2 | 2 | 0 | 4 |  | 231 | 10，000 | ${ }^{3562}$ |
|  | $\frac{4}{7}$ | $\stackrel{4}{4}$ | ${ }_{0}^{0}$ |  | 63 | 48 |  |  |  |  | 2 | 0 <br> 4 | ${ }^{0}$ | $\stackrel{0}{0}$ | 4 |  | ${ }_{2} 9$ | 3，000 | ${ }^{3563}$ |
|  | 1 | 23 | － |  | 43 | 54 |  |  |  |  | 0 | ${ }_{0}$ | 0 | 0 | ${ }_{3}^{4}$ |  | 100 | 10，000 | ${ }_{3565}$ |
|  | 28 | ${ }^{30}$ | － |  | 0 |  | 4 | 2 |  |  | 2 | 8 | 1 | 2 | － |  | 100 | 25，000 | ${ }_{3566}$ |
|  | 74 | 153 | 0 |  | 02 | $\stackrel{0}{0}$ |  |  |  |  | 13 | 19 | 4 | 8 |  |  | 575 |  | ${ }^{3557}$ |
|  | 12 | ${ }^{12}$ | ${ }_{0}^{0}$ |  | 02 27 | ${ }_{25}^{75}$ |  |  |  |  |  | 3 |  |  | － 3 |  | 100 50 | 4，000 | ${ }^{3568}$ |
|  | 48 | 17 | ， |  | ， | 0 |  |  |  |  | 8 | 4 | 7 | 74 | 3 | 3 | 100 | 3，000 | ${ }^{3570}$ |
|  | 12 | 12 | 0 |  | 0 | 0 |  |  |  | 0 | 3 |  | 0 | 0 － | － 3 |  | 200 |  | 3571 |
|  | 15 | 13 | 0 |  | ${ }^{31}$ | 25 |  |  | 3 |  | 6 | 5 |  |  | ． 3 |  | 36 |  | ${ }^{3572}$ |
|  | $\stackrel{3}{3}$ | 128 | 0 |  | ${ }_{8}^{18}$ | 16 | 0 | － | 0 | 0 | ${ }^{0} 8$ | ${ }_{10}^{0}$ |  | 0 | － 4 |  | 75 600 | 3,000 15,000 | ${ }_{3574}^{3373}$ |
|  | 7 | 18 |  |  | 0 | － | － | 1 | 0 | 0 | 0 | 2 | 2 | 0 | $1{ }^{-1}$ | 3 | 0 | 9，000 | 3575 |
|  | 93 | ${ }_{12}^{122}$ | 0 |  | 0 | 0 |  |  |  |  | ， | 20 |  | 2 | － 4 |  | 425 | 6，000 | ${ }^{3576}$ |
|  | 19 | ${ }_{13}^{12}$ |  |  | 5 | 71 |  |  |  |  |  | 1 | 1 | 2 |  | 4 | 150 150 | 7，000 | ${ }^{3578}$ |
|  | 26 | 37 | ， |  | ， | ， |  |  |  |  | 5 | 10 |  |  |  |  | 350 | 10，300 | ${ }^{3379}$ |
|  | 41 | 25 | － |  |  | 0 | 0 | － | 0 | 0 | 3 |  | 2 | － |  |  | 500 | 3，000 | 3530 |
|  | 23 | ${ }^{25}$ | 0 |  | 10 | 117 | 2 | － |  |  | 2 |  | 20 |  |  |  | 400 | 25，000 | 3581 |
|  | 40 | ${ }_{9}^{66}$ | 0 | 1 | 0 | 0 | 6 3 | － |  |  | 2 |  | 50 | 0 | 0.4 | 4 | 487 |  | 3583 |
|  |  |  |  |  |  | 0 |  |  |  |  |  |  | 8 | i ${ }^{-1}$ | － 4 |  | 1，800 |  | ${ }^{3583}$ |
|  | 48 | ${ }_{52}$ | 0 | 0 | 82 | 62 |  |  |  | 0 | 2 |  | 4 | 1． | － 3 | 3 ． | 1，80 | 15，000 | 3585 |
|  | 7 20 20 | 10 22 | 0 | 0 | ${ }^{65}$ | ${ }^{87}$ | 0 |  | 0 | 0 | 0 |  | 0 | 0 | 0 | 4 | ＋50 | 12，000 | ${ }_{3588}^{3588}$ |
|  | 14 | ${ }_{22}^{22}$ | 0 | ： | ${ }_{6}$ | 8 | 8 |  |  | ．．． |  |  | 0  <br> 7 1 | ${ }^{2} 10$ | ${ }_{7}^{0}{ }^{7} 4$ |  |  |  | ${ }^{3388}$ |
|  | 78 | ${ }^{23}$ | 0 | － | 0 | 0 |  |  |  |  |  | 10 | 10 |  | ． 4 |  |  | 25， 000 | 35¢9 |
|  | 36 26 | ${ }^{23}$ | 0 |  | 40 | ${ }_{42}^{28}$ |  |  |  |  |  |  | ${ }_{8}^{0} 0$ | 0 | 4 | 4 | 150 |  | ${ }_{3591}^{3590}$ |
|  | 24 | ${ }^{52}$ | 0 | － | 8 | 14 |  | 5 |  |  |  |  | 28 | 0 3 |  |  | 2，000 | 5.000 | ${ }_{3592}$ |
|  | 56 | ${ }^{65}$ | 11 | 14 | 0 | ． |  | － | 0 | 0 | 0 | 13 | 3. | 0 | 0 － 4 | 4. | ${ }^{150}$ | 6，000 | 3593 |
|  | 15 | 21 10 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  | 150 | 10,000 4,500 | ${ }^{3594}$ |
|  | 27 | 1 | 0 | ， | 0 | 0 |  | 0 | 13 | 21 |  |  | 8 8 | 0 | 4 | 4 － | 2，400 | 20゙， 000 | ${ }^{3596}$ |
|  | 20 | － $\begin{aligned} & 10 \\ & 35\end{aligned}$ | 0 | 0 | 0 | 0 |  |  | 0 | － | 3 | 1 | 5.0 | 0 | 0 | ${ }_{3}^{3}$ | 300 | 6，000 | ${ }^{3597}$ |
|  | 28 | 27 | 0 | 0 | 0 | $\stackrel{0}{0}$ |  |  |  |  |  |  | 4 |  |  | 3 3 3 |  | 12,000 10,000 | ${ }^{35998}$ |
|  | 15 | 30 | 0 | 0 | 0 | 0 |  |  | 2 | 5 |  | 3 | $7{ }^{7}$ | 2 |  | 3 | ， 500 | 20， 000 | 3600 |
|  |  |  | 0 | 0 |  |  |  |  |  |  |  | 0 | 0 | 0 |  |  | 100 12 | 15， 450 | 3601 |
|  | 14 |  | 0 | 0 | 308 | 290 |  |  |  |  |  |  | 0 | 0 | 0 |  | 200 | 2， 35，000 | ${ }_{3603}^{3602}$ |
|  | 10 | 3.5 10 | 0 | 0 |  | 0 |  |  |  |  | 2 | 2 | 2 |  |  |  | 500 | 1，200 | 14 |
|  | 10 | 15 | 0 | 0 | 164 | 145 |  |  |  |  | 3 | 1 | 1 |  |  |  | 180 |  | 3605 3606 |
|  | ${ }_{32}^{13}$ | 17 51 |  |  | 77 |  |  | 0 |  |  |  |  |  |  |  | 3 | 20 | 12，000 | ${ }^{607}$ |

Table 33.-Statistics of public high schools in the


United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of publie ligh schools in the

*Statistice of 1894-95.

United States for the seholastic year 1895－96－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  |  | Length of course in years. |  | Volumes in library. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Totalsecondarystudents． |  | Coloredsecondarystudantsincludedin col－umns7 and 8. |  | $\begin{gathered} \text { Elemen- } \\ \text { tary } \\ \text { pupils, } \\ \text { including } \\ \text { all below } \\ \text { secondary } \\ \text { grades. } \end{gathered}$ |  |  | Preparing for college． |  |  | Gradu－ ates in 1896. |  | College <br> prepara－ <br> tory stu－ <br> dent in <br> the class <br> that grad－ <br> uated in <br> 1896． |  |  |  |  |  |  |
|  |  |  | $\begin{gathered} \text { Clas- } \\ \text { sical } \\ \text { course. } \end{gathered}$ |  |  | $\begin{gathered} \text { Scien- } \\ \text { tific } \\ \text { course. } \end{gathered}$ |  |  |  |  |  |  |  |  |  |  |
| 宝 |  |  |  |  |  | 官 |  |  |  |  |  |  |  |  |  |  |  | ※゙ँ |  |  |
| $\cdots$ | 8 | 9 | 10 | 11 |  | 12 | 131 | 1 | 516 | 18 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
| 21 | 10 | 0 |  | 0 | 0 | 0 | 1 | 0 | 20 | 1 | 0 | 1 | 0 | 4 |  | 10 | \＄3，500 | 3672 |
| 16 | 23 | 3 |  | 0 | 0 | 0 |  |  |  | 3 | 3 | 1 | 1 | 4 |  | 150 |  | 73 |
| ${ }_{32}^{18}$ | 19 | 9 | － | 0 | 5 | 49 | 8 | 5 |  | 4 | 0 | ${ }_{2}^{2}$ | 0 | 3 4 |  | 200 |  | ${ }^{3674}$ |
| ${ }_{11}^{32}$ |  | 14 | 0 | 0 | 50 | 49 | ${ }^{3}$ |  | 1 | 4 | 4 | 2 | 1 | 4 |  | ${ }_{20}^{90}$ | 10,000 <br> 7,000 | ${ }_{3676}^{367}$ |
| 10 |  |  |  | 0 | 0 | 0 | ， |  | 0 | 0 | 0 | 0 | 0 | 4 |  | 125 | 3， 500 | 3677 |
| 25 |  | 29 |  | 0 | 56 | 36 | 12 |  |  | 0 |  | 1 | 2 | 4 |  |  | 10，000 | ${ }^{3678}$ |
| 45 | 11. | 11 | 0 | 2 | 0 | － | － |  | 4 | 07 | 22 | 4 | 2 | 4 |  | 500 | 15， 000 | ${ }^{3679}$ |
| 25 |  | 34 | 0 | 1 | 0 | 0 46 |  |  |  |  |  |  |  | 4 |  | 700 | 30， 000 | ${ }^{3680}$ |
| 18 30 |  |  | 0 | 0 | 44 50 | 46 |  |  | 2 | －${ }_{0}$ | $\stackrel{9}{2}$ | 0 | 2 | ${ }_{4}^{4}$ | ．． | 75 |  | ${ }_{3682}^{3681}$ |
| 10 |  | 12 |  |  | 43 | 53 |  |  |  | 0 |  | 0 | 2 | ． 4 |  |  | 8,000 | 3683 |
| 24 |  | ${ }^{23}$ | 1 | 1 | 251 | 279 | 1 | 3 |  |  | ${ }_{3}^{4}$ | 1 | 3 | ${ }^{4}$ |  | 200 | 35， 000 | － $\begin{aligned} & 3684 \\ & 3685\end{aligned}$ |
| 13 |  | 8 | 0 | 0 |  |  | 0 |  |  |  | 3 | 0 | 0 | － 3 |  | 1 | 600 | 3685 |
|  |  | － | 0 | 0 | 19 | 20 |  |  |  |  |  |  |  |  |  | 111 |  | 3686 3687 |
|  | 4 | 31 | 0 | 0 | 0 |  | －$-\cdots$ |  |  |  | 14 | 1 | 8 | 5 |  | 1,000 450 | ${ }_{40,000}^{20,000}$ | 3687 <br> 3688 |
|  | 4 | 64 2 | 0 | 0 | 110 | 117 | 0 ${ }^{2}$ | ${ }_{2}^{4}$ |  |  |  | 4 | 5 | 5．${ }_{3}^{4}$ |  |  | 5，000 |  |
|  | 9 | 58 | ， | 2 | 0 | 0 |  |  |  |  | 7 | 3 | 0 | － 4 |  | 310 | 10， 000 | 3690 |
|  | 12 | $\stackrel{47}{4}$ | 0 | 0 | 190 | 201 | 1 | 7 |  | ${ }_{3}^{13}$ | 7 | 3 | 7 | 4 |  | 600 | 30， 000 | ${ }^{3691}$ |
|  | 8 | 19 17 | 0 |  | 100 | 85 | 0 |  |  | $\mathrm{i}^{4}{ }^{3}$ | 4 | $\cdots$ | 2 | ${ }^{-1}{ }^{-1}$ |  | 200 | 17，000 | 3692 3693 |
|  | 14 | 18 | 0 | 0 | 10 | 8 | 0 | 2 |  |  |  |  |  | － 4 |  | 400 | 9，000 | 3694 |
|  | 15 | 18 | 0 | 0 | 0 |  | 0 |  |  |  | 2 |  |  | 4 |  | 150 |  | 3695 |
|  | 21 | 14 | 0 | 0 | 52 | 51 | 1 |  |  | 1 | 4 | 41 | 0 | 0 |  |  | 5，000 | ${ }_{3696}^{3698}$ |
|  | 22 | ${ }_{24}^{19}$ | 0 | 0 | 0 |  | 0 |  | 2 | 1 |  | 1 | － 0 | 4 |  |  | 12，000 | 3697 3698 |
|  | 18 | ${ }^{33}$ | 1 | 1 | 0 |  | 0 |  |  | 1 | 7 | 7 |  | 4 |  | 50 | 5，500 | 3699 |
|  | 28 25 | ${ }_{35}^{30}$ | 0 | 0 | 0 |  | 0 － 1 |  |  |  | 3 | ， | 1. | 0.3 |  | 100 | 18， 400 | ${ }^{3701}$ |
|  | $\stackrel{25}{3}$ | 35 5 5 | 0 | 0 |  |  | $0_{0}$ |  |  |  |  |  |  | $\cdot{ }^{-1}$ |  |  |  | ${ }_{3702}^{3701}$ |
|  | 14 | 23 | 0 | 0 | 0 | 0 | ${ }_{0}^{0}$ |  |  | － |  | 0 |  |  |  | 360 | 3,000 | 3703 |
|  | 30 | 31 47 | 0 | 0 | 0 | 0 | 0.6 |  | 2 |  | ${ }^{6} 10$ | 0 |  |  |  |  | 10， 000 | 3704 3705 |
|  | 32 10 | ${ }_{22}^{47}$ | 0 | 0 | ${ }_{73}^{0}$ |  |  |  |  |  | 7 |  |  |  | ${ }_{3}^{4}$ | 350 400 | 5,000 20,000 | 3705 3706 |
|  | 94 | 138 | 0 | 1 |  | 0 | 0 20 |  |  | ${ }^{2}$ | 21 | 21 |  | 2 |  | 600 | 80,000 | 3707 |
|  | 20 | 17 | 0 | 0 |  | 0 | 0 |  |  |  | 0 | ${ }^{0}$ | $\theta$ | 0 | 3 | 480 | 18， 000 | 3708 |
|  | 11 <br> 4 <br> 1 | 138 | 0 | $\stackrel{0}{2}$ |  | ${ }_{0}^{2} 3$ |  |  |  |  |  | 19 |  |  |  |  |  | 3709 3710 |
|  | ${ }^{18}$ | 17 | 0 |  | 32 | 2 | 43 | 1.1 | 0 |  | 1 |  | 1 |  |  | ${ }^{5} 7$ | 9，000 | 3711 |
|  | ${ }_{36}^{31}$ | 24 60 | ${ }_{2}$ |  |  | $1{ }^{1}$ |  |  |  |  |  |  |  |  |  | 40 300 | 8,000 18,000 | ${ }_{3713}^{3712}$ |
|  | 13. | 11 | 2 |  |  | 45 | $32^{-}$ | 4 |  |  |  |  |  |  |  | 300 12 | 16,000 3,200 | ${ }^{3713}$ |
|  | 35 57 5 | 58 79 | 0 |  |  |  |  |  |  |  |  | 17 | 6 | 8 | 3 3 3 | 300 | 10，000 | 3715 |
|  | 57 7 | 79 20 |  |  |  | 0 |  |  |  | $\cdots$ | 11 | ${ }_{3}^{22}$ |  |  | 3 | 950 152 | 22，000 | ${ }_{3717}^{3716}$ |
|  | 25 | 40 |  |  |  |  |  |  | 2 | $i$ | 0 |  | 1 |  | 3 | 100 | 3，500 | ${ }^{3718}$ |
|  | 41 | 76 | 0 |  |  | ${ }_{0}^{0}$ | 0 | 4 |  |  | ${ }_{9}^{9}$ | 19 | 5 | ${ }^{5}$ | 4 | 700 | 23， 000 | 3719 |
|  | ${ }^{13} 9$ | 14 |  |  |  |  | 56 |  |  |  |  |  |  |  |  | $\begin{array}{r}\text { r } \\ \mathbf{1} 250 \\ \hline 150\end{array}$ | 2,000 10,000 | 3720 3721 |
|  |  | 19 |  |  |  |  | 37 |  |  |  |  |  |  |  | 3 | 1， 86 | 1，500 | ${ }_{3722}$ |
|  | ${ }_{33}^{13}$ | ${ }^{14}$ | 0 |  |  | 21 | 24. |  | 18 | c |  |  | 0 |  | ， | 75 |  | 3723 |
|  | 3 ${ }^{3}$ | ${ }_{6}^{69}$ |  | 0 |  | 37 |  |  |  |  |  |  |  |  | 4 | 575 150 |  | ${ }^{3724}$ |
|  | 17 | 12 20 | 0 | 0 |  |  |  |  |  |  | ${ }_{2}^{2}$ |  |  |  | 3 | 100 | 7,000 | 3726 |
|  | 17 50 | ${ }_{78}^{20}$ | 0 |  |  | $0$ | 0 |  |  |  | ${ }_{3}^{2}$ |  | ${ }_{2}^{2}$ |  |  | 100 400 | 30， 000 | 3727 |
|  | 17 | 15 |  | 0 |  |  |  |  |  |  |  |  |  |  |  | 1 |  | ${ }^{3728}$ |
|  |  | 24 | 0 |  |  |  | ${ }_{1} 92$ | 7 | 3 | 0 |  |  | 3 |  | 4 | 250 | 18， 000 | 3730 |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |  |  | 50 | 15，000 | 3731 |

Table 33.—Statistics of public high schools in the


United States for the scholastio year 1895-96-Continued.


Table 33.-Statistics of public kigh schools in the

\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{* S} \& \multirow[t]{2}{*}{State and post-office.} \& \multirow[t]{2}{*}{Name.

2} \& \multirow[t]{2}{*}{Principal.} \&  \& \multicolumn{2}{|l|}{Instructors for secondary students.} <br>
\hline \& \& \& \& 4 \& 5 \& 6 <br>
\hline \& OHIO-continued. \& \& \& \& \& <br>
\hline 3792 \& Oakwood \& High School \& L. A.Snook............... \& Ind... \& 1 \& 0 <br>
\hline 3793 \& Oberlin. \& High School \& Miss Letitia Bennett... \& Dept.- \& 1 \& 3. <br>

\hline 3794 \& Ohio City \& $$
\begin{aligned}
& \text { do } \\
& \text { do }
\end{aligned}
$$ \& I, O.Jones................ \& Ind... \& 1 \& 0 <br>

\hline 3795 \& Orrville. \& -do \& W.A. McBane............ \& Dept.. \& 2 \& 1 <br>
\hline 3796 \& Orwell. \& do \& I.J. Addicott............ \& Ind... \& 1. \& 1 <br>
\hline 3797
3798 \& Osborn \& do \& Geo P. Harmount....... \& Ind.... \& 1 \& 1 <br>
\hline 3798
3799 \& Osnaburg \& \& E. E. Sluss . . . . . . . . . . . . . \& Dept.. \& 12 \& 0 <br>
\hline 3800 \& Ottawa- \& do \& Miss BerthaK. Krauss. \& Dept. : \& 1. \& 1 <br>
\hline 3801 \& Owensville \& Boston High School \& A. T. Marsh .............. \& Ind... \& 0 \& 2 <br>
\hline 3802 \& Oxford. \& High School ...... \& C. W. M. Clun ............ \& Dept.. \& 1 \& 2 <br>
\hline 3803 \& Painesville \& ....do....... \& F. H. Kendall ........... \& Dept... \& 5 \& 0 <br>
\hline 3804
3805 \& Parkman Pataskala \& - . . do \& M. D. Smith .............. \& Ind.... \& 2 \& 0 <br>
\hline 3806 \& Paulding \& do \& W. H. Gant................. \& Dept.. \& 2 \& 0 <br>
\hline 3807 \& Payne \& do \& J. A. Shadley-............ \& Dept.. \& 1 \& 5 <br>
\hline 3808 \& Peebles \& do. \& J. E. Collina............ \& Dept.. \& 1 \& <br>
\hline 3809 \& Pemberville \& do \& S. S. Simpson ............ \& Ind ... \& 1 \& 0 <br>
\hline - 3810 \& Peninsula. \& do \& Frederic Hickman...... \& Dept.. \& 1 \& 0 <br>
\hline 3811 \& Perry .-.... \& do.* \& D. A. Milligan............ \& Ind.... \& 2 \& 0 <br>
\hline 3812 \& Perrysburg \& 10 \& E. Ward................ \& Dept.. \& 1 \& 2 <br>
\hline 3814 \& Pionreer.. \& \& E. C. Kiplinger ........... \& Ind... \& 1 \& 0 <br>
\hline 3815 \& Piqua. \& do \& Mary E. Hall. \& Dept... \& 1 \& 2 <br>
\hline 3816 \& -Plain City \& . do \& D. N. Cross... \& Dept.. \& 2 \& 1 <br>
\hline 3817 \& Poland.... \&  \& M. A. Kimmel. \& Ind... \& 1 \& 1 <br>
\hline 3818 \& Polk \& do \& E.O. Parker............. \& Ind...- \& 1 \& 0 <br>
\hline 3819
3820 \& Pormeroy \& do \& T. C. Flanegin .......... \& Dept.. \& 1 \& 0 <br>
\hline 3821 \& Portage..... \& do \& Fred. W. Toon \& Dept... \& 2 \& 1 <br>
\hline 3822 \& Portsmouth \& do \& Thos. Vickers, supt..... \& Dept:- \& 2 \& 3 <br>
\hline 3823 \& Port Union \& do \& D. A. Thomas........... \& Ind... \& 1 \& $\frac{1}{2}$ <br>
\hline 3824 \& Port Washiogton \& do.* \& M. B. Whitaker ......... \& Ind ... \& 1 \& 2
0 <br>
\hline 3825 \& Powhatan Point . \&  \& F. I, Oesch..... \& Ind ... \& 1 \& 0 <br>
\hline 3827 \& Proctorvile \& Fairview High School* \& B. F. Forgey \& Dept... \& 1 \& 1 <br>
\hline 3828 \& Putin-Bay. \& ...do. \& J.C.Oldt..... \& Ind... \& 1 \& 0 <br>
\hline 3829 \& Quaker City \& do.* \& W. H. Gregg. \& Dept.. \& 2 \& 0 <br>
\hline 3830 \& Quiney -... \& do \& J. F. Smith............... \& Dopt.. \& 1 \& 0 <br>
\hline 3831 \& Racins \& do \& C. W. Wright............ \& Ind... \& 1 \& 0 <br>
\hline 3832
3833 \& Ravsbore \& 10 \& W. A. Caldwell. . . . . . . . \& Ind... \& 1 \& 1 <br>
\hline 3834 \& Reesville \& \& W. D. Dodge... \& Ind... \& 1 \& 0 <br>
\hline 3835 \& Republic. \& \& Chss. N. Helter \& Ind... \& 1 \& 0 <br>
\hline 3836 \& Rex. \& Bethel Towaslip High School. \& J. E. Peterson. \& Ind... \& 2 \& 0 <br>
\hline 3837 \& Reynoldsbirg - \& High School .......... \& D.J.Sayder. \& Ind... \& 3 \& 1 <br>
\hline 3838 \& Richmond Dale \& - do ............ \& F. W. Yaplo. \& Dept. \& 1 \& <br>
\hline 3839
3840 \& Richwoorl \& Union High School ........... \& C. R. Smith................. \& Ind... \& 2 \& \% <br>
\hline 3840 \& Ridgeville Corners. \& \& T. J. Williams. . . . . . . . . . \& Ind ... \& 0 \& <br>
\hline 38412 \& Ridgeway \& Iikh Behool \& W, L., Shooty .............. \& Ind... \& 1 \& <br>
\hline 3843 \& Riping Sun \& \& Anna Bsmbach \& Dept.- \& 1 \& <br>
\hline 3844 \& Rittman... \& \& G. C. Sheffler. \& Dept.. \& 1 \& <br>
\hline 3845 \& Rock Creek \& \& C. W. Hoover \& Ind. \& 1 \& <br>
\hline 3846 \& Rockford \& \& I. W. Prentico \& Dept.. \& $\frac{1}{2}$ \&  <br>
\hline 3848 \& R Rossevilile \& \& L. C. Shaw. \& Ind... \& 1 \& <br>
\hline 2819 \& 9 Pushsylvania. \& \& F.P. Bchisler............. \& Ind... \& 2 \& <br>
\hline 2850 \& 0 Sabina...... \& Union High School . . ........ \& John P. Bower.......... \& Ind.. \& 1 \& <br>
\hline 3851 \& 1 St. Clairsville \& \& J. E. Ockerma \& Dept. \& , \& <br>
\hline 3852
3253 \& 2 St. Lomisville \& \& Geo. Romiter \& Dept. - \& 0 \& <br>

\hline 3653 \& 3 ISt. Marys. \& \& Ida M, Wamey .............. \& $$
\begin{aligned}
& \text { Dopt. } \\
& \text { Dopt. }
\end{aligned}
$$ \& 2

2 \& <br>
\hline
\end{tabular}

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the


[^89]United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of publie high schools in the


United States for the scholastic year 1895-96-Continned.


Table 33.-Statistics of publio high-schools in the


United States for the scholastic year 1895-96-Continued.


Table 33,-Statistics of public high schools in the


United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the


United States for the scholastio year 1895-96-Continued.


Table 33.-Statistics of public high schools in the

\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \multirow[t]{2}{*}{} \& \multirow[t]{2}{*}{State and post-office.} \& \multirow[t]{2}{*}{Name.

2} \& Principal. \& Department or indepenilent. \& \multicolumn{2}{|l|}{Instrictors for secondary students.} <br>
\hline \& \& \& 4 \& 4 \& 5 \& 6 <br>
\hline \& PENNSYLVANIA-con-
tinued. \& \& \& \& \& <br>
\hline 4152 P \& Palmyra.............. \& North Londonderry High School. \& D. R. Gettel ......... ... \& Ind... \& 2 \& 0 <br>
\hline 4153 P \& Parkersburg \& High School .................. \& Eli P. Conley ............. \& Ind... \& 1 \& 0 <br>
\hline 4154 \& Parryyille \& .... do ...... \& Jacob H. Schrope...... \& Ind... \& 1 \& 0 <br>
\hline 4155 \& Penfield \& - . . do \& G. W. Lenkerd .......... \& Ind... \& 17 \& 0 <br>
\hline 4156
4157 \& Philadelphia
.... do ...... \& Central Manual Training High School. \& Wm. L. Sayre ............. \& Dept.. \& 17
3 \& 0
75 <br>
\hline 4157
4158 \& . .do \& Girls High School \& John G. Wight.......... \& Dept..- \& 3 \& 75 <br>
\hline 4159 \& Phœnix \& Northeast Manual Training School. \& Dr. C. Hanford Henderson. \& Dept.. \& 16
0 \& $\checkmark$ <br>
\hline 4160 \& Pillow... \& Union Town School *.......... \& W. S. Cornman. \& Ind... \& 2 \& 0 <br>
\hline 4161 \& Pittsburg \& Central High School, Academic department. \& C.B. Wood............... \& Dept.. \& 11 \& 12 <br>
\hline 4162 \& Pittston \& High School*.................- \& Robert Shiel \& bept.. \& 1 \& 2 <br>
\hline 4163 \& Plymouth \& .... do ..... \& Irving A. Heike \& Dept. - \& 2 \& 0 <br>
\hline 4164 \& Portland. \& do \& A.D. Wannemaker \& Dept.- \& $\frac{1}{5}$ \& 4 <br>
\hline 4165 \& Pottstown \& do \& Jacob Hartman Rohr- \& Dept.. \& 5 \& 2 <br>

\hline 4166 \& Pottsville \& do \& | bach. |
| :--- |
| S. A. Winslow | \& Dept.-. \& 2 \& 2 <br>

\hline 4167 \& Quakertow \& ....do \& A. H. Kittleman........... \& Ind... \& 1 \& , <br>
\hline 4168 \& Reading \& Boys' High School \& M. E. Scheibner .......... \& Dept.. \& 8 \& 1 <br>
\hline 4169 \& \& Girls' High School \& Miss E. A. Stahle........ \& Dept.. \& 1 \& 2 <br>
\hline 4170 \& Renovo... \& High School ...... \& Jas. J. Palmer \& Dept.. \& 1 \& 2 <br>
\hline 4171 \& Ridley Park \& .... do ..... \& H. H. Keeler \& Ind... \& 1 \& 0 <br>
\hline 4172
4173 \& Rochester \& do \& Rufus Darr. \& Dept.. \& 2 \& 0 <br>
\hline 4173 \& Rouseville \& - Cornclanter Township Contral High School. \& C. H. Donnell ............ \& Ind... \& 1 \& 0 <br>
\hline 4174 \& Royersford \& High School .................... \& William I_ockart. \& Dept.. \& 2 \& 0 <br>
\hline 4175 \& Saxton... \& -...do . . . . . . . . . . . \& S. A. Van Ormer. ......... \& Ind... \& 1 \& 1 <br>
\hline 4176 \& Sayre .......... \& do \& I. F . Stetler .................. \& Dept.- \& 2 \& 1 <br>
\hline 4177 \& Schuylkill Haven. \& \& H. Day Gise .................. \& Dept. \& 1 \& 1 <br>
\hline 4178 \& Scottdale ....... \& do \& Erastas L. Stoner \& Dept.. \& 2 \& 0 <br>
\hline 4179 \& Scranton. \& do \& J.C.Lange................ \& Dept.. \& 5 \& 4 <br>
\hline 4180 \& Selins Grov \&  \& R. L. Schroyer . . . . . . . . . \& Ind... \& 2 \& 5 <br>
\hline 4181 \& Sellersville- \& Public High School \& W. Reiff Nauman ...... \& Ind... \& 1 \& 0 <br>
\hline 4182 \& Sewickley \& High School *...... \& H.J. Rose ................. \& Dept.. \& 2 \& 1 <br>
\hline 4183 \& Shamokin \& High School \& Prof. Kimber Clearer... \& Dept.. \& 4 \& 1 <br>
\hline 4184 \& Sharon.... \& -...do *............................. \& Marion M. Hoskin ..... \& Dept.. \& 0 \& 2 <br>
\hline 4185 \& Sharpsvillo \& Public School \& T.S. Vickerman......... \& Ind... \& 2 \& 1 <br>
\hline 4186 \& Sheffield .. \& Union School ..................... \& R. L. Armstrong ......... \& Dept.. \& 1 \& 0 <br>
\hline 4188 \& Shenandoa \& High School ........ \& J. W. Cooper ............ \& Dept.. \& 2 \& 3 <br>
\hline 4189 \& Somerset \& Pnblic High ${ }^{\text {S }}$ School \& J.J. Savifz ................ \& Dept.. \& 2 \& 0 <br>
\hline 4190 \& South Bothlehem \& \& F. E. Pritts.............. \& Dept.. \& 3 \& 0 <br>
\hline 4191 \& South Easton..... \& High School \& M. Alton Richards..... \& Dept.. \& 3 \& 0 <br>
\hline 4192

4193 \& South Williamsport \& -...do**.... \& | Robert A. Hamilton |
| :--- |
| J. W. Etout. | \& Ind... \& 1 \& 0 <br>

\hline 4193 \& Spartansburg...... \& High School \& W. W. Kopf .................. \& Ind. \& 1 \& 0 <br>
\hline 4194 \& Springboro . \& High School \& G. S. Sigendiall. ............ \& Dept. \& 1 \& 1 <br>
\hline 4196 \& Steelton ... \& \& Jacob K, Jones.......... \& Dept.. \& 2 \& 9 <br>
\hline 4197 \& Strasburg \& \& Chas. S. Davis. \& Dept. - \& 3 \& <br>

\hline 4198 \& Sugar Grove. \& High School, department \& Edwin Brown............ \& | Ind... |
| :--- |
| Ind | \& 1 \& 0 <br>

\hline 4199

4200 \& Summit Hill. \& | Union School. |
| :--- |
| High School | \& \& \& 1 \& <br>

\hline 42001 \& 1 Tumbary. \& \& C. D. Oberdorf \& \& 3 \& 2 <br>
\hline 4202 \& 3 Tarentum \& Public High School \& J. I. Derr .... \& Dept... \& 0 \& 3 <br>
\hline 4203 \& 3 Thirlow. \& High School ................. \& B. S. Hinmmell \& Dept.. \& 1 \& 0 <br>
\hline 4204 \& 4 Tidioute \& High Chester High School. \& J. (\%. Tockenberry ....... \& Dept.. \& 1 \& 4 <br>

\hline 4395 \& 5 Tlonesta. \& | High Sehool |
| :--- |
| Pahllo High … | \& I.J. Roblnson .......... \& Dept.. \& 0 \& 8 <br>


\hline 4208 \& ) Titnsville. \& Public High Sehool \& | R. N. Speer |
| :--- |
| Lartitia M. Wilson. | \& Dept.. \& 1 \& $1{ }^{4}$ <br>

\hline
\end{tabular}

United Statea for the seholastic year 1895-96-Continued.


Table 33.-Statistics of publio high schools in the

|  | State and post-office. | Name. | Principal. | Department or independent. | Instructors for secondary students. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | PENNSYLVANIA-continued. |  |  |  |  |  |
| 4207 T | Tobyhanna | High Schoo | C. A. Hank... | Ind... | 1 | 0 |
| 4208 T | Towanda. | .....do.*... | H. S. Putnam............ | Ind... | 2 | 2 |
| 4209 | Townville | do | Ira B. Peavy | Ind.... | 1 | 0 |
| 4210 | Trevorton | do | P. S. Bergstresser ....... | Ind... | 1 | 0 |
| 4211 | Troy... | do | Daniel Fleisher, Ph. D.. | Ind... | 1 | $\stackrel{2}{2}$ |
| 4212 | Turbotville | do | Thos. B. Shannon....... | Dept.. | 1 | $\stackrel{2}{2}$ |
| 4213 4214 | Tyrone | Lewisville Graded School | C. E. Kauffman......... | Dept.. | 1 | 1 |
| 4214 | Uyysses | Lewisville Graded School High School | Truman G. Gardner .... | Ind.... | 1 | 1 <br> 2 <br> 2 |
| 4216 | Uniontown | High school | U.G. Smith. | Dept.. | 1 | 2 0 |
| 4217 | Unionville | High School, department of Public School. | Frank K. Walter....... | Dept.- | 1 |  |
| 4218 | Upland |  | Geo. L. McCrackeñ.... | Ind... | 1 | 0 |
| 4219 | Vanderbilt. | High School Borougli High | H. S. Dumbauld <br> W. O. Woodring | Dept... | 1 | 0 |
| 4221 | Warren. | High School ${ }^{*}$ | S. Reed Brown. | Dept.. | ${ }_{1}^{2}$ | 6 |
| 4222 | Wäshington. | .....do ...... | A. G. Braden | Dept.. | $\stackrel{ }{ }$ | 3 0 |
| 4224 | Waverly. | Radnor Public High Sehool. | Fred. C. Hanyen... George H. Wilson. | Dept... | 1 | 2 3 3 |
| 4226 | Waynesbor | High School ................. | R. T. Adams.............. | Dept.. | \% | 3 |
| 4227 | Weatherly. | ....do ... | G. W. Hemminger | Dept.. | 1 | 1 |
| 4228 | Weils boro | do | A. Frank Stauffer, A.M. | Dept.. | 1 | 1 |
| 4229 | West Bethlehem |  | C. T. Bender.... | Ind... | 3 | 4 |
| 4230 | West Chester.. | Public High Schoo High School ..... | Addison Jones. | Dept... | 1 |  |
| 4232 | Wiconisco.. | ....do ..... | J. Albert Lutz............ | Ind... | , | 1 |
| 4233 | W illiamsport | . do | W. W. Ketchner, A. M | Dept.. | $\stackrel{3}{3}$ | 4 |
| 4234 | Williametown | .....do | A. H. Gerberich . | Dept.. | ${ }_{2}^{2}$ | 0 |
| 4235 | Wrightsville |  | E. U. Aamailler . | Dept.- | $\stackrel{2}{1}$ | 1 |
| 4236 | Wyoming | …do . ${ }^{\text {d }}$. | W. H. Hench.. | Dept.. | $\frac{1}{4}$ | 2 |
| 4237 4238 | York | City High School | Otis L. Jacohs, A. M | Dept.. | ${ }_{1}^{4}$ | 0 |
|  | REODE ISLAND. | High sch | Plammer N. Osborne.. |  |  |  |
| 4239 | Ashaway | High School................ | Charles Moore, A. B.... | Ind ... | 1 | 1 |
| 4240 | Auburn. | Cranston High School...... | А. Н. Кеуя.............. | Ind... | 3 | 1 |
| 4241 4242 | Barrington | High Sehool.................. | R. F. Colwell .... | Ind... | 1 | 1 |
| 4243 | Central Falis |  | William Orerton.. | Dept.. | 3 | 2 |
| 4244 | Johnston | ...do | Frank A. Spratt......... | Ind... | 2 | 2 |
| 4245 | Newport. | Rogers High School | Frank E. Thompson.... | Dopt.. | 5 | 8 |
| 4246 | Pawtucket | High School.. | Wm. Woorlside Cartis.. | Dept.. | 1 | 5 |
| 4247 | Providence |  | David W. Hoyt | Dept.. | 19 | 28 |
| 4248 | .....do | $\underset{\substack{\text { Manual } \\ \text { School. }}}{ }$ Training High | George F. Weston...... | Dept.. | 12 | 2 |
| 4240 | Falley Falls. | Cumberland High School. | A. L. Barbour, A. M.... |  | 1 | 2 |
| 4250 | Warren..... | High Echool. | Walter H. Young | Dept. | $\frac{1}{3}$ | 3 |
| 4251 4252 | Westerly Wroonscol | ....do | W. R. Whittle. Frederct $W$ Doring | Dept. . Dent. . | 2 | 3 3 |
|  | SOUTH CABOLISA. |  |  |  |  |  |
| 425 4251 | Allendale. | Graied Sohool ... | - Bellenger. | Dept.. | 0 | 3 |
| 4255 | Amerson. Antreville | City Righ School | J. B. Atkinson.. | Lept.. | 1 | 0 |
| 4256 | 5 Appleton. | High | J. C. Daniel.... | Ind. | 0 | 1 |
| 4257 | 7 Bamberg. | Classical Institute | J. W. Gaines. | Dent.. | 3 | 2 |
| 4258 |  | High School. | W. M. Brysm |  | 1 | 0 |
| 4200 | 0 崖 Bascomville | Graded High School Academy | F. M. Sheridm | nept.. | 1 |  |

United States for the scholastic year 1895-96-Continued.


Table 33.-Statisticis of publie hight cheols ia the


United States for the scholastic year 1895－90－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Volumes in library. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total secondary students． | Colored secondary students included in col－ umns 7 and 8. |  | $\begin{gathered} \text { Elemen- } \\ \text { tary } \\ \text { pupils, } \\ \text { including } \\ \text { all below } \\ \text { secondary } \\ \text { grades. } \end{gathered}$ |  | Preparing for college． |  |  |  | Gradu－ ates in 1896. |  | College prepara－ tory stu－ dents in the class that grad－ uated in 1896. |  |  |  |  |  |  |
|  |  |  | Clas－ sical course． | Scien－ tific course． |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  | $\begin{aligned} & \text { gi } \\ & \text { 雷 } \end{aligned}$ | $\begin{aligned} & \text { 㡙 } \\ & \text { 品 } \\ & \text { ⿷匚⿳ } \end{aligned}$ | $\begin{aligned} & \dot{\oplus} \\ & \text { 岟 } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  | $\stackrel{\dot{\Phi}}{\stackrel{y}{\pi}}$ |  |
| 7 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 920 | 21 | 22 | 23 | 24 |  |
| 2410 | 23 | 0 | 30 | 26 | 7 | 5 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |  |  | \＄5，000 | 4261 |
|  | 35 | 0 0 | 0 | 0 | 1 | 3 | 1 | 3 | 0 | 11 | 0. | 10 | 3 |  | 160 | 6，000 | 4262 |
| 12 | 24 | 0 0 | － 63 | 64 |  |  |  |  |  |  |  |  |  |  |  | 2， 000 | 4263 |
|  | 8 | 0 | 00 | 0 | 7 | 8 |  |  | 0 | 0 | 0 | 0 | 3 | 0. |  | 6，000 | 4264 |
| 2944 | 27 | 0 | 0 | 10 | 10 | 8 | 2 | 0 |  |  | 3 | 3 | 3 |  |  | 500 | 4265 |
|  | 6 | 0 | 0 | 49 | 0 | 2 | 0 | － |  |  |  |  | 3 | 0 | 0 | 1， 000 | 4266 |
| $\begin{array}{r}4 \\ 12 \\ 12 \\ \hline\end{array}$ | 15 | 0 | $0{ }^{0} 71$ | 55 | 5 | 3 |  |  |  | 1 | 1 | 1 | 5 |  | 8 | 3，000 | 4267 |
| 15 | 15 | 0 | 0 | 0 |  |  |  |  | 1 | 3 |  |  | 3 |  | 250 | 2，000 | 4268 |
|  | 20 | 0 | 0 | 0 |  |  |  |  | 4 | 5 |  |  | 2 |  | 300 | 15， 000 | 4269 |
|  | 4 | 0 | 0 | 22 | 2 | 2 |  |  | 0 | 0 |  |  | 4 |  | 40 | ${ }^{15} 50$ | 4270 |
| 6 37 | 60 | 0 | 0 | 0 |  |  |  |  | 5 | 14 |  |  | 3 | 0 |  |  | 4271 |
| 37 24 16 | 23 | 0 | 0 |  | 3 | 5 |  |  | 7 | 0 |  |  |  |  |  | 800 | 4272 |
| 16 | 25 39 | 0 | 00 | 0 | 10 |  |  |  |  |  |  |  | 3 | 0 | 1，145 | 5，100 | 4273 |
| 40 | 39 | 0 | ${ }_{0} 0$ | 131 | 10 | 15 |  |  |  |  |  |  | 4 |  | 500 | 2，000 | 4274 |
| 9 | 1 | 0 | 0  <br> 0 91 | 139 | 40 | 20 |  |  |  |  | 0 | 1 | ．．． |  |  | 4，000 | 4275 |
|  | 22 | 0 | $0{ }^{0} 31$ | 133 |  |  |  |  |  |  |  |  |  |  |  |  | 4276 |
| $\begin{array}{r}4 \\ 30 \\ \hline\end{array}$ | 20 | 0 | $0{ }^{0}$ | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 0 | 4 | $\cdots$ |  |  | 4277 |
| 15 | － 5 | 0 | $0{ }^{0}$ | 55 | 15 | 5 | 15 | 5 | 1 | 0 | ． 1 | 0 | 3 | － | 0 | 1，500 | 4278 |
| 59 | 46 | 0 | 0 | 0 |  |  |  |  | 1 | 5 | 1 | 5 | 4 | 0 |  | 1，500 | 4280 |
| 4 <br> 8 | 3 | 0 | $0 \quad 31$ | 17 | 3 | 0 | 1 | 0 | 3 | 1 | 3 | 1 | ．．． | 0 | 0 | 100 | 4281 |
|  | 4 | 0 | $0 \quad 34$ | 35 | 8 | 4 | 0 | 0 | ， | ， | 0 | 0 |  |  |  | 400 | 4282 |
|  | 92 | 0 | 0 O | 0 | 10 | 7 | 2 | 1 | 0 | 0 | 75 | 4 | 6 | 80 |  | 6， 000 | 4283 |
| 100 10 | 12 | 0 | 0 0 30 | 33 |  |  |  |  |  |  |  |  | 4 |  |  | 2， 000 | 4284 |
| 10 2 | 4 | 0 | 0 | 13 |  |  |  |  |  |  |  |  |  | ． 0 | 0 | 500 | 4285 |
| 8 | 6 | 0 | 0 | 31 | 2 | 3 |  |  |  |  |  |  |  |  |  | 1， 000 | 4286 |
| 18 | 17 | 0 | 0 | 30 | 1 | 4 | 1 | 0 | 2 | 3 | 2 | 2 | 4 | 0 | 40 | 800 | 4287 |
|  | 40 | 0 | $0 \quad 15$ | 20 | 10 | 16 | 3 | 7 | 20 | 25 | 9 | 13 |  |  | 300 | 600 | 4288 |
| 11 | 17 | 0 | 0.86 | 104 | － 7 | 5 | 4 | 0 | 2 | 1 | 2 | 1 | 2 |  |  | 2，500 | 4289 |
| 1020 | 4 | 0 | 0 | 16 | 3 | 3 | 0 | 0 |  |  | 3 | 4 |  |  | 0 | 100 | 4290 |
|  | 13 | 0 | 0 | 512 | 7 | 6 | 1 | 0 | 6 |  | 4 | 2 |  |  |  |  | 4291 |
| 010 | 16 | 0 | 0 | 15 | 0 |  | 5 | 5 | 1 | ${ }^{2}$ | 1 |  | 3 | 0 |  | 1，000 | 4292 |
|  | 13 | 0 | 0 － | 0 | 0 |  | － | － | 2 | 0 |  |  | －－7 |  | 0 | 1，500 | 4293 4294 |
| 35 | 30 | 0 |  | 0 | 0 |  |  | 1 | 6 | 8 | B |  | 3 | 127 | 300 | 6，000 | 4295 |
| 12 | 6 | 0 | 0 | 616 |  | 0 |  |  |  |  |  |  | 4 |  |  | ， 250 | 4298 |
|  | 18 | 0 | 01 | 817 | 7 | 2 |  |  |  |  |  |  |  |  |  | 1，000 | 4297 |
| 21 | 66 | 0 | 0 | 0 | 0 |  |  |  | 2 | 0 | 0 |  | 2 |  | 341 | 20， 000 | 4298 |
| 4 | 6 | 0 | 0.3 | 5 | 4 | 4 |  | 0 | 2 |  | 2 | 2 |  |  | 5 | 2，000 | 4290 |
| 3 <br> 8 <br> 8 | 7 | 0 | 0 | 1. | 1 | 3 | 5 |  | ． 0 |  | 0 |  | 0 |  |  | 1，500 | 4300 |
|  | 7 | 0 |  | $2{ }^{3}$ | 3 |  |  |  |  |  |  |  |  |  |  | 400 | 4301 |
| 8 4 4 | 6 10 | 0 | 0 | 26 | 0 | 3 3 | 8 |  |  |  |  |  |  |  | 26 |  | 4302 |
| $\begin{aligned} & 10 \\ & 10 \\ & 30 \end{aligned}$ | 10 43 | 0 | 0 0 | 0 | 0 | 3 | 6 |  | 5． $\begin{aligned} & 0 \\ & 1\end{aligned}$ |  | 5 |  | 0 | 2 | 450 | 500 7,000 | 4303 <br> 4304 |
| 11 | 5 | 0 | 0 | 21 | 14 | 2 | 2 | 0 | 0 |  | 1. |  | 0 | 3 | 0 | 1，050 | 4305 |
| 710 | 0 | 0 | 0 | 0 | 0 |  |  |  | 4 | 46 | 6 | 3 | 4 |  | 25 | 3，200 | 4306 |
|  | 10 |  | 0 | 30 | 30 | 5 | 5 |  | 3.0 | 0 | 0 | － | 0 | 0 | 0 | 4，000 | 4307 |
| 10 | 8 | 0 | 0 | 10 | 8 |  |  |  | 50 | 0 | 0 | － | 1 | 2 | 0 | 400 | 4308 |
| 21 | 23 | 0 | 0 | 35 | 39 | 3 | 9 | 5 | 0 | 21 | 1 | ， | 1 | 3 | 180 | 1，200 | 4309 |
| $10$ | 10 | 0 | 0 | 20 | 10 |  | 2 |  |  |  | ．． |  | 0 | 3 |  | 800 | 4310 |
| $\begin{array}{r} 13 \\ 5 \end{array}$ | 12 | 0 | 0 | 32 | 17 |  | 8 |  |  |  | － |  | 0 | 8 | 0 | 1，000 | 4311 |
|  | 12 | 0 | 0 | 27 15 | 55 |  | 2 |  |  |  |  |  | $\begin{array}{lll}0 & 3 \\ 1 & 3\end{array}$ | 3 |  | 1，000 | 4312 |
| 38 | 3 | 0 |  |  |  |  |  |  |  | － | 0 |  | 1 |  | ， | 20，250 | 4313 |
| 32 | 43 | 0 | 0 | 0 | 0 |  |  | 2 4 | 3 | 43 | 3 |  | 3 | 4 | 1，000 | 75， 000 | 4314 |
| 12 | 19 | 0 | 0 | 0 | 0 |  |  | ． | ． 3 | 3 <br> 3 <br> 2 <br>  <br>  | 2 |  | 0 | 3 | 44 | 7，000 | 4315 |
| ${ }^{6} 8$ | 20 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  | 0 |  | 250 | 6，000 | 4316 |

Table 33.-Statistics of public high schools in the

*Statiatics of 1894-95.

United States for the scholastic year 1895-96-Continwed.


"Statistica of 1891-95.

United States for the scholastic year 1895-96-Continued.



United States for the scholastic year 1895-96-Continued.

| Stadents. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Totalsecondary students. |  | Coloredsecondarystudantsincludedin col-umns7 and 8. |  | Elemen-tarypapils,includingall bolowsecondarygrades. |  | Preparing for college. |  |  |  | $\begin{gathered} \text { Gradu. } \\ \text { ates in } \\ 1896 . \end{gathered}$ |  | Collegeprepare.tory stu.dents indhe classthat graduatel inu896.189. |  |  |  |  |  |  |
|  |  | $\begin{gathered} \text { Class- } \\ \text { sical } \\ \text { course. } \end{gathered}$ | $\begin{gathered} \text { Scien- } \\ \text { tifle } \\ \text { course. } \end{gathered}$ |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \dot{\oplus} \\ & \stackrel{\Xi}{\Xi} \end{aligned}$ |  |  |  |  |  | $\stackrel{\dot{\Phi}}{\stackrel{\oplus}{\sharp}}$ |  | 守 |  | $\dot{\ddot{B}}$ |  |  |  |  |  |  |  | 岡 |  |  |
| 7 | 8 |  | 10 |  |  | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 2:3 | 24 |  |
| 65 |  | 95 | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 200 | \$14, 000 |  |
| 11 |  | 24 | 0 0 | 123 | 105 | $\cdots$ | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 50 | 4,500 | 4439 |
| 5 |  | 9 | 0 | 15 | 14 |  |  |  |  |  |  |  |  | 0 | 0 | 50 | 500 | 4440 |
| ${ }_{2}^{23}$ |  | 22 | 0 | 0 | , | 9 | 7 | 10 | 5 | 0 | 0 | 0 | 0 | 3 | 0 | 250 | 6,000 | 4441 |
| ${ }_{2}^{25}$ |  | ${ }_{20}^{25}$ | 0 | 75 | 100 | - | 0 | 2 | 3 | 0 | 0 | 0 | 0 2 | 3 4 4 |  | 40 | 2,000 4,000 | ${ }_{4443}^{4442}$ |
| 78 |  | 60 | 0 | ${ }_{0}^{44}$ | 4 | 10 | 8 | 0 | 0 |  |  |  |  | 4 |  |  | 4,000 10,000 | -4444 |
| 8 |  |  | 0 |  | 0 | 5 | 5 |  |  | 1 | 2 |  |  | 3 |  | 25 |  | 4445 |
| 63 19 |  | ${ }_{13}^{135}$ | 0 | $\begin{array}{ll}0 \\ 0 & 0 \\ 0\end{array}$ |  |  |  |  |  | 1 | 6 |  |  | 3 |  | ${ }^{600}$ | 1,000 | $\left.\right\|_{4417} ^{446}$ |
| 19 |  | ${ }_{28}^{23}$ | 0 | 0 |  | 0 1 | $1{ }_{3}$ | 1 | 2 | $\cdots$ | 0 |  |  |  |  | 200 | 3,000 12,000 |  |
| 16 |  | 21 | 0 |  | 0 | 0 |  |  |  |  | 0 | 0 | 0 | 4 |  | 88 | 7,500 | 4449 |
| 21 |  | ${ }^{21}$ | 0 | 0 |  | 0 | 0 | 2 | 1 | 0 | 10 | 0 |  |  | ... | 160 | 1,000 | 4450 |
| 52 48 48 |  | 63 52 5 | 0 |  |  | 0 | 0 |  |  | 4 | 10 | 0 | 0 | 3 |  | 200 | 12,000 1 1500 | ${ }_{4451}^{4451}$ |
| $\stackrel{48}{25}$ |  | ${ }_{25}$ | 0 | 085 | 96 | 6 | 58 |  |  | 4 | 5 | 2 | 1 | 4 |  |  | 3, 000 | ${ }_{445}^{44}$ |
| 40 |  | 50 | 0 | 078 | 80 | 0 | 1 | 0 | 0 |  |  |  |  | 1 |  | 40 | 4, 500 | 4454 |
| 30 27 |  | 20 25 | ${ }_{0}^{0}$ | 0  <br> 0  | - | 0 1 <br> 4  | $\begin{array}{ll}1 \\ 3 & 1 \\ 4\end{array}$ |  |  | . 2 | 1 | 2 | 1 |  |  | ${ }_{27}^{0}$ | 3,000 1,800 | 4455 |
| 27 24 |  | 25 40 | 0 | 0 | 4 | 0 | $\begin{array}{ll}1 \\ 1 & 1 \\ 1\end{array}$ |  |  |  |  |  |  |  |  | 1, 000 | 1,800 40,000 |  |
| 10 |  | 15 | 0 | 0 | 50 | 0 | $2{ }^{2} 12$ | 1 | 2 |  | ${ }^{2}$ | 0 | 2 | 4 | .... | 350 | 3,000 | 4.458 4.59 |
| 23 |  | 31 20 | ${ }_{0}^{0}$ | (105 | ${ }_{1}^{50}$ |  |  |  |  |  |  |  |  |  |  | 0 |  | 4459 4460 |
| 15 7 |  | 10 | 0 | ${ }_{0}{ }_{38}$ | ${ }_{35}$ |  |  |  |  |  |  |  |  | 3 |  |  | $\stackrel{4}{2,000}$ | ${ }_{4461}^{4460}$ |
| 15 |  | 20 | 0 | 0120 | 120 | 0 | 0 | 0 | 0 | - | 5 | 0 | 0 | 3 |  | 50 | 3,000 | 4462 |
| 25 |  | ${ }^{60}$ | 0 | 0 |  | 0 | $9{ }^{9} 12$ |  |  |  | 11 | ${ }_{2}^{2}$ | - 3 | 3 | 0 | 300 | 32,500 | ${ }_{4464}^{4463}$ |
| $\stackrel{19}{19}$ |  | 36 30 | ${ }_{0}^{0}$ | 0 |  | 0 | 0 0 | 14 | 0 |  |  | 2 |  | 4 | 0 |  | 20,000 1,000 |  |
| 17 | 7 | 24 | 0 | 0 |  | 0 |  |  |  | 4 | 2 |  |  | 3 |  | 125 | 10,625 | 4466 |
|  |  | ${ }^{36}$ | 0 | 0 |  | 0 |  |  |  |  |  |  |  |  |  | 200 | 5,000 |  |
| ${ }_{21}^{22}$ |  | $2{ }_{24}^{20}$ | 0 | 0 |  | 0 | $3{ }^{3}$ | 2 | 0 |  | ${ }_{3}^{5}$ | 3 1 |  |  |  | 300 800 | 5,000 10,000 | 4468 4469 |
|  | 10 | 58 | 0 | 0 | 0 | 0 |  |  |  | $\frac{1}{3}$ | 6 | 1 | 6 |  | 0 | 200 | 35, 000 | 4470 |
|  | 2 | 24 | - | 0 | 0 - 0 | 0 | 4 |  |  |  |  |  |  |  |  |  | 4,000 | 4471 |
|  | 0 | ${ }^{40}$ | 0 | 0 | 0 |  |  |  |  | 0 | 0 | 0 | 0 | 3 |  | 100 | 4,000 | ${ }_{4473}^{4472}$ |
|  | 16 53 | 16 30 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | - | 3 | 2 |  |  |  | 200 |  | ${ }_{4474}$ |
|  | 12 | 18 | 0 | 106 |  | 88 |  |  |  |  | 1 | - 0 | 0 | 3 |  | 0 | 3,500 | 4475 |
|  | $\stackrel{2}{3}$ | 71 5 | 0 | ${ }_{0}^{0}$ | 75 | 0 | 0 |  |  | 1 | 10 |  |  | 4 |  | 500 | 35,000 1,000 | ${ }_{4477}^{4476}$ |
|  | 3 | 28 | 0 | 3 | 0 | 0 | 0 |  |  |  |  |  |  |  |  | 125 | 6,000 | 4478 |
|  | 19 | ${ }_{23}^{28}$ | 0 | 0 | 0 | 0 | 2 |  |  | - 0 | 0 |  |  | ${ }^{3}$ |  | 0 | 3, 000 | 4479 |
|  | 82 87 | $\begin{aligned} & 89 \\ & 58 \end{aligned}$ | 0 | 0 | 0 | 0 32 <br> 0 30 | 32. ${ }_{3}{ }^{3}$ |  | ${ }^{0}$ |  | 6 |  | \| 8 | . ${ }^{4}$ |  | 515 200 | 22,000 4,000 | ${ }_{4481}^{4480}$ |
|  | 22 | ${ }_{29}$ | 0 | 0 | 0 | 0 | 2. |  | ${ }_{0}$ |  | - 6 | 1 | 13 | ${ }^{5}$ |  | 437 | 10,000 | 4482 |
|  | 8 | 11 | 0 | 0 | 1.3 | 31 | 1. |  |  |  |  |  |  |  |  |  |  | 4483 |
|  | 19 | 39 13 | 0 | 0 | 0 | 0 | 1. |  |  |  |  |  | 0 | ${ }^{\frac{4}{3}}$ | ... |  | ${ }_{22,}^{12,000}$ | ${ }_{4485}^{4484}$ |
|  | 64 | 48 | 0 | 0 | 8 | 92 | 48 | - | $\bigcirc$ | 04 | 3 |  |  | 4 |  |  | 3,000 | 4486 |
|  |  |  | 0 |  |  |  |  |  |  |  |  |  | 0 |  |  | 0 |  | 4487 |
|  | ${ }^{23}$ | 24 | 0 | 0 |  |  | ${ }_{9}^{1}$ | 0 |  |  |  |  |  |  | 0 | 0 |  | 4488 |
|  | 82 | 159 | 0 | 0 | 0 |  | 9 | 0 |  | 10 | 2 |  | 7 | 4 |  | ${ }_{260} 60$ | 75,000 | 4489 |
|  | ${ }_{46}^{18}$ | ${ }_{78} 17$ | 0 | 0 | 0 |  |  |  |  |  | 15 |  |  | . 4 |  | ${ }_{680}^{260}$ | 12,000 |  |
|  | 15 | 8 | 0 | 0 | 57 | ${ }^{68}$ |  |  |  |  | 0 |  | 0 |  |  |  | 2,500 | $4+92$ |
|  | 50 | ${ }_{6}^{60}$ | 0 | 0 |  |  |  |  |  | 0 | - ${ }^{2}$ | 0 | ${ }_{0}^{2}$ | ${ }_{3}^{3}$ |  | 200 | 8,000 | ${ }^{4493}$ |
|  | 32 | 21 | 0 | 0 | 62 |  |  |  |  |  |  |  |  |  |  |  | 1,400 | ${ }^{4495}$ |
|  | 31 | ${ }_{45}^{45}$ | 0 | 0 | 0 |  | 10 |  | 42 |  |  |  | 4 | ${ }^{3}$ |  | 1,309 | 30,000 | 4496 |
|  |  |  |  |  |  | ${ }_{56}^{0}$ |  |  |  |  |  |  |  | ... |  | ${ }_{37}$ | 1, 1,800 | 4497 4488 |

Table 33.-Statistios of public high schools in the


United States for the scholastic year 1895-96-Continued.


Table 33.-Statistios of public high schools in the


United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the

|  | State and nost-ofice. | Name. | Principal. |  | $\left\lvert\, \begin{aligned} & \text { Instrnet- } \\ & \text { ors for } \\ & \text { seondary } \\ & \text { students. }\end{aligned}\right.$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | VERMONT-cont'd. | Central High School.........High School................ |  | Dept Dept Ind |  |  |
| 4615 | Chester. |  |  |  |  |  |
| ${ }_{4617}^{4616}$ | Enoslurg Falls |  | L. M.Jenne Julia B. Jackman |  |  |  |
| 4618 | Fair Haven. |  |  | Dept.. | 1  <br>   |  |
| 4619 | Hardwick | Hardwick A cademy | Wm. G. Park <br> W. D. Parsons. |  | 1 |  |
| 4620 | Hinesburg | High School ........... | W. D. Parsons <br> Asa M. Jones. | Dept.. | 1  <br> 1 0 <br> 1 0 |  |
| 4622 | Island l'ond | High School ............ | Martin S. Vilas |  |  |  |
| 4623 | Ludlow. | Black River Academy | Erank L. Bugbee....... | Dept.. | 1 0 <br> 1 0 <br> 1 3 |  |
| 4624 4625 | Lyndon.... | Liyndon Academy. |  | Ind... | 1  <br> 1 3 <br> 1 2 <br>   |  |
| 4626 | Middetown Springs | Graded Schooi | Etwin IV.Johnso |  |  |  |
| 4627 4628 | Milton. | High School * | Clarence If. Willey....S. J. Blanpied. ${ }^{\text {c. }}$. | Ind... | 1 1 <br> 1 1 |  |
| 4628 | Montpelier | Washington County High School. |  | Dept.. | $1{ }^{1} 3$ |  |
| 4629 | Morrisville | People's $\Delta$ cademy.......... | W. A. Beebe........... | Dept. <br> Ind.. | $\begin{array}{lll}1 & 2 \\ 1 & 1 \\ & 1\end{array}$ |  |
| ${ }_{4631}^{4630}$ | Newbary | Newbury Seminary | B. A. Shaw ............. |  |  |  |
| 4632 | North Bennington.. | High School ...... | Chas. H.Phelps ......... | Inept... |  |  |
| 4633 | Northfield |  |  |  | 1  <br> 2 0 <br> 1 2 <br> 1 1 |  |
| 4634 | North Troy |  |  |  |  |  |
| 4635 4636 | Poultney | do | H.S. Lovejoy ......... |  |  |  |
| 4637 | Quechee |  | Geo. E. Mann ........... | Dept.- | 1 1 <br> 1 0 <br> 2  |  |
| 4638 | Randolph |  | N.J. Whitehill........ | Ind | $1{ }^{1}$ |  |
| 4639 4640 | Richford. |  |  | Ind .... |  |  |
| 4641 | Rutland |  | P.M. Paige ${ }^{\text {Alf........... }}$ |  |  |  |
| 4642 | St. Albane | do | Francis A. Bagnall.... | Dept. | 1 5 <br> 0 1 |  |
| 4643 | Shelburne |  |  |  |  |  |
| ${ }_{4645}^{4644}$ | Soath Roy |  | Wm. C. Hopkins, jr... | Ind.... | $1{ }^{1}$ |  |
| 4646 | Springtiel |  | H. Dressel, jr ........... |  |  |  |
| 4647 | 8wantor | Union High Sch | C. L.Pevier $\cdot$............ | Ind... | 1  <br> 1 3 <br>   |  |
| 4648 | Underhill | Graded School | John E. Wheelock. <br> D. G. Abbott | Ind... | 1 3 <br> 1 1 <br> 1 1 |  |
| 4650 | Warling ford | High School |  | Dept.. | 1 1 <br> 1 1 <br>  1 |  |
| 4851 | Waterbnry | ....do .... | E. B. Gray. <br> §. R. Parker $\qquad$ |  |  |  |
| ${ }_{4653}^{4652}$ | Wells River. | Graded and High School.... | Fred T. Sharp.......... | Ind | 1 | 1 1 1 2 2 |
| ${ }_{4654}^{463}$ | White River Junc-tion,Winooski.......... | lingh school*: | Z. C. Hinds. | Ind... | 1 | 2 |
| 4655 |  | High School* <br> High School | Henry Conlin <br> Edwin H. Whitehill | Dept. Ind. |  | ${ }_{3}^{1}$ |
| 4650 | Woodstock |  |  |  |  |  |
|  | virginta. |  |  |  |  |  |
| ${ }_{4657}^{465}$ | Alingdon. | Cave City High School Guinea High School Washington School | C. G. Hillenberg....... | Ind... |  |  |
| 4659 | Adriance |  |  | Ind... |  |  |  |
| 1860 | Ashland... | Graded School | W. N. Hamiet. | Dopt.. |  |  |
| ${ }_{4}^{4651}$ | Beaver Dam |  | Miss Virginia Campbell | Ind | 0 | 1 |
| ${ }_{463}$ | Bedford City. | Now London A Academy | E. Albert Smith . . . . . | Ind. | ${ }_{1}^{2}$ | 1 |
| 48685 | Bertrvill . | High School .......... | M. W. Jones | Ind. | 2 | 4 |
| 4685 | ${ }^{\text {Bowling Gr }}$ (10ydton | Graded schoo | T. B. Glassell | Ind... | 0 | 2 |
| 4067 | Boykins | High school | M. ${ }^{\text {Marshall Mor }}$ | Ind.... | $\frac{1}{0}$ | 1 |
| ${ }_{469}$ | ${ }_{\text {Bristol. }}$ |  | R. H. Sheppe |  | 1 | 1 |
| 4670 |  |  | W. S. Flory. | Ind. | 1 | 0 |
| 4071 | Brema | High School | J. P. Mcluar | Ind.... | 1 | 0 |

[^90]TUnited States for the scholastic year 1895－96－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Volumes in library． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Culored secondary students included in col－ umns 7 and 8 |  | Elemen－ tary pupils， incloding all below secondary grades． |  | Preparing for college． |  |  |  | Gradu－ ates in 1896. |  | College prepara－ tory stu－ dents in the class that grad． uated in 1896. |  |  |  |  |  |  |
| second studen | ary． |  |  | $\begin{gathered} \text { Clas- } \\ \text { sical } \\ \text { course. } \end{gathered}$ | Scien－ tific course． |  |  |  |  |  |  |  |  |  |  |
| "゙ |  |  |  |  |  | $\begin{gathered} \dot{\oplus} \\ \stackrel{\oplus}{A} \end{gathered}$ |  | 彩 |  |  |  | $\begin{aligned} & \text { 亗 } \\ & \text { ⿷匚 } \end{aligned}$ |  |  |  |  |  | 囟 |  |  |
| 7 | 8 | 9 | 10 | 11 | 112 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |  | 22 | 23 | 24 |  |
| 29 | 27 | 0 | 0 | 15 | 18 | 12 | 16 |  |  | 6 | 8 | 2 | 3 | 4 | 40 | 250 | \＄5，000 | 4615 |
| 45 | 36 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 7 | 6 | 1 | 0 | 4 |  | 10 | 5，000 | 4616 |
| 10 | 20 | 0 | 0 | 65 | 105 |  |  |  |  | 1 | 1 |  |  | 3 |  | 50 |  | 4617 |
| 12 | 30 | 0 | 0 | 0 | 0 | 2 | 4 |  |  | 3 | 7 | 0 | 0 | 4 |  | 125 |  | 4618 |
| 30 | 30 | 0 | 0 | 70 | 70 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |  | 75 | 12，000 | 4619 |
| 14 | 24 | 0 | 0 | 9 | 10 | 1 | 2 |  |  | 3 | 4 | 1 | 1 | 3 |  | 65 |  | 4620 |
| 22 | 18 | 0 | 1 | 0 | 0 | 3 | 0 | 1 | 2 | 3 | 1. |  |  | 4 |  |  | 2， 000 | 4621 |
| 10 | 20 | 0 | 0 | 90 | 80 | 0 | 0 |  | 0 | 0 | 5 | 0 | 0 | 3 |  | 0 | 10，000 | 4622 |
| 45 | 50 | 0 |  | 15 | 20 | 8 | 5 | 18 | 21 | 5 | 5 | 5 | 3 | 4 |  | 1，500 | 25， 000 | 4623 |
| 8 | 12 | 20 | 0 | 40 | 40 | 0 | 0 | 0 | ， | 2 | 1 | 0 | 0 | 4. |  | 50 | 15，000 | 4624 |
| 36 | 40 | 0 |  | 0 0 | 0 | 7 | 8 | 12 | 16 | 1 | 5 | 1 | 2 | 4 |  |  |  | 4625 |
| 6 | 7 | 7 |  | 0 54 | 59 | 0 | － | 1 | 1 | 1 | 2 | 0 |  | 2 |  | 30 | 1，500 | 4626 |
| 6 |  |  |  | 0 | 41 |  |  |  |  |  |  |  |  | 3 |  | 325 | 6，000 | 4627 |
| 43 | 72 | 2 |  | 0 0 | 0 | 3 | 1 | 7 | 0 | 2 | 10 | 1 | 0 | 4 |  | 2，500 | 50，000 | 4628 |
| 59 | 63 |  |  | 0 0 | 0 | 10 | 2 | 12 | － | ， | 1 | 1 | 1 | 4 |  | 1，200 | 6， 000 | 4629 |
| 21 | 21 | 1 |  | 0 | 49 | 0 | 0 | 2 | 1 | 0 | 2 | 0 | 2 | 4 |  | 200 | 4，000 | 4630 |
| 13 | 25 | 50 |  | 0 | 2 | 5 | 3 | 1 | 3 | 2 | 8 | 1 | 5 | 4 |  | 85 |  | 4631 |
| 21 | 24 | 4.0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 2 | 6 | 0 | 6 | 3 |  | 750 | 10，000 | 4632 |
| 14 | 28 | － 0 |  | 0120 | 117 | 2 | 1 | 12 | 27 | 1 | 3 | 0 | 0 | 4 |  | 556 |  | 4633 |
| 11. | 17 | － 0 |  | 073 | 61 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 4 |  | 82 |  | 4634 |
| 9 | 27 | － 0 |  | 0 | 0 |  |  | 0 | 0 | 0 | 7 | 0 | 0 |  |  |  | 1，800 | 4635 |
| 8 | 13 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 3 | 1 | 0 | 3 |  | 50 | 3，000 | 4636 |
| 7 | 10 | 0 |  | 23 | 22 | 2 | 5 | 1 | 0 | 1 | 1 | 0 | 1 | 4 |  | 200 | 6，000 | 4637 |
| 49 | 59 | 0 | 0 | 140 | 148 | 14 | 8 | 9 | 21 | 6 | 8 | 6 |  | 4 |  | 350 | 20， 000 | 4638 |
| 18 | 22 | 0 |  | 162 | 144 | 4 | 0 |  |  | 1. | 3 | 0 | 0 | 4 |  | 154 | 10，000 | 4639 |
| 6 | 11 | 0 | 0 | 0 | 0 |  |  |  |  | 0 | 0 | 0 | 0 | 4 |  | 0 |  | 4640 |
| 60 | 159 | 0 | 0 | 0 | 0 | 15 | 26 | 3 | 0 |  |  |  |  | 4 |  |  | 20，000 | 4641 |
| 51 | 59 | 0 | 0 | 0 | 0 | 3 | 9 | ； |  | 5 | 7 | 2 | 3 | 4 |  | 500 |  | 4642 |
| 10 | 12 | － 0 | 0 | 10 55 | 60 | 0 | 0 | 1 | 1 | 1 | 3 | 1 | 1 | 4 |  | 150 350 |  | 4643 |
| 10 | 15 44 | ． 0 | 0 | 55 146 | 60 156 | 5 | 0 |  |  | 7 |  |  |  | 4 |  | 350 100 | 6，000 | 4644 4645 |
| 14 17 | 14 9 | － 0 | 0 | 146 | 154 | 5 | 0 | 10 | 0 | 7 | 11 | 4 | 0 | 4 | 25 | 100 75 | 65,000 5,000 | 4645 4646 |
| 38 | 37 | ． 0 | 0 | 142 | 129 | 10 | 1 | 5 | 10 | 3 | 1 | 3 | 1 | 4 |  | 400 | 8， 000 | 4847 |
| 20 | 15 | 50 |  | 030 | 55 | 0 | ， | 0 | 0 | 0 | 0 | 0 | 0 | 3 |  |  | 5，000 | 4648 |
| 20 | 25 | － 0 | 0 | 0 0 | 0 | 3 | 3 |  | ．．．． | 2 | 7 | 2 |  | 4 |  | 44 | 10， 000 | 4649 |
| 3 | 18 | 3 | 0 | 0 | 0 | 0 | 0 |  |  | － | 2 |  |  | 4 |  | 18 | 4， 500 | 4650 |
| 23 | 27 | 1 | 0 | 0 | 1 |  |  |  |  | 0 | 0 |  |  | 4 |  |  | 2，500 | 4651 |
| 17 20 | ${ }_{25}^{13}$ | － 0 | 0 | 0 | 37 192 | 1 | 3 | 1 | 0 | 0 | 2 | 0 | 1 | 4 |  | 150 30 | 14， 000 | 4652 4653 |
| 20 30 | 25 40 | （1） 0 | 0 0 | 0 160 <br> 0  | 192 | ． 3 | 8 | 7 | 3 | 4 | 7 5 | 0 | 1 | 4 |  | 30 100 | 15,000 2,000 | 4653 4654 |
| 12 | 20 | 0 | 0 | 0 108 | 178 | 0 | 0 | 1 | 0 |  | 2 |  |  | 4 |  | 190 | 4，500 | 4655 |
| 35 | 51 | 10 |  | － 10 | 19 | － 2 | 2 | 0 |  | 1 | 8 | 0 | 2 | 4 |  | 300 | 10，000 | 4656 |
| 8 |  | 70 |  | 0808 | 89 | 0 | 0 |  |  | － | 4 | 4 | 2 | 2 |  |  | 11，000 | 4657 |
| 4 | 19 | 9 | 0 | 0 | 4 | 4 | 10 | 0 |  | 0 | 0 |  |  |  |  |  | 150 | 4658 |
| 45 |  | 0 |  | 0 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 10 | 0 | 2 |  |  |  | 4659 |
| 19 | 10 | 0 |  | 0 0 | 0 |  |  | 2 | 2 | 1 | 1 | 1 | 1 | 4 |  | 0 | 1，200 | 4680 |
| 10 |  | 4 |  | 020 | 26 | 10 | 4 | 0 | 0 |  |  |  |  | 4 |  | 0 | 500 | 4681 |
| 20 | 25 | 5 |  | 027 | 41 |  |  | 0 | 1 |  |  |  |  |  |  |  | 25，000 | 4662 |
| 18 | 21 | 1 |  | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 |  |  | 5 |  |  | 3，000 | 4663 |
| 45 |  | 2 |  | 0106 | 54 |  |  |  |  |  |  |  |  | 4 |  | 0 | 7，000 | 4664 |
| 10 |  | 2 | 0 | 037 | 28 |  |  |  |  | 0 | 0 | 0 | 0 |  |  |  | 500 | 4665 |
| 10 |  | 7 | 0 | 0 | 26 |  |  |  |  |  |  |  |  |  |  | 0 | 800 | 4668 |
| 17 |  | 4 |  | 0 | 0 |  |  |  |  | 0 | 0 |  |  |  |  |  |  | 4667 |
| 17 |  | 9 | 0 | 0 | $\stackrel{0}{73}$ | 2 | 0 | 1 | 0 | 1 | 3 | 1 | 3 | 3 |  | 20 |  | 4668 |
|  |  | 4 | － | 0 04 <br> 0 15 | 18 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |  | 600 | 1,800 240 | 4669 4670 |
| 10 |  | 1. |  | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 2 |  | 0 | 7,000 | 4671 |

Table 33.-Statistics of public high schools in the

|  | State and post-office. | Name. | Principal. | Department or independent. | Instructors for secondary students. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | virginia-cont'd. |  |  |  |  |  |
| 4672 | Callands. | High Point High School** | Miss Mary L. Cobbs. | Ind. | 0 | 2 |
| 4673 | Cedar Bluff | High School* | S. H. Laird .............. | Ind... | 1 | 1 |
| 4674. | Charlottesville | Midway High School | James W. Lane.......... | Dept.. | 2 | 2 |
| 4675 4676 | Chatham.. | Graded School* | T. A. Watkins | Dept.. | 1 | 0 |
| 4677 | Clarksville | Liberty Acad | Frank A. Kelly | Dept... | 1 | 0 |
| 4678 | Clifton Forge | .....do *. | Ella K. Anderson | Ind... | 0 | 1 |
| 4679 | Clinch ...... | Clinch Academy* | L. R. Dingus ..... | Ind... | 1 | 0 |
| 4680 | Covington | High School*... | James G.Jeter | Ind... | 1 | 3 2 |
| 4681 | Danville.. |  | W.F. Grasty | Dept.. | 1 | 2 |
| 4683 | Elkton -.... | Elk Rum High | W.J.Lincoln.. | Ind... | 1 | 1 |
| 4684 | Emporia | High School. | John W eymouth | Ind | 1 | 0 |
| 4685 | Fox .... | Fox Institute | A. M. Gentry .-. | Dept.. | 1 | 0 |
| 4686 | Front Royal. | Graded School. | Thos. J. 0 Neil | Dept.. | 0 | 4 |
| 4687 | Fugates Hill | Collingwood High School* | H.W. Fugate............. | Ind... | 1 | 1 |
| 4688 4689 | Grant ............... | High Point Academy ...... | Prof. E. H. Copenhaver. | Ind... | 1 | 1 |
| 4689 4690 | Harrisonburg ...... | High School …....... | W. H. Keister. ${ }^{\text {Miss Mattio.. }}$ | Ind. | 1 | 1 |
| 4691 | Houston | Graded School | Miss Mattie Wilson. | Ind... | 1 | 1 |
| 4692 | Jonesville | Jonesville Academy | W. M. Meredith | Dept.. | 2 | 1 |
| 4693 | Lacey Spring | High School ....... | P. S. Good. | Ind... | 1 | 0 |
| 4694 | Leesburg.... | Leesburg Academy | J. S. Simpson | Dept.. | 2 | 0 |
| 4695 | Lincoln.. | Lincoln Academy* | E. C. Sine ... | Ind... | 1 | 0 |
| 4696 | Linville | High School*.... | J. A, Mercer | Ind. | 1 | 0 |
| 4697 | Luray | Graded School | B. B. White | Dept.. | 2 |  |
| 4698 | Lyachburg .... | High School .-........ | Thomas C. Miller ...... | Dept.- | 3 | ${ }_{2}^{2}$ |
| 4699 4700 | McGaheysville | Oak Hill High School | J. F. Armentrout........ | Ind... | 1 | 1 4 |
| 4700 | Manchester | High School | Jas. H. Blackwell | Dept... | 1 | 1 |
| 4702 | Monterey | High School* | Jno. M. Colaw | Dept.. | 1 | 0 |
| 4703 | Mount Crawford | Mount Crawford Academy | Maj. O. C. Hulvey ...... | Ind... | 2 | 0 |
| 4704 | Neopolis. | High School ................ | F. H. Wheatley ........ | Dept. | 1 | 0 |
| 4705 | Newmarket | Graded Schoo | E. A. Luster.... | Ind... | 0 | 3 |
| 4706 | Norfolk. | High School. | Geo. McK. Bain ........ | Dept.. | 2 | 5 |
| 4707 | Palmyra. | Edgewood High School | Miss Lucy W. Sneed ... |  | 0 | $\frac{1}{6}$ |
| 4708 | Petersburg | High School ....... | Miss A. P. Bolling...... | Dept.. | 0 | 6 |
| 4709 | Pe..do..... | Peabody High School. | Jas. E. Shields........... | Dept.. | 1 | 1 |
| 4710 | Portsmouth ........ | High School. | Willis A. Jenkins .... | Dept.. | 1 | 1 |
| 4711 | Pulaski City ....... | Graded Schoo | E. L. Darst ............. | Dept.. | 1 | 12 |
| 4712 | Richmond | High School | Julian P. Thomas ....... | Dept.. | 2 1 | 2 |
| 4714 | Rose Hill | Cumberland College* | J.P. Mauzy ${ }^{\text {J }}$ |  | 1 | 1 |
| 4715 | Round Hill | Graded School**... | I. C. Fletcher. | Ind. | 1 | 0 |
| 4716 | Rye Cove. | W ashington Institate | Robt. E. Wolfe | Ind... | 2 | 1 |
| 4717 | Salem... | High School .......... | J. Luther Sheppe | Dept.. | 1 | 2 |
| 4718 | Shenandor | Grailed School | Rev. R. H. Cline. | Dept.. | 1 | , |
| 4719 | Snowflake | Greenwood High School * | Lawrence Dougherty .. | Ind... | 1 | 0 |
| 4720 | South Boston | Graded School.. | W. A. Crenshaw ....... | Dept.. | 1 | 0 |
| 4721. | Spring Valley | High School * | O:C. Brewer .......... | Dept.. | 1 | 1 |
| 4722 | Staunton -.. | .....do ...... | J.R. Weaver ............ | Dept.. | 3 | 2 |
| 4723. | Stevens Creek | Academy ............ | Perking Glover | Ind.. | 1 |  |
| 4724 | Suffolk | Kings Fork High School * | Daisy D. Nurney | Ind... | 0 | 2 |
| 4725 4728 | - Tazemoli | Public High School....... | P.St.J. Wilson.. | Dept.. | 1 | 1 |
| 427 | Tazowell ......... | High School ....... | Geo. C. Perry.. | Ind... | 0 | 1 |
| 4728 | Toshes ............. | Graded School....... | D. Hays........ | Ind. | 1 | 1 |
| 4729 | Warrenton | High School ....... | F. B. Lovell John | Ind... | 1 | 0 |
| 4730 | West Polint | - .indo .............. | Mrs.K. R. Riohardson.. | Dept.. | 0 | , |
| 4731 | 1 Willimeburg | High school (N0.1) | Jno.8. Charles ......... | Dept.. | 1 | 1 |

United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schools in the


United States for the scholastic year 1895-96-Continued.


Table 33.-Statistics of public high schoots in the

|  | State and post-office. | Name. | Principal. | Department or independent. | Instractors for secondary students. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | WISCONSIN-cont'd. |  |  |  |  |  |
| 4788 | Amherst | High School . . . . . . . . . . . . . | O. H. Day ...... | Ind | 1 | 0 |
| 4789 | Antigo. | Free High School............. | C. O. Marsh .... | Dept... | 1 | 2 |
| 4790 4791 | Appleton | High School, district No.3.. | W. F. Winsey.. | Dept.. | 3 <br> 5 | 0 |
| $\begin{aligned} & 4791 \\ & 4792 \end{aligned}$ |  | Ryan High School........... | F. E. McGovern. | Dept.. | 5 1 | 4 |
| 4792 | Arcadia | Free High School. ............ | Prof. G. O, Banting R.H. Mueller . . | Dept.. <br> Dept.. | 1 | 1 |
| 4794 | Asbland |  | Edwin H. Cassells | Dept.. | 3 | 2 |
| 4795 | Augusta | Free High School | L. W. Wood...... | Dept.- | 1 | 2 |
| 4796 | Aroca | High School. | James Foy.... | Ind... | 1 | 0 |
| 4797 | Bangor |  | F. A. Harrison. | Ind... | -1 | ${ }_{6}^{0}$ |
| 4798 4799 | Baraboo | do | J. E. McCollins | Dept.. | 1 | 6 |
| 4800 | Barron Bay | Hree High So | T. D. Roand | Dept... | 1 | 2 |
| 4801 | Beaver Dain | Free High School | H.B. Hybbeli | Dept.. | 1 | 3 |
| 4802 | Belleville | High School .... | J. A. Pratt . . | Dept.. | 1 | 0 |
| 4803 | Beloit. | Free High Sch | C. H. Gordon | Dept.. | 3 | 4 |
| 4804 | Berlin | High School .... | F. A. Lowell | Dept.. | 2 | 0 |
| 4805 | Black Earth | ---do ..... | H. A. Whipple | Ind... | ${ }_{2}$ | 0 |
| 4806 | Black River Falls | Union High School .......... | J. H. Derse... | Dept.- | , | 3 |
| 4807 | Bloomer | Free High School............ | E.C. Roberts. |  | 1 | 0 |
| 4808 | Bloomingtón | High School ................... | $\underset{\text { S. E. Pearson. }}{\text { W }}$ | Dept.. | 1 | 2 |
| 4810 | Brandon |  | Charles O'Conn | Dept.. | 1 | 0 |
| 4811 | Brillion. | do | W. H. Goodall. | Ind ... | 1 | 1 |
| 4812 | Brodhead | Free High Sch | Ralph W. Pringle | Dept.. | 1 | 2 |
| 4813 | Burlington | Union School *-.............. | Alexander Corstve | Ind ... | 0 | $\stackrel{2}{1}$ |
| 4814 | Cadott... | Town of Siegel High School. | Elsie 0. Ewing.... | Ind... |  | 1 |
| 4815 | Cambridge.......... | High School................. | Franklin Gould | Ind... | 2 | 3 |
| 4817 | Centralia............. | High School.................... | Henry D. Kneip. | Dept.. | 1 | 1 |
| 4818 | Chilton | .....do ......................... | F. A. Thayer ... | Dept.. | 1 | 1 |
| 4819 | Chippewa Falls | do | R. L. Barton | Dept.. | 2 | 3 |
| 4820 | Clinton. | Free High School | H. B, Lathe . | Ind... | 1 | 1 |
| 4821 | Clintonville | High School.................. | W. H. Hickok | Ind... | 1 | 1 |
| 4823 | Colby | Free High school | Lewris A. Jones | Ind.... | 1 | 0 |
| 4824 | Cuba City | High School ${ }^{+}$... | T.J. Metcalf | Ind.... | 1 | 0 |
| 4825 | Cumberland | -...do .... | D.E. Cameron. | Ind... | 1 | 1 |
| 4826 | Darlington | Froe High-school | J. M. Stevens. | Dept.. | 1 | 2 |
| 4827 | Deerfield | High School...... | A. B. Moses... | Dept... | , | 2 |
| 4828 | Delavan | Free Eligh Sohool | C. W. Rittenbarg | Dept.. |  | 2 |
| 4829 4830 | De Ретө... Dodgeville | High Sohool. | Violet M. Alden | Dept.. | 0 | 3 2 2 |
| 4830 4831 | Dodgevill Durand. | .....do .... | O.J. Schuster . ${ }^{\text {deit }}$ | Dept.. | 1 | $\stackrel{2}{1}$ |
| 4832 | Earand Troy. | Free High School* | Jamee W. Nesbit. | Dept.. | 1 | 1 |
| 4833 | Edgerton. | High School...... | H. A. Adrian. | Dept.. | 1 | 5 |
| 4834 | Elthorn | .....do ....... | C. D. Kipp... | Dept.. | 1 | 2 |
| 4835 | Ellaworth |  | O.J. Brewer | Dept.. | 2 | 0 |
| 4836 | Elroy | do | W. E. Utendorfer | Ind... | 1 | 1 |
| 4837 | Evansvile | ....do | E. E. DeCon..... | Dept.. |  | 1 |
| 1838 4838 | Fairchild | do | A. E. Trler...... | Dept.. | 1 | 0 |
| 4839 | Florence. | - | W. T. Campbell. | Ind... | 1 | 1 |
| 4840 | Fond du Lac. | do | L. A. Williams. | Dept.. | 2 | 4 |
| 4841 | Fort Atkinson | -...do ... | A. Wm. Weber. | Dept.. | 2 | 2 |
| 4883 | Fort Loward. |  | A. W. Burton. | Dept.. | 1 | 3 |
| 4844 | Friendislip | do | Robert Rienow. | Ind | 1 | , |
| 4885 | Glenbenlah | . | K. E. Couch .... | Ind... | 1 | 0 |
| 48 | Grand Itapid | Howe High School. | Gry S. Ford. | Dept.. | 3 | 0 |
| 4888 | Green May | Tast Side Bigh School. | Wm. O, Brow | Dept.. | 1 | 4 |
| 4849 | Grreenwood | Went Side Eigh School... | A. W. Brrton | Dept. | 1 | 4 |
| 480 | Hartford. | South Skide High School. | Frank Sonlo... | Ind... Dept. . | 1 |  |

United States for the scholastic year 1895-96-Continued.

| Students. |  |  |  |  |  |  |  |  |  |  |  |  |  | Length of course in years. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Totalsecondarystudents. |  | Colored secondary included in col7 und 8 . 7 and 8. |  | Elementary pupiss, all below secondary grades. |  | Preparing for college. |  |  |  | Graduates in 1896. |  | College preparadents in the class that grad 1896. |  |  |  |  |  |  |
|  |  | $\begin{gathered} \text { Clas- } \\ \text { sical } \\ \text { course. } \end{gathered}$ | Scientific course. |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \dot{\text { gig }} \\ & \text { ज्ञा } \end{aligned}$ |  |  |  |  |  | 켤 |  | $\dot{\text { gig }}$ |  |  |  | 彩 |  |  |  |  |  |  |  |  |
| 7 | 8 | 9 | 10 |  |  | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
| 18 | 26 | 0 |  |  |  |  |  |  | 0 |  |  |  |  | 3 | 0 | 150 | \$9, 200 |  |
| 40 | 50 | 0 | 0 | 0 | 0 | 3 | 7 | 2 | 0 | 2 | 5 | 2 | 3 | 4 |  | 565 | 30, 000 | 4789 |
| 17 | 17 | 0 | 0 | 0 | 0 | 10 | 8 | 7 | 9 | 3 | 4 | $\stackrel{3}{3}$ | 2 | 4 |  | 2, 000 | ${ }^{80} 0000$ | 4780 |
| 50 32 | 75 34 | 9 0 | 0 | ${ }_{0}^{0}$ | 0 | 0 | 0 | 9 | 3 | ${ }_{6}^{5}$ | 8 | ${ }_{6}^{4}$ | 3 4 4 | 4 |  | 2,200 1,053 | 50,000 10,000 | 4781 4792 |
| 14 | 13 | 0 | 0 | 0 | 0 |  |  |  |  | 3 | 4 |  |  | 4 |  | ${ }^{1} 150$ | 7, 500 | ${ }_{4793}$ |
| 30 | 53 | 0 | 0 | 0 | 0 | 1 | 7 | 8 | 17 | 1 | 4 | 1 | 3 | 4 |  | 400 | 20, 000 | 4794 |
| 41 | 40 | 0 | 0 | 38 | 40 |  |  |  |  | 6 | 6 |  |  | 4 |  | 300 | 8,000 | 4795 |
|  | 14 | 0 |  | 38 | 40 |  |  |  |  | 0 | 0 |  |  | 3 |  | 275 | 6;000 | 4796 |
| 10 69 | 117 | 0 0 | 0 | 80 | 103 | ${ }_{0}^{2}$ | 5 | 2 | $0$ | ${ }_{8}^{1}$ | 10 | ${ }_{2}^{1}$ | 8 | $\stackrel{3}{3}$ |  | 1,200 | 3,000 60,000 | 4797 |
| ${ }_{22} 29$ | ${ }_{21}$ | 0 |  | - | 0 | 0 | ${ }_{0}$ | ${ }_{6}^{2}$ | 4 | ${ }_{3}^{8}$ | 20 | 2 | ${ }_{0}^{6}$ | ${ }_{3}^{4}$ | 0 | 200 | 60,000 6,000 | 4798 4799 |
| 17 | ${ }_{56}^{21}$ | 0 |  | 0 | 0 | 1 | 2 | 1 | 2 | 4 | 7 | 2 | $\frac{1}{2}$ | 4 |  | 700 | 28, 000 | 4800 |
| 4 | 56 29 | 0 |  | 0 | 0 |  |  |  |  |  | 7 | $\stackrel{2}{2}$ | 3 | 4 |  | 500 | 40, 000 | 4801 |
| ${ }_{68}^{20}$ | 167 | ${ }_{3}$ | ${ }^{0}$ | 0 | 0 | 0 | 0 | 0 | 0 | 8 |  | 1 | 4 | 3 4 4 |  | 41 100 | 25, 2000 | ${ }_{4802}^{4802}$ |
| 41 | 50 |  |  | 0 | 0 | 5 | 10 | 5 | 5 |  | 8 | ${ }_{2}^{4}$ | 4 | 4 |  | 1,692 | ${ }_{40,000}$ | ${ }_{4804}^{4803}$ |
| 28. | 28 | 0 |  | 0 | 0 |  |  | 2 | 1 | 9 | 7 |  |  | 4 |  | 1, 30 | 2, 000 | 4805 |
| 4 | 56 23 | 0 | 0 | 0 | 0 |  |  |  |  | 5 | 8 | 0 | 1 | 4 |  | 1, 200 | 35, 000 | ${ }_{4800}^{4807}$ |
| 13 | 28 |  |  | 0 | 0 | 0 | 0 |  |  | 0 | 5 |  | 0 | 4 | 0 | 250 | 10,000 | 4808 |
| 29 | 52 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 2 | 3 | 2 | 1 | 4 |  | 1,300 | 3, 000 | 4809 |
| 19 | 14 | 0 | 0 | 138 | 186 |  |  |  |  | 4 | 2 |  |  | 3 |  | ${ }_{200}^{350}$ | 2,500 | 4810 |
| 32 | -60 | . 0 | 0 | 10 | 180 | 0 | 0 | 12 | 18 | 1 | 13 |  | 13 | 3 4 4 |  | ${ }_{678}^{200}$ | 15, 1000 | ${ }_{4812}$ |
| 30 | 37 | 0 | 0 | 0 | 0 |  |  |  |  | 1 | 6 | 0 | 2 | 4 |  | 300 | 14, 000 | 4813 |
| ${ }_{8}^{8}$ | 18 | ${ }_{0}^{0}$ | 0 | ${ }_{70}^{11}$ | ${ }_{73}^{116}$ |  |  |  |  | 2 | ${ }_{5}^{4}$ | 2 | 0 | 3 |  | ${ }_{200}^{153}$ | 8,400 8,000 | 4814 |
| 20 | 29 | 0 | 0 | 0 | 0 |  |  |  |  | 1 | ${ }_{3}$ |  |  | 4 |  | 175 | 9,500 | ${ }_{4816}$ |
| 30 | 40 | 0 | 0 | 0 | 0 |  |  |  |  | 5 |  | 1 | 1 |  | 0 | 450 | 30, 000 | 4817 |
| 35 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |  | 1 | , | 4 | 0 | 300 | 5,000 | 4818 |
| 51 | 80 | 0 | 0 | 12 | 131 | 2 | 1 | 1 | 1 | 11 | 2 | 3 | 2 | 4 |  | 3,258 | 96, 000 | 4819 |
| 23 | 22 | 0 | 0 | 129 | 131 | 0 | 0 | 3 | 3 | 10 | 7 | 3 |  | 4 | 0 | 300 | 35,000 | 4820 |
| 22 | 30 | 0 | 0 | 188 | 148 | 2 |  |  | 0 |  |  |  | 0 | 4 | 0 | 400 | 10, 000 | 4821 |
| 10 | 19 | 0 | 0 | 30 | 15 | 0 | 0 | 0 | 0 | 1 | 3 |  | 0 | 3 | 0 | 100 | 7,500 | 4822 |
| 15 | 124 | 0 0 | 0 | ${ }_{76}$ | 61 |  |  |  |  | ${ }^{3}$ | 5 | 1 | 2 | -3 |  | 50 | 2,300 4,000 | 4823 |
| 27 | 34 | 0 |  | 178 | 179 | 0 | 0 | 1 | 0 |  |  | 1 | 0 | 4 | 0 | 350 | $8{ }_{8}^{4,000}$ | ${ }_{4825}^{482}$ |
| 38 | 59 | 0 |  | , | 0 |  |  |  |  | 4 | 6 |  |  | 4 |  | 2,000 | 50,000 | 4826 |
| ${ }_{23}^{17}$ | 17 48 | 1 0 | 1 | 0 0 | 0 | 8 | $\begin{aligned} & 0 \\ & 19 \end{aligned}$ | 8 | 0 | , | $\frac{4}{7}$ | 1 | 0 | 4 | 0 | 18 840 | 5,000 4,000 | 4827 4828 |
| 24 | 55 | 0 |  | 0 | 0 | 7 | 21 | 4 | 5 | 4 | 10 | 2 | 4 | 4 |  | 850 | 7, 400 | ${ }_{4828}^{4828}$ |
| 27 | ${ }^{62}$ | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 20 | 4 | 12 | 4 | 12 | 4 |  | 500 | 35,000 | 4830 |
| ${ }_{32}^{25}$ | ${ }_{26}^{32}$ | 0 0 |  | 40 | 52 |  |  |  |  |  | 1 | 2 | 1 | 4 |  | 175 | 10,000 10,000 | ${ }_{4832}^{4831}$ |
| 30 | 40 | 0 | 0 | 0 | , | 6 | 10 | 12 | 8 | 5 | ${ }^{6}$ | 2 | 5 | 4 |  | 1,000 | 30, 000 | 4833 |
| 48 | 62 | 0 | 0 | 0 | 0 |  |  |  |  | 1 | 11 | 0 | 2 | 4 |  | 515 | 33, 000 | 4834 |
| ${ }_{20}^{36}$ | $\stackrel{48}{38}$ | 0 0 | 0 | 188 | 313 |  |  | 1 | 0 | 5 | 5 |  |  | 4 |  | ${ }_{350}^{220}$ | 17, 000 | ${ }_{4836}^{4835}$ |
| 42 | 59 | 0 | 1 | 0 |  |  |  |  |  | 7 | 10 |  |  | 4 |  | 500 | 25,000 | 4837 |
| 12 | 11 | 0 | 0 |  | 0 | 0 |  |  |  | 1 | 8 |  |  | 8 |  | ${ }^{600}$ | 3, 000 | 4838 |
| ${ }_{88}^{14}$ | 118 | 0 | 0 | 153 | 164 | 0 | 0 | 2 | 0 | 11 | ${ }_{14}^{1}$ | 0 | 0 | 4 |  |  | 15,000 30,000 | 4839 4840 |
| 85 56 | 118 | ${ }_{0}^{0}$ | 0 | 0 | 0 | 6 | 0 | 0 | 4 |  | 14 | 4 | 0 |  | 0 | 1,200 | 35, ${ }^{300}$ | ${ }_{4841}^{4840}$ |
| 21 | 60 | 0 | 0 |  | 0 |  |  |  |  | 0 | 11 |  |  | 4 |  | ${ }^{1} 180$ | 20, 000 | ${ }_{4842}^{4841}$ |
| 17 | ${ }_{28}^{28}$ | 2 |  | 112 | 85 |  |  | 10 | 18 | 1 | 7 | 0 | 2 | 4 |  | 300 | 15, 000 | 4843 |
| 10 | ${ }_{9}^{23}$ | - $\begin{array}{r}0 \\ 0\end{array}$ | 0 | 18 0 | 22 | $0$ | $\begin{aligned} & 0 \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \\ & 0 \end{aligned}$ | ${ }_{2}^{1}$ | 0 | 0 | 0 | 3 |  | 80 50 | 2.000 | 4844 4845 |
|  | ${ }^{36}$ | 0 | 0 | 0 | 0 |  |  |  |  | 5 | 2 | 2 | 0 | 4 |  | 250 | 35,000 | ${ }_{4840}^{4845}$ |
| 46 27 | 87 | - | 0 | , | 0 |  |  |  |  | , | 11 | 4 | 9 | 4 |  |  | 40, 000 | 4847 |
| 11 | 21 |  | 0 | ${ }_{60}$ | 77 |  |  |  |  | 3 | 8 | 0 | 0 | ${ }_{3}^{4}$ |  | 300 145 | 20,000 3,500 | ${ }_{4848}^{4848}$ |
| 33 | 36 |  |  |  | 0 | 3 | 0 | 3 | 2 | 5 | 6 | 2 | , | 4 | 0 | 140 400 | 15, ${ }^{3,00}$ |  |

Table: 33.-Statistics of public high schools in the

|  | State and post-office. | Name. | Principal. | Department or independent. | Instructors for secondary stadents. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 | 5 | 6 |
|  | wisconsin-cont'd. |  |  |  |  |  |
| 4851 | Hayward ............ | Free High School | J. G. Adams | Dept.. | 1 | 1 |
| 4852 | Hazel Green......... | High School...... | R. E. Smith. | Ind... | 1. | 0 |
| 4853 | Highland... | - ...do . ${ }^{\text {a }}$.... | James E. MoGover | Dept.. | 1 | 1 |
| 4854 4855 | Hillsboro Horicon | Free High School | A. F. T, Elmegreen... | Dept.. <br> Dept | 1 | 1. |
| 4855 4856 | Horicon. | High School..... | S. T. Johnson.. | Dept..- | 1 | $\frac{1}{2}$ |
| 4857 | Humbird | do | E. M. Beeman | Dept.. | 1 | 1 |
| 4858 | Janesville | do | D. D. Mayne. | Dept.. | 4 | 5 |
| 4859 | Jefferson | do | G. W. Gehrand | Dept.. | 1 | 2 |
| 4860 | Juneau... | do | J. T. Lindley.. | Ind... | 1 | 1 |
| 4861 | Kaukauna |  | C. F. Youmans | Dept.. | 1 | 2 4 4 |
| 4863 | Kewaunee |  | M. McMahon. | Dept.. | 1 | 2 |
| 4864 | Kiel | do | G. M. Morrissey | Ind... | 1 | 1 |
| 4865 | Kilbourn | do | Chester W. Smith | Ind... | 1 | 5 |
| 4866 | La Crosse... | do | W. R. Hemmenway | Dept. . | 2 | 7 |
| 4867 4868 | Lake Genera. | . do | A. F. Bartlett.. | Dept.. | 1 | $\stackrel{2}{2}$ |
| 4868 | Lake Mills. | do | Allen B. West. | Deps... | 1 | 2 2 2 |
| 4870 | Lancaster | do. | David James | Ind... | 1 | 0 |
| 4871 | Madison |  | J. H. Hutchiso | Dept.. | 1 | 12 |
| 4872 | Manawa | Little Wolf High School... | James J. Gill. | Ind... | 1 | 0 |
| 4873 | Manitowoc. | Third Ward High School *.. | Albert Guttman | Dept.. | 2 | 0 |
| 4874 | Marinette | High School................. | Guy E. Maxwell. | Dept.. | $\stackrel{2}{1}$ | 3 1 |
| 4875 4876 | Marshall | Medina High School......... | Wm. Fowlie... | Ind.... | 1 | $\frac{1}{2}$ |
| 4876 | Marshfield | High School ..................... | G. W. Paulus. | Dept.. | 1 | 2 |
| 4878 | Mazomanio | do | Oliver M. Salisbur | Ind... | 1 | 1 |
| 4879 | Meuasha | do | A. B. Dunlap..... | Dept.. | 1 | 2 |
| 4880 | Menomonie | .... do ........................ | Judson E. Hoyt. | Dept.. | 2 | 1 |
| 4881 | $\begin{aligned} & \text { Merrill ... } \\ & \text { Merrillan } \end{aligned}$ |  | Auna E. Anderson | Dept.. | 1 | 3 |
| 4883 | Middieton | do | Wm. F. Thicl.. | Ind.... | 1 | 0 |
| 4884 | Milton Juaction | $\cdots$...do | J. B. Borden... | Ind.. | 1 | 10 |
| 4885 | Milwankee | East Side High School...... | A. J. Rogers. | Dept.. | 10 | 10 |
| 4886 | ....do | South Side High School..... | Sanford A. Hooper | Dept.. | 4 | - |
| 4887 | M- -do ..... | West Sido High School ..... | C. E. McLerregan. | Dept.. | 4 | 1 |
| 4888 489 | Mineral Point | High School .................. | A. R. Jolley...... | Dept.. | 2 1 | 1 |
| 4890 | Monroe. | ......d.do | Aivin F. Roto. | Dept.. | 2 | 2 |
| 4891 | Montello. | do. ${ }^{\text {a }}$ | Peter R. Boylan. | Ind... | 1 | 0 |
| 4892 | Montfort | do | David James... | Ind... | 1 | 1 |
| 4893 | Mount Hope | do | C. E. Shearer. | Ind... | 1 | 0 |
| 4894 | Muscoda. | .do | Arthar W. Kopp. | Ind... | 1 | 1 |
| 4895 4896 | Necedah Neonah |  | C. H. Maxson ... | Dept.. | 1 | 1 3 |
| 4897 | Neillsville | do | W. ${ }^{\text {J. }}$ L Morrison | Dept.. | 1 | 2 |
| 4898 | New Lisbon | do | S. A. Bostrick | Dept.. | 1 | 1 |
| 4899 | New Londor. | do | De Witt Elwood | Dept.. | 1 | 2 |
| 4800 | Dakfield... | do | A. M. Olson... | Ind... | 1 | 0 |
| 4901 | Oakwood.... |  | L. B. Stiles... | Ind... | 2 | 0 |
| 4902 4903 | Oconomawos | Free Bigh Bchool | O. J. Schuster | Dept... | 1 | 2 |
| 4903 | Oconto | High School ..... | R. L. Cooley. | Dept.. | 1 | 2 1 1 |
| 4905 | Onalaska | ......d.do | E. E. Sholdon | Dept.. | 1 | 1 |
| 4908 | 3 Oregon. | .....do | Herbert M, Haske | Dept.. | 1 | 1 |
| 4908 | Oghkent Pepin.. | $\begin{aligned} & \text { do } \\ & \text { do } \end{aligned}$ | Rufus H. Halsey | Dept.. | 8 | 5 |
| 4909 | Peshtigo. | do | G. E. Pratt.... | Ind... | 1 | 0 |
| 4910 | 0 Powauk | do | A. II. Kreiling.. | Ind... | 2 | 0 |
| 4911 | 1 Phillips. | do | F. L. Mr Mowan | Ind... | 1 | 1 |
| 4912 | 2 Plainiela |  | G. Eber Dafor | Dept.-. | 1 | 1 |
|  | Pattevile |  | Chas. M. Fox... | Ind... | 1 | 1 |

United Statcs for the scholastic year 1895－96－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Volumes in library． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Totalsecondarystudents． |  | Colored secondarystudents included in col－ 7 and 8 ． |  | Elomen－tarypupils，includingall belowsecondarygrades． |  | Preparing for college． |  |  |  | Gradu－ates in 1896. |  | College prepara－ dents in the class uated in 1896. |  |  |  |  |  |  |
|  |  | $\begin{gathered} \text { Clas. } \\ \text { sical } \\ \text { course. } \end{gathered}$ | $\begin{array}{\|} \text { Scien- } \\ \text { tific } \\ \text { course. } \end{array}$ |  |  |  |  |  |  |  |  |  |  |
| ボँ |  |  |  | 㤩 |  | $\begin{aligned} & \text { ज⿹丁口㇒ } \\ & \text { ज्ञ } \end{aligned}$ |  | $\begin{array}{\|l\|l\|l\|l\|l\|l\|} \text { 品 } \end{array}$ |  | 㴪 |  | $\begin{aligned} & \dot{8} \\ & \text { gis } \end{aligned}$ |  |  |  |  |  | $\begin{aligned} & \dot{\oplus} \\ & \text { gig } \end{aligned}$ |  |  |
| 7 | 8 | 9 | 10 |  |  | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
|  |  |  |  |  |  | 0 | 0 | 0 | 0 |  | 0 |  |  |  |  | 275 | \＄6，000 |  |
| 8 | 12 | 0 | 0 | 55 | 65 | 0 | 0 | 0 | 0 | 0 |  | 4 |  | 3 |  | 100 | \＄6， 800 | 4852 |
| 17 | 15 | 0 | 0 |  | 0 | 0 | 0 | － | 0 | 0 | 0 | 0 | 0 | 4 |  | 425 | 4， 500 | 4853 |
| 14 | ${ }_{20}^{20}$ | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 |  | ${ }^{3}$ | 0 | 0 | 3 |  | 320 | 3，000 | 4 |
| 16 52 | 22 67 | 0 | 0 | 0 0 | 0 | 0 | 0 | 15 | 10 | 5 3 | 12 | 5 | 11 | 4 |  | 600 1,700 | 10,000 45,000 | 4855 |
| 18 | 16 | 0 |  | 0 | 0 |  |  |  |  |  | 0 |  |  |  |  | ${ }^{286}$ |  | 4857 |
| 121 | 208 | 0 |  | 0 | 0 | 20 | 50 | 10 | 5 | 22 | 36 | 10 | 15 | 4 |  | 250 | 60，000 | 4858 |
| 36 | 40 |  |  |  |  | 11 | － | 18 | 15 |  |  |  |  | 4 |  | 900 | 6，200 | ${ }_{4859}^{4859}$ |
| 20 | ${ }_{30}^{28}$ | 0 0 |  | 80 | 100 | 7 | 5 0 | ${ }^{8}$ | ${ }_{1}^{12}$ | ${ }_{3}$ | ${ }_{2}^{2}$ | 0 | 0 | 4 |  | 500 300 | 20,000 5,000 | ${ }_{4861}^{4860}$ |
| 46 | ${ }_{88}^{30}$ | 0 |  | ${ }^{0}$ | 0 |  |  | 0 | 12 | ${ }_{6}$ | 11 | 3 | 4 | 4 |  | 640 | 80，000 | 4862 |
| 27 | 23 | 0 | － | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  |  |  |  | 1，500 | 10， 000 | ${ }_{4863}$ |
| 17 | 20 |  |  | 80 | 84 |  |  |  |  | 1 | ， | 1 | 0 | 3 |  | 300 | 8，000 | ${ }_{4885}^{4885}$ |
| 38 97 | － 46 | 0 1 |  | 73 0 | 68 | 0 1 | － $\begin{aligned} & 0 \\ & 2\end{aligned}$ | 4 | － | 10 | 18 | $\frac{1}{5}$ | ${ }_{4}^{1}$ | 4 |  | 600 601 | 10,000 45,000 | 4835 4863 |
| ${ }_{3}^{97}$ | 149 | 1 | － 1 | ${ }_{0}^{0}$ | 0 | ．．． | $\ldots$ | 4 | ．${ }^{3}$ | 18 | ${ }_{8}^{18}$ | 5 | ${ }_{4}^{4}$ | 4 |  |  | 45，000 | ${ }_{4867}^{4866}$ |
| 30 | 36 | 0 |  | 0 | 0 | 6 | 0 | 4 | 4 | 5 | 8 | 2 | 1 | 4 | $\ldots$ | 500 | 20， 000 | 4888 |
| 47 | 60 | 0 |  | 0 | 0 |  |  |  |  | 4 | 9 |  |  | 4 |  | ${ }_{2}^{260}$ | 27，000 | 4869 |
| 10 | 12 | 0 | 0 | 55 | 62 |  |  |  |  | ${ }_{23}^{2}$ | 20 | 17 | 11 |  |  |  | 203， 000 |  |
| 201 | 216 16 | 1 | 0 | ${ }_{0}$ | 0 | ．．． |  |  | － | 1 | 0 | 1 | 11 | ${ }_{3}^{4}$ |  | 275 | 2， 2 ， 500 | ${ }_{4872}^{4871}$ |
| 38 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |  | ， | ， | 1 | 4 |  | 380 | 32， 000 | 4873 |
| 52 | 78 | 0 |  | 0 | 0 | 5 | 5 | 4 | 0 |  | 9 | 2 | 2 | 4 |  | 150 | 25， 000 | 4874 |
| 18 | 34 43 | 0 | 0 | － | 0 |  |  |  |  | 0 | 1 |  |  | 4 |  | 100 | 6，000 | ${ }_{4876}^{4875}$ |
| 35 | 43 | 0 | 0 | 0 | 0 | 3 | 2 | 3 | 10 | 5 | 5 | 3 | 1 | 4 |  | 400 | 2,000 | 4877 |
| 21 | ${ }_{28}^{28}$ | 0 |  | 120 | 88 | 1 | 3 | 2 | 1 | 1 | 1 |  | 1 | 4 |  | 218 | 10，000 | 4878 |
| 27 55 | 46 49 | 0 |  | 0 | 0 | ${ }_{10}^{0}$ | 6 | ${ }_{3}$ | 10 | 3 | 2 | $\stackrel{1}{4}$ | 2 | 4 |  | 500 1,000 | 35， 000 | ${ }_{4880}^{4879}$ |
| 39 | 79 |  |  |  |  |  |  | 1 | 0 |  | 7 |  |  | 4 |  | 200 | 10， 000 | 4881 |
| 20 | 16 |  |  | 80 | 184 | 1 | 3 |  |  | 2 | 8 | 1 | 2 | 3 |  | 1，000 | 50， 000 | ${ }^{4882}$ |
| 17 | ${ }_{30}^{10}$ |  |  | 80 | 110 |  |  | 2 | 0 | ${ }_{3}^{5}$ | 0 |  |  |  |  | 125 |  | 4883 <br> 4884 |
| 259 | 256 | 0 | 0 | 8 | 110 | 86 | 79 | 25 | 20 | 39 | 61 | 25 | 20 | 4 |  | 1， 200 | 117， 210 | ${ }_{4885}^{4888}$ |
| 192 | 216 | 0 |  | 0 | 0 |  |  |  |  | 16 | 28 | 7 | 12 | 4 |  | 1，652 | 75， 000 | ${ }_{4}^{4888}$ |
| 138 | 182 60 | ${ }_{0}$ | 0 | － | 0 | 5 | 1 |  |  |  | 0 | 0 | － |  |  |  | 150,000 $25 ; 000$ | ${ }_{4888}^{4887}$ |
|  | 14 |  | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 3 | 2 | 1 | $i$ | 4 |  | － 365 | 15， 000 | 4889 |
| 55 11 | 80 <br> 24 |  | 0 0 0 | － | 57 | $\cdots$ | 0 | 0 | $\ldots$ |  |  | 0 | 0 |  | 0 |  | 7,000 2,500 | 4891 |
| 16 | 36 | 0 | 0 | 0 | 0 | ．．． | － | － | ．．． | 0 | 2 |  |  | 4 |  | 50 |  | 4892 |
| 18 | 17 20 | 0 | 0 0 | $\stackrel{0}{38}$ | 50 | ．．． | 0 | 0 | ． 0 | $\frac{4}{3}$ | ${ }_{9}^{2}$ | 2 | 4 | 3 |  | 150 500 | 2,000 8,000 |  |
| 30 | 42 | 0 |  | 0 | 5 | 0 | 0 | 4 | 6 | 2 | 8 |  |  |  |  | 350 |  | ${ }_{4895}^{489}$ |
| 40 | 60 <br> 51 | 0 |  | 0 | 0 |  |  |  |  | 3 | 11 | 0 | 2 | 4 |  | 500 |  | 4896 |
| 18 | ${ }_{24}^{51}$ | ${ }_{0}$ |  | 0 | 0 | 3 | 4 |  |  | 5 | ${ }_{5}^{2}$ | 3 | ${ }_{3}^{2}$ |  |  | $\begin{array}{r}75 \\ 807 \\ \hline\end{array}$ | 15， 000 | 4898 |
| 18 | ${ }_{32}^{24}$ |  |  | 0 | ， |  |  |  |  | 0 |  | 0 | 0 | 4 |  | 250 | 6，500 | 4899 |
| 13 | 28 |  | 0 | 57 | 80 |  |  |  |  | 0 | ， |  |  | ${ }^{3}$ |  | 150 |  | 4800 |
| ${ }_{37}^{12}$ | 11 57 | 0 |  | 25 0 | 38 0 | 0 | 0 0 | ${ }_{16}^{0}$ | 19 | 2 | 2 | 0 2 | 8 | 3 <br> 4 |  | 150 625 | 4,000 350 | 4901 4902 |
| 40 | 45 |  |  | 0 |  |  |  |  |  | 2 | 5 |  |  |  |  | 500 |  | ${ }_{4903}$ |
| 12 | 18 | 0 | 0 | 0 | 0 | 1 | 0 |  | 1 | ${ }_{2}^{4}$ | ${ }^{6}$ | 3 | ${ }_{1}^{2}$ | 4 |  | ${ }^{600}$ | 14，000 | ${ }_{4905}^{4904}$ |
| 23 44 | ${ }_{41}^{21}$ | 0 |  | 0 | 0 | ． | 0 |  |  | 2 | 3 4 4 | $\frac{1}{2}$ | 1 |  |  | 200 | 14,000 17,000 | ${ }_{4908}^{4905}$ |
| 01 | 128 | 8 |  | 0 | 0 | 10 | 15 | 12 | 18 |  | 12 | 4 | 5 |  |  | 1，525 | 75， 000 | 4907 |
| 10 |  |  |  | ${ }_{0}^{61}$ | 5 | $\cdots$ | － |  | ${ }^{-1}$ | 2 | ${ }_{3}^{2}$ | 1 | 2 | ${ }_{3}$ |  | 245 |  | 4908 4009 |
| 12 | 17 | 7 |  |  | 125 |  |  |  |  | 2 | 5 |  |  | 3 |  | 222 | 1，200 | 4910 |
|  | 9 | 9 | 0 | 0 |  | 0 | 0 | 0 | 8 | 0 | 8 | 0 | 0 | 3 | ．．． | 1，800 |  | 4911 |
|  | （ |  |  | 0 0 |  |  |  |  |  |  | ${ }_{2}^{3}$ |  |  | 3 |  | ${ }_{64} 26$ | 3，500 | ${ }_{4912}^{4912}$ |

Table 33.-Statistics of public high schools in the

|  | State and post-office. | Name. | Principal. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | 9 | 3 | 4 | 5 | 6 |
|  | WISCONSLN-cont'd. |  |  |  |  |  |
| 4914 | Plymouth. | High S | Otto Gaffron . . . . . . . . . . . . | Dept.. | 1 | 2 |
| 4915 | Port Washington | -...do ..... | A. C. Piper ............... | Dept.. | 2 | 0 |
| 4916 P | Potosi | do | Philip A.Kolb. . . . . . . . | Ind... | 1 | 3 1 |
| 4917 P | Poynette Prairie d | do | H. S. Yonker............. | Dept.. Dept. . | 1 | 1 |
| 4919 | Prairie du Sac | do | J. F. Be | Dept.. | 1 | 1 |
| 4920 | Prescott..... | do | James Goldsworth | Dept.. | 1 | 1 |
| 4921 | Racine. | do. | Albert J. Volland. | Dept.. | 2 | 3 |
| 4922 | Reedsburg.. | do | W. N. Parker | Dept.- | 2 | 1 |
| 4923 4924 | Rhinelander | do | C. M. Gleason.......... | Dept.. | 1 | 2 1 |
| 4925 | Rice Lake -...... | do | G. M. MacGregor. | Dept... | 1 | 2 |
| 4926 | Ripon.......... | do | Albert E. Schaub........ | Dept... | 1 | 2 |
| 4927 | River Falls | do | Howard L. Wilson...... | Dept.. | 1 | 2 |
| 4928 | Rosendale | do | Alice M. Tetherly ...... | Ind... | 0 | 1 |
| 4929 | St. Croix F | do | Paul Van der Eike....... | Dept.. | 1 | 0 |
| 4930 | Sauk City | do | W. H. Schultz........... | Ind... | 1 | 1 |
| 4931 4932 | Sextonvill | do | Peter Peterson | Ind... | 1 | $\frac{1}{2}$ |
| 4932 | Sharon |  | J. G. Skeels . | Dept.. | 1 | 1 |
| 4934 | Shawano. Sheboygan | do | D. O. William | Dept.. | 5 | 2 |
| 4935 | Sheboygan Falls | do | F. F. Showers | Ind... | 2 | 1 |
| 4936 | Shell Lake.. | do | Jno. N. Foster. . . . . . . . . | Dept.. | 1 | 1 |
| 4937 | Shallsburg | do | M. M. Warner. | Dept.. | 2 | 1 |
| 4938 | South Kaukauna. | . do. |  | Dept.. | 1 | 2 |
| 4939 | South Milwaukee | - . . . do | John E. Roets........... |  | 1 | 1 |
| 4940 | Sparta ....... | . . . . do | J. W. Livingston........ | Dept.. | 2 | 2 |
| 4941 | Spring Green | do | J. D. Rouse....... | Dept.. | 1 | 1 |
| 4942 4943 | Stevens Point | do | H. A. Simonds........... | Dept.. | 3 | 2 |
| 4943 | Stoughton... | - do | Arthur H. Shoitz........ | Dept.. | 1 | 2 |
| 4944 4945 | Sturgeon Bay | - do do - - - . | E. E. Beckwith........... | Dept.. | 1 | 2 |
| 4945 | Sun Prairie.. | Free High School............. | Jos. Melville ............ | Ind... | 1 | 1 |
| 4916 | Snperior | Nelson Dewey High School. | G. L. Bowman ............ | Dept.. | 1 | 4 |
| 4948 | Tomah | .-..-do. | G. W. Rheigle | Dept... | 1 | 2 |
| 4949 | Two Rivers | . . . . do | Edwin R. Smith......... | Dept.. | 1 | 1 |
| 4950 | Unity .- | ..... do | James M. Powers ........ | Ind... | 1 | 0 |
| 4851 | Viroqua | ...do ..................... | Taylor Frye............. | Dept.. | 1 | 3 |
| 4959 | Waldo.... | Queen Anne High School... | Gөorge H, Drewry ..... | Ind... | 1 | 1 |
| 4953 4854 | W alworth | High School .................... | J. W.Blodgett .......... | Dept.. | 1 | 1 |
| 4955 | W aterloo |  | H. W. Rood | Dept.. | 2 | 0 |
| 4956 | Waukesha |  | G. L. Terry. | Dept.. | 1 | 4 |
| 4957 | W aqpun | North Ward High School... | H. C. Curtis ............... | Ind... | 1 | 1 |
| 4958 | .....do... | South W ard High School... | F.C. Howard. ............. | Dept.- | 1 | 2 |
| 4959 | Wausan.... | Washington High School... | W, R. Moss .............. | Dept.. | 2 | 4 3 |
| 4860 | Wauwatosa | Figh School ................... | J. M. Turner. . . . . . . . . . . | Dept.- | 1 | 3 |
| 4962 | West De Pere | High School | C. C. Parlín | Dept.. | 1 | 1 |
| 4983 | Westfield... | ....do ...... | D. F. Burnham............... | Ind... | 1 | 0 |
| 4964 | West Salem ... | ...do do ..................... | Charles E. Slothower... | Ind... | 1 | 0 |
| 4985 4966 | Went Superior | Broad way High School ...... | Cary Richard Colburn.. | Dept... | 2 | 5 |
| 4907 | Weyanwega | High School ................... | Frank W. Starx ......... | Ind... | 1 | 3 |
| 4988 | Winneconne. |  | E. W. W alker ........... | Dept.. | 1 | 5 |
| 4909 | Wonewoc... | . . . . . do do | Benjamin Thomas. <br> W. S. Freeman ............ | Dept.. | 1 | 0 |
|  | wriorneta. |  |  |  |  |  |
| 4970 | 1 Buffalo ........ |  |  |  |  |  |
| 4971 | 1 Chejenne Cit | Ligh sc | Wileon MoBride | Dept.. | 1 | 0 |
| 4972 | 2 Evanston.... |  | Anng E. Fox....... | Dept. | 0 | 5 |
| 4973 | 3 Rawlins. |  | Mise Mand Perdue..... | Dept.. | 1 | 2 |
| 4974 | 4 Sundance | Prblie Sehool | Joseph E. Brate. <br> J. I. Gates. | Dept.. Ind | 1 | 1 |

United States for the schalastic year 1895－96－Continued．

| Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Volumes in library． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Colored secondary students included in col－ umns 7 and 8. |  | Elemen－ tary pupils， including all below secondary grades． |  | Preparing for college． |  |  |  | Grada－ ates in 1896. |  | College prepara－ tory stu－ dents in the class that grad－ uated in 1896. |  |  |  |  |  |  |
| $\begin{aligned} & \text { secon } \\ & \text { stad } \end{aligned}$ | ary |  |  | Clas－ sical course． | $\begin{gathered} \text { Scien- } \\ \text { tific } \\ \text { course. } \end{gathered}$ |  |  |  |  |  |  |  |  |  |  |
| 彩 |  | 过 |  |  |  |  |  | $\begin{aligned} & \text { 感 } \\ & \hline \end{aligned}$ |  | 稛 |  | $\begin{aligned} & \text { 荗 } \end{aligned}$ |  |  |  |  |  | 臤 |  |  |
| 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
| 44 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 7 | 2 | 8 | 1 | 2 | 4 |  | 300 | \＄25， 000 | 4914 |
| 6 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |  | 400 |  | 4915 |
| 20 | 35 | 0 | 0 | 0 | 0 |  |  |  |  | 0 | 4 |  |  | 3 |  | 100 |  | 4916 |
| 22 | 28 | 0 | 0 | 0 | 0 |  |  | 4 | 7 | 2 | 2 | 1 | 1 | 4 |  | 600 | 200 | 4917 |
| 30 | 50 | 0 | 0 | 0 | 0 | 3 | 6 | 4 | 7 | 0 | 6 | 0 | 1 | 4 |  | 800 | 25， 000 | 4918 |
| 24 | 18 | 0 | 0 | 0 | 0 | 4 | 5 | 4 | 5 | 1 | 1 | 1 | 1 | 4 |  | 500 | 12， 000 | 4919 |
| 25 | 27 | 0 | 0 | 0 | 0 |  |  | 1 |  | 1 | 1 | 1 | 0 | 4 |  | 500 | 15， 000 | 4920 |
| 90 | 107 | ， | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 7 | 22 | 2 | 2 | 4 |  | 1， 100 | 20， 000 | 4921 |
| 24 | 50 | 0 | 0 | 0 | 0 |  |  | 4 | 6 | 2 | 5 | 1 | 3 |  |  | 521 | 7，000 | 4922 |
| 25 | 40 | 0 | 0 | 0 | 0 |  |  | 3 | 6 | 0 | 5 | 0 | 2 | 4 |  | 850 |  | 4923 |
| 28 | 27 | 0 | 0 |  | 0 |  |  | 4 | 2 | 4 | 2 | 2 | 1 | 4 |  | 100 |  | 4924 |
| 56 | 70 | 0 | 0 | 0 | 0 | 0 | 1 |  |  | 2 | 8 | 1 | 2 | 4 |  | 300 | 10，000 | 4925 |
| 35 | 42 | 1 | 0 | 0 | 0 | 1 | 0 | 14 | 26 | 4 | 0 | 3 | 0 | 4 |  | 500 |  | 4928 |
| 16 | 14 | 1 | 0 | 0 | 0 |  |  |  |  |  | 6 |  |  | 4 |  | 1，000 | 1，800 | 4927 |
| 15 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |  |  | 3 |  | 68 | 6，000 | 4928 |
| 13 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |  |  | 3 |  | 145 | 6，000 | 4929 |
| 28 | 10 | 0 | 0 | 58 | 62 |  |  |  | ． | 5 | 2 | 5 | 2 | 4 |  | 600 | 7，000 | 4930 |
| 15 | 13 | 0 | 0 | 54 | 38 |  |  |  |  |  |  |  |  | 3 |  | 123 | 3，000 | 4931 |
| 15 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 1 | 3 | 0 | 4 |  | 250 | 12， 000 | 4932 |
| 22 | 44 | 0 | 0 | 159 | 143 |  |  |  |  | 4 | 5 | 1 | 1 | 4 |  | 200 | 25， 000 | 4933 |
| 60 | 80 | 0 | 0 | ， | 0 | 40 | 14 | ， | 1 | 5 | 14 | 5 | 14 | 4 |  | 6， 210 | 35,000 | 4934 |
| 30 | 32 | 0 | 0 | 0 | － | 6 | ， | 2 | 1 | 4 | 0 | 2 | 0 | 4 |  | 530 |  | 4935 |
| 25 | 30 | 0 | 0 | 0 | 0 |  |  |  |  | 4 | 7 | ， | 0 | 3 |  | 500 | 15， 000 | 4936 |
| 25 | 25 |  | 0 | 0 | 0 |  |  | 10 | 8 | 3 | 4 | 3 | 4 | 4 |  | 525 | 20， 000 | 4937 |
| 39 | 36 |  | 0 | 0 | 0 |  |  |  |  | 5 | 8 |  |  | 4 | 0 | 200 | 400 | 4938 |
| 10 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 4 | 0 | 0 | 3 |  | 378 | 20，000 | 4939 |
| 72 | 92 | 0 | 0 | 0 | 0 |  |  |  |  | 12 | 10 | 7 |  | 4 |  | 300 | 25， 000 | 4940 |
| 19 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 3 | 2 | 0 | 4 |  | 320 | 5， 000 | 4941 |
| 44 | 85 | 0 | 0 | 0 | 0 |  |  |  |  | 7 | 18 |  | 3 | 4 |  | 1， 118 |  | 4942 |
| 40 | 50 |  | 0 | 0 | 0 | 0 | 0 | 4 | 7 |  | 3 | 2 | 1 | 4 |  | 340 | 25， 000 | 4943 |
| 17 | 45 | 0 | 0 | 0 | － |  |  | 1 | 2 | 3 | 12 | 2 | 2 | 4 |  | 600 | 12， 000 | 4944 |
| 18 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 8 | 2 | 3 |  | 2 | 4 |  | 397 | 10， 000 | 4945 |
| 13 | 18 | 0 | 0 | 0 |  |  | ．． | ．． | ．． | 5 | 6 | 5 | 6 | 4 |  | 50 | 200 | 4946 |
| 13 | 20 | 0 | 0 | 5 | 10 |  |  |  |  | 4 | 5 |  |  | 3 |  | 100 | 5， 000 | 4947 |
| 29 | 44 | 0 | 0 | 0 | 0 |  |  |  |  | 5 | 6 | 2 | 2 | 4 | 0 | 800 | 17，000 | 4948 |
| 30 16 | $\stackrel{24}{15}$ |  | 0 | 0 4 | 45 | 0 | 0 |  |  | 3 | 4 |  |  | 4 |  |  |  | 4949 4950 |
| 16 | 15 96 | 0 | 0 | 44 | 45 | 0 | 2 | 1 | 0 | 2 | 0 | 1 | 2 | 4 |  | 200 | 3,000 25,000 | 4950 |
| 12 | 14 | 0 | 0 | 48 | 58 |  |  |  |  | 2 | 4 | 0 | 0 | 3 |  | 157 | －4， 000 | 4952 |
| 25 | 20 | 0 | 0 | 0 | 0 |  |  |  |  | 4 | 6 |  |  | 3 |  | 112 | 2， 575 | 4953 |
| 4 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 1 | 5 | 1 | 5 | 4 |  | 650 | 43， 000 | 4954 |
| 24 | 20 | 0 | 0 | 0 | 0 |  |  | 4 | 0 | 1 | 0 | 0 | 0 | 4 |  | 300 | 12， 000 | 4955 |
| 46 | 85 | 1 | 0 | 0 | 0 |  |  |  |  | 5 | 7 |  |  | 4 |  | 1， 500 | 81，784 | 4056 |
| 33 | 21 | 0 | 0 | 85 | 93 |  |  |  |  | 5 | 4 |  |  | 4 | 0 | 300 | 9，500 | 4957 |
| 40 | 51 | 0 | 0 | 0 |  |  |  |  |  | 7 | 8 |  |  | 4 |  | 427 | 15， 000 | 4958 |
| 55 | 80 | 0 | 0 | 0 | 0 |  | 0 | 1 | 0 | 4 | 11 | 2 | 1 | 4 |  | 606 | 12，500 | 4959 |
| 39 | 46 | 0 | 0 | 0 | 0 | 10 | 8 | 1 | ${ }^{3}$ | 6 | 6 | 3 | 1 |  |  | 450 |  | 4960 |
| 18 | 45 | 0 | 0 | 0 | 0 | 1 | 1 | 1. | 4 | 9 | 8 | 2 | 0 | 4 |  | － 700 | 20,000 12，900 | 4981 |
| 18 | 28 | 0 | 0 | 102 | 98 | － | 2 | 1 | 4 | 4 | 3 3 3 | 1 | 0 | $\frac{1}{3}$ |  | 1，000 | 12， 1000 | ${ }_{4}^{4962}$ |
| 18 | 36 | 0 | 0 | ， | 0 |  |  |  |  | 3 | 5 |  |  | 3 |  | 400 | 12， 000 | 4964 |
| 86 | 144 | 0 | 0 | 0 | 0 | 20 | 30 | 25 | 10 | 12 | 13 | 8 | 7 | 4 | 0 | 40 | 2，500 | 4965 |
| 17 | 53 | 0 | 0 | 041 | 64 | ． 0 | 0 | 0 | 0 | 4 | 7 | 0 | 0 | 4 | 0 | 250 | 5，000 | 4966 |
| 73 | 89 | 0 |  | 0 | 0 | － 9 | 15 | 7 | 0 | 8 | 8 | 8 | 4 | 4 |  | 1， 485 | 50， 000 | 4967 |
| 15 16 | 19 | 0 |  | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 2 | 0 | 8 |  | 300 200 | 8， 000 | 4988 |
| 16 | 29 | 0 | 0 | 0113 | 121 | 0 | 0 | 0 | 0 | 4 | 3 | 8 | 0 | 4 |  | 200 | 10，000 | 4969 |
| 12 | 18 |  | ， | 0 | 0 |  |  |  |  | 0 | 0 |  |  | 2 |  |  | 15，000 | 4970 |
| 58 | 77 | 1 | ． 1 | 10 | 0 |  |  |  |  | 1 | 0 |  | 0 | 4 |  | 1， 220 | 45， 000 | 4971 |
| 24 5 | 40 | 0 | － | 00 | 0 | 13 | 36 | 1 | 0 | 4 | 0 | 1 | 2 |  |  | 500 | 40,000 | 4972 |
| 10 | 15 | 50 | ， | 0 0 | 0 | 0 | 4 |  |  | 0 | 0 | 0 | 0 | 4 |  | 450 15 | 30,000 1 | 4973 |



" Statisticl of 1894-05.
and other private secondary schools for the scholastic year 1895－96．

| In．struct． ors for sec－ ond－ ary stu－ dents |  | Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Number in military drill. |  | Value of grounds， build－ ings，and scientific appa－ ratus． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total second－ ary stu－ dents． |  | Colored second－ ary sta－ dentsin－ cluded in col－ umns 7 and 8. |  | Elemen－ tary． |  | Preparing for college． |  |  |  | Gradu－ atés in 1896. |  | College prepara－ tory stu－ dents in the class that graduated in 1896. |  |  |  |  |  |  |
|  |  | Clas． sical course． | Scien－ tific course． |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 蕆 |  |  |  | $\begin{aligned} & \dot{0} \\ & \text { ज゙ } \end{aligned}$ |  |  | $\begin{aligned} & \dot{0} \\ & \text { di } \\ & \text { In } \\ & ==1 \end{aligned}$ |  |  |  |  |  |  |  |  | $\begin{aligned} & \text { 岛 } \\ & \text { Ä } \end{aligned}$ |  |  |
| 5 | 6 | 7 | 8 |  |  | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 12 | 23 | 24 |  |
| 2 | 1 | 122 | 68 | 0 | 0 | 44 | 36 | 12 | 8 | 6 | 4 |  |  |  |  | 6 |  |  | \＄4， 000 | 1 |
| 1 |  | 16 |  |  |  | 12 |  | 16 |  |  |  | 0 |  | 0 |  | 4 | 0 |  | 15，000 | 2 |
| 1 | 6 1 | 40 | 64 | 0 | 0 | 35 | 190 30 | $\stackrel{-}{2}$ | 36 0 | 4 | $28$ |  | 23 |  |  | 4 | 0 | $\begin{array}{r} 2,000 \\ 200 \end{array}$ | 2，000 | 3 4 4 |
| 1 | 0 | 13 | 7 | 0 | 0 | 62 | 42 |  |  |  |  |  |  |  |  |  | － |  |  | 5 |
| 1 | 2 | 10 | 16 | 0 | 0 | 5 | 59 |  |  | 10 | 15 |  |  |  |  |  |  | 200 | 2，000 | 6 |
| 1 | 0 | 29 | 29 | 0 | 0 | 47 | 30 | 20 | 18 | 9 | 10 | 0 | 0 | 0 | 0 | 5 | 0 | － | 400 | 7 |
| 1 |  | 7 | 6 | 0 | 0 | 11 | 4 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 4 | 0 |  |  | 8 |
| 0 | 2 | 0 | 81 | 0 | 0 | 4 | 41 |  |  |  |  | 0 | 1 |  |  |  |  |  | 20， 000 | 9 |
| 2 | 1 | 26 | 12 | 0 | 0 | 9 | 7 | 14 | 4 | 8 | 0 | 0 |  | 0 | 0 |  | 0 | 300 | 5，000 | 10 |
| 2 | 0 | ${ }^{14}$ | 9 | 0 | 0 | 33 | 13 |  |  | 5 | 3 | 2 | 1 | 2 | 1 | 4 |  |  |  | 11 |
| 1 | 2 | 21 | 23 | 0 | 0 | 42 | 51 |  |  |  |  | 0 | 0 | 0 | 0 | 4 | 0 | 1，000 | 3，500 | 12 |
| 1 | 1 | 133 | 18 | 0 | 0 | 20 | 32 | 12 | 15 | 10 | 0 |  |  |  |  |  | 0 | 3，000 |  | 13 |
| 1 | 1 | 15 | 10 | 0 | 0 | 20 | 15 | 10 | 1 | 4 | 3 | 0 | 0 |  |  |  | 0 | ， | 2， 000 | 14 |
| 1 | 1 | 8 | 7 | 0 | 0 | 22 | 13 | 4 |  |  | 3 |  |  |  |  |  | 0 | 0 | 500 | 15 |
| 2 | 1 | 75 | 30 |  |  | 35 | 25 |  |  |  |  |  |  |  |  |  |  |  | 3， 000 | 16 |
| 1 | 2 | 27 | 16 | 0 | 0 | 26 | 30 |  |  | 7 | 6 | 0 | 2 | 0 | 2 | 4 | 0 | 0 | 3， 500 | 17 |
| 1 | 0 | 24 | 7 | 0 | 0 | 19 | 28 | 9 | 4 |  |  | 0 | 0 |  |  | 4 | 0 | 0 | 2，500 | 18 |
| 1 | 1 | 20 | 36 | － 0 | 0 | 20 | 12 | 10 | 4 |  |  | 6 | 2 | 6 | 2 |  | 0 | 100 | 6， 000 | 19 |
| 1 | 2 | －15 | 35 | 0 | 0 | 10 | 15 | 3 | 10 |  |  | 2 | 2 |  |  |  | 0 | 250 | 3，000 | 20 |
| 1 | 2 | 25 | 20 | 0 | 0 | 28 | 27 | 7 | 5 | 3 | 1 | 20 | 18 |  |  |  | 0 | 100 | 2，000 | 21 |
|  | 4 | 50 | 50 | 0 | 0 | 5 | 45 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | ． | 0 | 1，500 | 10，000 | 22 |
| 3 | 1 | 56 | 0 | 0 | 0 | 10 | 0 | 18 | 0 | 4 | 0 |  |  |  |  |  |  |  |  | 23 |
| 2 | 0 | 40 | 20 | 0 | 0 | 25 | 20 | 1 | 0 | 4 | 1 | 6 | ， | 3 | 1 | 3 | 0 | 100 | 600 | 24 |
| 1 | 0 | ｜ 8 | 10 | 0 | 0 | 10 | 19 | 0 | 0 | 0 | 0 | － | ， | 0 |  | 2 |  | 0 | 500 | 25 |
| 1 | 1 | ${ }^{9}$ | 8 | 0 | 0 | 40 | 42 | 0 | 0 |  |  |  |  |  |  |  |  | 300 | 2， 000 | 26 |
| 1 | 0 | ． 15 | 15 | 0 | 0 | 25 | 30 | 8 | 3 |  |  | 10 | 2 | 10 | 2 | 1 |  |  | 500 | 27 |
| 1 | 0 | － 7 | 8 | 8 0 | 0 | 23 | 33 | 6 | 8 |  |  |  |  |  |  |  |  | 0 | 1，000 | 28 |
| 1 | 10 | 05 | 4 | $4{ }^{0}$ | 0 | 13 | 14 | 2 | 2 |  |  | 0 | 0 |  |  | 4 |  | 0 | ， 80 | 29 |
|  | 10 | 14 | 0 | 0 | 0 | 10 | 0 | 4 | 11 |  |  | 0 | 0 |  |  | 4 |  | 0 |  | 30 |
|  | 1 | 2 | 12 | － 0 | 0 | 30 6 | 18 | 25 | 11 | 18 | 20 | ${ }_{0}^{2}$ | 1 |  |  | 4 |  | 400 | 7,500 5,000 | 31 32 |
| $i$ | 11 | 1 14 | 10 |  |  | 22 | 18 | 9 | 7 |  |  |  |  |  |  |  |  |  |  | 33 |
|  | 3 | 314 | 5 | 5 |  | 49 | 50 |  |  |  |  | 9 | 4 | 9 | 4 | 3 |  | 60 | 10，000 | 34 |
|  | 1 | 1.16 | 10 | c ${ }^{\text {c }}$ | 0 | 22 | 24 |  |  |  |  |  |  |  |  | 5 |  | 60 | ， 600 | 35 |
|  | ${ }^{0}$ | $2{ }^{2} 12$ |  | $3{ }^{5}$ | 0 | 53 | 77 | 0 | 5 |  |  | 0 | 1 | 0 | 1 | 4 |  |  | 1，500 | 30 |
|  | $1{ }^{1} 1$ | $1{ }^{1}$ | 5 | 50 | 0 | 19 | 21 |  |  |  |  | 0 | 0 |  |  |  |  | 10 | 2，000 | 37 |
|  | $1{ }^{1} 1$ | $1{ }^{1} 18$ | 11 | 1 |  | 55 | 18 |  |  |  |  | 0 | 0 | 0 | 0 | 4 |  |  | 1，200 | 38 |
|  | $1{ }^{1} 1$ | $1{ }^{1} 20$ | 24 | $4{ }^{4}$ | 0 | 16 |  | 5 | 4 | 2 | 0 |  |  |  |  |  | 0 |  |  | 39 |
|  | 10 | 0 12 |  |  | 0 | 71 | 110 |  |  |  |  |  |  |  |  |  |  | 50 | 2，500 | 40 |
|  | 10 | 06 | 9 | 9 |  | 40 | 38 |  |  |  |  |  |  |  |  |  |  |  | 600 | 41 |
|  | （a）． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 42 |
|  | 0 1 | 126 | 22 | 20 |  | －12 | 10 |  |  |  |  |  |  |  |  |  |  |  | 1，500 | 43 |
|  | 0 | 2 17 | 19 | 9 |  | 021 | 23 | 1 | 4 | 2 | 0 |  |  |  |  | 4 |  | 0 | 3，580 | 44 |
|  | $\stackrel{2}{2}$ | $0{ }^{0} 19$ | 21 | 1 | 0 | 022 | 32 | 1 | 0 |  |  |  |  |  |  | 4 |  | 75 | 2，000 | 45 |
|  | 6 | 0 90 |  | 0 |  | ．． 11 |  | 45 | 0 |  | 0 | 9 |  |  |  |  | 90 |  | 75， 000 | 46 |
|  | 1. | 122 | 19 | 9 | 0 | 013 | 20 | 0 | 2 | 1 | 0 | 1 | 2 | 1 | 2 |  |  |  | 2， 000 | 47 |
|  | 0 | 3 | 30 | 0 | 0,0 | 0 | 20 | 0 | 0 |  | 0 | 0 | 3 | 0 | 0 | 4 |  |  | 3， 000 | 48 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 49 |
|  | 0 | 2 | 011 | 11 | 0 1 | $0^{1} 0$ | － 35 | ${ }^{1} 0$ |  |  |  |  |  |  |  |  |  |  | 10，000 | 50 |
|  | 1 | $1{ }^{1} 10$ | 18 | 18 | 0 | 012 | 13 |  |  | 0 | 0 |  |  |  | 0 | 4 |  |  |  |  |
|  | 1 | 0 |  | 8 ． |  | ．． 15 |  |  |  |  |  |  |  |  | 0 | 4 |  |  | 1,800 150 | 51 52 |

Table 34．－Statistics of private high schools，endowed academies，seminaries，and

Amity

## Arkadelphia

Bellevilie．
Berryville
Carrollton
Caxthron
Clinton．
Golly．
Hamburg．
Hazen
Helena
Hindsville．
Hope
Littlo Rock
Magnolia
Mason Vailey．
Monticello
Olalona
Ozark．
Parazonild

## 100 Pea Ridgo．

Prairie Grove．
105 Onitmani．．．．．．．．．．．．．．．．
104
105
Opelika
Perdue
Piedmont
Pineville
Pushmataha．
Ramer
Roanoke
Rockford
Rock Mills
Rutledge．
Stevenson
Sulligent ．．．．．．．．．．．．．．

Talladega
Town Creek
Trussville．
Tuscumbia
Tuscaloosa
Tuskegee．
Verbena
W alnut Grove．
White Plains．
Woodstock
ARKANSAS．

Rogers
Rover
Bouthlaind

Name．

Opelika High School＊
Perdue Hill High School．．．．．．
Cumberland Presbyterian Seminary．
Pineville Aoademy．．．．．．．．．．．．． Academy．
Pushmataha High School＊．．．．
High School＊
Roanoke Normal College ．．．．．．．
Rockford Male and Female High School．＊
Rock Mills High School
Rutledge High School．．．．．．．．．
William and Emma Austin College．
Suiligent A cademy
Talladega College．
Talladega Male A ce．．．．．．．．．
Town Creek Normal Scyo．．．
Trussville Academy
Deshler F＇emale Institute
Verner Military Institute．．．．．． Alabama Military Institute．．． Verbena High School．
Vernon Institute
Walnut Grove College
Talladega District High School．
Woodstock A cademy

Amity High School
Arkadelphia Academy
Shorter University＊
Belleville High School
Clarke＇s Academy ．
Carrollton Seminary
Cauthron High School
Male and Female A cademy
Conference Training School．
North Arkansas Academy＊．
Hamburg High School．
Rural Academy
Sacred Heart A cademy
Hindsville Academy
Hope Institute
Arkansas Female College＊
South Western Academy．
Mason Valley Iustitute．
Hinemon University School．． Okalona High School Frankiln Female College． Thompson＇s Classical lnatitut Pea Rlidge Normal Colloge．．．．． Prairie Grove Institate．．．．．．．．
Male and Fernale Collage．
Rogors A cademy
Fouche Valley High Sichool ．．．
Sonthland College and Nermil
Institute．

＊Statistice of 1894－95．
other private secondary schools for the scholastic year 1895-96-Continued.


Table 34.-Statistics of private high sohools, endowed academies, seminaries, and

*Statistios of 1804-05.
other private secondary schools for the scholastic year 1895-96-Continued.


Table 34. -Statistics of private high schools, endowed academies, seminaries, and


[^91]other private secondary schools for the scholastic year 1895-96-Continued.


Table 34.-Statislics of private high schools, endowch academies, seminaries, and


- Statistics of 1894-95.
other pritate scesndary seleols for the scholastie ycar 1895-96-Continued.


Table 34.-Statistics of private high schools, endowed academies, seminaries, and

other private secondary schools for the scholastio year 1895-96-Continued.


Table 34.-Statisties of private high sohools, endowed academies, seminaries, and

othar private swonilark schools for the scholastic year 18.93-96- Donsinued.


Table 34.-Statistics of private high schools, endowed academies, seminaries, and

other private secondary sohools for the scholastic year 1895－96－Continued．

| In．struct． ors for sec－ond－ ary stu－dents． － |  | Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | - ©xerqut ut semano | Value of grounds， build． ings，andscientific appa－ ratus． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total secondary stu dents． |  | Coloredsecond－ary sta－dentsin－cludedin eol－umns7 and 8. |  | Eleman－ tary |  | Preparing for college． |  |  |  | Gradu． ates in 1896. |  | College prepara－ tory stu－ dents in the class that gradrated in 1896. |  |  |  |  |  |  |
|  |  | $\left.\begin{gathered} \text { Clas- } \\ \text { sical } \\ \text { course. } \end{gathered} \right\rvert\,$ | $\begin{aligned} & \text { Scien- } \\ & \text { cific } \\ & \text { course. } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  | 猋 |  |  |  | $\begin{aligned} & \text { 品 } \\ & \text { 馺 } \end{aligned}$ |  | $\begin{aligned} & \text { ジ } \\ & \text { ジँ } \end{aligned}$ |  |  |  |  |  |  |  | 通 |  |  |
| 56 | 6 | 7 | 8 |  |  | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
|  |  | 21 | 21 | 0 | 0 | 12 | 21 | 3 | 4 | 2 | 0 |  |  |  |  | 2 |  |  | \＄800 |  |
| ${ }_{2}^{1} \stackrel{1}{2}$ | 2 | ${ }^{21}$ | 48 | ． | ． | 73 | 77 | $\stackrel{1}{ }$ | 4 | 2 |  |  | 5 | 2 | 5 | 4 |  | 250 | 7，000 | 10 |
| 3 0 | 0 | 77 | 69 | 0 | 0 | 39 | 34 | 12 | 5 | 16 | 2 | 2 | 1 |  |  |  | 0 | 450 | 20，000 | 311 |
| 30 | 0 | 53 | 0 | 0 | － | 45 | 0 | 25 | － | 20 | 0 |  |  |  |  |  | 3 | 1，200 | 5,000 | 312 |
| $1{ }^{1} 1$ | 1 | 18 | 25 | 18 | 25 | 22 | 20 | 3 |  |  |  |  |  |  |  | 1 | 0 |  | 1，500 | 313 |
| 1 | 0 | 15 | 10 | － | 0 | 45 | 15 | 4 |  |  |  |  |  |  |  |  |  | 20 | 2，500 | 314 |
| 1 | 1 | ${ }_{10}^{20}$ | 25 | 0 | 6 | 10 | 15 | 15 | 20 |  |  | 5 | 5 | 5 | 5 | 4 |  | 500 | 3，500 | 315 |
| $\begin{array}{ll}1 & 3 \\ 1 & 2 \\ 2\end{array}$ | 2 | 15 | 6 40 | 10 15 | ${ }_{4}^{6}$ | 183 95 | 240 | 5 | 2 |  |  | 1 | $\frac{1}{3}$ | 0 | ${ }_{0}^{1}$ | 4 |  | 850 3,000 | 10,800 30 50 | 316 317 |
| 4 | ${ }_{0}$ | ${ }_{32}$ | 0 | 15 | ${ }_{0}$ | 9 | ${ }^{2}$ | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 |  |  | 3,000 5,500 | 30,500 50,000 | ＋317 |
| 1 | 41 | 100 | 60 | ， | 0 | 110 | 130 |  |  |  |  | 4 | 2 |  |  | 5 |  | 1， 200 | 100， 000 | 319 |
| 1 |  | 34 | 26 | 0 | 0 | 39 | 33 | 8 | 5 | 6 | ${ }^{6}$ | 0 | 0 | 0 | 0 | 1 | 0 |  | 1，500 | 320 |
| 0 |  | ${ }^{6}$ | ${ }^{6}$ | 0 |  | 12 | 9 | 0 | 2 | 6 | 0 | 0 | 0 | 0 | 0 |  |  |  |  | 321 |
| 1 | 2 | ${ }^{56}$ | 38 | 0 | 0 | 33 | 31 | 43 | 27 | 13 | 11 | 12 | 4 | 11 | 9 | 4 |  | 63 | 3，500 | 322 |
| 2 | 0 | 10 |  |  |  | 61 | 69 |  |  |  |  | 1 | 0 |  |  | 3 |  |  | 5，000 | 323 |
| 1 | 1 | ${ }^{27}$ | 10 | － | 0 | 0 83 <br> 0 21 | ${ }_{11}^{57}$ | 1 | 0 |  |  |  |  |  |  | 3 | 0 |  | 4， 500 | 324 325 |
| 0 | 1 | 8 | 12 | 2 | 0 | 0 20 <br>   | 30 | 1 | 6 | 4 | 6 | 0 | 0 | 0 | 0 |  | 0 |  | 1，000 | ${ }_{326}^{325}$ |
| 1 | 0 | 11 | ${ }_{6}$ | 6 | 0 | 0 | 5 | ${ }^{3}$ | 4 | 0 | 0 | 1 | 0 | 0 | 0 | 4 |  |  | ${ }^{1} 750$ | 327 |
| 1 | ${ }_{3}$ | 11 | 9 | ${ }^{9} 80$ |  |  | ${ }_{-65}$ | 3 | 3 |  |  | 1 | 0 |  |  | 4 |  |  | 1，000 | 328 |
| 2 | 2 | 56 | 32 |  |  |  | ${ }_{98}$ | 31 | 19 |  |  | 3 | 3 |  |  | 4 |  | 350 | 4，000 | 329 330 |
| 2 | 2 | 30 | 25 | 0 | 0 | 0.50 | 55 | 10 | ， | 0 | 0 | 10 | 0 | 10 | 0 | 4 |  |  |  | ${ }_{331}$ |
|  |  |  | 30 |  |  |  | 28 | 1 | 2 |  |  |  |  |  |  |  |  |  | 1，200 | 332 |
| 0 | 2 | 11 | 37 | 11 | 137 | 68 | 165 | 1 | 18 | 1 | 0 | 4 | 13 |  |  | 2 |  |  | 12， 250 | 333 |
| 1 | 4 | 0 | 16 |  |  | 0 | 13 | 0 | 10 |  |  | 0 | 2 | 0 | 2 | 4 |  | 350 | 11，000 | 334 |
| 1 | 0 | 18 |  |  | 0 | ${ }^{-1} 14$ |  | 18 | 0 |  |  |  |  |  |  |  |  |  | 10，000 |  |
| 1 | 0 | （ ${ }^{2} 15$ | ${ }_{30}^{26}$ |  | 0 | 0   <br> 0  20 <br> 25   | ${ }_{35}^{18}$ | ${ }^{4}$ | ${ }^{3}$ | ${ }^{3}$ | 0 | 4 | ， | 4 | 3 | 5 | 0 | 0 | ， 300 | 336 |
| 1 | 1 | ${ }^{-}{ }^{1} 10$ | ${ }^{30}$ | $3{ }^{1}$ | 0 | ${ }_{0}^{0}{ }^{0} 250$ | ${ }^{5}$ | 7 | 10 | 0 | 0 |  |  | － 0 | 0 | 3 | 0 |  | 2，000 1 | 337 338 |
| 1 | 0 | 0 |  |  | 0 | $0{ }^{48}$ | $8{ }^{43}$ | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 |  | 1，000 | ${ }_{339}^{338}$ |
| 1 | 1 | 122 | 22 | 2.0 | 0 | 021 | $1{ }^{29}$ | ${ }^{2}$ | 5 | 0 | 0 |  |  |  |  |  |  |  | 1，600 | 340 |
| 1 | 1 | $1{ }^{16}$ | ${ }^{10} 12$ | $\begin{array}{lll}0 \\ 2 & 0 \\ 0\end{array}$ | 0 |  | ${ }^{7}{ }^{32}$ |  | 5 | 4 | 4 | 0 | 0 | 8 | 0 | 4 |  | 200 | ${ }_{6}^{6,000}$ | ${ }_{341}^{341}$ |
|  | $\stackrel{1}{0}$ | $1{ }^{1}$ | 20 | 20 | ${ }_{0} 0$ | ${ }^{0} 10$ | ${ }^{0}{ }^{4} 80$ |  |  |  |  | ${ }_{0}^{2}$ | 0 | 2 | 0 | 3 |  |  |  | 342 343 |
| 0 | 1 | 17 | 26 | $6{ }^{1}$ | 0 | 0 － 48 | 859 |  |  | 1 | 10 | 0 | 18 | 0 | 8 | 3 |  |  | 1，800 | 344 |
| 1 | $1{ }^{1}$ | 120 | 21 |  | 0 | $0{ }^{0} 37$ | ${ }^{60}$ |  |  |  | 2 | 3 | － 5 | 3 | 5 | 3 |  | 300 | 6，000 | 345 |
|  | 3 | 3.70 | ${ }^{90}$ | 0 | 0 | 057 | 781 | 14 | 18 |  |  |  |  |  |  | 4 |  | 500 | 10，000 | 346 |
| 1 | 12 | 273 | 27 | 7 | 0 | 38 | $8{ }^{23}$ | 21 | ． 8 | 12 | 0 | 4 | 3 | 0 | 0 | 4 |  | 158 | 28，000 | 347 |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 0 |  | 0 |  |  |  |  |  |
|  | 0 | $2{ }^{2}$ | ${ }^{17}$ | 7 | $0^{0} 0$ | 0 －56 |  |  | 8 | 1 | 0 |  | ${ }^{2}$ | 1 | 1 |  |  | 0 | 1，000 | ${ }^{349}$ |
|  | 1  <br> 0  <br> 0 2 <br> 2  | ${ }_{2}^{2}$27 <br>  <br>  | 33 <br> 20 <br> 20 | 3 | 0.0 |  |  |  |  |  |  |  | ${ }^{6}$ | 2 | 3 |  | 0 |  | 6， 000 10 1000 | ${ }_{351}^{350}$ |
|  | 1 | 232 | 34 | 4 |  |  |  |  | 13 | 0 | 0 | 0 | 0 | $\cdots$ | 0 | ${ }_{3}^{4}$ |  |  | 10,000 1,500 | ${ }_{352}^{351}$ |
|  | 1 | 159 | ${ }^{14}$ | 4 | 0. | $0{ }^{-1} 8$ | 58 | 8 | 2 |  |  |  |  | － |  | 4 |  | 50 | $\begin{array}{r} 1,000 \\ 3,000 \end{array}$ | $\begin{aligned} & 353 \\ & 353 \end{aligned}$ |
|  | 10 | 0 | 411 | 1 | － | 47 | 731 | 14 | 10 | 0 | 1 | 0 | 0 | 0 | 0 | 4 |  | 3 | 1，500 | 354 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 |  | ${ }^{3}$ |  | 1，050 | 3，000 |  |
|  | $\begin{array}{l\|l} 1 \\ 2 & 0 \\ 1 \end{array}$ | $\begin{array}{ll} 0 \\ 1 & 64 \end{array}$ | $\begin{array}{ll} 44 \\ 34 \\ 34 \end{array}$ | $\begin{gathered} 5 \\ 3 \end{gathered}$ | $01$ | $\begin{array}{l\|l} 0 & 7 \\ 0 & 16 \end{array}$ |  | （1） |  |  |  |  |  |  |  |  |  |  |  | 356 357 |

Table 34.-Statistics of private high schools, endowed academies, seminaries, and

|  | State and post-office. | Name. $\qquad$ <br> 2 | Principal. | Religious denomination. |
| :---: | :---: | :---: | :---: | :---: |
|  | ILILNOIS. |  |  |  |
| 358 | Albion | Southern Collegiate Institute* | Frank B. Hines . . . . . . . |  |
| 359 | Alton. | Ursuline Academy of the Holy Family. | Mother Theresa Gillespie. |  |
| 360 | Anna | Dnion Açademy of Southern Illinois. | John C. Ransmeir.......... | Presb..... |
| 361 | Ashmore. | Lee's Academy-...-. .-. .-. . . . . . | G. W. Lee | Nonsect.. |
| 362 | Aurora (Broadway and North ave.). | Jennings Seminary*............. | Rev. A. R. Cronce | M. E...... |
| 363 | Bunker Hill .......... | Bunker Hill Military A cademy. | S. L. Stiver, A. B., A. M., B. D. | Nonsect .- |
| 364 | Cairo | Chase Academay................. | Miss J. Chase............... |  |
| $365$ | do | St. Joseph's Female Seminary. | Sister Sophronia. | R. C...... |
| 366 | Chicago (4568 OaKenwald ave.). | Ascham Hall..................... | Kate Byam Martin......... | Nonsect.. |
| 367 | Chieago (2141 Calumet are.). | Dearborn Seminary . . . . . . . . . . . | Mrg. J.F. Purington...... | Nonsect .. |
| 368 | Cbicago (Wabash arenue and 35 th st.). | De La Salle Institute .......... | I3rother Pius.. | R. C...... |
| 369 | Chicago (479-481Dearborn ave.). | Girls' Collegiate School......... | Rebecca S. Rice, A. M...... | Nonsect.. |
| 370 | Chicago (249 Dearborn ave.). | Grant Collegiate Institute .... | Mary A. Mineah, A. M.... | Nonsect .. |
| 371 | Chicago (2101 Indiana ave.). | Tho Harrard School.............. | John J. Schobinger and John C. Grant. | Nonsect.. |
| 372 | Chicage (40 47th st.).- | Kenwoon Institnte. | Miss A. E. Butts | Nonsect .. |
| 373 374 | Chicago (38 scottst.). | Kirkland School The Loring School .................. | Emma S. Adams.......... | Nonsect.. <br> Nonsect.. |
| 375 | ave.). <br> Chicago (1428 Sheridan road). | Miller's (Mrs.) Seminary....... | Mrs. R. T. Miller | Nonsect.. |
| 376 | Chicago (2834 Wabash ave.). | St. Francis Xavier's Academy. | Mother Mary Geneviere.- | R. C...... |
| 377 | Chicago (Dearborn avenue and Elm st.). | University School................ | E. C. Corlter, A. M......... | Nonsect .. |
| 378 | Crab Orchard.......... | Crab Orchard Academy* ...... | James W. Tirner | Nonsect .- |
| 379 | Creal Springs........... | Creal Springs College........... | Mrs. G. B. Murrah, president. | 13apt |
| 380 | Dakota . . . . . . . . . . . . . | College of Northern Olinois .. | Rev. H. I. Beam, A. M., president. | Reformed. |
| 381 | Decatur ................. | St. Theresa's Academy ......... | Mother Lucy - .............. | R. C...... |
| 382 | Desplaines.............. | St. Mary's Training School (Boys). | Brother Elixus. | I. C...... |
| 383 | Elgin ................... | Elgh A cademy ............... | A. G. Welch .........-..... | Nonsect.. |
| 384 | Fvanston .............. | The Winchell Academy ....... | S. Robertson Winchell, A. M. | Nonsect.. |
| 885 | Fairfld | Hayward Collego and Commercial School. | A. A. Kester, president ... | Meth..... |
| 386 | Galeaburg (Knox and Academy sts.). | St. Joseph's Academy . . . . . . . . | Sister Theodata. | I. C...... |
| 387 384 | Genesco................ | Geneseo Collegiate Instiluto.. | Norbury W. Thornton, A. M. | Preab |
| 388 380 | Godirey | Monticello Female Seminary.. | Harriet N, Faskell ........ | Nonsect . |
| 390 | Highland Park | Northwostern Military Academy. | Wilson T.Hoge,president. H. P. Davidson, A. M..... | Free Meth <br> Nonsect.. |
| $\begin{aligned} & 391 \\ & 392 \end{aligned}$ | Kankakee.............. | St.Joseph'g Seminary * ........ | Sister St. Zepbyrina....... | R. C...... |
| $\begin{array}{r} 392 \\ 393 \end{array}$ | Kenilworth | Kenilworth Hall ............... | Mrs, Mary Keres Babcock | Nongect .. |
| 394 | La Harpe | St. Alban's A cademy | A. H. Noyes, B. A........... | Ifpis ...... |
| 396 | Longwood | A cademy of Our Lady......... |  |  |
|  | Marissa | Marissa Acaderny.............. | H.W. Speer, A. $\mathbf{B}^{\text {. . . . . . . . . }}$ | U. Presb. |

other private sceondary schools for the scholastic year 1S35-96-Continued.


Table 34.-Statistics of private high schools, endowed academies, seminaries, and


- Statiotics of 1891-95.


## other private secondary schoals for the scholastic year 1895－96－Continned．

| In．struct－ors forsec－ond－aryaty．stut．dents． |  | Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Volumes in library． | Value ofgronnds，build．ings，andsciantificappa－ratus． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total second arystudents． － |  | Colored second－ dents in－ cluded in col－ 7 and 8. |  | Elementary， |  | Preparing for college． |  |  |  | Gradu ates in 1896. |  | $\begin{gathered} \text { College } \\ \text { propara- } \\ \text { tory sta- } \\ \text { dentis in } \\ \text { the class } \\ \text { that } \\ \text { grad uated } \\ \text { in 1896. } \end{gathered}$ |  |  |  |  |  |  |
|  |  | $\begin{gathered} \text { Clas- } \\ \text { sical } \\ \text { course. } \end{gathered}$ | $\begin{gathered} \text { Scien- } \\ \text { tific } \\ \text { course. } \end{gathered}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { 呂 } \\ & \text { 告 } \end{aligned}$ |  |  |  | $\begin{aligned} & \text { ज } \\ & \text { ज゙্ } \end{aligned}$ |  | 品 |  | 㡙 | デ \＃゙ ※ | 椞 |  | $\stackrel{\dot{8}}{\stackrel{\circ}{4}}$ |  | 离㶾 |  |  |  |  |  | 稛 |  |  |
| 5 | 6 | 7 | 8 |  |  | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 23 | 23 | 24 |  |
|  |  | 36 | 33 | 0 | 0 | 6 | 0 | 3 | 3 | 14 | 1 | 6 | 1 | 2 | 3 | 3 |  | 400 | \＄2，500 | 397 |
| 1 | 4 | 0 | 30 | 0 | 0 | 0 | 30 |  |  |  |  | 0 | 3 | 0 | 3 | 4 |  | 250 |  |  |
|  |  | 50 | 45 | 0 | 0 | ${ }_{4}^{0}$ | ${ }^{54} 4$ | ${ }_{6}$ | 0 |  |  | 5 | 10 | 0 | 2 | 4 |  | 250 |  | 399 |
| 0 | $\stackrel{1}{2}$ | 0 | ${ }^{49}$ | 0 | 0 | 4 | － 47 | ${ }_{0}^{6}$ | 1 |  |  | 5 | 1 | ${ }_{0}^{4}$ | 1 | 3 4 4 |  | 21，000 | 20， 000 | 400 |
| 0 | 5 | 150 | 35 | 0 | 0 | 0 | 15 | 0 | 20 |  |  | 0 | 7 | 0 | 1 |  |  |  |  | 401 |
|  |  | 150 | 155 | 1 | 0 | ${ }^{40}$ | ［ $\begin{array}{r}40 \\ 125\end{array}$ | 10 | 10 | 10 | 10 | 5 | 4 | 5 | 4 | 4 |  | 1，000 | 125,000 40,000 | 403 |
| 3 | 1 | 25 | 26 | 0 | 0 |  |  | 2 | 1 |  |  | ${ }_{6}$ |  |  |  | 4 |  | 700 |  | 404 |
| ${ }_{1}^{2}$ | 1 | ${ }^{8}$ | ${ }^{6}$ | 0 | 0 | $\stackrel{\square}{2}$ | 5 | ， | 1 | 2 | 0 | ${ }_{2}^{6}$ | 0 | 2 | 0 | 4 |  | 100 300 | 15,000 5,000 | 405 |
| 0 | 3 <br> 4 | 23 0 | 25 | 0 | ${ }_{0}^{0}$ |  | 175 | 6 | 7 | 17 | 18 | 2 | 4 | 2 | 4 | 4 |  |  |  | ${ }_{407}^{406}$ |
| 0 | 3 |  | 43 | 0 | 0 |  |  |  |  |  |  |  |  |  |  | 4 |  | 500 |  | 408 |
| 5 |  | 224 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | ， | 38 | 3 | 35 | 0 | 4 |  | 1， 500 2,500 | 50，000 | 409 410 |
| ${ }_{0}$ | 1 | 0 | $1 \begin{aligned} & 15 \\ & 69\end{aligned}$ | 0 | 0 | 0 | 15 $\begin{gathered}15 \\ 3\end{gathered}$ | 0 | 8 | 0 | 7 | 0 | 1 |  |  | 4 |  | 300 | 20，${ }^{1200}$ | 411 |
| 1 | 2 | 31 | 46 | 0 | 0 |  | 3 <br> 8 <br> 8 | 1 | 6 | 0 | ${ }_{20}^{0}$ | 1 | ${ }_{1}^{13}$ | 0 | ${ }^{0}$ | 4 |  | 2，000 | 65， 000 | 412 |
| 4 | 1 | 48 | 0 | 0 | 0 | 13 | 0 | 0 | 6 |  |  | 1 | 6 | $\frac{1}{3}$ | ${ }_{0}^{2}$ | 4 | ${ }_{26}$ | 50 500 | 1,200 50,000 | 413 414 |
| 1 | 1 | ${ }_{23}^{25}$ | 12 | 0 | 0 | 11 10 | 21 |  |  |  |  | 2 | 0 | 1 | 0 | 3 | 0 | 200 | 5，000 | 414 |
|  |  |  |  |  |  |  | 5 | 2 | 2 | 3 | 0 | 3 | 1 | 0 | 0 | 4 | 0 | 25 | 4，000 | 416 |
| 1 | 2 | 16 | 17 | 0 | 0 | 31 | 38 |  |  |  |  | 5 | 3 | 5 | 3 | 3 |  | 800 | 10， 000 | 417 |
| 11 | 0 | 115 | 0 | 0 | 0 | 23 |  |  |  |  |  | 8 | 0 | 8 |  |  |  |  |  |  |
|  |  | 84 | 60 | 4 | 0 | 0 | 0 |  |  |  |  | 4 | 9 | 0 | 2 | 3 | 5 | ， 500 | 20，000 | 419 |
|  | 3 | 0 | 24 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 6 | 0 | 38 | 0 | 0 | 0 |  | 0 | 2 |  |  | 0 | 4 | 0 | 1 | 4 |  | 1， 500 | 20， 000 | $\begin{aligned} & 420 \\ & 421 \end{aligned}$ |
|  |  | 0 | $70^{\circ}$ | 0 | 0 | 7 |  |  |  |  |  | 0 | 13 | 0 | 8 | 5 |  | 250 | 20， 000 | 422 |
| 0 | ${ }_{6}^{6}$ | 0 | 24 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 4 |  | 500 |  |  |
|  |  |  | ${ }_{30}^{130}$ | 0 | 0 |  | 220 40 |  |  |  |  | 0 | 4 | 0 | 0 | 4 |  |  | 15， 000 | ${ }_{424}^{423}$ |
|  | 0 | 55 | 0 | 0 | 0 | 18 | ${ }_{0}^{40}$ | 3 | 0 | 5 | 0 | 8 | 0 | 2 | 0 | $4$ | 5 | 1，000 | 100， 000 | 425 |
|  |  | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 10 | 0 | 78 | 0 | － | ${ }^{124}$ | 1144 |  |  |  |  |  |  |  |  | 4 |  |  |  | ${ }_{428}^{427}$ |
|  |  | 40 | 20 | 0 | 0 | 23 | 18 | 15 | 3 | 0 | ${ }_{0}^{0} 1$ | 3 | $\begin{gathered} 9 \\ \hline \end{gathered}$ | 0 | 0 |  | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{array}{r} 4,000 \\ 3,000 \end{array}$ | 15， 000 |  |
|  | 6 | 0 | 50 | 0 | 0 | 0 | 30 | 0 | 10 | 0 | 12 | 0 | 4 | 0 | 4 | 3 |  | 2，500 |  | 430 |
|  | $1{ }_{1}^{1} 2$ | 44 | 29 | 0 | 0 | 15 | 13 | 1 | 1 | 10 | － |  | 3 |  |  | 3 |  |  |  |  |
|  | 10 | ${ }_{0}$ | 75 |  | 0 |  |  |  |  | 3 | 4 | 0 | ${ }^{0}$ | 0 | 0 | 3 | 0 | ＋35 | 800 | 432 |
|  |  | 0 | 35 | ， | 0 |  | 110 |  |  |  |  |  |  |  |  |  |  |  |  | 4343 |
|  | ${ }_{2}^{2}$ | 42 | ${ }^{67}$ | 0 | 0 |  |  | 0 | 0 | 0 | 0 | $\cdots$ | 7 |  |  | 3 | 0 | 3，000 |  | 433 |
|  |  |  | 104 | o |  | 20 |  |  |  |  |  | 0 | 8 |  |  | 4 |  | 600 |  | 436 |
|  |  |  |  |  |  |  | 10 |  |  |  |  | 5 | 2 | 5 | 1 |  | 57 | 4，000 | 30， 000 | 437 |
|  |  | 35 | 40 | 0 | 0 | 31 | 15 |  |  |  |  | 5 | 4 |  |  |  |  | 1，000 | 10，000 | 438 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | $1: 0$ | 8 | 7 | 0 | 0 | ${ }_{34}^{83}$ | ${ }_{33}^{50}$ | ${ }_{0}^{5}$ | 5 |  |  |  |  |  |  | 4 | 0 | 150 0 | 7,000 3,000 | ${ }_{440}^{439}$ |
|  | 1 0 | 5 | ${ }^{3}$ | 0 |  | 41 |  | 2 | 3 |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 5 | 10 | 0 | 0 | 25 | 25 | 2 |  |  |  | 0 | 0 |  |  | 3 | 0 | 20 100 | 3，000 | ${ }_{442}^{441}$ |

Table 34.-Statistics of private high schools, endoved academies, seminaries, and

other private secondary schoots for the scholastic year 1895－96－Continued．

| In－struet－ ors for sec－ ond－ ary stu－ dents |  | Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Volumes in library． | Value of grounds， build． ings，and scientific appa－ ratus． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total <br> second dents． dents． |  | Colored second－ ary stu－ dents in－ cluded in col－ umns 7 and 8. |  | Elemen． tary． |  | Preparing for college． |  |  |  | Gradu－ ates in 1896. |  | College prepara－ tory stu－ dents in the class that graduated in 1896. |  | 舞 |  |  |  |  |
|  |  | Clas－ sical course． | Scien－ tific course． |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 島 |  | $\begin{aligned} & \text { 囟 } \\ & \text { ज } \end{aligned}$ |  | $\begin{aligned} & \text { 号 } \\ & \text { 钍 } \end{aligned}$ |  | 㭡 | $\begin{aligned} & \text { ⿷匚⿱口⿰口口⿺尢丶 } \\ & \text { g్ర } \\ & \text { } \end{aligned}$ | $\begin{aligned} & \text { 品 } \\ & \text { 号 } \end{aligned}$ |  | 荘 | $\begin{gathered} \dot{9} \\ \text { 島 } \\ \text { g్0 } \\ \text { M1 } \end{gathered}$ | $\begin{aligned} & \dot{\Xi} \\ & \text { ज⿹丁口㇒ } \end{aligned}$ |  |  |  |  | $\begin{aligned} & 0 \\ & 5 \\ & 50 \\ & 60 \\ & 0 \\ & H \end{aligned}$ |  |
| 5 | 6 | 7 | 8 |  |  | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | P4 |  |
| 0 | 1 | 0 | 21 | 0 | 0 | 30 | 50 |  |  |  |  | 0 | 4 |  |  |  |  | 300 | \＄30，000 | 443 |
| 0 | 1 | 3 | 1 | 0 | 0 | 45 | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 | 1 | 20 | 32 | 0 | 0 | 50 | 53 | 18 | 22 | 0 | 1 | 0 | 0 | 3 | 1 | 4 | 0 | 500 | 20,000 5,000 | 4445 |
| 2 | 2 | 35 | 30 | 0 | 0 | 105 | 55 |  |  |  |  |  |  |  |  |  | 0 | 300 | 75， 000 | 446 |
| 1 | 2 | 20 | 25 | 0 | 0 | 00 | 65 | 3 | 6 |  |  | 0 | 0 | 0 | 0 | 3 | 0 | 1，000 | 22，000 | 447 |
| 0 | 2 | 12 | 11 | 0 | 0 | 8 | 6 | 4 | 7 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 300 |  | 448 |
| 1 | 1 | 21 | 13 | 0 | 0 | 6 | 4 |  |  | 5 | 2 | 1 |  |  |  |  |  |  |  |  |
| 1 | 1 | 13 | 9 | 0 | 0 | 65 | ${ }^{3}$ |  |  | 5 |  | 0 | 0 |  |  |  | － | 125 | 1,000 3,000 | 449 450 |
| 0 | 1 | 5 | 12 | 0 | 0 | 65 | 71 | 5 | 9 |  |  |  |  |  |  |  | 0 | 250 |  | 451 |
| 1 | 1 | 7 | 10 | 0 | 0 | 8 | － | 0 | 0 | 0 | 0 | 0 | 4 |  |  | 4 | 0 | 400 | 30，950 | 452 |
| 3 | 2 | 30 | 47 | 0 | 0 | 0 | 0 | 25 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 165 | 11，000 | 453 |
| 2 | 2 | 20 | 34 | 0 | 0 | 31 | 69 | 3 | 2 | 12 |  |  | 10 |  |  |  |  | 800 | 15， 000 | 454 |
| 0 | 7 | 20 | 40 |  | 0 | 80 | 185 | 0 | 18 | 10 | 12 | 2 | 1 | 5 | 3 | 4 | 0 |  | 20， 000 | 455 |
| 0 | 4 | 0 | 33 |  |  | 0 | 126 | 0 | 18 | 10 | 33 | 2 | 11 |  |  |  |  | 400 | 25， 000 | 456 457 |
| 6 | 0 | 63 | 0 | 0 | 0 | 16 | 0 | 37 | 0 | 1 | 0 |  |  |  |  |  |  |  |  |  |
| 2 | 1 | 26 | 19 | 0 | 0 | 152 | 74 | 37 | 0 | 1 | 0 | 14 | 0 |  |  | 5 | 0 | 3，800 |  | 453 |
| 2 | 3 | 13 | 10 | 0 | 0 | 21 | 18 | 1 | 1 | 5 | 10 | 1 | 3 | 1 | 1 | 4 | 0 | 1，500 | 4， 500 | 459 460 |
| 1 | 1. | 7 | 11 | 0 | 0 | 5 | 6 |  |  |  |  | 0 | 6 | 0 | 5 | 4 | 0 | 500 |  | 461 |
| 0 | ， | 0 | 100 | 0 | 0 | 0 | 0 | 50 | 0 | 50 | 0 | 15 | 0 |  |  |  |  |  |  |  |
| 1 | 2 | 15 | 11 | 0 | 0 | 25 | 18 | 3 | 4 | 3 | 3 | 15 | 1 | 1 | 0 | 3 |  | $\begin{array}{r}5,000 \\ 353 \\ \hline\end{array}$ | 80,000 10,000 | 462 |
| 3 0 | 1 | 49 | 16 | 0 | 0 | 65 | 27 | 32 | 12 | 10 | 6 | 19 | 4 | 0 | 0 | 4 | 0 | 3，009 | 10,000 53,000 | 463 464 |
| 3 | 2 | 12 | 15 | 0 | 0 | 70 | 105 |  |  |  |  | 0 | 1 |  |  | 3 |  | 300 |  | 465 |
|  |  |  | 2 | 0 | 0 | 100 | 85 | 1 | 4 | 3 | 5 | 12 | 17 | 5 | 7 | 3 | 0 | 2， 000 | 40， 000 | 460 |
| 4 | 4 | 50 | 57 | 1 | 0 | 20 | 23 | 8 | 3 | 2 | 5 | 2 | 6 |  |  |  |  |  |  |  |
| 0 | 1 | 0 | 10 | 0 | 0 | 20 | 30 | 0 | 0 |  |  | 0 | ${ }_{6}^{6}$ |  |  |  |  | 350 | 30，000 | 467 468 |
| 0 | 1 | 16 | 11 | 0 | 0 | 4 | 3 |  |  |  |  | 2 | 3 | 0 | 0 | 4 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{array}{r}40 \\ 150 \\ \hline\end{array}$ |  | 468 469 |
| 3 | 4 | 16 | 23 | 0 | 0 | 4 | 6 | 3 | 8 | 4 | 7 | 4 | 3 | 4 | 3 | 3 | 0 | 600 |  | 469 470 |
| 3 5 | 3 3 | 187 | 66 | 0 | 0 | 36 | 31 | 2 | 2 | 17 | 6 | 23 | 19 | 19 | 8 | 3 | 0 | 200 | 15， 000 | 470 471 |
| 4 | 1 | 55 | 25 | 0 | 0 | － | 0 | 10 | 8 | 11 | 4 |  |  |  |  |  |  |  |  | 472 |
|  | 2 | 15 | 10 | 0 | 0 | ${ }^{6}$ | 15 | 10 | 4 | 0 | 0 | 2 | 0 |  |  |  |  | 300 | 25， 000 | $4 \pi 3$ |
| 5 | 4 | 29 | 26 | 0 | 0 | 10 | 4 | 3 | 5 | ${ }_{0}^{2}$ | 1 | ${ }_{2}^{2}$ | 1 | 1 | 0 | 3 | 0 | 400 | 5， 000 | 474 |
| 2 | 1 | 23 | 20 | 0 | 0 | 7 | 13 | 3 | 5 | 0 | 0 | $\stackrel{2}{3}$ | 1 | 3 | 2 | 3 | 0 | 600 | 3,500 | 475 |
|  |  | 38 | 16 | 0 | 0 | 20 | 0 | 40 | 10 |  |  | 3 9 | 3 4 4 | 3 | $\begin{aligned} & 3 \\ & 0 \end{aligned}$ | 3 | 0 | 2，500 | 5,000 25,000 | 476 477 |
|  | 1 | 25 | 20 | 0 |  | 149 | 95 |  |  |  |  | 5 | 5 | 2 | 4 | 4 | 28 |  |  |  |
|  | ， 0 | 16 | 9 | 0 | 0 |  |  | 0 | 0 | 6 |  | 5 | ， | 2 | 4 | 3 | 28 | 2，000 | 30，000 | 478 |
|  | 1 | 30 | 5 | 0 | 0 | 20 | 10 | 0 | ， | 17 | 4 | 6 | 1 | 3 <br> 2 <br>  | 1 |  |  | $\begin{aligned} & 800 \\ & 800 \end{aligned}$ | $\begin{array}{r} 3,000 \\ 15,000 \end{array}$ | $479$ |
|  | ， 1 | 60 | 40 | 0 | 0 | 25 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 3 | 46 | 28 | 0 | 0 | 165 | 92 | 12 | 7 | 12 | 10 | 2 8 8 | 0 | ${ }_{8}^{2}$ | 0 |  | 0 | 1，000 | 10， 000 | 431 |
|  | 1 | 30 | 27 |  | 0 | 22 | 37 |  | 7 | 12 | 7 | 11 | 12 | －88888 |  |  | 25 | 1，000 | 30，000 | 482 |
|  | 2 | 7 | 14 |  | 0 | 77 | 3. |  | 0 |  |  | 11 | 12 | 10 |  | 4 |  |  | 15， 000 | 483 |
|  | 2 | 4.5 | 21 | 0 | 0 | 35 | 7 | 10 | 0 | 5 | 0 | 6 | 6 | 4 | 3 | 4 | 40 | 2，000 | 10，000 | 484 485 |

Table 34.-Statistics of private high schools, endowed academies, seminaries, and

*Statistics of 1894-95.
other private secondary schools for the scholastio year 1895－96－Contimued．

| In－ <br> struct－ ors for sec－ond－ ary stu－ dents． |  | Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Length of course in years. |  | Number in military drill. | －Kibiqit mes sounto | Value of grounds， build． inge，and sclontific appa－ ratus． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total second－ arysta－ dents． |  |  | Colored second－ ary sta－ dentsin－ cluded in col－ umns 7 and 8. |  | $\begin{aligned} & \text { Elemen- } \\ & \text { tary. } \end{aligned}$ |  | Preparing for college． |  |  |  |  | Grada． ates in 1896. |  | College prepara－ tory stu－ dents in the class that graduated in 1896. |  |  |  |  |  |  |
|  |  | Clas－ sical course． | Scien－ tific course． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \dot{9} \\ & \text { 嶌 } \end{aligned}$ |  |  |  |  |  |  |  | 官 |  | $\begin{gathered} \dot{0} \\ \text { 岸 } \end{gathered}$ |  | $\begin{aligned} & \dot{9} \\ & \stackrel{y}{7} \\ & \text { Hig } \end{aligned}$ |  |  | $\begin{aligned} & \text { స゙ँ } \\ & \text { 今ี̉ } \end{aligned}$ |  | $\begin{aligned} & \text { 品 } \\ & \text { In } \end{aligned}$ |  |  |  |  |  |  |  |  |
| 5 | 6 |  | 7 | 8 |  |  | 9 | 10 | 11 | 12 | 13 | 14 |  | 15 | 16 | 17 | 18 | 19 | 20 |  |  | 11 | 22 | 23 | 24 |  |
| 2 | 0 |  | 31 | 23 | 0 | 0 | 39 | 22 | 15 | 13 |  | 10 | 7 | 3 | 2 | 3 | 1 |  | 3 |  | 0 |  |  | 486 |
| 2 | 0 |  | 24 | 18 | 0 | 0 | 14 | 18 | 0 | 0 |  |  |  | 7 | 9 |  |  |  | 4 | 0 | 1， 200 | \＄30，000 | 487 |
| 0 | ， |  | 0 | 50 | 0 | 0 | 5 | 30 | ， | 30 |  | 0 | 10 | 0 | 6 | 2 |  |  | 3 |  |  | 25， 000 | 488 |
| 1 | 3 |  | 28 | 27 | 0 | 0 | 5 | 5 | 3 | 2 |  | 24 | 19 | 2 | 3 | 2 | 3 |  | 4 | 0 | 1， 000 | 20，000 | 489 |
| 1 | 1 |  | 19 | 19 | 0 | 0 | 6 | 3 | 2 | 3 |  | 2 | 5 | 2 | 0 |  |  |  | 3 | 0 | 400 | 5，000 | 490 |
| 0 | 2 |  | 23 | 16 | 0 | 0 | 7 | － |  |  |  | 23 | 0 | 0 | 1 | 0 | 0 |  | 4 | 0 | 500 | 5， 000 | 491 |
| 2 | 4 |  | 74 | 37 | 1 | 0 | 16 | 13 | 7 | 5 |  | 22 | 16 | 6 |  | 6 | 7 |  | 5 |  | 200 | 3， 000 | 492 |
| 0 | 6 |  | 0 | 25 | 0 | 0 | 0 | 40 | 0 | 25 |  |  |  | 0 | 5 |  |  |  | 4 |  | 1，500 |  | 493 |
| 4 | 3 | 20 | 20 | 15 | 0 | 0 | 70 | 80 | 2 | 0 |  | 6 | 0 | 2 | 0 |  |  |  |  | 0 | 3， 000 | 18，000 | 494 |
| 5 | 1 | 4. | 41 | 22 | 0 | 0 | 67 | 59 | 8 | 4 |  | 18 | 7 | 10 | 2 | 6 | 2 |  |  |  | 1，200 | 60， 000 | 495 |
| 3 | 1 |  | 42 | 18 | 0 | 0 | 20 | 5 | 5 | 0 |  |  | ．．． | 0 | 0 |  |  |  | 3 |  | 850 | 60， 000 | 496 |
| 1 | 1 |  | 8 | 10 | 0 | 0 | 11 | 17 |  |  |  |  |  | 4 | 0 |  |  |  |  |  | 150 |  | 497 |
| 0 | 4 | 4 | 0 | 60 | 0 | 0 | 0 | 40 | 0 | 20 |  |  |  | 0 | 2 | 0 | 2 |  | $\pm$ | 0 | 650 | 10，000 | 498 |
| 0 | 2 | 2 | 0 | 4 | 0 | － | 21 | 22 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 |  | 3 | 0 |  |  | 499 |
| 9 | 0 | － 7 | 75 | 0 | 0 | 0 | 0 164 | 0 | 22 | 0 |  |  |  | 9 | 0 | 9 | 0 |  |  |  | 7，600 | 180， 000 | 500 |
| 7 | 0 | 03 | 31. | 0 | 0 | 0 | － 10 | 0 | 4 | 0 |  | 6 | 0 | 3 | 0 |  |  |  | 4 | 31 | 500 | 85， 000 | 501 |
|  | 2 | 21 | 10 | 20 | 1 | 1 | 14 | 63 | 8 | 4 |  | 0 | 7 | 2 | 3 | 2 | 3 |  | 3 | 0 | 1，200 | 13， 400 | 502 |
| 1 | 1 | 1 | 10 | 9 | 0 | 0 | 0 | 1 | － 0 | 0 |  | 0 | 0 | 2 | ， | 2 | 2 |  | 4 | 0 | 500 | 5， 000 | 503 |
|  | 11 | 1 － | －3 | 7 | 0 | － | 13 | 22 | 2 | 4 |  | 1 | 2 | 2 | ， | 2 | 2 |  | 3 | 0 | 500 | 4，500 | 504 |
|  | 3.3 | $3{ }^{3}$ | 38 | 37 | 0 | 0 | 1 | 4 | ． | 3 |  | 25 | 20 | 1 | － | 1 | 5 |  | ＋ | 0 | 2， 268 | 75， 000 | 505 |
|  | $2{ }^{5}$ | 5 5 | 55 | 66 | 0 | ． 0 | － 30 | 50 | 12 | 20 |  | 23 | 34 | 5 | 6 | 4 | 0 |  | 4 | 0 | 300 | 70，000 | 506 |
|  | 30 | 0 | 8 | 10 | 0 | 0 | 062 | 50 | 2 | 2 |  | 0 | 0 | 0 | 0 | 0 | 0 |  |  | 0 | O | 2， 000 | 507 |
|  | $2{ }^{2}$ | 5 | 1 | 80 | 0 | 0 | 0 | 40 | 1 | 20 |  | 0 | 0 | 0 | 3 |  | ．．．． |  | 4 | 0 | 500 | 18，000 | 508 |
|  | 1 | 2 | 7 | 6 | 60 | 0 | 0 | 9 | 1 | 2 |  | 0 | 0 | 1 | 3 | i | ． 3 |  | 8 | 0 | 41 |  | 509 |
|  | 1 | 0 | 5 | 6 | 50 | 0 | 20 | 10 | 1 |  | 1 | 0 | 0 | 0 | 0 | 0 |  |  |  | 11 |  | 6，000 | 510 |
|  | 3 | 1. | 59 | 50 | 0 | 0 | 0 21 | 30 | 10 |  | 8 | 16 | 24 | 6 | 4 |  |  |  | 4 |  |  | 10，000 | 511 |
|  | 2 | 2 | 26. | 40 | 0 | 0 | $0{ }^{7}$ | 19 | ${ }^{6}$ |  | 4 | － | ， | 2 | 1 | 2 |  |  | 3 | 0 | 532 | 7， 500 | 512 |
|  | 1 | 1 | 34 | 4 | 40 | 0 | 0 | ${ }^{5}$ | ${ }^{2}$ |  | 1 |  |  |  |  |  |  |  |  |  |  | 1，500 | 513 |
|  | 1 | 1 | 80 | 31 6 | 1 6 | 0 | 0 12 <br> 0 10 | （18 | （10 | 10 | 5 | 0 | 0 | 0 | 0 | 0 |  |  | $\stackrel{4}{3}$ | 0 | $\stackrel{2}{0}$ | 6，500 | 514 515 |
|  | 1 | 1 | 18 | 15 | 50 | 0 | 20 | 0 | 1 | 1 | 0 | 4 | 0 |  |  |  |  |  |  |  |  | 3， 000 | 516 |
|  | 4 | 1 | 92 | 62 | 2 | 0 | 0 － 93 | 34 |  | 4 | 0 |  |  | 13 | 0 |  |  |  | 4 | 0 | 500 |  | 517 |
|  | 2 | 1 | 22 |  | 5 |  |  | 044 |  |  |  |  |  |  |  |  |  |  |  | 0 | 0 |  | 518 |
|  | 1 | 2 | 8 | 7 | 7 | 0 | 0 0 30 | 038 |  | 0 | 0 | 8 | 8 | 0 |  | － 0 |  |  | 8 |  | 55 | 4，000 | 519 |
|  | 2 | － | 20 |  | 0 | 0 | $0{ }_{0}^{0}$ | 042 | $2{ }^{2} 20$ | 0 | 10 |  |  | 0 | 0 | 0 |  |  |  | 0 | 0 | 5，000 | 520 |
|  | 1 | 1 | 13 | 23 | 3 | 0 | 018 | 818 | 8 1 | 1 | 2 | 2 | 2 | 7 | 3 | ， 2 |  |  | 4 | 0 | 500 | 5，000 | 521 |
|  | 1 | 2 | 20 |  | 20 | 0 | 0 | 0 | 0 | 0 | 10 |  |  |  | ＋1 |  |  |  |  | 0 | 1， 200 | 20，000 | ${ }^{522}$ |
|  | 1 | 2 | 15 | 13 | 13 | － | 070 | 0 52 | 2 |  |  |  |  |  |  |  |  |  | 3 | 0 | 25. | 1，200 | 523 |
|  | 3 | 8 | 13 | 16 | 16 | 0 | 0 | 220 | 0 |  |  |  |  | 5 | 5 | 5 |  |  | 4 | 0 | 1，000 |  | 524 |
|  | 0 | 6 | 0 | 025 | 25 | 0 | 0 | 435 | 5 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 3 | 0 |  |  | 525 |
|  | 1 | 0 | 16 | 6 | 0 | 0 | 010 | 0 | 0 | 2 | 0 | 4 | 0 | 12 | 0 |  |  |  | 4 |  | 100 | 4，000 | 526 |
|  | 0 | 8 |  | 0 | 4 | 0 | 0 | 0 | 10 | 0 | 24 | 0 | 20 |  | － |  |  |  |  |  | 500 | $20,000$ |  |
|  | 1 | $\begin{aligned} & 1 \\ & 0 \end{aligned}$ | $\begin{aligned} & 25 \\ & 40 \end{aligned}$ | $\begin{array}{rr} 5 & 10 \\ 10 \end{array}$ | $\begin{array}{r} 10 \\ 0 \end{array}$ | 0 | 0 | 15 | 5 25 | 5 | 7 | ${ }^{3}$ |  | 0 |  |  |  |  |  | 0 | 800 | E， 000 | 528 |
|  | $-2$ | 2 | 40 | ${ }^{-12}$ | 12 | 0 | 0  <br> 0 10 | 7 | $\begin{array}{lll}7 \\ 7 & 20\end{array}$ | 0 | ${ }^{0}$ | 25 2 | － | $0{ }^{0}$ |  |  |  | － | 4 | 15. | 2，000 | 45,000 15,000 | 529 530 |
|  | 3 | 0 | 85 | 5 | 5 | 0 | 0 | 0 | 05 | 0 | 1 | 20 |  | 0 | 5 |  |  | － | 4 | 0 | 17,000 | ＋ 28,000 | 530 531 |

Table 34.-Statistics of private high schools, endowed academies, seminaries, and

other private secondary schools for the scholastic year 1895-96-Continued.


Table 34.-Statistics of private high schools, endowed academies, seminaries, and

| 580 | R |
| :--- | :--- |
| 581 | S |
| 582 | S |
| 583 | S |
| 584 | $\cdots$ |
| 585 | S |
| 586 |  |
| 587 |  |
| 588 |  |
| 589 |  |
| 590 |  |

Arcadia
Clinton
Coushatta .
Donaldsonville
Franklinton
Gibsland
Grand Cotean
Mount Lebanon
Mount Zion
Napoleonville
New Iberia.
New, Orleans, $(222$ Coliserm st.).
New Orleans ( 185 N .
Rampart st.).

New Orleans (1456 Camp st.).
New Orleans (2308 Esplanade st.).
Now Orleans
....do
New Orleans (73 Coliseum st.).
New Orleans ...........
Olla .........................
Opelounas

yanke.
Athens
Bangor
Bethel
Blaehili.
Bueksport.....................

Sevier's (Miss) School ..........
St. Joseph's Academy.........
St. Joseph's Academy..........
Male and Female College...... Science Hill School
Shelbyville Academy.
Van Horn Institute
Spencer Institute
Riverside Seminary.
Rose Hill Seminary*
Lynnvale Academy
Williamsburg Academy
E. A. Seminary

Gilbert Academy and Industrial College.
Clinton Female Institute*....
Cousbatta Male and Female College.
St. Vincent's Institute .........
Franklinton Central Institute.
Gibsland Institute
Sacred Heart Convent.
Mount Lebanon College
Mount Zion High School
Napoleonville College*..........
Fasnacht's (Mrs.) Gräded School.
Carnatz Institute
Columbia Institute.
Dyker's Institute
French and English Board-
ing and Day School.*
Home Institute
Matthey-Picard Institute
St. Joseph's Academy
St. Mary's Dominican A...... emy.*

## University School

Ursuline Academy
Olla Instltute
$\qquad$
A cademy of the Immaculate Conception.
Opelousas Female Institute* .
The Thatcher Institute ${ }^{+} . . .$.
Everett Institute.

## Somerset Academy

Clesobical and English sohool..
Gould A cademy*
Bluehill Academy
Rast Main Confarence Bomi. nary.

Principal.

Miss Elizabeth Sevier.
Rev. Mother Florence
Mrs. Fannie B. Talbot... Wiley T. Poynter, D. D..
Geo. L. Sampson and James Henry. J. L. Tait, A. M Geo. F. Winston.......
Lawrence Rolfe, A.
Gillie B. Crenshaw .
W. E. Madderra....:

Charles M. Stevens:.......
Epis
R. C.

Nonsect.
M. E. So.

Nonsect.
Nonsect
Nonsect
Nonsect
Nonsect
Cong .

Nonsect
M. E.

Nonsect
Nonsect
R. C

Nonsect.
Nonsect.
R.C

Bapt.....
R.C.

Nonsect.
Nonsect .
R.C

Nonsect.
Epis
Nonsect
R. C
R. ${ }^{\text {C }}$
R. C.......

Nonsect
R.C

## Nonsect

R.C.

Nonsect
Nonsect
Nonsect

Nonsect

| L. C. Williams.............. | Nonsect |
| :--- | :--- |
| Monsect |  |
| Mdelen L. Newmar M. Simpson......... | Nonsect |

Frank W. Blair, A. B
Rev. A. F. Chase, Ph. D
other private seoondary schools for the scholastic year 1895-96-Continued.


T'able 34.-Statistics of private high schools, endowed academies, seminaries, and

other private seondary schools for the scholastic year 1895-96-Continued.


Table 34.-Statistics of private high schools, endowed academies, seminaries, and

other private secondary schools for the scholastic year 1895-96-Continued.


Table 34.-Statistics of private high schools, endowed academies, seminaries, ana

ather private secondary sohools for the scholastic year 1895-96-Continued.


Table 34.-Statistics of private high schools, endowed academies, seminaries, and


* Statiaticn of 1894-9t.
other private secondary schools for the scholastic year 1895－96－Continued．

|  |  | Students． |  |  |  |  |  |  |  |  |  |  |  |  |  | Length of course in years． |  | Volumes in library． | Value of grounds， build－ ings，and scientific appa－ ratıs． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total second－ ary stu－ dents． | Colored ary stu－ dentsin－ in col－ 7 and 8. |  | Elemen tary． |  | Preparing for college． |  |  |  |  | Gradu－ ates in 1896. |  | College prepara－ tory stu－ the class thrat graduated in 1896. |  |  |  |  |  |  |
|  |  | $\begin{array}{\|c} \text { Clas- } \\ \text { sical } \\ \text { course. } \end{array}$ |  |  | $\begin{gathered} \text { Sclen- } \\ \text { tifice } \\ \text { course. } \end{gathered}$ |  |  |  |  |  |  |  |  |  |
| $\begin{gathered} \dot{\circ} \\ \text { 用 } \end{gathered}$ |  |  | $\begin{aligned} & \dot{\otimes} \\ & \underset{\sim}{\tilde{Z}} \end{aligned}$ |  |  |  |  | 总 |  |  | ボ |  | 㡙 |  | $\stackrel{\dot{\oplus}}{\stackrel{\pi}{\pi}}$ |  |  |  |  | $\begin{array}{\|l\|} \hline \ddot{\ddot{H}} \\ \text { 䍔 } \\ \hline \end{array}$ |  |  |  |
| 5 | 6 | \％ | 89 | 10 | 11 | 12 |  | 131 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | ${ }_{10}^{4}$ | $\begin{gathered} 38 \\ 0 \end{gathered}$ | $\begin{array}{l\|l} 41 & 0 \\ 30 & 0 \end{array}$ | 0 | 0 | ${ }_{2}^{0}$ | 0 | 7 | 8 | 6 | 8 | ${ }_{0}^{2}$ | 5 | 0 | 3 6 | 4 | 34 | 300 325 | $\$ 18,000$ 25,000 | ${ }_{752}^{751}$ |
| ${ }_{3}^{3}$ | 3 | 29 | 25 | ${ }^{0}$ | 0 | 0 | 0 | 6 | 3 | 2 | 0 | 4 | 1 | 3 | 0 | 4 | 0 | 1，087 | 20， 000 | 753 |
| 8 | 1 | ${ }_{80} 8$ | $\stackrel{3}{14}$ | 0 | 22 | 18 | 8 |  | 1 |  |  | 6 | 1 | 6 | 1 |  | 0 | 1,000 |  | 755 |
| 2 | 5 | 57 | 45 | 1 | 0 |  | 15 | 15 | 12 | 13 | 13 | 7 | 6 | 4 | 6 | 4 | 0 | 1，850 |  | 756 |
| 10 | 6 | 197 | 0 |  | 175 |  | 0 ． |  |  |  |  | 17 | 0 | 1 | 0 | 4 |  | 4，700 | 289， 061 | 757 758 |
| 1 | ， | 12 | 31 | 1 | 1 | 8 | 8 | ， 2 | 2 | 1 | 0 | 7 | 8 | 1 | 1 | 4 | 0 | 1，${ }^{\text {® }} 00$ | ．10，000 | 758 |
| 0 | － 8 | 3 － 0 | 40 |  | 0 | 5 | 5 | 0 | 3 | 0 | 20 | 0 | 7 | 0 | 7 | 4 |  | 600 | 20， 000 | 759 |
| 1 | 4 | 17 | 14.0 |  | 10 | 0.20 | 20.1 | 17 | 5 |  |  | 3 | 2 | ${ }_{3}^{3}$ | 0 | $\begin{aligned} & 4 \\ & 4 \end{aligned}$ | 0 | 1，000 | 25， 000 | 760 761 |
| 1 | 3 | 18 | 0 | ， | 12 | $2{ }^{2} 6$ | 6 | 11 | 5 | 9 | 0 | 4 | 0 | 3 | 0 | 4 | 0 |  |  | 761 |
| 1 | 12 | 222 | 70 | 0 |  | $2{ }^{2} 1$ | 1 | 18 | 6 | 2 | 0 | 5 | 0 |  | 0 | 4 | 0 | 300 | 0 | 762 |
|  | 5 | 5 | 17 | 0 | 17 | $7{ }^{4} 4$ | 40 | 2 |  | 1 | 0 | 0 | 1 | 0 | 1 | 4 | 0 |  |  | 783 |
|  | ${ }_{3}^{9}$ | 9 0 <br> 3 8 | 49  <br> 7 0 | 0 | 0 10 | 0 14 <br> 0 4 <br>   | ${ }_{4}^{14}$ |  |  | 0 3 | ${ }_{3}^{0}$ |  | ${ }^{9}$ | 0 0 | 0 | 4 | 0 | 5，380 | 102,000 20,000 | 764 765 |
|  | 0 | 40 | 270 | － | 10 | 0 | 38 | ， | 0 | 0 | 8 | － | 1 | 0 | 1 | 5 | 0 | 1，200 | 3，000 | 768 |
|  |  | $0{ }^{39}$ | 0 | 0 |  | 0 | 0 | 39 | 0 | 0 | 0 | 9 | 7 | ${ }^{9}$ | 0 | 5 | 0 | 1，100 |  | 767 788 |
|  | 10 | （1） | 120  <br> 31 0 | － 0 |  | 0 8 <br> 0 68 | 88 | 0 | ${ }^{0}$ | 0 | 29 |  | 7 6 | ． 0 | 2 | 5 |  | 500 4,126 | 38,125 184,141 |  |
|  | $\begin{array}{lll}0 \\ 1 & 4 \\ 1 & 3\end{array}$ | 4 <br> 3 | $\begin{array}{ll}31 & 0 \\ 63 & 0\end{array}$ |  |  | $\begin{array}{lll}0 \\ 0 & 68 \\ 0\end{array}$ | 68 |  | 28 | 4 | 9 |  | 8 8 | 1 |  |  | 0 | ${ }^{4,126}$ | 182， 2000 | 770 |
|  | 1.1 | 1． 13 | 8 | 0 | 0 | ， | 0 |  | 0 | 1 | 0 | 1 |  | 0 |  | 4 | 0 | 100 | 15， 000 | 771 |
|  | 20 | 0 0 110 | 0 | 0 | 0 | 5 | 0 | 88 | 0 | 22 | 0 | 22 | 0 | 20 | 0 | 5 | 0 | 3，500 | 300， 000 | 772 |
|  | 5 | 5  <br> 5 51 <br> 0 8 | 44 | $0$ |  | $6$ | ${ }_{0}^{0}$ | $11$ | 16 | 19 | 0 | 2 | 8 | ${ }_{2}^{3}$ | 5 |  | 0 | 794 400 | 150,000 10,000 | 773 774 |
|  | 4 |   <br> 3 30 | 12 | 0 | ${ }^{0}$ | 53 |  | 2 |  |  |  | 2 | 0 |  | 0 | 4 | 0 | 600 | 43， 633 | 775 |
|  | 1 | $1{ }^{3}$ | 15 | 0 | 0 | 5 | 1 | 8 | 9 | 1 | 6 | 2 | 2 | 2 | ${ }_{2}^{2}$ | 4 | 0 |  | 10，000 | 776 |
|  | 1 | $3{ }^{3} 0$ | － 36 | 0 | － | 28 | 84 | 0 | 20 |  |  | ． 0 | 5 | 0 | 3 | 4 | 0 | 4，000 |  | 777 |
|  | 0 |  | 29 | 0 | 0 | 0 | 25 | 0 |  | 0 |  |  |  |  | － 4 | 5 | 0 | 400 | 30，000． | 778 |
|  | 2 | ${ }^{8} 55$ | 44 | 0 | 0 | 9 | 12 | 15 | 4 | 18 | 3 | 1 | 5 |  | 0 | 4 | 0 |  | 60，000． | 779 |
|  | 4 | 2 36 <br> 1 14 | 8 0 | 0 | 0 | ${ }_{11}^{0}$ | 18 | 20 | 0 | 16 |  |  |  | ${ }_{1}^{6}$ | 0 | 4 |  | 500 200 | 40,000 40,000 | 780 781 |
|  |  | 18.14 | － 97 |  | ${ }_{0}{ }^{0}$ | 1 | 18 |  |  |  |  | 0 | － 16 | 1 | 16 | $\cdots$ | － |  |  | 782 |
|  | 2 | O 7 | 70 | 0 | 0 | 1 | 0 | 2 |  | 0.5 | 5 |  |  | 1 |  | 4 | 0 | 500 | 9，000 | 783 |
|  | 1 | 0 15 | 517 | － | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 3 | 3 | 0 | 4 | 0 |  | 12，000 | 784 |
|  | 4 | 6 E6 | 610 | 0 | 0 | 0 | 6 | 0 | 010 | 0 | 2 | 4 | 10 |  |  | 4 | 0 | 4，000 | 8，700 | 785 |
|  |  | 118 | 88 | 0 |  |  | 5 |  |  | 5 | 5 |  | 0 | 0 | 0 | 4 | 0 | 200 | 5， 000 | 786 |
|  | $7$ | $\begin{array}{l\|l\|l\|l\|l\|l\|l\|} \hline \\ 8 \end{array} 148$ | $\begin{array}{l\|l\|} \hline 16 \\ 18 & 108 \end{array}$ | $\begin{aligned} & 1 \\ & 0 \end{aligned}$ | $\begin{aligned} & 1 \\ & 1 \end{aligned}$ | $\begin{gathered} 10 \\ 0 \end{gathered}$ | $\begin{aligned} & 4 \\ & 0 \end{aligned}$ | $\begin{array}{r} 3 \\ 29 \end{array}$ |  |  | 0 |   <br> 8  <br> 8 12 <br> 1  | （ ${ }^{8}$ | 2 | ${ }^{-\cdots}$ |  | 0 | 8，${ }^{4,100}$ | rers，${ }^{25,000}$ | 788 788 |
|  | 2 | ${ }_{3}$ | $40{ }_{10}^{100} 51$ | 0 | 0 | $21$ | 15 | ${ }_{5}$ |  | ${ }_{6}^{2} 4$ | 4 | 8 | $7{ }^{13}$ |  | 4 | 4 | 0 | ， 300 | 125， 000 | 788 |
|  | 1 | 214 | 140 | － | － | 10 |  | 08 | 80 | 0 | 8 | 02 | ． |  |  | － 5 |  |  | 1，000 | 780 |
|  | 7 | $0 \quad 13$ | 130 | 0 | 0 | 6 | 0 | 06 | 60 | 0 | 6 | 04 | 40 | 0 | 0 | 8 | 43 | 800 | 35，000 | 791 |
|  | 0 | 20 | 020 | 0 | ， | 0 | $18$ | $0$ |  |  |  |  | 0 | 0 | 0 |  |  |  | 30，006） | 792 |
|  | － | 50 | 08 | 0 | 0 | 0 | ${ }_{2}$ | $\begin{array}{l\|l} 2 & 0 \end{array}$ |  | 3 |  |  | 0 |  |  |  |  | 1，500 |  | 793 |
|  | 0 | c 0 | 016 | 0 | 0 | 0 |  | 5 | 03 | 30 | 0 | 00 | 0 | 0 0 |  |  | 0 | 500 |  | 79 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2，500 | 475， 0 | 79 |

Table 34.-Statistios of private high schools, endowed, acadenies, seminaries, and

Duluth
Faribault
.....do
Fergus Falls
Graceville
Madison
Minneapolis (1313 4th st.).
Minneapolis (2122
2118 Pleasant ave.).
Minneapolis
Monterideo................
Moorhead.
Owatonna.
Red Wing
Rochester
St. Anthony Park (St. Panl Station).
St. Joseph .............. ave.).
St. Panl (370 Selby St. Paul (Merrian Park).

## St. Pan

 ist. Panl (Weatern ave.).St. Panl (Weaternave and Nelson street).

| Name. | Principal. | Religious denomination. |
| :---: | :---: | :---: |
| 2 | 3 | 4 |
|  | Thos. B. White, B. S.. | Friends... |
| Raisin Valley's Seminary ..... <br> St. Thomas's Private School .. | Rev. E. Kelley. | R. C....... |
| Normal Collegiate Institute... | G. J. Edgcumbe, A. M., Ph. D. | Nonsect .. |
| The Detroit Home and Day School. | Miss Ella M. Liggett, A. B. | Nonsect .- |
| The Detroit School for Boys... | Frederick Whilton, master. | Nonsect .. |
| Detroit Seminary.............. | Miss Cutcheon, Miss Pope. | Nonsect .. |
| St. Joseph's High School. | Sister Mary Lignoria | R.C...... |
| Akeley Institute................ | Rev. J. E. Wilkinson, Ph. D. | Epis ...... |
| Powell's Preparatory School .. | Rev.Isaac P. Powell...... | Nonsect .. |
| St. Patrick's Schoo |  | R. |
| Parochial School | J. M. Langan | R. C...... |
| Michigan Female Seminary... | Fannie Ruth Robinson, A. M. | Nonsect .- |
| St. Joseph's A cademy | Sister M. A gnes | R. C |
| St. Mary's A cademy. | Mother M. Justina........ | R. C |
| Michigan Military Academy .. | J. Sumner Rogers, supt... | Nonsect <br> R. C |
| St. Andrew's Academy ${ }^{\text {* }}$...... | Sister Mary Vincent...... David S, Wंarner, A. M... | FreeMeth |
| The Maynard School. | Laura A. Jones.. | Nonsect .. |
| Bethlehem Academy | Sister M. Dominic | R. C...... |
| St. Mary's Hall | Ella F. Lawrence. | Epis...... |
| Shattuck Sohool ............... | James Dobbin, D.D | P, E...... |
| ParkRegion Latheran College. | Edwin G. Mellem. | $\begin{aligned} & \text { Lath ..... } \\ & \text { R. C..... } \end{aligned}$ |
| Convent of Our Lady of the Lake.* | Sisters of St. Joseph....... |  |
| Lutheran Normal School...... | O. Lo' Kensgaard | $\begin{aligned} & \text { Luth .... } \\ & \text { Ref. Presb } \end{aligned}$ |
| Stanley Hall .......... | Olive Adele Erer | Nonsect .. |
| Wraaman's A cademy . ......... | W. W. Wraman. | Nonsect .. |
| Windom Institute .............. | C. W. Headley, A. |  |
| Hope Academy. <br> Pillobur $A$ ado.. | H. W. Ryding........... | Lath .... |
| Pilisbury Academy Red Wing Erangelical Lio | James W. Ford, Ph. D.... H. H. Bergsland. | Bapt Luth |
| Red Wing Evangelical Lutheran Seminary. | H. H. Bergsland. | Luth |
| Academy of Our Lady of Lourdes. | Mother Matilda | R. |
| Stryker Seminary.............. | Miss Anna K. Strylker | Nonsect |
| St. Benedict's Acad | Sister Pius |  |
| Baldwin Seminary | Clinton J. Backus, M. | Nonsec |
| Barnard School for Boys | C. N. B. Wheele | Nonsect |
| Colloge of St. Thomas. | Rev. James C. Byrn | R. C |
| Conrent Visitation. | Cliementine Shepherd | R. ${ }^{\text {c }}$ |
| Cretin High School. <br> St. Catherine's Schoo | Brother E. Lewis. | R. P [ |
| - St, Joseph's A cademy. | Sister Hyacinth ........... | R.C |

other private secondary schools for the scholastic year 1895-96-Continned:


Table 34.-Statistics of private high schools, endowed aoademies, seminaries, and

other private scondary schools for the scholastic year 1895-96-Continued.

| In-structors for secary dents. |  | Students. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | -Кx\&Iq!I | Value of grounds, build. ings, and scientifle appa. ratus. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total second ary students. |  |  | Colored secondary sta-dentsincluded in col. umns 7 and 8. |  | Elementary. |  | Preparing for college. |  |  |  |  | Graduates in 1896. |  | College ргерага. tory students in the class that graduated in 1896. |  |  |  |  |  |  |
|  |  |  | Classical course. |  |  |  | Scientific course. |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 逯 |  |  |  |  | $\begin{gathered} \dot{\Phi} \\ \frac{1}{\pi} \\ \end{gathered}$ |  |  |  | $\begin{aligned} & \text { @ } \\ & \stackrel{y}{\mathrm{x}} \end{aligned}$ |  |  | $\begin{aligned} & \dot{\otimes} \\ & \stackrel{\rightharpoonup}{\vec{A}} \end{aligned}$ |  |  |  |  |  | $\begin{aligned} & \text {.. . } \\ & \text { जin } \end{aligned}$ |  |  |  |  |
| 5 | 6 |  | 78 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |  | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
| 2 | 0 |  | 13 | 5 | 0 | 0 | 48 | 14 | 5 | 0 |  | 10 | 2 | 3 | 3 | 1 | 0 | 3 | 0 | 900 | \$45, 000 | 837 |
| 2 | 0 |  | 251 | 15 | 0 | 0 | 60 | 10 | 0 | 0 |  | 0 | 0 | 15 | 7 |  |  | 2 | 0 | 500 | 1,800 | 838 |
| 4 | 4 |  | 301 | 14 | 0 | 0 | 37 | 29 | 0 | 0 |  |  |  | 0 | 0 | 0 | 0 | 3 | 0 | 105 | 20,000 | 839 |
| 7 | 1 | 150 | 50 | 45 | 0 | 0 | 25 | 5 | 10 | 3 |  | 0 | 0 | 4 | 0 | 4 | 0 | 5 | 0 | 1, 000 | 20,000 | 840 |
| 0 | 6 |  | 0 | 25 | 0 | 0 | 0 | 120 |  |  |  |  |  | 0 | 3 |  |  | 4 | ... | 1,000 | 80, 000 | 841 |
| 1 | 1 |  | 27 | 23 | 0 | 0 | 47 | 49 | 3 | 10 |  | 0 | 0 | 1 | 5 |  |  | 2 | 0 | 500 | 3,000 | 842 |
| 2 | 1 |  | 33 | 77 | 0 | 0 | 45 | 43 | 6 | 3 |  | 4 | 4 |  |  |  |  | 3 |  | 40 | 1,500 | 843 |
| 1 | 1 |  | 35 | 38 | 0 | 0 | 25 | 27 |  |  |  |  | . | 10 | 13 | 10 | 13 | 3 | 0 | 150 | 5, 000 | 844 |
| 2 | 3 |  | 30 | 45 | 0 | 0 | 70 | 55 | 30 | 45 |  | 30 | 45 | 0 | 0 | 0 | 0 |  |  | 500 |  | 845 |
| 0 | 3 | 18 | 18 | 23 | 0 | 0 | 47 | 57 | 5 |  |  | 6 | 15 |  |  |  |  | 4 | 40 | 800 | 7,000 | 846 |
| 0 | 2 | 5 | 5 | 36 | 0 | 0 | 21 | 30 | 2 | 10 |  | 4 | 0 | 0 | 5 |  |  | 4 | 0 | 60 | 2,000 | 847 |
| 1 | 1 | 20 | 20 | 85 | 0 | 0 | 15 | 20 |  |  |  |  |  | 1 | 3 |  |  | 4 |  | 800 | 8,000 | 848 |
| 1 | 2 | 18 | 18 | ${ }^{25}$ | 0 | 0 | 40 | 50 | 5 | 0 |  | 1 | 0 | 1 | 6 | 1 | 0 | 4 | 0 | 1,000 | 5,000 | 849 |
| 3 | 4 | 1 | 15 | 15 | 0 |  | 25 | 45 | 2 |  |  | 5 | 10 | 0 | 0 |  | . | . |  | 250 | 250 | 850 |
| 1 | 0 |  | 7 | 9 | 0 | 0 | 28 | 36 |  |  |  |  |  |  |  |  |  |  |  |  |  | 851 |
| 1 | 2 | 2 | 20 | 15 | 0 | , | 70 | 67 | 6 |  |  | 11 | 10 | 2 | 2 | 2 | 2 | 3 | 0 | 200 | 325 | 852 |
| 2 | 3 | 31 | 10 | 2 | 0 |  | 80 | 90 | 0 |  |  | 4 | 1 | 0 | 0 | 0 | 0 | 5 |  | 50 | 1,500 | 853 |
|  | 1 | 1 | 9 | 4 | 0 | 0 | 25 | 26 | 2 |  |  | 2 | 1 |  |  |  |  | 4 | 0 |  | 2,000 | 854 |
| 1 | 1 | 1 | 6 | 10 | 0 | 0 | 24 | 43 | 1 | 4 |  | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 200 | 2, 000 | 855 |
| 0 | - 1 | 1 | 0 | 3 | 0 | 3 | - 5 | 20 | 0 | 1 |  |  |  | 0 | 1 | 0 | 1 |  | 0 | 300 | 25,000 | 856 |
|  | 12 | $2{ }^{2}$ | 20 | 20 | 0 | 0 | 0 | 60 | 5 |  |  | 10 | 10 | 2 | 3 | 2 | 3 | 3 | 0 | 1,000 | 5,000 | 857 |
|  | 2 | 1 | 23 | 29 | 0 | 0 | $0{ }^{41}$ | 45 | 2 |  |  | 2 | 3 | 1 | 2 |  |  | 4 | 0 | 700 | 1,200 | 858 |
|  | 10 | 0 | 11 | 12 | 0 | 0 | 0 | 33 |  |  |  | ${ }^{2}$ | 1 | 1 | 0 |  |  | 3 |  | 200 | 1,500. | 859 |
|  | 1 | 1. | 20 | 25 | 0 | - 0 | 055 | 40 |  |  |  | 4 | 3 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 1,000 | 860 |
|  | 2 | 4 | 0 | 45 | - 0 | 0 | 0 | ) 21 |  |  |  | 0 | 16 | 0 | 4 |  |  |  | 0 | 600 | 5, 000 | 861 |
|  | 2 | 0 | 31 | 0 | 0 0 | 0 | 0 | 2 | 0 |  |  | 4 | 0 | 3 | 0 | 3 | 0 | 4 | 0 | 0 | 4,000 | 862 |
|  | 1 |  | 12 | 20 | 0 | 0 | 0 | 42 | 8 | 5 | 4 | 1 |  | , | 0 |  |  | 4 |  | 0 | 2,500 | 863 |
|  | 1 | 1 | 19 | 25 | 5.0 | 0 | 35 | 50 | 0 | 2 | 3 | 1 | 0 | 3 | 0 |  |  | 4 | 0 | 150 | 3, 000 | 864 |
|  | 0 | 2 | 0 | 65 | 50 | 0 | 0 | 08 | 84 | 0 |  |  | ... | 0 | 12 |  |  | 5 | ... | 350 | 30,000 | 885 |
|  | 1 | 1 | 9 | 9 | 9 0 | 0 0 | 019 | 9 | 5 |  | 0 |  |  | 0 | , |  |  | 4 |  | 175 | 4,000 | 866 |
|  | 2 |  | 40 | 35 | 5 - 0 | 0 | 40 | 0 | 11 | 7 | 5 | 3 | 0 |  |  |  |  | 3 | 0 | 1,500 | 1,500 | 867 |
|  | 0 | 2 | 15 | 15 | 50 | 0 | 35 | 5 | 30 |  | 8 |  |  | 2 | 0 | 2 | 0 | 3 | 0 | 1,000 | 2,500 | 868 |
|  | 1 | 1 | 24 | 24 | 40 | 0 | 028 | 8 | 30 | 1 | 1 | 3 | 4 |  |  |  |  |  | 0 | 300 | 1,200 | 869 |
|  | 0 | 4 | 0 | 53 | 30 | 0 | 0 | $0 \mid 5$ | 56 |  |  |  |  |  |  |  |  |  |  |  |  | 870 871 |
|  | 0 | 8 | 0 | 50 | 0 | 0 | 0 | 0 | 48 | 0 | 1 | 0 | 31 | 0 | 7 |  |  | 5 |  | 200 |  | 871 |
|  | 6 | 0 | 51 |  | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 51 | 600 | 25, 000 | 872 |
|  | 3 | 2 | 155 | 177 | 7. | 0 | 0 | 40 | 50 | 29 | 0 | 35 | 45 | - 9 | 10 |  |  | 4 | 0 | 2, 000 | 10,000 | 873 |
|  | 1 | 0 | 20 | 16 | 16 | 0 | 04 | 40 | 37 | 2 | 1 | 1 | 3 |  |  |  |  | 3 | 0 | 300 | 1,000 | 874 |
|  | 1 | 2 | 26 | - 20 | 20 | 0 | 0 | 12 | 8 |  |  |  |  |  |  |  |  |  |  | 300 | 1,200 | 875 |
|  | 1 | 0 | 20 | 10 | 10 | 0 | 0 | 40 | 80 |  |  |  |  |  |  |  |  |  | 0 | 0 | 600 | 876 |
|  | 3 | 0 | 25 | 25 | 25 | 0 | 0 | 7510 | 00 |  |  |  |  | 7 | 8 | 1 | 0 | 4 |  | 2,000 | 20,000 | 877 |
|  | 1 | 2 | 10 | 12 | 12 | 0 | 0 | 34 | 34 | 1 | 1 | 2 | 5 | 1 | 2 | 1 | 1 | 4 | 0 |  | 6,500 | 878 |
|  | 2 | 2 | 18 | 88 | 38 | 0 | 06 | 60 | 81 | 0 |  | 8 | 6 | 0 | 0 | 0 | 0 | 4 | 0 | 150 |  | 879 |
|  | 0 | 3 | 25 | 50 | 40 | 25 | 4012 | 23 | 18 | 10 | 8 |  |  | 11 | 1 |  | 0 | 4 | 0 | 150 |  | 880 |
|  | 2 | 3 | 29 |  | 422 | 29 | 424 | 40 | 89 |  | - |  | 10 |  |  |  |  |  |  |  | 8,000 | 881 |
|  | 0 | 3 |  | $0 \quad 68$ | 88 | 0 | 0 | 0 | 18 | 0 | 0 |  | 12 | 0 | 19 |  |  | 4 |  | 500 | 18,000 | 882 |
|  | 1 | 1 | 10 |  | 10 | 0 | 0 | 50 | 30 |  | 1 |  |  | 2 | 2 | 0 | 0 | 4 | 0 | 0 | 1,000 | 883 |
|  | 1 | 0 | 8 | $8{ }^{8} 8$ | 8 | 0 | 0 | 24 | 25 |  | 4 |  |  | 0 | 0 |  |  |  |  | 200 |  | 881 |
|  | 2 | 1 | 147 | 7 81 | 0 | 0 | 0 11 <br> 0 3 | 14 | 61. | 0 2 | 0 |  |  | 3 3 3 | - 0 |  | 0 | 2 |  | 1,000 | 40,000 | 888 |

Table 34.-Statistics of private high seioools, endowed academies, seminaries, and


## other private secondary schools for the scholastic year 1895－96－Continued．

| In－struetors forseevond－arysta．dents． |  | Students |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Value of grounds， ongs，and scientific ratus． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total second arystudents． |  | $\|$Colored <br> second－ <br> ary str－ <br> dentinin－ <br> cluded <br> in col－ <br> umns <br> 7 and 8. |  | $\begin{gathered} \text { Elemen- } \\ \text { tary. } \end{gathered}$ |  | Preparing forcollege． |  |  |  | Gradu－ ates in 1896. |  | College tory stu－ dents in the class that graduated |  |  |  |  |  |  |
|  |  | Clas－sicalcourse | $\begin{gathered} \text { Scien- } \\ \text { tifie } \\ \text { course. } \end{gathered}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| ब्रा |  |  |  | 彩 |  | 雲 |  |  |  | 采 | $\begin{aligned} & \text { 鬼 } \\ & \text { 础 } \end{aligned}$ | 㡙 |  | 恖 |  |  | 获 |  |  |  | $\begin{aligned} & \text { 商 } \\ & \text { 兑 } \end{aligned}$ |  |
| 3 | 6 | 7 | 8 |  |  | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
| 0 |  | 0 |  | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 1 | 100 | 90 | 0 | 0 | 40 | 62 | 3 | 2 |  |  | 2 | ${ }_{1}^{3}$ | 2 | 1 | 4 | 0 | 600 | 83， 000 | 888 |
|  |  | 18 | 6. | 0 | 0 | 17 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $1$ | 0 | 10. | 14 | 0 | 0 | 28 | 26 | 0 | 5 | 0 | 5 | 0 | 2 | 0 | 2 |  | 0 | 200 |  | 888 |
| $\frac{1}{1}$ |  | $30$ | 5 | 0 | 0 | 25 | 20 | － | 0 | 4 | 3 | － | 0 | 0 | 0 | 3 | 0 | 0 | 3； 000 | 889 |
| 3 |  | 58 | 19 | 0 | 0 | 60 30 | 67 | 23 | 0 | ${ }_{10}^{4}$ | 5 |  | 0 |  |  | 3 4 4 | 0 | 2000 | 4，000 | ${ }_{8}^{89}$ |
| 1 | 2 | 20. | 35 | 0 | 0 | ${ }_{60}$ | 65 | 10 | 15 |  | 0 | 8 | 0 |  |  | 4 | 0 | 2，000 | 40,000 2,000 | ${ }_{894}^{893}$ |
|  |  | 1 |  | － | 0 | 43 | 38 | 10 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | $\cdots$ | 2,000 2，000 | 8995 |
| 1 |  | 15 | 24 | 0 | 0 |  | ${ }_{76}^{60}$ |  |  | 0 | 15 | 3. | 4 | ${ }_{3}^{3}$ | 4 | $\frac{4}{3}$ | 0 | 100 | 1，000 | ${ }_{896}$ |
| 2 | ， | 20 | 8 | 0 | － | 105 | 100 | 3 | i | 4 | 15 | 3 | 8 | ${ }_{2}^{0}$ | 8 | 3 | 0 | 690 | 5， 2,500 | ${ }_{898}^{897}$ |
| 1 | 1 | 17 | 18 | 0 |  | 22 |  |  |  |  |  |  |  |  |  | 3 | 0 |  | 5，000 | 899 |
|  | 1 | 20 | 17 | 0 | 0 | ${ }_{36}^{75}$ | ${ }^{65}$ | 0 | $\begin{aligned} & 2 \\ & 0 \end{aligned}$ | 0 | 8 | 0 | 0 |  |  | 3 | 0 | 0 | 300 | 900 |
| 2 | 0 | 18 | 22 | 0 | 0 | 75 | 122 | 3 | 2 | 5 | 1 | 7 | 5 | 5 | 5 | 3 | 0 | 200 500 | 1,000 3,000 | 901 |
|  | 1 | 30 | 20 | 0 | 0 | 25 | 40 |  |  |  |  |  |  |  |  | 4 | 0 | 300 | 1,500 | 903 |
|  |  | 41 | 62 | 0 | 0 | 24 | － |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | － | 5，000 |  |
|  |  | 13 | 0 | 0 | 0 | 30 | 10 | 0 | 0 | 0 | 0 | 0 | 0 |  |  | 4 | 13 | 2，500 | 20，000 | ${ }_{605}$ |
|  | 1 | 48 | 44 | 0 | 0 | 95 | 80 | 5 | 2 | 10 | 4 | 17 | 4 | 2 | 2 | 2 | 0 | 1，050 | 2， 500 | 996 |
| 3 |  | 26 |  | 0 | 0 | 56 | 46 |  |  |  |  | 7 |  |  |  | 4 | 40 |  | 4，000 |  |
| ${ }_{2}^{0}$ |  | ${ }^{0}$ | 24 | 0 | 0 |  | 16 |  | 6 |  |  | 0 | 3 |  |  |  |  | 1200 | 4，000 | ${ }_{908}^{908}$ |
| 1 | 1 | 15 | ${ }_{21}^{21}$ | 0 | 0 |  | 14 | 12 5 | ${ }_{6}^{6}$ | 10 | 5 | 1 | 1 |  |  |  | 0 | 1，250 | 10， 00 | ${ }_{910}^{909}$ |
| 4 | 0 | 50 | 0 | 0 | 0 | 16 | 0 | 5 | 0 | 25 | 0 | ${ }_{9}$ |  |  | 0 | 4 |  | 600 2， 000 | 10,000 50,000 | 910 911 |
|  | 1 | ${ }_{20}^{4}$ | 20 | 0 | 0 | 20 | 34 40 | 1 | 5 |  | 0 | 0 | 3 | 0 | 2 | 4 | 5 | ${ }^{2} 400$ | 5， 000 | ${ }_{913}$ |
| 3 | 4 | 76 | 34 | 0 | 0 |  | ${ }_{6} 6$ | 4 |  | ${ }_{2}^{0}$ | ${ }_{3}$ | $\frac{1}{2}$ |  | $\frac{1}{2}$ | $\frac{1}{4}$ | 4 | 0 | 200 | 10， 000 | 913 |
| 2 | 1 | 15 | 10 | 0 | 0 | 60 | 40 | 8 | 6 | 3 | 2 |  |  |  |  | 4 |  |  |  |  |
|  | 0 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 |  |  | 4 |  | 30 | 2，000 | 916 |
| 0 | 2 | 0 | 60 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 4 |  |  | 4 | 0 | 400 | 30，000 | 917 |
|  |  |  |  |  |  |  | 38 |  |  |  |  |  |  | 0 | 4 |  |  | 100 |  |  |
| $\begin{aligned} & 0 \\ & 2 \end{aligned}$ | 1 | $25$ | $\begin{array}{\|l\|l} 38 \\ 20 \end{array}$ | 0 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 40 \\ & 37 \end{aligned}$ | $\begin{aligned} & 32 \\ & 32 \end{aligned}$ | 15 | 18 | 4 | 0 | 2 | 3 |  |  | 4 | 0 | 500 | 25， 000 | 918 |
| 4 | 0 | 22 | 18 | 0 | 0 | ${ }_{43}$ | ${ }_{37}$ | 0 |  |  | 0 | 6 | ${ }_{5}$ |  |  |  | ${ }^{0}$ |  | 0，000 | ${ }_{920} 92$ |
| 0 | 5 | 0 | 50 | 0 | 0 | 0 | 90 | 0 | 30 | $0$ | 20 | 0 | 10 | 0 | 10 |  | 40 | 1， 1,500 | 75，${ }^{1000}$ | ${ }_{821}^{920}$ |
| $\begin{aligned} & 1 \\ & 7 \end{aligned}$ | 1 | ${ }^{8} 8$ | $\begin{aligned} & 12 \\ & 36 \end{aligned}$ | 0 | 0 | 40 | $\stackrel{60}{3}$ |  |  |  |  |  |  |  |  |  | 0 |  | 500 | 922 |
| 7 | 0 | ${ }_{36}$ | ${ }^{36}$ | 0 | 0 | ${ }_{2}^{7}$ | ${ }^{3}$ | ${ }_{36}$ | 10 | 3 | 10 | 15 |  | 12 | 4 | 4 | 0 | ${ }_{400}^{250}$ | 10， 000 | ${ }^{23}$ |
| 3 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 48 | 0 | $\because$ | 0 | 18 |  |  |  |  |  |  | 6， 000 | ${ }_{925}^{424}$ |
| $\begin{aligned} & 1 \\ & 1 \end{aligned}$ | 2 | 80 | 8. | 0 | 0 | 0 | 0 | 4 |  | 15 | 20 | 1 | ， |  |  | 4 | 0 | 300 | 2，500 | 228 |
| $\begin{aligned} & 1 \\ & 4 \end{aligned}$ | ${ }_{2}$ | ${ }_{51}^{3}$ | －88848 | 0 | 0 | 40 | 55 | 2 | ${ }^{6}$ | 1 | ， |  |  |  |  | 3 |  | 150 | 2，500 | ${ }_{928}$ |
| 3 | 1 | ${ }_{28}$ | 34 | 0 | 0 | 38 | 14 |  |  | G |  | 1 |  |  |  |  |  | 825 | 20， 000 | 020 |
| 2 | 1 | 47 | 34 | 0 | 0 | 25 | 20 | 0 | 0 | 0 | 0 | 2 |  | 0 | ${ }_{0}^{2}$ | 4 | 0 | 100 | 25， 000 | ${ }_{931}^{937}$ |
|  | 1 | 0 | 74 | 0 | 0 | 0 | 10 |  |  |  |  | 0 | 9 |  |  | 4 | 0 | 1，300 | 60， 000 | ${ }_{932}$ |
| 2 | 1 | 23 | 18 | 0 | 0 | 30 | 40 |  |  |  |  | 4 | 2 |  |  |  | 0 | 700 | 40，000 |  |
| 1 | 0 | 20 | 15 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 2 2 | 3 | 0 | 80 | 0 | 0 | ${ }_{0}$ | 60 | 18 | 30 | 0 | 0 | ${ }_{0}$ | 2 |  |  | 4 | 0 |  |  | ${ }^{934}$ |
|  | 1 | 27 | 23 | 0 | 0 | 13 |  |  |  | 4 | 2 |  |  |  |  | 4 | 0 |  |  | $035$ |
|  |  | 40 | 28 |  |  | 10 | 10 |  |  |  |  | 2 |  |  |  | 4 |  | 500 | 5，00 |  |

Table 34.-Statistics of private high schools, endowed academies, seminaries, and


* Statietice of 1894-95.
other private secondary schools for the scholastio year 1895-96.-Continued.


Table 34.-Statistics of private high schools, endowed academies, seninaries, ant

o！her private secomdary schools for the scholastic year 1895－96－Continued．

| In struct ors for sec－ ary stu－ dents |  | Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Volumes in library. | $\begin{gathered} \text { Value of } \\ \text { grounds, } \\ \text { build- } \\ \text { ings, and } \\ \text { scientific } \\ \text { appa- } \\ \text { ratus. } \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total second－ arystu－ dents． |  | Colored second－ dents in－ cluded in col． <br> 7 and 8. |  | Elemen－tary． |  | Preparing for college． |  |  |  | Gradu ates in 1896. |  | College propara－ tory stu－ dents in the class that graduated in 1896. |  |  |  |  |  |  |
|  |  | Clas． sical course． | Scien－ tific course |  |  |  |  |  |  |  |  |  |  |  |  |
| 采 | 号 <br> 号 <br>  |  |  | $\begin{aligned} & \dot{y} \\ & \text { ⿹ㅣㄹ } \end{aligned}$ | 0 0 0 0 0 | $\stackrel{\text { gi }}{\text { J゙ }}$ |  | $\begin{aligned} & \text { 馬 } \\ & \text { y. } \end{aligned}$ |  |  |  | 永 |  |  |  |  |  |  |  |  | 近 |  |
| 5 | 6 | 7 | 8 |  |  | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 28 | 23 | 9 |  |
| 4 | 1 |  | 27 | 0 | 0 | 0 | 0 | 23 | 0 | 7 | 0 | 12 | 2 |  |  | 4 | 0 | 350 | \＄60， 000 | 984 |
| 2 | 5 | 15 | 24 | 0 | 0 | 38 | 45 |  |  |  |  |  |  |  |  | 4 | 39 |  |  |  |
| 3 1 1 | 4 | 59 | 38 | 0 | － | 11 | 25 | 5 | a |  |  |  | 1 |  |  | 4 | 0 | 1， $\begin{array}{r}500 \\ \hline\end{array}$ | 12,000 20,000 | 985 986 |
| 0 | 4 | 21 | 22 20 | 21 | 22 | 30 | 29 | 6 | 9 | 0 | 1 | 0 | 0 | 0 | 0 | ． | 0 | ＋ 700 | 60，000 | 987 |
| 1 | 0 | 14 | 12 | 0 | 0 | 22 | 18 | 0 | 0 |  |  | 0 | 4 | 0 | 3 | 4 |  | 500 | 20，000 | 988 |
| 1 | 2 | 20 | 14 | 0 | 0 | 15 | 15 | 4 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |  | 3， 000 | 989 |
| 2 | 6 | 57 | 6.1 | 0 | 0 | 16 | 14 | 4 |  |  |  | 0 | 0 |  |  | 4 | 0 | 200 | 2， 500 | 990 |
| 1 | 0 | 14 | 18 | 0 | 0 | 10 | 14 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 26 | 400 | 15，000 | 991 |
| 1 | 1 | 28 | 20 | 0 | 0 | 49 | 62 |  |  | 0 |  | 6 | 2 |  |  | 4 | 0 | 40 120 | 10，000 | 992 993 |
| ， | 2 | 0 | 30 | 0 | 0 | 0 | 95 |  |  | 0 | ， | 0 | 0 | 0 | 0 | 4 | 0 | 500 |  |  |
| 0 | 2 | 0 | 35 | 0 | 0 | 0 | 24 | 0 | 15 | 0 | 12 |  |  |  |  |  |  |  |  | ${ }_{995}^{994}$ |
| 0 | 1 |  | 20 | 0 | 0 | 60 | 103 |  |  |  |  |  |  |  |  | 3 | 0 | 200 | 15， 000 | 996 |
| 2 | 2 | 2 | 16 | 0 | 0 | 93 | 87 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | 3 | 38 | 45 | 0 | 0 | 11 | 21 | 12 | 11 | i1 | 9 | 3 | 4 | 3 | 3 | 4 | 83 | 250 | 30,000 20,000 | 997 998 |
| 4 | 1 | 46 | 22 | 0 | 0 | 0 | ， | 16 | 6 | 13 |  | 6 | 3 | 6 | 3 |  |  | 800 | 65， 000 | 998 999 |
| 5 | 2 | 29 | 15 | 0 | 0 | 17 | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | 4 | 21 | 14 | 0 | 0 | 3 | 4 | 3 | 0 |  |  | 3 | 0 |  |  | 3 | 0 | 2，500 | 40， 000 | 1000 |
| 4 | 0 | 16 | 0 | 0 | 0 | 21 | 0 | 1 | 0 | 8 |  |  |  |  |  |  | 16 | 300 500 | 22， 500 | 1001 |
| 0 | 3 | 10 | 10 | 0 | 0 | 30 | 40 | 1. | 0 | 8 | － | 1 | 2 | 1 | 0 | 3 4 | 16 | 500 45 |  | 1002 1003 |
| 0 | 2 | 0 | 30 | 0 | 0 | 0 | 30 | 0 | 10 | 0 | 20 | 1 | $\frac{2}{3}$ |  |  | 4 | 0 | 6， $\begin{array}{r}45 \\ \hline\end{array}$ | 3,000 300,000 | 1003 1004 |
| 2 | 3 | 0 | 53 | 0 | 0 | 0 | 22 | 0 | 4 | 0 | 20 | 0 0 | 3 3 3 |  |  | 4 | 0 | 6,000 2,500 | 300,000 150,000 | 1004 1005 |
| 0 | 6 | 0 | 29 | 0 | 0 | 20 | 50 |  |  |  |  | 0 | 4 |  |  | 4 |  | 2，500 | $\begin{array}{r} 150,000 \\ 10,000 \end{array}$ | $\begin{aligned} & 1005 \\ & 1000 \end{aligned}$ |
| 1 | 1 | 22 | 23 | 0 | 0 | 34 | 37 |  |  | 0 | 2 |  |  |  |  |  |  |  |  |  |
| 5 | 2 | 42 | 26 | 0 | 0 | 0 | 0 | 2 | 0 |  | 2 |  |  |  |  |  | 0 | 100 | 20， 000 | 1007 |
| 3 | 2 | 17 | 10 | － | 0 | 10 | 7 | 3 | 1 | 7 | 4 | $\stackrel{3}{3}$ | $\stackrel{2}{2}$ | 1 2 2 | $\stackrel{2}{1}$ | $\stackrel{4}{4}$ | 0 | 1，000 | 20,000 6， 000 | 1008 |
| 0 | 3 | 1 | 21 | 0 | 0 | 50 | 49 |  |  |  |  | 0 |  |  |  | 3 | 0 |  | 6， 000 | 1009 1010 |
| 0 | 1 | 0 | 13 | 0 | 0 | 9 | 43 |  |  |  |  | 0 | 2 |  |  | 5 |  |  |  | 1011 |
| 1 | 4 | 13 | 10 | 0 | 0 | 17 | 20 |  |  |  |  | 1 | 2 | 0 | 0 |  |  |  |  |  |
| 1 | － | 6 | 0 | ， | 0 | 6 | 12 | 0 | 0 | 2 | 0 | 1 | ${ }_{0}$ | 0 | 0 | 4 | 0 | 1，404 |  | $\left\{\begin{array}{l} 1012 \\ 1013 \end{array}\right.$ |
| 1 | 0 | 10 18 | 9 15 | 0 | 0 | 4 | 2 |  |  |  |  |  |  |  |  |  |  | 1， 25 | 0，000 | 1013 <br> 1014 |
| 0 | 5 | 18 | 129 | 0 | 0 | 2 | 3 |  |  | 1 | 0 | 0 | 3 | 0 | 0 | 4 | 0 | 0 | 4，000 | 1015 |
|  |  | 0 | 29 | 0 | 0 | 0 | 1 | 0 | 13 |  |  | 0 | 1 | 0 | 1 | 3 |  | 900 | 20，000 | 1016 |
| 32 | 0 | 345 | 0 | 0 | 0 | 0 | 0 | 290 | 0 | 50 | 0 | 100 | 0. | 85 | 0 | 6 | 0 | 10，000 |  | 1017 |
| 3 | 5 | 37 | 42 | 0 | 0 | 13 | 11 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 12 | 0 | 191 | 0 | 4 | 0 | 0 | 0 | 140 | 12 | 51 | 0 |  | 5 0 | 20 | 5 | 4 | 0 | 3，603 | 60， 000 | 1018 |
| 0 | 4 | 0 | 102 | 0 | 2 | 0 | 102 | 1 0 | 15 | 0 | 0 | ${ }^{2}$ | 26 | 20 | 1 | 4 | 0 | 1,600 800 | 2，000 | 1019 |
| 0 | 1 | 2 | 9 | 0 | 0 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 800 300 | 100，000 | 1020 |
| 2 | 0 | 30 | 18 | 0 | 0 | 43 | 49 | 4 | 1 | 1 | 0 | 5 | 1 | 5 | 1 | 4 | 0 | 300 |  | 1021 |
| 1 | 1 | 8 10 | 10 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 2 | 1 | 5 | 0 | 0 | 4 | 0 | 500 | 25,000 8,000 | 1022 |
| 1 | 3 | 17 | 19 | 0 | 0 | $\stackrel{1}{3}^{3}$ | 12 |  |  |  |  | 0 | 0 | 0 | 0 | 3 | 0 | 50 | 10，000 | 1024 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 2 | 4 | 0 | 1，600 | 70，000 | 1025 |
| 3 |  | 84 | 80 | 2 | 1 |  |  | 13 |  |  |  |  |  | 11 |  |  | 0 | 1．800 | 40，000 1 | 1026 |

Table 34.-Statistios of private high schools, endowod academies; seminaries, and
1027
1028
1029
1030
1031
1032
1033
1034

1035
1036
State and post-office.

Milton
Mount Vernon............

McCollom Ins initute............. tution.
Colby Academy *
Coe's Academy
Pembroke Academy
Holderness School for Boys
The Morgan School
McGaw Normal Institute....
Brewster Free Academy

School for Young Ladies
Belvidere Classical A cademy.
Farnum Preparatory School
Blair Presbyterial Academy
German Theologiral School of
Newark, N. J. (Academic
department).
Bordentown
.....do
Bridgeton
....do
Burlington
Camden (419 Penn st.)
Cinnaminson
Deckertown
East Orange ( 63 Harrison st.)
Elizabeth (524 Westminster et.).
Elizabeth (279 N. Broad st.).
Englewood (Lincoln Park).
Englewood
…do
Fort Lee.
Freehold
Hackettstown
Hightstown
Hoboken ( 285 Washington st.).
Hoboken (Willow ave. and bth et.).
Hoboken (0th and River ste.).
Boboken ( 852 Bloomfield ot.)
Jersey Clity (Orescent and Harrison aven.). Jersey City (14) Grand st.).

other private secondary schools for the scholastic year 1895-96-Continued.


Table 34.-Statistics of private high schools, endoucd academies, seminaries, and

other private secondary schools for the scholastic year 1895-96-Continued.


Table 34.-Statistics of private high schools, endowed academies, seminaries, and

|  | State and post-office. | Name. | Principal. | Religious denomination. |
| :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 |
|  | NEW MEXICO. |  |  |  |
| $1107$ | Albuquerque | Albuquerque Academy* | George L. Ramsay | Cong ..... |
| $1108$ | .....do ....... | Goss Military Institute. | Robert S. Goss, A. M | Nonsect .. |
| $\begin{aligned} & 1109 \end{aligned}$ | East Las Veg | Las Vegas Academy .......... | N. C. Campbell............ | Cong |
| 1110 | Santa $\mathrm{F}^{6}$ | Loretto dcademy-Our Lady of Light. <br> St. Michael's College | Sister Mary Xavier....... Brother Botulph.......... |  |
| 1112 | Adams | Adams Collegiate Institute... | Salem G. Pattison, A. M .. | Nonsect .. |
| 1113 | Albany (Kenwood) | Academy of the Sacred Heart. | Madame Mary Burke..... | R. C...... |
| 1114 | Albany .-............ | Albany Academy .............. | Henry P. Warren, A. B ... | Nonsect.. |
| 1115 | Albany ( 155 Washington ave.). | Albany Female Academy ..... | Miss Luey A. Plympton.. | Nonsect .- |
| 1116 | Albany (43 Lodgest.). | Christian Brothers' Academy. | Brother Leontine | R. C...... |
| 1117 | Albany (Robin st.,cor. Madison ave.). | Notre Dame Academy .......... | Sister M. Laura. | R. C...... |
| 1118 | Albany ................ | St. Agnes' School | Miss Ellen W. Boyd ...... | P. ${ }_{\text {P }}$ |
| 1119 | diba | St. Joseph's Acade |  | R. C...... |
| 1120 | Allegany | St. Elizabeth's Academy ....... | Mother M. Teresa. . | R. C |
| 1121 | Amsterda | St. Mary's Catholic Institute.. | Rev.J. P. McInrow John P. Slocum. | R. C......- |
| 1123 | Antwe | Ives Seminary .................... | F. E. Arthur... | Nonsect |
| 1124 | Belleville | Union A cademy of Belleville.. | Charles Josiah Galpin, A. M. | Nonsect |
| 1125 | Bingham | Lady Jane Grey Sckool | Mrs. Jane Grey Hyde..... | Nonsect .. |
| 1126 | Bridgohampto. | St. Joseph's A cademy | Sister M. Joseph | R. C...... |
| 1127 | Bridgehampton........ | Literary and Commercial In. stitute. | Lewis W. Hallock, A. M .. | Nonsect .. |
| 1128 | Brooklyn (Lafayette ave., St. James and Clifton place). | Adelphi Academy.............. | Charles H. Levermore, Ph. D. | Nonsect .. |
| 1129 | Brooklyn ( 63 New York ave.). | Bedford Aademy.............. | George Rodeman, A. M., Ph. D . | Nonsect .. |
| 1130 | Brooklyn(183-185 Lincoln place). | Berkeley Insti | Julian W. Abernethy, Ph. D. | Nonsect .- |
| 1131 | Brooklyn ( 102 Berkeley place). | Berkeley School for Boys...... | Wm. A. Stamm ...... | Nonsect .. |
| 1132 | Brooklyn ( 36 Monroe place). | Bodman's (Misses) School for Girls. | Misses Bodman. | Nonsect ..- |
| 1133 | Brooklyn ( 730 Nos. trand ave.). | Brevoort School for Girls ..... | Mrs. Adeline Kipling | Epis ...... |
| 1134 | Brooklyn ( 429 Classon ave.). | Brooklyn Hill Institate....... | Benjamin Blake Holmes, B. A. | Nonsect .- |
| 1135 | Brookljn (234 Greene ave.). | The Crescent School | Albert C. Perkins ........ | Nonsect .. |
| 1136 | Brooklyn (139 Clinton st.). | Deghuée's School for Young Ladies and Children. | Prof. Joseph and Charles Deghuée. | Nonsect |
| 1137 | Brooklyn ( 209 Clinton ave.). | Female Institution of the Vis. itation. | Sister Mary Loretto | R. C.... |
| 1138 | Brookiyn (146 Macon st.). | Garrotts' (Miss) School for Young Ladies and Children. | Miss Mary L. Garrott | Nonseet .. |
| 1139 | Brooklyn ( 50 Monroe place). | Hall's (Miss) School for Girls*. | Miss Clara Frances Hall.. | Nonsent |
| 1140 | Brookly ( 145 Montagne at.). | The Latin School. | Caskie Harrison, M. A. | Nonsect .. |
| $\begin{aligned} & 1141 \\ & 1142 \end{aligned}$ | Brooklyn | Lock wood A cademy |  | Nonsect |
| 1142 | Bronklyn (30 Madison et.). | Nativity Academy ............. | Sister M. Basil |  |
|  | Brooklyn ( 215 Ryercon Eh). | Pratt Institute (High School). | Wm. A. McAndrew | ons |
| 114 | Brooklyn ( 525 Clinton玉тe.). | Rounds's (Miss) School for Girls. | Miss Christiana Rounds.. | Nonsect .. |

other private secondary schools for the scholastic year 1895-96-Continued.


Table 34.-Statistics of private high schools, endowed academies, seminaries, and

other private secondary schools for the scholastic year 1895－96－Continued．

| In．structors forsec．ond．arysut．dents． |  | －－Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Volumes in library． | Value of grounds，build－ build－ scientific appa－ ratas． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total second－ ary students． |  | Colored second． dentsin cluded in col－ 7 and 8. |  | $\begin{aligned} & \text { Elemen. } \\ & \text { tary. } \end{aligned}$ |  | Preparing for college． |  |  |  | $\begin{gathered} \text { Gradu. } \\ \text { ates in } \\ 1896 . \end{gathered}$ |  | College <br> prepara－ <br> tory stu－ <br> dents in <br> the class <br> that <br> graduated <br> in 1896. |  |  |  |  |  |  |
|  |  | $\begin{gathered} \text { Clas. } \\ \text { cical } \\ \text { sicurse. } \end{gathered}$ | Scien－tific course． |  |  |  |  |  |  |  |  |  |  |  |  |
| $\stackrel{9}{9}$ |  |  |  | 甹 |  | 吾 |  |  | 的感 | $\begin{aligned} & \text { 追 } \\ & \text { ज̈n } \end{aligned}$ | $\begin{aligned} & \text { 爵 } \\ & \text { 湺 } \end{aligned}$ |  |  |  |  |  | 㭡 |  |  |  |  |  |
| 5 | 6 | 7 | 8 |  |  | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
| 0 | 2 | 0 | 26 | 0 | 0 | 0 | 74 | 0 | 2 | 0 | 0 | 0 | 5 | 0 | 2 | 4 | 0 | 1，000 | \＄75， 000 | 1145 |
| $\begin{aligned} & 6 \\ & 0 \end{aligned}$ |  | 110 0 | 45 | 0 | 0 | 480 0 | 70 | 10 | 0 | 0 | 0 | 13 | 0 | 0 |  | 3 | 110 | 2，000 |  | 1146 |
| 1 | 6 | 0 | 84 | 0 | 0 | 4. | 99 | 0 | 3 | 0 | 0 | 0 | 15 | 0 | 2 | 4 | 0 | 1，789 | 98，480 | 1148 |
| 1 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 2 | 0 |  |  |  |  |  |  |  |  | 1149 |
| 6 | 0 | 28 | 0 | 0 | 0 | 49 | 1 | 3 | 0 | 25 | 0 | 3 | 0 | 3 | 0 | 4 | 0 |  | 00 | 150 |
| 0 | 6 | 0 | 60 | 0 | 0 | 0 | 190 |  |  |  |  | 0 | 11 | 0 | 8 | 5 | 0 | 2， 049 | 255, | 1151 |
| $\begin{aligned} & 4 \\ & 4 \end{aligned}$ | $\begin{array}{r} 0 \\ 12 \end{array}$ | ${ }_{0}^{45}$ | $78$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $0$ | $\begin{array}{r} 55 \\ 6 \end{array}$ | 70 | 30 | 0 | 15 | $\begin{aligned} & 0 \\ & 2 \end{aligned}$ | $\begin{aligned} & 1 \\ & 0 \end{aligned}$ | 11 |  |  |  |  | 2，000 |  | ${ }_{1152}^{115}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 11 | 0 | 0 | 4 | 0 | 981 | 73， | 1153 |
| $\begin{aligned} & 4 \\ & 0 \end{aligned}$ | 0 | ${ }_{0}^{40}$ | $\stackrel{0}{35}$ | $0$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |  | 0 | 10 | 0 | 13 | 9 | 1 | 0 | 0 | 0 | 4 | 0 | 900 | 8,000 | 1154 |
| 1 | 3 | 50 | 60 | ${ }_{0}$ | 0 | ${ }_{25}^{0}$ | 10 | 0 | ${ }_{2}^{3}$ |  |  | ${ }_{3}^{0}$ | 4 | $\stackrel{0}{2}$ | ${ }_{1}^{2}$ | 4 | 0 | 1，900 | 25， 000 | 1155 |
| 0 | 4 | 0 | 20 | 0 | 0 | 0 | 15 |  |  |  |  | 0 | 14 | ${ }_{0}^{2}$ | 4 | 4 | 0 | 3，000 | 20,000 50,000 | ${ }_{1157}^{1156}$ |
| 5 | ， | 3 | 22 | 0 |  | 00 | 102 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 2 |  | 104 | 59 | 0 | 0 | 1 | 7 | 40 | 10 | 30 | 8 | 17 | 15 | 15 | 6 | 4 | ${ }_{0}$ | 300 | 15,000 88,845 | ${ }_{1159}^{1158}$ |
| $\stackrel{2}{3}$ | 1 | ${ }^{7}$ | ${ }_{3}^{3}$ | 0 | 0 | 33 0 | 1 | 0 |  | － | － | 4 | 0 |  | 0 | 4 |  | 100 | ．15，000 | 1160 |
| 1 | 1 | 25 | ${ }_{33}$ | ${ }_{0}$ | 0 | 10 | 12 |  |  | 2 | 0 | 1. | 2 | 1 | 2 | 4 | 0 | 763 400 | 91，${ }^{3} \mathbf{0} 000$ | ${ }_{1162}$ |
| 1 | ${ }^{6}$ | 72 | 53 | 1 | 0 | 4 | 2 | 19 | 1 | 9 | 4 |  | 7 | ${ }_{6}$ | 2 |  | 68 | 1，607 |  |  |
|  |  |  | 15 | 0 | 0 | 1 |  |  |  |  |  | 3 | 0 |  |  | 4 |  | －600 | 10，000 | 1164 |
|  |  | ， | 22 | 0 | 0 | 1 | 4 | 4 | 3 | 0 | 0 | 0 | 3 | 0 |  | 4 | 0 | 565 |  | 1165 |
| 2 | ${ }_{0}$ | 15 | ${ }_{0}$ | 0 | 0 | ${ }_{20}^{1}$ | ${ }_{0}^{3}$ | 5 | 0 | 3 | ${ }_{0}^{6}$ | 0 | 12 | 3 | 0 | 4 | 0 | 2， 268 | 47， 945 | 1166 |
| 9 | ， | 85 | 0 |  | 0 | 30 | 0 | 5 | 0 | 36 | 0 | 4 | ${ }_{0}$ | $1{ }^{3}$ | 0 | 5 | 85 | 3，070 |  | ${ }_{1168}^{1167}$ |
| $\left\lvert\, \begin{array}{\|c\|} 2 \\ \hline \end{array}\right.$ | 2 | ${ }_{80}^{42}$ | 62 | 0 | 0 | 8 | 8 | 8 | 3 | 4 | 0 | ${ }^{3}$ | 0 | 2 | 2 | 3 | 8 | 2,200 | ${ }_{35} 80000$ | 1169 |
| 1 | 1 | ${ }_{32}$ | 18 | 0 | 0 | 0 | 0 | 60 | 0 | 20 | 0 | 10 | 0 | 10 | 0 | 6 | ， | 1， 100 |  | 1170 |
| 1 | 0 | 17 | 8 | 0 | 0 | 8 | 2 | 0 | 0 | 1 | － | 0 | ${ }_{3}^{6}$ | 1 | ${ }_{0}^{2}$ |  | ${ }_{0}^{24}$ | 200 250 | 4,500 3,000 | ${ }_{1172}^{1171}$ |
| ${ }_{0}^{4}$ | ${ }^{3}$ | 48 | 45 | 1 | 0 | 4 | ${ }^{3}$ | 3 | 0 | 10 | 0 | 9 | 4 | 9 | 2 | ${ }_{3}$ | 0 | 3，000 | 26，000 | 1173 |
| 0 | 1 | 10 | ${ }_{10}^{6}$ | 0 | 0 | 11 | 10 |  |  |  | 3 | 0 | ${ }^{6}$ | 0 | ${ }^{6}$ |  | 0 |  |  | 1174 |
| ， | 5 | 80 | 20 | － | 0 | 0 | 0 | 2 | 0 | 2 | ${ }_{0}$ | 10 | ${ }_{6}$ | 4 | 0 | 3 | 75 | 3，780 | 30,000 48,300 | ${ }_{1176}^{1175}$ |
| ${ }_{2}^{2}$ | 5 | 67 | 0 | ${ }_{0}^{0}$ | 0 | ${ }^{10}$ | 0 | 4 | 1 | 11 | 3 | 2 | 3 | 2 | 3 |  | 0 | 3，000 | 26， 000 | 1177 |
| 1 | 5 | 10 | 40 | 0 | 0 | 23 | ${ }_{36}^{0}$ | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |  | 0 | 1，360 | 78， 100 | 1178 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 0 | 500 | 25，000 | 1179 |
| 0 | 10 | 12 | 50 | 0 | 0 | 33 | ${ }^{0}$ | 2 | 0 |  |  | 10 | ， | 2 | 0 | 1 | 12 | 300 | 32， 000 | 1180 |
| 0 | 8 | 0 | 66 | 0 | 0 | 0 | ${ }_{29}$ | 0 | 8 | 0 | 4 | 0 | 12 | 0 | 4 | 4 | 0 | 1，260 | 273,600 80,000 | ${ }^{1181}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | 3 | 40 | 42 | 0 | 0 | $\begin{aligned} & \mathbf{0} \\ & 0 \end{aligned}$ | $\begin{aligned} & 6 \\ & 0 \end{aligned}$ | 5 | $\frac{4}{4}$ | $\begin{gathered} 10 \\ 4 \end{gathered}$ | $\begin{aligned} & 2 \\ & 3 \end{aligned}$ | 2 | 6 | 1 | 0 | 4 |  | 4， 1,000 1,850 | $125,000$ | $1183$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 10 | 0 | 94 | 0 | 0 | 0 | 22 | 0 | 30 | $\begin{gathered} 20 \\ 0 \end{gathered}$ | $0$ |  | $\begin{gathered} 0 \\ 12 \end{gathered}$ | $0$ | ${ }_{12}^{0}$ | $4$ | $\begin{aligned} & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 5,000 \\ & 5,000 \end{aligned}$ | 800， 000 | $\begin{aligned} & 1185 \\ & 1180 \end{aligned}$ |
| 0 | 3 | 8 | 23 | 0 | 0 | 5 | 4 | 0 | 4 | 0 | 0 | 0 |  | 0 | 1 |  |  |  |  |  |
| 7 | 0 | 127 | ${ }_{0}$ | 0 |  | 3 0 | 7 | 74 | 1 | 18 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 500 | 4， 000 | 188 |
| 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 81， 5 |  |
| 2 |  | 13 | 5 | 0 | 0 | 9 4 | 7 | $\frac{4}{3}$ | 0 |  |  | 3 3 | 3 0 | 0 | 0 | 5 | 0 | 4，000 | 42，000 | 1100 |
|  |  | 22 | 26 |  |  |  | 183 |  |  |  | 0 |  |  |  |  |  |  |  | ${ }_{28,}^{15,000}$ | ${ }_{1192}^{1191}$ |

TABLE 34.-Statistios of private high schools, endowed academies, seminaries, and

|  | State and post-ottice. | Name | Principal. | Religious denomination. |
| :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 |
|  | NEW YORK-continued. |  |  |  |
| 1193 | Hudson | Skinner (Mis | Sarah R. Skit | Nonsect |
| 1194 | Ithaca | Cascadilla School | C. V. Parsell | Nonsect .- |
| 11905 | -1haca | The University Preparatory School. | Charles A. Stiles, B. S..... | Nonsect .- |
| 1196 | Kingston | Golden Hill School .-........... | John M. Cross, A. M ...... | Nonsect .- |
| 1197 | Lima | Genesee Wesleyan Seminary.. | John P. Ashley, A. M., S. T. B., Ph. D. |  |
| 1198 | Locust Valley | Friends' A cademy. | Franklin P. Wilson....... | Nonsect .. <br> Nonsect . |
| 1199 1200 | Macedon Cent | Macedon Academy | Joseph G. McConnell <br> Wilham Carleton Tifft, | $\begin{array}{\|l\|} \text { Nonsect .. } \\ \text { Bapt...... } \end{array}$ |
| 1201 | Montour Falls | Cook Academy | A.M. Roger W. Swetland, A. B.. | Bapt...... <br> Nonsect |
| 1202 | Mount Vernon. | Lockwood's (Misses) Collegiate School. | L. H. and M. C. Lockwood. | Nonsect |
| .1203 | Moriah | Sherman Collegiate Institute* | Berton L. Brown, A. M. | Nonsect .. <br> Luth |
| -1204 | Neperan | Concordia College | Rev. H. Feth | Luth ....- |
| 1205 | N | St. Margaret's School........... | Briggs. |  |
| 1206 | New Brighton (52 Lafayette ave.). | Trinity Classical and English School (Boys).* | John M. Hawkins......... |  |
| 1207 | Newburg ......... | Mackie's (Miss) Seminary* | Misses Mackie.. |  |
| 1208 | ....do | Mount St. Mary's Academy | Sister M. Hildegar |  |
| 1209 | Newburg (Semainary Place). | Siglar's School* ................ | Heury W. Siglar. | Nonsect .- |
| 1210 | New York (43 West 47th st.). | The Academic Classes for Girls. | Misses Whiton and Bangs. | Nonsect .. |
| 1211 | New York (Riverdale) | Academy of Mount St. Vin-cent-on-Hudson. | Mary W. Brennan ......... | R. C ...... |
| 1212 | New York (315 Madison ave.). | Allen's School for Boys ....... | Francis B. Allen, A. B | Nonsect .- |
| 1213 | New York (116-118 West 125th st.). | Barnard School. | Wm. Livingston Hazen, B. A., LL. $B$. | Nonsect .. |
| 1214 | New York ( 20 West 44th st.). | Berkeley School. | John S. White, LL. D..... | Nonsect |
| 1215 | New York ( 17 West 44th st.). | Brearley School | J. G. Croswell, A. B ....... | Non |
| 1216 | New York (132 West 71st st.). | Callisen's School for Boys. | A. W. Callisen............. | Nonsect .- |
| 1217 | New York ( 721 Madison ave.). | Chapin Collegiate School...... | Henry Barton Chapin, D. D., Ph. D. | Nonsect .. |
| 1218 | Now York (241-243 West 77th st.). | Collegiate School | Lemuel C. Mygatt, A. B., A. M. | Nonsect .. |
| 1219 | New York (34-36 East 51.st st.). | Columbia Grammar School. . . | B. H. Campbell, A. M..... | Nonse |
| 1220 | New York (32 West 40th st.). | Comstock School | Miss Lydia Day | Nonseet .- |
| 1221 | New York (741-7435th | Condon School | E. B. Condon, A. B., A. M. | Non |
| 1222 | New York ( 177 West 73d st.). | The Curtis School.............. | Osborn Marens Cartis.. | Nonsect |
| 1223 | New York (20 East 50th st.). | The Cutler Sohool. | Arthur H. Cutler, A. B., Ph. D. | Nonsect .- |
| 1224 | New York (342 Lex. ington ave.). | Daheim Preparatory Institute. | Hermann Siegel and Amalie Siegel. | Nonsect .- |
| 1225 | New York (108 West | De La Salle Institute | Brother Pompian, F. S. C.. | R. C |
| 1226 | ITew IGTi ( 9 Fast | Drisler \$chool | Frank Drisler | Nonsect .- |
| 1227 | New Xorl ( 10 East 42, st.) | Dwight School* | Arthur Williams | Nonsect |
| 1228 | ( New York (Riveruide | Ely'a (Miseen) School for Girls. | Miss Sara M. My .......... | Nonsect .- |

[^92]other private secondar'y schools for the seholastic year 1895-96-Continued.


Table 34.-Statistics of private high schools, endowed academies, seminaries, and

pther private secondary schools for the scholastic year 1895-96-Continued.


Table 34.-Statistics of private high schools, endowed academies, seminaries, and

other private secondary schools for the schoiastic year 1895-96-Continued.


Table 34-Statistios of private high schools; endowed academies, seminaries, and

*Statistici of 1804-03.
other private secondary schools for the scholastic year 1895－96－Continued．

| Yn－struct－ors forsec．ond．aryatu．sents．dents． |  |  |  |  |  |  |  |  | uden | ts |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total second arystu dents |  | Colored second－ dentsin－ cluded umins7 and 8 ． |  | Elemen tary： |  | Preparing for college． |  |  |  | $\begin{gathered} \text { Gradu- } \\ \text { ates in } \\ 1896 . \end{gathered}$ |  | Collegeprepara－tory stu－dents inthe classthatgraduatedin 1896． |  |  |  | Volumes in library． | Value ofgrounds，haildings，andscientificappacratus． |  |
|  |  | $\begin{gathered} \text { Clas. } \\ \text { siacal } \\ \text { course. } \end{gathered}$ | $\begin{gathered} \text { Scien- } \\ \text { tifici- } \\ \text { course. } \end{gathered}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| gig |  |  |  | 葛 | $\left[\begin{array}{l} 9 \\ 9 \\ 9 \\ 4 \\ \hline \end{array}\right.$ | 完 |  | 稛 |  | $\begin{aligned} & \text { ※ } \\ & \text { ※ } \end{aligned}$ | $\begin{aligned} & \text { 感 } \\ & \text { 品 } \end{aligned}$ | 采 |  | 骨 |  |  |  |  |  | $\begin{aligned} & \dot{( }) \\ & \text { m } \end{aligned}$ |  |  |
| 5 | 6 | 7 | － 8 |  |  | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
| $\begin{aligned} & 2 \\ & 6 \end{aligned}$ | 3 | $15$ | ${ }^{38}$ | 0 | 0 | 235 | 52 | 0 | 0 | 0 | 0 | 1 | 8 | 0 | 0 |  |  |  |  |  |
| 1 | 1. | ${ }_{37}$ | 30 | 1 | 0 | ${ }_{17}^{43}$ |  |  |  |  |  | 15 | 0 | 14 | 0 | 3 | 50 | ${ }^{1} 100$ | 187， |  |
| 0 | 6 |  | 60 | 0 | 0 | 0 | 79 | ${ }_{0}$ | ${ }_{3}$ | ${ }^{6}$ | 2 |  |  |  |  |  | 0 | 2，160 |  |  |
| $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\frac{1}{2}$ | 0 | ${ }_{1}^{16}$ | 0 | ${ }_{0}^{0}$ | ${ }^{95}$ |  |  |  |  |  | 0 | 2 | 0 | 0 | 4 | 0 | 895 |  |  |
| 0 | 1 | 7 | 4 | 0 | 0 | 22 |  |  |  |  |  |  |  |  |  |  |  | 600 |  |  |
| 0 | 2 | － 0 | 14 | 0 | 0 | 2 | 19 | ${ }_{0}$ | 0 | ${ }_{0}$ | $\frac{1}{5}$ | 0 | 1 | 0 | $\stackrel{1}{0}$ | $\begin{aligned} & 3 \\ & 4 \end{aligned}$ | 0 | 193 | 9，4 | 13 |
| $\begin{aligned} & 5 \\ & 5 \end{aligned}$ | 0 | $\begin{aligned} & 40 \\ & 33 \end{aligned}$ | 0 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $0$ | $\begin{array}{\|l\|l} 90 \\ 10 \end{array}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 20 \\ & 10 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 8 | 0 0 | $\stackrel{9}{3}$ | 0 | ${ }_{3}^{6}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 4 | $3{ }^{0}$ | 1，000 | $\begin{array}{r} 300,000 \\ 84,650 \end{array}$ |  |
|  |  | 10 | 2 | 0 | 0 | 24 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 6 \\ & 1 \end{aligned}$ | 2 | 100 | 0 | 0 | 0 | 0 | 0 | 25 | 0 | 15 | 0 | 10 | 0 | 10 | 0 | 4 | 100 |  | 60， 5000 | ${ }_{1315}^{1314}$ |
|  |  | － | 15 | 0 | 0 | 5 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 109 | 1，500 |  |
| 3 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 15 |  |  |  |  |  |  |  |  |  |  |  |  |
| $\frac{1}{1}$ | 1 | 18 | 10 | 0 | ${ }_{0}^{0}$ | 18 | 32 | 10 | 11 | 2 | 2 | 4 | 0 | 0 | 0 | 4 | 0 | 800 | 5， 000 | ${ }_{1318}^{1317}$ |
|  |  |  |  | － |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\frac{1}{1}$ | 1 | ${ }_{17}^{3}$ | 11 | 0 | 0 | $14$ | 11. | ， | 2 | 2 | 0 |  |  |  |  | 2 | 0 |  | 1，000 | 1320 |
| 0 | 1 | ${ }^{6}$ | 5 | 6 | 5 | 40 | ${ }_{41}^{6}$ | 3 |  |  |  | 0 | 0 | 0 | 0 | 4 | 0 | 80 | 7， 700 | 1321 |
| $\begin{aligned} & 1 \\ & 7 \end{aligned}$ | 1 | $\begin{aligned} & 10 \\ & 40 \end{aligned}$ | 10 0 | 0 | 0 | 30 | 15 |  |  |  |  | 0 |  | 0 | 0 | 4 |  | 0 |  | ${ }_{1323}^{1322}$ |
| 0 | 2 | ${ }_{3}$ | 4 | 0 | 0 | ${ }_{26}^{52}$ | ${ }_{25}^{0}$ | 22 | 0 | ${ }_{2}^{21}$ | $\stackrel{1}{0}$ | 9 | 0 |  |  | 6 | 0 |  |  | 1324 |
|  |  | 14 | 35 | 0 | 0 | 25 | 20 | 4 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 |  | 56 100 | 1，00 | 1325 |
|  |  |  | 30 | 0 | 0 |  | ${ }_{12}^{4}$ | 9 | 5 | 3 | 0 |  |  |  |  |  |  | 1，167 |  | ${ }_{1327}^{1326}$ |
| 2 | 1 | 40 | 20 | 0 | 0 | ${ }_{68} 16$ | 53 | 5 |  | 1 | 0 | ${ }_{0}^{0}$ | 0 | 0 | 0 | 4 | 0 |  | 8,000 | 1328 |
| 1 | 1 | 17 | ${ }_{9}^{29}$ | 0 | 0 | 16 <br> 30 | ${ }_{24}^{24}$ | 15 | 25 |  | 0 | 0 | 0 | 0 | 0 |  | 0 | － $\begin{array}{r}0 \\ \hline\end{array}$ | 5，000 | ${ }_{1330}^{1329}$ |
| 1 | 2 | 15 | 20 | 0 | ${ }_{0}$ |  | 35 45 | 3 |  |  |  |  |  |  |  | ${ }_{2}^{4}$ |  |  | 5，000 | ${ }_{1331}^{1330}$ |
| 1 | 0 | 13 | 10 | 0 | 0 | 12 | 10 | 2 | ${ }_{4}^{5}$ | 2 | ${ }^{3}$ | 0 | 0 | 0 |  | 2 | 0 |  | 3，000 | ${ }_{1332}^{1331}$ |
|  | 1 | $\stackrel{9}{9}$ | 10 2 | 0 | 0 | 82 | 10 |  |  |  |  | 0 | 0 | 0 |  | 4 | 0 |  | 300 100 | ${ }_{1334}^{1333}$ |
| 2 | 0 | 65 |  | 0 | 0 | ${ }_{10}^{82}$ | 10 | ${ }_{10}^{2}$ | 0 | 2 | 0 |  |  |  |  |  |  |  |  | ${ }_{1335}^{1334}$ |
| 3 | 1 | 26 | 17 | 0 | 0 | 16 | 6 | 11 | 1 | 2 |  | ${ }_{6}$ | 2 | 6 | 2 | 4 | 4 |  | 3,000 1,100 | ${ }^{1336}$ |
|  |  | 12 | ${ }_{10}^{17}$ | 0 | 0 | 60 | 50 |  |  |  |  |  |  |  |  |  | 0 |  |  | ${ }_{1}^{1337}$ |
| 1 | 0 | 10 | 0 | 0 | 15 | 20 | 5 | 10 | 10 |  |  | 0 | 0 | 0 | 0 | ${ }_{3}^{3}$ |  |  | 1， 500 | 1339 |
| $\frac{1}{3}$ | 3 | 0 | 12 | 0 | 15 | 0 | 274 |  |  |  |  | 0 | 12 | 0 | 0 |  |  |  | 65，000 | 1340 |
| 1 | 0 | 17 | 4 | 0 | 0 |  | ${ }_{26}^{6}$ |  |  |  |  | ， |  |  |  | 4 |  | ${ }^{1,600}$ | 4，${ }^{1}$ | ${ }_{1342}^{1311}$ |
| 1 | 1 | 10 | ${ }_{8}^{8}$ | 0 | 0 | 15 | 12 | $\stackrel{5}{0}$ | 0 | 0 |  | 1 | 0 | 0 | 1 | ${ }_{3}^{2}$ | 0 | 150 | 1，500 | 1343 |
| 1 |  | ${ }_{3} 8$ | 25 | 0 | 0 | ${ }^{23}$ | 16 | ${ }^{6}$ | 9 | 1 |  | 6 | 0 | 2 | 2 | ${ }_{4}$ |  |  | 2，000 | ${ }_{1}^{1344} 1$ |
| 2 | 1 | 47 | 45 | － | 0 | ${ }_{50}$ | ${ }_{35}$ | 10 |  |  |  |  |  |  |  |  |  |  | 1，300 | 1346 |
| 1 | 1 | 21 | 10 | 0 | 0 | ${ }^{35}$ | 40 | 2 | 1 | 2 |  | 6 | ${ }_{3}^{4}$ | ${ }_{1}$ | 1 | ${ }_{4}^{4}$ | 0 | 100 | 5，000 | 1317 |
| d | 1 | ${ }_{33}^{17}$ | ${ }_{31}^{6}$ | 0 | 0 | ${ }_{18}^{27}$ | ${ }^{36}$ | ${ }_{19}^{2}$ | 4 | ${ }_{2}^{1}$ | 1 | 0 | 0 | 0 | 0 | 4 |  | 200 | Io， 6000 | ${ }_{1349}^{1348}$ |
| 1 | 0 | 13 | ${ }^{6}$ | ， | 0 | 41 | ${ }_{33}$ | 8 | 4 |  |  | 0 | 0 | 0 |  | 3 | 0 | 300 | 3，500 | ${ }^{3} 350$ |
| 1 | 1 | ${ }_{11}{ }^{0}$ | ${ }^{13}$ | 0 | － | 0 | 9 | 0 | 12 |  |  | 0 |  | 0 |  |  |  | 200 | 1，500 | ${ }^{1351}$ |
|  | 1 | 11 | 12 | 0 | 0 | ${ }^{51}$ | － $\begin{aligned} & 64 \\ & 10\end{aligned}$ | 4. | 5 |  | 0 |  |  |  |  | 2 | － |  | 3，000 | ${ }_{1353}^{1352}$ |
| 2 | 2 | 12 |  | 12 | 8 | 61 | 72 |  |  |  |  |  |  |  |  |  |  |  | 1，500 | 1354 |
| 1 | 1 | 15 | 18 | 0 | 0 | ${ }^{39}$ | 28 | ${ }^{3}$ | 7 |  |  | 1 | 0 | 1 | 0 | ${ }_{3}$ | 0 |  | 6，000 1 1,700 | ${ }^{1355}$ |
| 0 | 1 | 10 | 10 | 0 | 0 | 60 15 | 25 | 15 | 10 |  |  | 4 | 1 | 4 | 1. |  | 0 | 0 | 3，000 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4 |  |  | 500 | 1358 |

TABLE 34.-Statistics of private high sohools, endowed academies, seminaries, and

"Statistics of 1894-95.
other private secondary schools for the scholastic year 1895-96-Continued.


Table 34.-Statistics of private high schools, endowed academues, seminaries, and

*Statistics of 1804-95.
other pritate secondary schools for the scholastic year 1895-96-Continued.


Table 34.-Statistics of private high sohools, endowed academies seminaries, and

| State and post-office. | Name. | Principal. | Religious denomination. |
| :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 |
| OHIO--continued. |  |  |  |
| Cincinnati (5th and Walnut sts.). | Dodd Classical High School... | 'T. J. Dodd, D. D........... | Nonsect .- |
| Cincinnati ( 16 Morris st.). | Eden Park School | Madame Fredin ........... | Nonsect .. |
| Cincinnati ${ }^{656}$ Gilbert ave., Walnut Hills). | Educatioual Insti | Dri. Alois Schmidt | Nonsect .. |
| Cincinnati (Walnat Hills, Station D). | Franklin School. | Joseph E. White and G. S. Sykes. | Nonsect .. |
| Cincinnati............ | Hillebrand's (Miss) English, German, and French School.* | Hillebrand \& Gardthau. sen. | Nonsect .. |
| Cincinnati (44 East Auburn ave.). | Lupton (Miss) Sohool for Girls - | Miss Katharine M. Lupton. | Nonsect .. |
| Cincinnati (196 Auburí ave.). | Mount A uburn Young Ladies' Institute.* | H. Thane Miller, president. | Nonsect .. |
| Cincinnati (College Hill station). | Ohio Military Institute . . . . . . | Dudley Emerson, A. M... | Nonsect .. |
| Cincinnati (1615 Vine st.). | St. Prancis Seraphicus College. | Bernard Nurre. | R. C ....... |
| Cincinnati | St. Mary's Educational Institute. | Sister Mary Borgia ........ | R. C |
| Cleveland (768-770 Euclid ave.). | Hathaway-Brown's School for Girls. | Miss Mary E. Spencer... | Epis |
| Cleveland ............ | Mittleberger's (Miss) English and Classical School for Girls. University School. | Miss Augusta Mittle. berger. <br> Newton M. Anderson..... | .Nonsect Nonsect |
| Cleveland (Wilson st., | Ursuline Academy .. | Mother Superior. |  |
| Columbus ...... | Columbas Latin School | Frank T.Cole, A.B.,LL. B. | Nons |
| Columbus (151 East Broad st.). | Phelps's (Miss) English and Classical School for Girls. | Miss Lucretia M. Phelps.- | Epis |
| Columbus -.......... | St. Joseph's Academy.......... | Sisters of Notre Dame | R. |
| $\begin{aligned} & \text { Columbus (Eberly } \\ & \text { Building). } \end{aligned}$ | Thompson's Prepgratory School. | J. T. Thompson............ | N |
| Damascus........ | Damascus Academy ........... | Edgar Stinson, M. S. | Friends. |
| Dayton (17 3d st. east). | English Training School for Boys and Girls. | A. B. Shanck |  |
| Dayton (Ludlow and Franklin sts.). | Notre Dame A cademy -........ | Sisters of Notre Dame. |  |
| Dayton ............... | St. Mary's Institute | Rev. FatherJoseph Weckexser. | R. C...... |
| Ewingtou | Evington A cadem | F, F. Vale, A. M. | Nunsect .- |
| Fostoria. | Fostoria Academy ${ }^{\text {a }}$ | T. A. Hostetler. | United Br. |
| Gambier -2... | Harcourt Place Seminary ...... | Mrs. H. N. Hills........... | Epis |
| Grmantown | Miami Military Institute of Twin Valley College. Green Spring Academy......... | Orvon Graff Brown, president. <br> H. C. Dukon | Nonseet |
| Hillsboro.. | Hillsboro College..... | Charles F. Enyart, A. M.. | M. E. |
| Hudsou | Western Reserve Acad | Frederick W. Ashley, A.M. | Nonsest .. |
| Marion | St. Mary's School | Rev. James A. Burns | R. C |
| Middle Point .......... | Western Ohio Normal School*. | P. S. Morgan. | Presb..... |
| Mount Verunn........ | Mount Vernon Academy ...... | Wm. T. Bland <br> J. Howard Bro | 7. Day Ad.- |
| New Loxington.. | St. Aloysius Academy ${ }^{\text {* }}$ | Mother Gonzag | R. C |
| Painesville ... | Mathews'e (Miss) School for Girls. | Mrs.Maria R.D.Mathews. | Nonseet .. |
| Plearant | Frairfiela Academy ............. | C. C. Webb | Nonsect .. |
| Readin | Union Seminary - A (............ | Walter H. Houston | Nongect .. |
|  | Ursnline Academy for Young | Sister M. Baptista.. | R. C...... |
| Savannah | Ladies. <br> S\}arannah Academy | M. D. Oswalt and G. M. Johnston. | Presb... |

*Statistios of 1894-95.
other private serondary schools for the scholastic year 1895－96－Continued．

| In． struct ors for sec． ond． ary stu－ dents． |  | Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Value ofgrounds，build－ings，andscientificappa－ratus． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total second－ ary stu－ dents． |  | Colored second－ ary sta－ dentsin－ cluded in col－ umns 7 and 8. |  | Elemen－tary． |  | Preparing for college． |  |  |  | Gradu－ ates in 1896. |  | College prepara－ tory sta－ dents in the class that <br> graduated in 1896. |  |  |  |  |  |  |
|  |  | Clas－ sical course． | Scien tific course． |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | 稛 | $\begin{gathered} \text { gi } \\ \text { む̈ } \\ \text { E } \end{gathered}$ |  |  | 参 |  | 帚 |  | ※̊ |  | $\frac{\dot{\Phi}}{\vec{G}}$ |  |  |  |  |  | $\begin{aligned} & \dot{\Delta} \\ & \text { ⿷匚 } \end{aligned}$ | $\begin{aligned} & \dot{\Xi} \text { 荡 } \\ & \text { 品 } \\ & \text { ⿷匚 } \end{aligned}$ |  |
| 5 | 6 | 7 | 8 |  |  | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 44 |  |
| 1 | 0 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |  |  | 1461 |
| 0 | 5 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 2 |  |  | 0 | 2 | 0 | 2 |  |  | 700 | \＄20，000 | 1462 |
| 2 | 3 | 14 | 11 | 0 | 0 | 0 | 0 | 11 | 5 | 4 | 1 | 4 | 3 | 4 | 3 | 1 | 0 |  |  | 1463 |
| 5 | 2 | 60 | 0 | 0 | 0 | 31 | 0 | 38 | 0 | 22 | 0 | 20 | 0 | 20 | 0 | 4 | 0 | 500 |  | 4 |
| 0 | 5 | 0 | 20 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  | 1465 |
| 0 | 4 | 0 | 18 | 0 | 0 | 0 | 2 | 0 | 3 |  |  | 0 | 1. | 0 | 1 | 4 | 0 | 3， 000 |  | 1466 |
| 1 | 7 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 |  |  |  |  |  |  | 4，000 |  | 1467 |
| 0 | 0 | 28 | 0 | 0 | 0 | 6 | 0 | 2 | 0 | 12 | 0 | 0 | 0 |  |  | 4 | 28 | 2，000 | 100， 000 | 1468 |
| 8 | 0 | 98 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 5 | 0 | 300 |  | 1469 |
| 0 | 5 | 0 | 60 | 0 | 0 | 0 | 140 |  |  |  |  | 0 | 1 |  |  | 4 |  |  |  | 1470 |
| 0 | 7 | 0 | 60 | 0 | 0 | 15 | 60 | 0 | 25 | 0 | 0 | 0 | 8 |  |  | 4 | 0 | 1，200 | 2，000 | 1471 |
| 2 | 11 | 0 | 88 | 0 | 0 | 15 | 83 | 0 | 5 | 0 | 3 | 0 | 16 | 0 | 9 | 4 | 0 | 2，373 |  | 1472 |
| 16 | 0 | 113 | 0 | 0 | 0 | 77 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 12 | 0 | 75 | 0 | 0 | 30 | 200 |  |  |  |  | 22 | $\begin{aligned} & 0 \\ & 5 \end{aligned}$ | 21 | 0 | 4 | 0 | 1，500 | 240， 000 | $\begin{aligned} & 1473 \\ & 1474 \end{aligned}$ |
| 5 | 1 | 14 | 0 | 0 | 0 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 | 8 | 0 | 100 | 0 | 0 | 0 | 50 | 9 0 | 4 | 5 | 0 | 3 0 | 10 | 3 0 | 0 | $\begin{aligned} & 4 \\ & 4 \end{aligned}$ | 0 | $\begin{aligned} & 1,200 \\ & 1,000 \end{aligned}$ | 400 | $\begin{aligned} & 1475 \\ & 1476 \end{aligned}$ |
| 0 | 4 | 0 | 40 | 0 | 0 |  | 110 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | 0 | 16 | 24 | 0 | 0 | 10 | 110 | 4. | 2 | 4 | 0 | 0 | $\begin{aligned} & 5 \\ & 6 \end{aligned}$ | 4 | 6 | $\begin{aligned} & 4 \\ & 2 \end{aligned}$ | 0 | 3，000 | 200 | $\begin{aligned} & 1477 \\ & 1478 \end{aligned}$ |
| 1 | 2 | 7 | 10 | 0 | 0 | 24 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 1 | 12 | 6 | 0 | 0 | 15 | 10 | 4 | 0 |  |  | 4 | 3 | 0 | 0 |  | 0 | 240 |  | 1479 |
| 0 | 4 | 0 | 16 | 0 | 0 | 0 | 79 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |  |  | 30 |  |  |
| 6 | 0 | 67 | 0 | 0 | 0 | 192 | 0 | 0 | 0 | 67 | 0 | 14 | 0 | 14 | 0 | 4 | 0 | 30 |  | 1481 1482 |
| 1 | 0 | 18 | 18 | 0 | 0 | 4 | 3 | 3 | 1 |  |  |  |  |  |  |  |  |  |  |  |
| $1$ | 1 | 32 | 19 | 0 | － 0 | 43 | 23 | $\cdots$ | 1 | 4 | － |  |  |  |  |  | 0 | 50 900 | 1， 27000 | 1483 |
| 0 | 8 | 0 | 43 | 0 | 0 | 4 | 6 | 0 | 3 | 0 | 4 | $\stackrel{2}{0}$ | 5 | 0 | 3 | 4 | 0 | 900 | 27，000 100,000 | 1484 |
| 1 | 0 | 10 | 0 | － | 0 | 5 | 0 |  |  |  |  | 1 | 0 |  |  |  | 10 |  | 100,000 36,000 | （1485 |
| 2 | 1 | 19 | 18 | 0 | 0 | 93 | 52 | 3 | 2 | 16 | 14 | 5 |  |  |  |  |  |  |  |  |
| 2 | 2 | 8 | 12 | 0 | 0 | 17 | 43 | 0 | 1 | 16 | 14 | 0 | 2 | 0 | 1 | 4 | 0 | 500 0 | $\begin{array}{r} 7,500 \\ 30,000 \end{array}$ | 1487 1488 |
| 4 | 1 | 52 | 35 | 0 | 0 | 5 | 9 | 18 | 6 | 28 | 10 | 13 | 9 | 12 | 8 | 4 | 0 | 900 | 30,000 40,000 | 1488 |
| 1 | 1 | ${ }_{2}^{5}$ | 10 | 0 | 0 | 99 | 88 |  |  |  |  | 1 | 1 |  |  | 4 | 0 | 90 | 40，00 | 1489 1490 |
| 4 | 2 | 33 | 18 | 0 | 0 | 130 | 32 | 10 | 4 | 5 | 3 | 7 | 2 |  |  | 3 | 0 | 200 | 18，000 | 1491 |
| 1 | 0 | 16 | 1 | 0 | 0 | ${ }^{24}$ | 1 |  |  |  |  |  |  |  |  | 4 | 0 | 500 | 18，000 | 1492 |
| 0 | 3 | 0 | 32 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 380 | 26，800 | 1493 |
| 0 | 3 | 0 | 10 | 0 |  | 0 | 8 | 0 | 9 | 0 | 0 | 0 | 1 | 0 | 1 | 4 | 0 | 1，110 | 6，000 | 1494 1405 |
| 3 | 1 | 40 | 10 | 0 | 0 | 20 | 15 | 20 | 5 |  |  |  | 1 |  |  |  |  |  |  |  |
| 1 | 1 | 18 | 6 | 0 | 0 | 12 | 4 | 10 | 3 |  |  | 3 | 1 |  |  |  | 0 |  | $3,000$ | $1496$ |
| 0 | $\frac{4}{5}$ | 0 | 33 40 | 0 | 0 | 0 | 62 |  |  |  |  | 0 | 4 | 2 | 0 | 4 | 0 | 1，000 | $10,000$ | 1497 |
| 0 | 5 | 0 | 40 | 0 | 0 | 0 | 30 |  |  |  |  | 0 | 3 |  |  | 4 | ．．． | 8，000． | 50,000 | 1498 1499 |
| 3 | 0 | 20 | 29 | 0 | 0 | 20 | 18 | 6 | 0 | 7 | 5 | 4 | 1 | 4 | 1 | 4 | 0 | 150 | 5，000 | 1500 |

TABLE 34.-Statistics of private high schools, endowed academies, semionaries, and

|  | State and post-office. | Name. | Principal. | Rellgions denomination. |
| :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 |
|  | OHIO-continued. |  |  | S |
| 1501 | South New Lyme | New Lyme Institu | J.Tuckerman, A.M., Ph.D. | Nonsect |
| 1.02 | South Salem. | Salem Academy | John E. Williams, A. B... | Presb... |
| 1504 | Tiffin | College of Ursuline | Susan A. Longwell........ | R. C |
| 1505 | Toledo | Smead School......... | The Misses Smead......... | Nonseat |
| 1506 | .... do ................. | Ursuline Convent of Sacred Heart. | Mother M. Immaculate... | R. C. |
| 1507 | West Farmington | Western Reserve Seminary.... | T. H. Armstrong, Ph. D., A. M. | M. E. |
| 1508 | Woodville | The Teachers' Semina | Theo. Mees, president. | Luth |
| 1509 | Zanesville | Putnam Military Academy*. | J. M. Hulbert. ............. | Presb..... |
| 1510 | . do $\qquad$ окцанома. | Putnam Seminary ............ | Mrs. Helen B. Colt........ | Nonsect .. |
| $-1511$ | Gathrie. | St. Joseph's Academa * | Mother Paula, O.S.B..... | R. |
| 1512 | Kingfisher | Kingfisher College. . | J. T. House................. | Cong |
| 1513 | Albany | Albany College. | Wallace Howe Lee......... | P1 |
| 1514 | Baker City | St. Francis Academy | Sister Mary Cupertin | R. ${ }^{\text {c }}$ |
| 1516 | Dallas | La Creole Academic Institute. | A. M. Sanders, A. ${ }^{\text {M }}$ | Non |
| 1517 | Forest Grove | Tualtin Academy* | H.L. Bates |  |
| 1518 | Lebanon | Santiam Academy* | S. A. Randle .............. |  |
| 1519 | Mount Angel | Moust Angel Academy ........ | Mother Mary Bernardine, O. S. B. | $\underline{T}$ |
| 1520 | Peadleton | St. Joseph's Academy . . . . . . . . | Sister M. Stanislaus....... |  |
| 1521 | Portland. | Bishop Scott Academy . ........ | J. W. Hill, M. D............ | P. E |
| 1522 | Portland (Montgomery st. bet. 14th \& 63d st.). | Portland Academy ............. | J. R. Wilson . | Nonsect .- |
| 1523 | Portland............... | St. Helen's Hall | Mary B. Rodney |  |
| 1524 | do | St. Mary's (Parochial) School and College. | Brother Lacius |  |
| 1525 | Salem. | Academy of the Sacred Heart. | Sister Mary of the Assumption. | R. |
| 1526 | The Dalles | St. Mary's Academy | Sister Mary Alodia ....... | R.C |
| 1527 | Tillamook $\qquad$ PERNSSYLYANTA. | Tillamook Academy............ | Rev. Jos. Schell . . . . . . . . . | R. C...... |
| 1528 | Academia. | Tuscarora A cadem5* | Miss May Rodney......... | Pr |
| 1529 | Allegheny (204 North ave.). | The Park Institute............. | Levi Ladden, Ph. D........ | Nonsect |
| 1530 | Ambler. | Sunnyside School. | Miss S. A. Knight. ........ | Nonseot |
| 1531 | A rmagh | Armagh Academy ............. | C. A. Campbell............. | Nonsect |
| 1532 1533 | Barkeyville. | Sarkeyville Academy ......... | Charles Manchester, B. D. | Nonsect |
| 1534 | Beaver. | Beaver College and Musical | William J. Aloxander, | M. E . |
| 1535 | Bedford. | Institute. ${ }^{\text {Bedford Classical A cademy }}$ | Lawrence M. Colfelt ...... | Nonsect .. |
| 1536 | Bellefonte | Bellefonte Academy* ......... | J. R. Hughes............... | Nonsect .- |
| 1537 1538 | Bethlehem .....do .... |  | Albert George Ran, Ph. D. willism Trich | Morsvisn. |
| 1538 |  | Preparatory School for Lehigh University.* | William Ulrich |  |
| 1540 | Brodheadevili | Mountain Sominary <br> Pairview Academy | Miss N.J. Davis.. ET Kankle A | $\begin{aligned} & \text { Pre } \\ & \text { Nor } \end{aligned}$ |
| 1511 | Bryn Mavr.. | Baldwin'e (Mtse) School, Preparatory to Bryn Mawr Col. | Miss Florence Baldwiz. | Noneect |
| 1542 | Buckinghatn. | Hughesian Freo School | Cynthia Doane | Friends.... |

- Statistica of 180405.


## other privale secondary schools for the scholastic year 1895-96-Continued.



Table 34.-Statistics of private high schools, endowed academies, seminaries, and


- Statistics of 1894-85.
other private secondary 8chools for the scholastic year 1895－96－Continued．

| In－ stract－ <br> ors for sec－ ond－ ary sta |  | Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Volumes in library． | Value of grounds， build． ings，and scientific appa－ ratus． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total second－ ary stu－ dents． |  | Colored second－ ary stu－ dents in－ cluded in col－ umns 7 and 8. |  | Elemen－ tary． |  | Preparing for college． |  |  |  | Gradu－ ates in 1896. |  |  |  |  |  |  |  |  |
|  |  | $\begin{aligned} & \text { Clas. } \\ & \text { sical } \\ & \text { course. } \end{aligned}$ | $\begin{aligned} & \text { Scien- } \\ & \text { tific } \\ & \text { course. } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  | $\begin{aligned} & \text { 䚾 } \\ & \text { ज्ञ } \end{aligned}$ |  |  |  |  |  | $\begin{aligned} & \text { 霜 } \end{aligned}$ |  | $\begin{aligned} & \dot{9} \\ & \text { 哥 } \end{aligned}$ | $\begin{aligned} & \text { © } \\ & \text { は̈ } \\ & \text { は̈ } \\ & \text { ⿷匚 } \end{aligned}$ | 逯运 | $\begin{aligned} & \text { 荘 } \\ & \text { 慁 } \\ & \text { ⿷匚 } \end{aligned}$ |  |  |  |  |  |  |  |
| $5-6$ | － 6 | 7 | 8 |  |  | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
| 3 | 0 | 25 | 0 | 0 | 0 | 7 | 0 | 3 | 0 | 14 | 0 |  |  |  |  | 4 | 0 | 500 |  | 1543 |
| 2 l | 1 | 30 | 26 | 0 | 0 | 2 | 4 | 12 | 0 |  | 3 |  |  |  |  |  |  |  |  |  |
| 3 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 20 | 0 | 11 | 0 | 11 | 1 |  |  | 3,000 500 | $\$ 30,000$ 20,000 | 1544 |
| 2 | 2 | 22 | 24 | 0 | 0 | 6 | 5 | 5 | 4 | 0 | 0 | 1 | 7 | 11 | 1 | 4 |  | 700 | 20,000 20,000 | 1546 |
| 0 | 4 | 7 | 12 | 0 | 0 | 58 | 68 | 2 | 3 |  | 0 | 2 | 3 | 2 | 1 | 3 | 0 | 1，230 | 28， 000 | 1547 |
| 3 |  | 18 | 0 | 0 | 0 | 30 | 0 | 8 | 0 |  |  |  |  |  |  | 4 |  | 2，000 | 30， 000 | 1548 |
| 1 | 1 | 12 | 20 | 0 | 0 | 12 | 16 | 2 |  | 1 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | － 500 | 30， 250 | 1548 1549 |
| 1 | 0 | 7 | 4 | 0 | 0 | 20 | 19 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 0 | 5 | 6 | 0 | 0 | 21 | 30 | 5 | 4 | 0 | 2 |  |  |  |  | 3 3 3 | 0 | 50 | 3,000 300 | 1550 |
| 1 | 0 | 18 | 10 | 0 | 0 | 0 | 0 | 1 | 0 |  |  |  |  |  |  |  |  |  | 300 0 |  |
| 1 | 1 | 71. | 27 | 0 | 0 | 4 | 4 | 12 | 0 | 18 | 0 | 7 | 1 | 7 | 1 | 3 |  | 300 | 10，000 | 1553 |
| 1 | 2 | 62 | 7 | 0 | 0 | 5 | 1 | 10 | 0 | 4 | 0 | 9 |  |  | 0 |  |  |  |  |  |
| 1 | 1 | 50 | 25 | 0 | 0 |  | ， | 10 | 5 | 5 | 5 | 0 | 1 | 0 | 1 | 3 | 0 | 135 |  | 1554 1555 |
| 1 | 0 | 15 | 10 | 0 | 0 | 5 | 5 | 10 | 1 | 5 |  | 0 | 1 | 0 | 1 | 3 | 0 | 400 | 3， 000 | 1556 |
| 1 | 1 | 7 | 11 | 0 | 0 | 2 | 0 |  |  |  |  |  |  |  |  | 4 | 0 | 150 | 5，000 | 1557 |
| 0 | 2. | 8 | 7 30 | 0 | 0 | 47 0 | 85 | 2 | 2 | 1 | 0 | 0 | 0 |  |  | 5 | 0 | 300 |  | 1558 |
|  |  |  |  |  | 0 |  |  | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 3 |  | 600 |  | 1559 |
| 6 | 4 | 85 | 59 | 0 | 0 | 20 | 18 | 20 | 8 |  |  |  | 8 |  |  |  |  |  |  |  |
| 3 | 1 | 24 | 21 | 0 | 0 | 5 | 2 | 1 | 0 | 2 | 0 | 0 | 0. | 0 | 0 | 4 | 0 | 3,500 250 | 100,000 30,000 | 1560 1561 |
| 4 | 2 | 61 | 59 | 0 | － | 56 | 43 | 6 | 1 |  |  | 5 | 1 |  |  |  | 0 | 1，000 | 6，000 | 1562 |
| 2 | 1 | 45 | 32 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0 | 4 | 44 | 70 | 0 | 0 | 30 | 50 |  |  |  |  |  |  |  |  |  | 0 | 125 1,500 | 2，500 | 1563 1564 |
| 10 | 0 | 175 | － | 0 | 0 | 125 | 0 | 70 | 0 | 100 | 0 | 30 | 0 | 25 | 0 | 5 | 0 | 1，500 |  | 15 |
| 0 | 1 | ， | 15 | 0 | 0 | 0 | 10 | 0 | 2 |  |  |  |  |  |  |  |  |  |  |  |
| 2 | 2 | 40 | 35 | 0 | 0 | 106 | 93 | 12 | 4 | 6 | 0 | 20 | 15 | 8 |  |  |  |  |  | 1566 1567 |
| 0 | 7 | 0 | 21 | 0 | 0 | 0 | 75 | 0 | 0 | － | 0 | ， | 3 | 8 | 2 | 4 | $0$ | 800 | 350， 000 | 1508 |
| 2 | 2 | 36 | 0 | 0 | 0 | 0 | 0 |  |  |  |  | 7 | 0 | 7. |  |  |  |  |  |  |
| 3 | 6 | 7 | 21 | 0 | 0 | 24 | 26 | 2 | 4 | 5 | 11 | 0 | 1 | 0 | 1 | $\begin{aligned} & 4 \\ & 4 \end{aligned}$ | 0 | 300 | 10,000 8,500 | 1569 |
| 1 | 3 | 4 | 14 | 0 | 0 | 3 | 13 | 2 | 5 | 1 | 0 | 0 |  | 0 |  |  |  |  |  |  |
| 3 | 0 | 38 | 62 | 0 | 0 | 20 | 30 |  | 3 | 6 | 3 | 8 | 7 | 4 | 2 | 4 | 0 | 2，000 |  | 1571 |
| 1 | 1 | 22 | 16 | 0 | 0 | 2 | 5 | 4 | 1 |  |  | 3 | 7 | 4 |  | 3 | 0 | 200 | 1，500 | 1572 |
| $1{ }_{1}$ | 4 | 184 | 34 | 0 | 0 | 0 | 41 |  |  |  |  | 0 | 11 |  |  |  |  | 3，000 |  | 1574 |
| 3 | 1 | 11 | 14 | 0 | 0 | 0 | 0 | 30 | 27 | 3 | 0 | 16 | 7 |  |  | ． | 0 | 5，000 | 50， 000 | 1575 |
| 2 | 5 | 44 | 36 | 0 | 0 | 20 | 20 | 4 | 2 | 3 | 7 | 3 |  |  |  |  | 0 | 200 | 5， 000 | 1576 |
| 1 | 3 | 26 | 24 | 0 | 0 | 8 | 4 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 4 | 0 | 700 |  | 1577 |
| 10 | 10 | 247 | 123 | 0 | 0 | 73 | 127 | 19 | 9 | 58 | 0 | 20 | 11 | 17 | 2 | 4 | 0 | 4，000 |  | 1578 |
| 3 | 1 | 22 | 20 | 0 | 0 | 0 | 0 | 10 | 10 | 4 | 0 | 2 | 2 | 2 | 2 | 3 | 0 | 4，000 | 250， 000 | 1579 |
| 3 | 4 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 |  |  |  |  |  |  |  |  | 1581 |
| 2 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 2 | 0 |  |  |  |  | 5 | 0 |  | 15， 000 | 1582 |
| 1 | 1 | 8 | 4 | 0 | 0 | 44 | 33 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 0 |  |  |  |
| 1 | 0 | 11 | 13 | 0 | 0 | 0 | 0 |  |  |  |  |  |  |  |  |  | 0 |  |  | 1583 |
| 0 | 1 | 12 | 16 | 1 | 0 | 0 | 0 | 2 | 3 |  |  |  |  |  |  |  | 0 | 0 |  | 1584 1585 1 |
| 0 1 | 5 | 0 | 35 | 0 | 0 | 0 | 15 |  |  | 0 | 0 | 0 | 2 |  |  |  |  | 0 |  | 1585 |
| 2 | 0 | ${ }^{6}$ | 13 | 0 | 0 | 9 | 4 |  |  |  |  |  |  |  |  |  |  | 40 | 2，000 | 1586 |
| 0 | 6 | 18 | 18 | 0 | 0 | 12 | 12 | 6 0 | 1 | 4 | 0 | 5 | 4 | 4 | 1 |  | 0 | ${ }^{0}$ | 9，000 | 1588 |
| 0 | 3 | 6 | 9 | 0 | 0 | 7 | 8 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 4 | 0 | 1，185 |  | 1589 |
| 4 | 1 | 18 | 0 | 0 | 0 | 8 | 0 | 3 | 0 | 8 | 0 | 5 | 0 | 4 | 0 | $\begin{aligned} & 4 \\ & 4 \end{aligned}$ | 0 |  |  | 3590 |
| 100 | 0 | 92 | 14 | 0 | 0 | 0 | 0 | 60 | 0 | 25 | 0 | 32 | 0 | 32 | 0 | $\begin{aligned} & 4 \\ & 4 \end{aligned}$ | 45 | 2，500 | $\begin{aligned} & 35,000 \\ & 50,000 \end{aligned}$ | 1591 1592 |
| 5 | 2 |  | 30 |  |  |  |  |  |  |  |  |  |  |  |  |  | S |  |  | $\begin{aligned} & 1592 \\ & \mathbf{4} 593 \end{aligned}$ |

Table 34.—Statistics of private high schools, endowed academies, seminaries, and

other private sccondary schools for the scholastic year-1895-93-Continued.


Table 34.-Statistics of private high schools, endowed academies, seminaries, and

|  | State and post-office. | Name. | Principal. | Religious denomination. |
| :---: | :---: | :---: | :---: | :---: |
|  | 1 | 3 | 3 | 4 |
|  | PENNSYLVANLA-con- tinued. |  | - |  |
| 1629 | Philadelphia (18th and Chestnut sts.). | Rittenhouse Academy | De Benneville K. Ludwig, A. M., Ph. D. ; Erasmus B. Waples, A. M. | Nonsect .- |
| 1630 | Philadelphia (1427 North 16th st.). | Schleigh Academy*............ | B. W aples, A. M. <br> Miss Dawson | Nonsect .- |
| 1631 | Philadelphia (2101 <br> Spruce st.). | The W alton-Wellesley School. | Dr. and Mrs. James R. Danforth. | Nonsect.- |
| 1632 | Philadelphia (1602 Green st.). | West Green Street Institute.. | Miss Martha Laird ........ | Nonsect .. |
| 1633 | Philadelphia (2045 Waluut st.). | West Walnut Street Seminary | Mrs. Henrietta Kutz....-. | Nonsect .. |
| 1634 | Philadelphia (8 South 12th st.). | William Penn Charter School. | Richard M. Jones, LL. D.- | Friends... |
| 1635 | Pittsburg(5th ave.and Craig st.). | Alinda College (Preparatory School). | Miss Ella Gordon Stuart.. | Nonsect . |
| 1636 | Pittsburg (Ross and Diamond sts.). | The Pittsbarg Academy....... | J. Warren Lystle........... | Nonsect .. |
| 1637 | Pittsburg....-....... | Shady Side Academy ........... | W. R. Crabbe, Ph. D..... | Presb..... |
| 1638 | Pittsburg (East Lib. erty). | Thurston's (Miss) Preparatory School. | Miss Alice M. Thurston.. |  |
| 1639 | Pittsbarg............... | Ursuline Young Ladies'A cademy. | Mother M. Ursula......... | R. C....... <br> Nonsect |
| 1640 | Pleasant M | Pleasant Mount Academy..... <br> The Hill School | Nelson J. Spencer.......... | Nonsect .. <br> Nonsect. |
| 1641 | Pottstown Prospect. | The Hill School Prospect Normal and Classical Academy. | John Meigs, Ph. D. John H. Wilson. | $\begin{aligned} & \text { Nonsect .. } \\ & \text { Nonsect } \end{aligned}$ |
| 1643 | Reedsville | Reedsville Academy........... | Orville De Witt, A. | Nonsect .- |
| 1644 | Reidsburg | Reid Institute..................... | George Ballentine, | Bapt...... |
| 1645 | Rimersburg | Clarion Collegiate Institute... | W, L. Smith, A.B........ |  |
| 1646 | Rose Point | Rose Point Academy............ | Rev. James S. Kittell..... | Nonsect .. |
| 1647 1648 | Saltsburg.......... | Kiskiminetas Springs School.. | A. W. Wilson, jr............ | $\begin{aligned} & \text { Nonsect.. } \\ & \text { Nonsect.. } \end{aligned}$ |
| 1648 | Scranton (1522 Wyoming ave.). | Green Ridge School*:........... | Louise Gerecke.............. | Nonsect .. |
| 1649 | Scranton................ | St. Ceoilia's Academ | Mother Mary .-......-. | R. C...... |
| 1650 | .....do ................... | St. Thomas College. | Rev. D. J. MaoGoldrick.. | R. C...... |
| 1651 | ....do | School of the Lackawanna | Revs. Thomas M. Cann, A. M. ; Walter H. Buell, A. M. | Presb..... Bapt...... |
| 1652 | Sharon-.......... | Hall Institute ....... | C. A. Gilbert. . . . . ........ | Bapt <br> Epis |
| 1653 | South Bethlehem...... | Bishopthorpe School*......... | Miss A. Oakley, B. L. ..... | Nonsect... |
| 1655 | Stewartstow Sugar Grove | English and Classical Institute Sugar Grove Seminary ........ | J. C. Weller | UnitedBr. |
| 1656 | Titusville ............... | St. Joseph's A cademy.......... | Mother Celestine.......... | R.C...... |
| 1657 | Toughkenamon....... | Toughkenamon Private School (Orthodox). | Hanпв M. Соре.............. | Friends... |
| 1658 | Towanda | Susquehanna Collegiate Institute.* | Edwin E. Quinlan, A. M.. | Presb..... |
| 1659 | Ward | Ward A cademy * . . . . . . . . . . . . | Benjamin F. Leggett, Ph.D | Meth ..... |
| 1680 | W ashing | Trinity Hgll ...................... | William W. Smith, rector. | Nonsect .. |
| 1661 |  | Washington Female Seminary | Miss N. Sherrard.......... | Nonsect. |
| 1662 | W aterford ... | W aterfurd Academy........... | Frank C. Rex. ............... | Nonsect ... |
| 1683 | W est Chester | Darlington Seminary for Young Ladiem. | Richard Jarlington........ | Friend |
| 1684 | T10 | Friends ${ }^{7}$ High School (Hickeite). | Frances B. Stevenson..... | Fr |
| 1665 | West Newton. | West Nowton Acaderny....... | T. N. Eaton, | Nonsect |
| 1607 | West Sunbury | West Sunbury A cademy | T, R. Hilliard. ............ | Nonмесt |
| 1608 |  | Westiown Boarding Sohool (Orthodox). | William T. Wiolyersham.. | Friends... |
| 1690 | Wilkesbarre. . . . . . . Franklin (St.). | Harry Hillman Academy...... Willes Barre Female Insti- | H. C. Davis, Ph. D........ <br> Elizabeth H. Rockwell... | $\begin{aligned} & \text { Nonsect. . } \\ & \text { Nonsect .. } \end{aligned}$ |

*Statistices of 1894-95.
other private secondary schools for the scholastic year 1895－96－Continued．

| In．struct－ors forsec．ond－arystu－dents． |  |  |  |  |  |  |  | Stu | d |  |  |  |  |  |  |  |  | Volumes in library． | Value of grounds， build－ scientific rappa－ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{gathered} \text { Total } \\ \text { second- } \\ \text { ary stu- } \\ \text { dents. } \end{gathered}$ |  | Colored second dents cluder in col－ 7 and 8 |  | $\begin{aligned} & \text { Elemen } \\ & \text { tary. } \end{aligned}$ |  | Preparing for college． |  |  |  | $\begin{gathered} \text { Gradu } \\ \text { atesin } \\ 1896 . \end{gathered}$ |  | College <br> prepara－ <br> tory stu－ <br> dentisi in <br> the class <br> that <br> ghaduated <br> in 1896． |  |  |  |  |  |  |
|  |  | Clas． sical cours． | $\begin{gathered} \text { Scien- } \\ \text { tific } \\ \text { course. } \end{gathered}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { 采 } \\ & \text { A } \end{aligned}$ |  |  |  | 彩 |  |  |  | ज゙ |  |  |  | 息 |  | 要 |  |  |  |  |  |  |  |  |
| 5 | 6 | 7 | 8 |  |  | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
| 7 | 0 | 39 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 8 | 0 | 3 | 0 | 2 | 0 | 5 | 0 |  |  | 1629 |
| 0 | 1 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 45 | 0 | 0 | 0 | 5 | 0 | 0 | 4 |  | 200 |  |  |
| 2 | 10 | 0 | 46 | 0 | 0 | 0 | 15 | 0 | 15 | 0 | 5 | 0 | 8 | 0 | 8 | 4 | 0 |  |  |  |
| 0 | 3 | 0 | 11 | 0 | 0 | 0 | 18 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 1 | 5 | 0 | 20 | 0 | 0 | 0 | 14 | 0 | 6 |  |  |  |  |  |  |  |  |  |  |  |
| 25 | 0 | 32 | 0 | － |  | 0 |  | 0 | 6 |  |  | 0 | 5 | 0 | 0 |  |  | 2，000 | 50，000 | 1633 |
|  |  |  |  |  |  |  |  |  |  |  |  | 48 | 0 |  |  | 5 | 0 |  |  | 1634 |
|  | 5 | 0 | 53 | 0 | 0 | 23 | 50 |  |  |  |  |  |  |  |  | 4 | 0 | 225 |  |  |
| 4 | 2 | 100 | 50 | 0 | 0 | 65 | 53 | 5 | 1 | 20 | 3 | 29 | 20 | 13 | 3 |  | 0 |  |  | 36 |
| $\begin{array}{r} 11 \\ 0 \end{array}$ | $\begin{aligned} & 0 \\ & 5 \end{aligned}$ | $\stackrel{147}{1}$ | $3{ }_{3}^{0}$ | $0$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 25 \\ & 38 \end{aligned}$ | （109 | $\begin{gathered} 50 \\ 0 \end{gathered}$ | $\begin{aligned} & 0 \\ & 9 \end{aligned}$ | 97 | 0 | 20 | 0 | 20 | 0 | 5 4 | 0 | 500 | 100， 000 | 337 |
| 0 | 3 | 0 | 40. | 0 | 0 | 0 | 60 | 0 | 10 |  |  | 0 | 7 | 0 | 4 | 4 | 0 | 8， 00 | 75，0 | 1639 |
| 2 | 1 | 10 | 20 | 0 | 0 | 40 | 50 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15 |  | 124 | 0 | 0 | 0 | 25 | 0 | 60 | 0 | 65 | 0 | 30 | 8 | 0 30 | 0 | 3 4 |  | 500 3,000 | 2,000 300,000 | ${ }_{1641}^{1840}$ |
|  |  |  | 18 | 0 | 0 | 6 | 4 | 4 | ， |  | 3 | 0 |  | 0 | 0 |  | 0 |  | 1，000 | 1642 |
| 1 | $\begin{aligned} & 2 \\ & 2 \end{aligned}$ | 18 6 | 4 | 0 | 0 | 11 | 0 | 12 | 7 | 7 | 0 |  |  |  |  | 4 | 0 |  |  |  |
|  |  |  |  |  | 0 | ${ }^{11}$ | 8 |  | 0 | 1 | 0 |  |  |  |  |  | 0 | 300 |  | 1644 |
| $5$ | $\begin{aligned} & 0 \\ & 1 \\ & 1 \end{aligned}$ | 18 60 | ${ }_{3}^{18}$ | － | － | － | O | 3 3 3 | 3 |  |  | 3 |  | 0 |  | ${ }_{3}^{4}$ | 0 | 300 | 5,000 | 1645 |
|  |  | ${ }_{3}^{60}$ | ${ }_{7}$ | 0 0 | 0 | 15 |  | 30 | ${ }_{0}$ | 30 | 0 | 15 | 1 | 13 | 0 | 3 | 0 | 300 | 5， 000 42,000 | ${ }_{1647}^{1646}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1648 |
| 2 | 7 | 30 | ${ }_{0}^{40}$ | 0 | 0 | 5 | $241$ |  |  |  |  | 0 | 9 |  |  |  |  | 500 |  | 1649 |
| 4 | 7 | 81 | 60 | 0 | 0 | 39 | 30 | 40 | 10 | $20^{\circ}$ | 10 | 16 | 6 | 13 | 4 | 3 | 0 | 8，000 | 40 | 1650 1651 |
| ${ }_{0}^{4}$ | 0 | 28 | ${ }_{25}^{12}$ | 2 | 0 | 28 |  |  |  | 7 | 6 | 2 |  | 2 | 0 |  | 0 | 600 | 40，000 |  |
|  | 0 | 18 | 17 | 0 | 0 | 12 | ${ }_{3}$ | 1 |  |  |  | 0 | 0 |  |  |  |  | 1，200 |  | 1853 |
| 3 0 | $\frac{4}{1}$ | 33 10 | ${ }_{12}^{94}$ | 0 | 0 | 1 0 90 | ${ }^{0}$ |  |  | 0 |  | 2 | 2 | 0 | 0 |  | 0 | 1，400 | 35,000 25000 | 1854 1655 |
| 0 | 2 | 12 | ${ }^{12}$ | 0 | 0 | ${ }_{3}^{90}$ | 18 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 1 | 0 | ${ }^{1} 800$ |  | 1656 |
| 4 |  | 74 | 135 | 0 | 0 | 0 |  | 7 |  |  |  |  |  |  |  |  |  |  |  | 1857 |
|  |  |  |  |  |  |  |  | 7 |  | 7 | 0 | 7 | 6 | 4 | 5 | 3 | 0 | 1，000 | 50， 000 | 1058 |
|  |  | －${ }^{3}$ | 0 | 0 0 | 0 0 | 14 |  |  |  |  |  |  |  |  |  | 3 |  |  |  |  |
|  |  | 0 | 81 |  |  | 0 | 151 | 40 | 0 |  |  |  |  |  |  | 4 | 40 | 8，000 | 180， 000 | 1860 |
| $\begin{aligned} & 2 \\ & 0 \end{aligned}$ | ${ }_{2}^{2}$ | 10 | 15 | 0 |  | 40 | 98 |  |  | 1 |  | 2 | 8 |  |  |  | 0 | 1，500 | 25， 000 | 1861 |
|  |  | 0 | 40 | 0 | 0 | 0 | 80 | 0 | 5 | 0 | 4 | 0 |  | 0 | $3$ | $\frac{1}{3}$ |  | 1，000 | 25， 000 |  |
| 0 | 9 | 6 | 14 | 0 | 0 | 4 | 4 | 4 | 5 | 2 | 1 | 2 | 3 | 2 |  | 5 |  |  |  |  |
| 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ${ }_{8}^{8}$ |  | $\begin{array}{\|c\|} \hline 62 \\ 105 \end{array}$ | $\begin{aligned} & 82 \\ & 85 \end{aligned}$ | － | 0 | 18 |  | 3 | 2 | 1 | 0 | $\stackrel{4}{3}$ | ${ }^{8}$ | ， | 2 |  | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 200 | $\begin{array}{r} 50 \\ 5,000 \end{array}$ | ${ }_{1686}^{1665}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 5，000 |  | 1687 |
| 5 | \％ | － | 54 | 0 | 0 0 | 38 | 50 | 10 | 0 | 22 |  | 7 0 |  |  |  |  |  |  | 60， 000 | 1868 |

Table 34.-Statistite of prirate high schools, endowed academies, seminaries, and


- Statistics of 1891-95.


## other private secondary schools for the scholastic year 1895-96-Continuod.



Table 34.-Statistics of private high schools, endowed academies, seminaries, and

## 1704

| State and post-office. | Name. | Principal. | Religious denomination. |
| :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 |
| SOUTH CAROLINA-con- tinued. | $5 \times$ |  |  |
| Conway | Burroughs High | William A. Dagnall. ...... | Nonsect |
| Covington | Hebron High School * | J. B. Humbert | Meth ..... |
| Frogmore. | Penn Normal and Industrial School. | Miss Ellen Murray | Nonsect .- <br> Nonsect |
| Gaffney... <br> Hartsrille | Gaffney Seminary ... Welch Neck High Sc | W.F. McArthur. A. Poindexter Taylor | $\begin{aligned} & \text { Nonsect .. } \\ & \text { Bapt....... } \end{aligned}$ |
| Honea Path | High School * .... | J. L. Eskew. . . . . - - . . . . . | Nonsect |
| Jordan Acad | Jordan Academy | Gist Gee.......-- .-. .-. . . . | Nonsect |
| Lexington. | Palmetto Collegiate Institato.. | Sidney J. Derrick........... | Nonsect |
| Manning | Manning Collegiate Institute.. | E. J. Browne . . - . . . . . . . . . . | Nonsect |
| Reedy Cre | Dothan High School .-....... | S. H. McGhee | Nonsect |
| Reidville... | Reidville Female College. | D. Balharrie Simpson, B. A., B. S. | Nonsect .. |
| ......do | Reidville Male High School. | George Briggs | Presb..... |
| Rock H | Presbyterian High School* | Alexander Sprunt (Rev.). | Presb..... |
| Sellers. <br> Sumter | Sellers High School * | Miss Anna Reaves. | Nonsect .. |
| Sumter | St. Joseph's Academy ........... Sumter Institute............ | Sister M. Loretto <br> H. F. Wilson. | R. C...... Nonsect .. |
| Walhalla | McCollough's (Miss) School | Miss E. H. McCollough ... |  |
| Yorkville. | York Baptist High School..... | W. O. Petty | Bapt....... |
| Burnsid | Ward Academy*................. | Mrs, D. G. Herron. . . . . . . . | Cong ...... |
| Canton | Augustana College................. | Anthany G. Tuve........... | Luth ..... |
| Scotland | Scotland Academy ................. | Otis G. Dale ................ | Preab |
| Sioux Fal | All Saints School....-............ | Helen S. Peabody.......... | P. E ....... |
|  | Sioux Falls University.......... | Edwin B. McKay......... | Bapt....... |
| Sturgis <br> Wessington | St. Martin's Academy.......... | Sister Victoria Siedler.... | R. C....... |
| Wessington | Wessington Springs Seminary. | Rev.J.K, Freeland........ | Meth ...... |
| TENNESSEES. |  |  |  |
| Alamo. | Alamo Male and Female Academy. | J. O. Brown, B. S. . ......... | Nonsect .. |
| Anderson | Big Valley Academy * .......... | W.L. Wallace . . . . . . . . . . . | Nonsect .. |
| Athens .. | Athens Female Acaderny .... | L. L. H. Carlock, D. D..... | Nonsect.. |
| Bellbuckle | Webb School ...................... | W. R, Webb ............... | Nonsect .. |
| Blooningd | Kingsley Seminary............... | Josepl G. Ketron, A. M .. | M. E...... |
| Bluff City | Zollicoffer Institute | J.J.Walford, A.B......... | Nonsect.. |
| Brownsvil | Wesleyan Female College..... | T. W. Crowder.... | Meth ..... |
| Bryson .................. | Bethany High School .......... | Thomas C, Young .......... | Nonsect.. |
| Butler .................... | Holly Springs College*......... | James H. Smith ........... | Nonsect |
| Camden ........ | The Benton Seminary (Cam. den Collegiate Institute). | J. W. Blair .................. | Nonsect .. |
| Campbellsville | Campbellsville High School ... | R. L. Kimbrough . . . . . . . . | Nonsect .. |
| Carthage | Geneva Academy* | H. A. Ingram................. | Nonsect.. |
| Cedar Hill. | Cedar Hill Institute............. | J. W. L. Greene | M. E. So .. |
| Centerville | Centerville High School........ | R. S. Ballow.................. | Nonsect .. |
| Chapel Hill............ | Chapel Hill Academy *......... | M. L. Cancer ............... | Nonsect |
| Chattanooga............ | Chattanooga College for Young Ladies. | John L. Cooper, A. M ..... | Nonsect.. |
| Chattanooga (706 Georgia ave.). | English and French School.... | Misses Dnval |  |
| Chattanooga. | University Sohool............... | J.Roy Baylor, B. A.,B.Let. | Nonsect |
| Chuckey City | Wesleysn Academy............. | H. F. Ketron | Moth |
| Clarkspille ( 528 Madison st.). | Clarksville Female Academy. | E. W. Browder, А. M ..... | M. E. So . |
| Cleveland .............. | Centenary Female College*... | Daniel Sullins, D. $D$ | M.E.So .. |
| Cloverdaie | Clifton Masonie Academy..... | G. W. Boncher, B. 8 W. A. Bell. | Nonsect.. Nonsect |

*Statistics of 1894-95.
other private secondary schools for the scholastic year 1895－96－Continued．

| In－ <br> struct－ <br> sors for <br> sec－ <br> sod． <br> ond <br> ary <br> stu－ <br> dents． |  | Students． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Value of grounds， build－ ings，and scientiicappa－ ratus． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total second ary students dents | Colored second－ ary stu－ cluded in col－ 7 and 8 |  |  | Elemen－ tary． |  | Preparing for college． |  |  |  | Gradu－ ates in 1896. |  | College prepara－ dents in the class that graduatedin 1896. |  |  |  |  |  |  |
|  |  | $\begin{gathered} \text { Clas. } \\ \text { sical } \\ \text { course. } \end{gathered}$ |  |  |  | $\begin{gathered} \text { Scien- } \\ \text { tific } \\ \text { course. } \end{gathered}$ |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  | 荡 |  | 而 |  | ． <br> 辟 <br> 缶 |  |  |  |  | 产 |  |  |
| 5 | 6 | 7 | 8.9 | 91 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |  | 21 | 22 | 23 | 24 |  |
| 1 | 0 | 30 | 21 |  |  | 24 |  |  |  | 0 | 0 | 4 | 1 | 3 | 1 | 4 | 0 | 2，000 | \＄3，000 | 1704 |
|  |  | 10 | 10 | 0 | 0 | 20 | 20 | 6 | 6 |  |  | 0 | 2 | 0 | 2 | 4 | 0 | 100 | 1，500 | 1705 |
| 0 | 2 | 18 | 16 | 18 | 16 | 132 | 130 | 0 | 0 | 0 | 0 | 5 | 3 | 0 | 0 | 3 | 0 | 300 | 3，000 | 06 |
| 2 | 3 | 30 | 20 | 0 | 0 | 60 | 28 |  |  |  |  | 2 | 1 |  |  | 4 | 0 | 350 | 7，000 |  |
| 2 | 1 | 20 | 10 | 0 |  | 30 | 40 | 10 | 6 | 0 | 0 | 6 | 3 | 3 | 2 | 3 | 0 | 200 | 7，000 | 1708 |
| 1 | 1 | 28 | 28 | 0 | 0 | 14 | 12 |  |  |  |  |  |  |  |  |  | 0 | 100 | 1，000 | 1709 |
| 1 | 0 | 1 | 13 | － | － | 13 | 18 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 50 | 1， 000 | 1710 |
| 1 | 2 | 27 | 33 | 0 | 0 | 32 | 38 |  |  |  |  | 0 | 2 |  |  |  |  |  |  | 1711 |
| 1 | ${ }_{0}^{0}$ | ${ }_{5}^{15}$ | ${ }_{10}^{10}$ | 0 | 0 | ${ }_{21}^{44}$ | 31 17 |  | ． 3 |  |  | 2 | 1 |  |  | 4 | 0 |  | 3，500 | ${ }_{1713}^{1712}$ |
| 1 | 1 | 0 | 20 | 0 | 0 | 0 | 40 | 0 | 15 |  |  |  |  |  |  | 4 | 0 | 1， 1,000 | 15,000 | 1714 |
| 1 | 0 | 33 |  |  |  | 45 |  |  |  | 3 | 0 |  |  |  |  | 4 | 0 | 200 | 1，200 | 1715 |
| ， | 2 | 0 | 47 | 0. | 0 | 0 | 3 | 0 | 20 |  |  | 0 | 2 |  |  | 4 | 0 | 150 | 20，000 | 1717 |
| 0 | ${ }_{2}^{1}$ | 12 | ${ }_{30}^{12}$ | 0 | 0 | ${ }_{0}^{13}$ | 8 40 4 8 |  |  |  |  | 0 | 5 |  | 3 |  |  | 0 |  | 1717 |
| 0 | 2 | 0 | 50 | 0 | 0 | 0 | 40 |  |  |  |  | 0 | 9 | 0 | 9 | 4 | 0 | 500 | 15，000 | 1719 |
| $\stackrel{0}{2}$ | ${ }_{1}^{2}$ | 2 ${ }^{2} 8$ | ${ }_{13}^{12}$ | 8 | 12 | $\cdots$ | 2 | 7 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 75 | 2，000 | 1720 1721 |
|  |  | 36 | 16 | 0 | 0 | 8 | 0 | 0 | 0 |  |  |  |  |  |  | 4 | 0 | 600 | 10，000 | 1722 |
| 4 | 1 | $1{ }^{18}$ | 12 | 0 | 0 | 45 | 47 | 14 | － 3 | 0 | 0 | 8 | ${ }^{3}$ | －${ }_{3}$ | 0 | 3 3 3 | 0 | 1， 000 | 10,000 15,000 |  |
|  | ${ }^{1}$ | $4{ }^{1}$ | 24 | 0 | 0 | 16 | 62 | 0 | － | ．．． |  | 0 | 1 |  |  |  |  |  | 75， 000 | 1725 |
| ， | 4.4 | $4{ }^{4} 8$ | 12 | 0 | 0 | 28 | 83 |  | － |  |  | 4 | 2 | 4 | 0 | 3 | 0 | 1，000 | 30， 000 | 1726 |
|  |  | 1  <br> 2 0 <br> 13  | ${ }_{20}^{16}$ | 0 | － 0 | 68 <br> 34 | 60 <br> 33 |  |  |  |  | ${ }_{2}^{1}$ | ${ }_{2}^{4}$ | 1 | ${ }_{1}^{4}$ | 4 | 0 | ${ }_{725}^{200}$ | 13，000 | 1728 |
|  | 11 | $1{ }^{1} 15$ | 514 | 4 | 00 | 0 0 60 | $0{ }^{36}$ | 6 |  | 0 | 0 | 5 | 4 | 2 | 1 | 2 | 0 | 200 | 2， 000 | 1729 |
|  |  | 0 38 | 825 |  | 0 | 027 | $7{ }^{7} 27$ |  |  |  |  |  |  |  |  |  |  |  |  | 1730 |
|  | 4 |  | $\begin{array}{l\|l\|l\|} \hline 0 & 47 \\ 00 & \end{array}$ |  | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ |  |  |  | $\begin{array}{l\|l\|} \hline 0 \\ 00 & 30 \\ 0 \end{array}$ | ． 0 | 10 |  |  | 20 |  |  |  | 100 2,163 |  | ${ }_{1732}^{1731}$ |
|  | － | ${ }_{0}{ }^{1}$ | $0{ }^{2}$ |  | 0 | ${ }_{0}^{0} 32$ | $2{ }^{0} 13$ | ${ }_{3}{ }^{0} 21$ | 21 ${ }^{1}$ |  | － | 20 | － | 0 | ${ }_{0}$ |  | 0 | 2， 163 60 | 2， 2000 | ${ }_{1733}^{1732}$ |
|  | 1 | 22 | 219 |  | 0 | 0 | 786 | ${ }^{6}$ | 4.9 |  |  |  | 0 |  |  |  | 0 | 0 |  | 1734 |
|  | 1. | 19 | 9 65 <br> 8 6 | 50 | 0 | ${ }_{39}^{12}$ | 2 <br> 17 <br> 18 <br> 28 | 78 |  |  |  | 0 | ） 8 |  |  | 0 |  | 0 | 10，000 | ${ }^{1735}$ |
|  | ${ }_{2}^{1}$ | ${ }^{8}$ | 8 ${ }^{8} 5{ }^{6}$ |  | 0 |  |  | 1728 | 28.23 | －18 | 21 |  | 0 |  |  |  | 0 | 600 |  | ${ }_{1737}^{1736}$ |
|  | 2 | 0 10 | 10 | 10 | 0 | 0 | ${ }^{5} 4$ | 90 | ${ }^{2}$ |  |  |  | － | 0 | 0 | － 4 | 0 | 150 | 3，000 | 1738 |
|  |  | 7 | 712 |  |  | 25 |  |  |  |  |  | 0 | 0 | 0 |  |  |  |  |  | 1739 |
|  |  | 0 | $6{ }^{6} 10$ | 0 | 0 | ${ }^{32}$ | 32 34 | 34 | 1 3 |  | 1 | 0 | 0 | 0 |  |  | 0 | 0 | 1，000 | 1740 |
|  | 1 | 1 10 <br> 1 24 | 10 15 <br> 18  | 5 0 <br> 8 0 | 0 0 | $\begin{aligned} & 50 \\ & 41 \end{aligned}$ | $\begin{array}{c\|c} 50 \\ 51 & 50 \\ 41 & 54 \end{array}$ | 50 | 10.15 |  |  | 0 | － | 0 |  | 3 |  | 100 | 4，000 | ${ }_{1741}^{1742}$ |
|  |  | $1{ }_{1}{ }^{2}$ | ${ }_{35}{ }_{20}^{18}$ | 80 | 0 | 41 | 40 | 540 | 1210 | 0 | 5 |  | 4 | 4 | 3 |  |  | 100 |  | 1743 |
|  | 0 | 20 | 30 | 30 | 0 | 0 | 0 | 30 | － |  |  |  | 8 |  |  |  | 40 | 1，600 |  | 1744 |
|  | 0 | 20 | 0 － 9 | 0 | 0 | 16 | 16 | 25 |  |  |  |  |  |  |  |  |  |  |  | 1745 |
|  | 1 | $\sigma 15$ | 15 | 0 |  |  |  |  |  |  |  |  | ， |  |  |  | 40 |  |  |  |
|  | 1 | $\begin{array}{lll}0 \\ 6 & 8\end{array}$ | 8 | $8{ }^{8}$ | 0 | 48 | 48 | 48 |  |  |  |  |  |  |  |  |  | 200 | 3，000 | 1747 |
|  |  | 0 | 0 08 | 88 | 0 | 0 | 6 | 54 | 020 | 0 |  |  | 014 |  |  |  | 0 | 2，000 | 10，000 | 1748 |
|  | 5 | 10 1 1 0 | $\begin{array}{c\|c} 0 & 201 \\ 8 & 12 \end{array}$ | 01 0 <br> 12 0 | 0 |  | $\begin{array}{c\|c} 0 & \\ \hline 62 & 5 \end{array}$ | $\begin{array}{r} 0 \\ 56 \end{array}$ | $\ddot{0}$ |  |  | 0 | 0 22 <br> 0 0 | 0 | $\begin{array}{r} 12 \\ 0 \end{array}$ | －- |  | $\begin{gathered} 500 \\ 60 \end{gathered}$ | 75,100 1,200 | ${ }_{1749} 175$ |
|  |  |  | 16 18 |  | 0 |  | $\begin{array}{r\|r\|} 62 & 5! \\ 0 & \end{array}$ |  |  |  |  | ． 0 | 0  <br> 0 0 <br> 0  |  |  | 2 | ． 0 | $60$ | 1，200 | ${ }_{1751}^{1750}$ |

TABLE 34.-Statistics of private high sehools, endowed aoademies, seminaries, and


- Statistics of 1891-05.


## other private secondary schools for the scholastic year 1895－96－Continued．

| In－siruct－ors fororec．soch－andatysta．dents． |  | Students． |  |  |  |  |  |  |  |  |  |  |  |  |  | Length of course in years． |  | Volumes in library． | Value of grounds， build－ ings，andscientific appa－ ratus． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Total second arystudents． |  | Colored ary sta－ dentsin in col－ 7 and 8. |  | Elemen－tary． |  | Preparing for college． |  |  |  | $\begin{aligned} & \text { Grada- } \\ & \text { ates in } \\ & 1896 . \end{aligned}$ |  | Collegeprepara－tory sta－dents inthe classthatgraduatedin 1896． |  |  |  |  |  |  |
|  |  | $\begin{gathered} \text { Clas- } \\ \text { sical } \\ \text { courso. } \end{gathered}$ | $\begin{aligned} & \text { Scien- } \\ & \text { tific } \\ & \text { coarse. } \end{aligned}$ |  | $\begin{aligned} & \text { 骨 } \\ & \text { 管 } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |
| 閏 |  |  |  | $\begin{aligned} & \text { 迫 } \\ & \text { 品 } \end{aligned}$ |  | $\begin{aligned} & \dot{\circ} \\ & \text { 㐓 } \end{aligned}$ |  | 品 | $\begin{aligned} & \text { oj } \\ & \text { an } \\ & \text { an } \end{aligned}$ | 吽 |  | $\begin{aligned} & \text { 品 } \\ & \text { gin } \end{aligned}$ |  | 宊 |  |  |  |  |  |  | $\begin{aligned} & \text { H } \\ & \text { 虽 } \\ & \text { 号 } \end{aligned}$ |  |
| 5 | 6 | 7 | 8 |  |  | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  |
| 1 | $\begin{aligned} & 2 \\ & 2 \end{aligned}$ | $\begin{array}{r} 2 \\ 24 \end{array}$ | $\begin{aligned} & 30 \\ & 22 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 0 | 16 31 | ${ }_{23}^{72}$ |  |  |  |  |  |  |  |  |  |  | 8,000 | $\$ 10,000$ 1,000 | 1752 1753 |
|  | 0 | 10 | 6 | 0 | 0 | 10 |  | 5 |  |  |  |  |  |  |  |  |  |  |  |  |
|  | ${ }_{2}$ | 54 | 82 | 0 | 0 | 52 54 | ${ }_{5}^{53}$ | 1 | 0 | 1 | 0 | 2 | 2 | 2 | 0 | 2 | 0 | 1,200 100 | 2,000 3,500 | ${ }_{1755}^{1754}$ |
|  | $\frac{1}{2}$ | 15 | ${ }^{5}$ | 0 | 0 | 54 40 | ${ }_{35}^{50}$ | 1 | 1 | 0． | 0 2 | ${ }_{0}^{4}$ | 5 | 0 | 0 | 4 |  |  | 1，500 | 1756 |
|  | 1 | 12 | 15 | 0 | 0 | 30 | 30 | 0 | 2 | 5 | ${ }_{0}^{2}$ | 0 | 0 | 0 | 0 | 4 | 0 | 15 | 2，500 | ${ }_{1757}$ |
| $\frac{1}{2}$ |  | $4{ }_{40}^{4}$ | 10 | 0 | 0 | 46 | 44 | 1 | 2 |  |  | 0 | 0 | 0 | 0 | 4 | 0 | 100 | 5，000 | ${ }_{1759}^{1758}$ |
|  |  | ${ }_{20}$ | ${ }_{25}^{35}$ | 0 | 0 | 128 | 43 130 | ${ }_{3}^{1}$ | 0 3 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 |  | 3，000 | ${ }_{1760}$ |
| 1 | 2 | 32 | 13 | 0 | 0 | －37 | 41 |  |  |  |  |  |  |  |  | 4 | 0 | 200 81 | 3,000 2,000 | 1761 1762 |
|  | 1 | 35 | 25 | 0 | 0 |  | 70 | 25 | 20 |  |  | 2 |  |  |  |  |  | 0 |  |  |
|  | 0 | 34 | 28 | 0 | 0 | 60 | 40 |  |  |  |  | 2 | 1 |  |  | ${ }_{3}^{4}$ | 0 | ${ }_{0}$ | 15，000 | 1764 |
|  | 0 | 10 | 5 | 0 | 0 | 20 | ${ }_{8}^{85}$ | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 1，000 | ${ }_{1765}^{1765}$ |
| 3 |  | 170 | 14 | 0 | 0 | － | 0 | 40 | 6 | 100 | 8 | 21 | 0 | 18 | 0 | 5 | 0 | 1,400 | 4,000 12,000 | ${ }_{1767}^{1766}$ |
|  |  | 20 | 24 | 0 | 0 | ． | 17 | 2 | 0 |  |  | 1 | 1 | 0 | 0 | 4 |  | 50 |  |  |
|  | 1 | ${ }_{10}^{10}$ | 15 | 0 | 0 | 20 | 26 |  |  | 4 | 0 |  |  |  |  |  | 0 |  | 1,500 | 1768 |
|  | 0 | 5 | 5 |  | 0 | ${ }_{0}$ | ${ }_{0}^{48}$ | 2 | 1 | 4 | 5 | 0 | 0 |  |  |  |  | 0 | 1,514 $\mathbf{2}, 500$ | 1770 |
|  |  | 15 | 24 | － | 0 | 15 | 18 | $\bigcirc$ |  |  | 5 |  |  |  |  | 4 | 0 | 0 | 2，500 | ${ }_{1772}^{1771}$ |
|  | 1 | 10 | 12 | ${ }_{0}^{0}$ | 0 | 89 53 | 54 45 | 4 | 1 | 2 | 4 | $\stackrel{2}{2}$ | 0 | 0 | 0 |  | 0 | $\cdots 350$ | 4，000 | 1772 173 |
| 1 | 1 | 35 | 49 | 0 | 0 | ${ }^{53}$ | ${ }_{96}^{45}$ | 4. | 0 | 0 | 4 | $\stackrel{2}{5}$ | ${ }_{10}^{4}$ | 2 | 2 | ${ }_{0}$ | 0 | 1，000 | 3，000 | ${ }_{1774} 17$. |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1775 |
| 2 | ， | ${ }_{21}^{49}$ | 31 | 0 | 0 | 7 | 15 | 18 | ${ }_{0}^{3}$ | 22 | 18 |  |  |  |  | 2 |  |  |  | 1776 |
|  | 1 | ${ }_{16}^{26}$ | 19 | 0 | 0 | 88 | 90 | 10 | 8 | 18 | 14 | 18 | 15 | 18 |  | 4 | 0 | ${ }^{400}$ | 35,000 8,000 | ${ }^{1777}$ |
|  |  |  |  | 0 | 0 | 15 | 14 |  |  |  |  | 0 |  | 0 | 0 | 4 | 0 | 200 | 3，500 | 1779 |
| 1 | 1 | ${ }_{2}^{25}$ | 5 | 0 | 0 | 11 | 0 |  |  |  |  | 4 | 0 | 4 | 0 | 5 | 0 |  |  |  |
|  |  |  |  |  |  |  | 5 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 200 | 2，000 | 1781 |
| 5 | 1 | $\begin{aligned} & 77 \\ & 40 \end{aligned}$ | ${ }_{10}^{0}$ | 0 | 0 | $\begin{aligned} & 40 \\ & 40 \end{aligned}$ | ${ }_{30}$ | 11 | $10^{0}$ | 10 | 6 | 5 | 0 | ${ }_{5}^{5}$ | 0 | 1 | 0 | 1，000 | 35， 000 | 1782 |
| 1 | 2 | 20 | 10 | 0 | 0 | 25 | 20 | ${ }^{1}$ | 0 | 10 | 6 |  |  |  |  | 4 | ${ }_{0}^{0}$ |  | 1，000 | ${ }_{178}^{1783}$ |
|  | 2 | 0 | 25 | 0 | 0 | 0 | 125 |  |  |  |  | 0 | 14 |  |  |  |  | 0 | 1，000 |  |
| 1 | 1 | ${ }_{40}^{12}$ | ${ }^{5}$ | 0 | ． | \％ | ${ }^{6}$ | 2 | 0 |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 40 | 20 | 0 | 0 | 30 | 20 | 9 | 6 |  |  | 5 | 1 | 5 | 1 | 4 | 0 | 500 | $\begin{array}{r} 3,000 \\ 4,000 \end{array}$ | $\left\lvert\, \begin{aligned} & 1788 \\ & 1787 \end{aligned}\right.$ |
| 4 | 0 | 21 | 24 | 0 | 0 | 44 | 31 |  |  |  |  | 4 | 5 |  |  | 4 | 24 | 200 | 6，000 | 1783 |
|  | 1 | 20 |  |  |  | 25 | 20 |  |  |  |  | 0 | 3 |  |  |  |  |  |  |  |
|  | 0 | 35 | 15 | 0 | 0 | 30 | 20 | 18 | 13 | 12 | 7 |  |  |  | 3 | $\begin{aligned} & 3 \\ & 4 \end{aligned}$ | 0 |  | 3,000 3,500 | 1789 |
|  | 0 | 10 | 19 | 0 | 0 | 80 55 | 40 58 | 4 | 8 | $\frac{1}{5}$ | ${ }_{12}$ | 1 | $\left[\begin{array}{c} 0 \\ 10 \end{array}\right]$ | ${ }^{0}$ | 10 |  | 0 | 200 | 2， 200 | 1791 |
|  |  |  |  |  |  |  |  | 10 |  |  |  |  |  |  |  |  |  | 0 |  |  |
|  |  | ${ }^{62}$ | 27 | 0 | 0 | 12 | 13 | 10 | 5 | 1 | 0 |  |  |  |  |  | 0 |  | 1，200 | 1793 |
|  |  | 38 | 27 | 0 | 0 | 37 | 23 | 10 | － |  |  | 2 | 3 |  |  | 5 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 400 \\ & 100 \end{aligned}$ | 12.150 5,000 | $1794$ |
|  |  | 32 20 | 42 | 0 | 0 | ${ }^{26}$ |  | 20 | 35 | 12. |  |  |  |  |  | 3 |  |  |  |  |
| 2 | 2 | 37 | $\begin{aligned} & 10 \\ & 37 \end{aligned}$ | 0 |  |  |  | 0 | 0 | 5 | 3 | 0 | 0 |  | 0 | 3 | 0 | 200 | 1，500 | ${ }_{1777}^{1798}$ |
|  | d | 7 | 9 | 0 | 0 | 68 | 37 |  |  |  |  | ${ }_{0}$ |  |  |  |  |  |  |  | 1708 |
|  |  | 0 | 40 | 0 | 0 | 0 | 80 | 0 | 10 | 0 | 12 | 0 |  | 0 | 5 | 3 | 0 |  | 6，000 | 1839 |
|  |  |  |  | 0 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1800 |

Table 34.-Statistics of private high schools, endowed aoademies, seminaries, and


- Statistics of 1891-95.
other private secondary schools for the scholastic year 1895-96-Continued.


Table 34.-Statistics of private high schools, endowed academies, seminaries, and

1853

| State and post-office. | Name. | Principal. | Religious denomination. |
| :---: | :---: | :---: | :---: |
| 1. | 2 | 3 | 4 |
| TEXAS-continued. |  |  |  |
| Brenham | Evangelical Liutheran College. | O. W. Hartmann ........... | Luth |
| Buffalo G | Buffalo Grap Collego............. | J. N. Ellis.................... | Cum Presb |
| Burleson | Red Oak Academy | L. C. Collier, A. M. ......... | Cum Presb |
| Castroville | Divine Providence Academy .- | Mother M. Florence:....... |  |
| Cleburne. | Irving Select School for Yonng Ladies. <br> East T'exas Normal College | Peyton Irving, sr W L Mayo | Nonsect .. <br> Nonsect |
| Commerce Corpus Cl | East I'exas Normal College ... | W.L. Mayo <br> J. D. Merideth | $\begin{aligned} & \text { Nonsect .. } \\ & \text { Nousect .- } \end{aligned}$ |
| Crowell | Crowell College .................. | B. R. Blankenship =....... | Nonsect.. |
| Dallas | Contral Academy | Waldemar Malcolmson ... | Nonsect .- |
| Decatur | Northwest Texas Baptist College. | A.J. Emerson, D. D....... | Bapt......- |
| Detro | Detroit Normal College* ...... | Andrew Rose. | Nonsect .- |
| Eddy | Eddy Literary and Scientific College. | J. M. Bedichek................ | Nonsect |
| Ferris | Ferris Institute................. | A. C. Speer. .................. | Nonsect .. |
| Forney | The Lewis Academy :........... | - E. C. Lewis ................. | Nonsect. |
| Fort Worth | St. Ignatius Academy and St. Stanislans School for Girls. Watson's (Miss Select School. | Sister Louise ................ | R. C ...... <br> Nonsect |
| Galveston | St. Joseph's A cademy .......... | Sister Mary ................. | R. C ...... |
|  | Ursuline Academy .............- | Mother Mary Joseph..... | R. C |
| Gramdview | Grand view CollegiateInstitute | J. E, Garrison.-............ |  |
| Greenville | Greenville College* ...........- | W. H. Long, A. M . . . . . . . . | Bapt. |
| Greenwood | Greenwood Male and Female College: | Charles S. Garrison ........ | Nonsect .. |
| Hearna | Hearne Academy Normal and Training School.* | M. A. Broyles.............. . | Bapt...... |
| Henderso | Henderson Normal School..... | M. M. Dup | Nonsect .. |
| Hillsboro | Patterson Institute.... | W. A. Patterson | Nonsect |
| Honey Gro | Methodist Conference* | L. T. Smith | Meth ..... |
| Laredo. | Laredo Seminary .................. | Miss N. E. Holding ....... | Meth..... |
|  | Ursuline Academy ............. | Sister St. Paul .............. | R.C...... |
| Lufkin | East Texas College* . .....-- - . | A. C. Foster | Nonsect. |
| Madisonville | Madisonville Academy * ...... | J.H. Allen ................... | Nonsect.. |
| Marsha | Bishop College.................. | Rev. IN. Wolverton, B. A.. | Bapt....... |
| Midloth | Masonic Female Institute .... | W.D. Allen.................. | Nonsect.. Nonsect. |
| Midlothia | Polytechnic Institute.......... | A. E. Hall .................. | Nonsect... |
| Minden. | Rock Hill Institute............ | G. I. Watkins and O, Garrett. | Nonsect .- |
| Monnt Sy | Rosedale Academy............. | J.S. Magee . . . . . . . . . . . . . | Nonsect .- |
| Newto | Ford Male and Female College. | Walker De Witt............ | Nonsect.. |
| Omen. | Summer- Hill School | Orr and Lanier. | Nonsect.. |
| Overto | Hubbard College................... | J. N. Huff. | Nonsect Nonsect |
| Paris | East Side Boys ${ }^{\text {² }}$ School........ Paris Female College........ | J.P. Downer ................. | $\begin{aligned} & \text { Nonsect... } \\ & \text { Bapt........ } \end{aligned}$ |
| Peaster | Poaster College | R. L. Davis | Nonsect. |
| Pilot Poin | Franklin College | I'. C. Belgher ................ | Nonsect.- |
| Plainview | Llana Estacado Malo and Female Institute. * | O.C. Mulkey ................ | Nonstet . . |
| Ranger | Ranger Baptist Academy ..... | R. W. Richarison | Bapt...... |
| Salado ...............- | Thomas Arnold High School.. | Witt and Jones ............ | Nonsret.. |
| San Antonio (4, Sodth Alamo eto). | German-English School. ....... | F. W. Schleicher............. | Nonsect.. |
| San Antonio... | Magruder's Collegiate Institute.* | J. B. Magruder ............. | Nonsect.. |
| ... .do | St. Mary's College . . . . . . . . . . . | John B. Bumeder | $\text { R. C } \ldots \ldots$ |
| San Antorio (1927~ 1935 North Flores st.). | San Antonio Academy ......... | W.B. Seeley, Ph. D....... | Nonsect.. |
| San Antonio. -...do | Sal Antonio Femaio Colloge.. Usaline Academy. | J. E. Harrison <br> Mother M. Magdalen..... | $\begin{aligned} & \text { M. E. So .. } \\ & \text { R. C...... } \end{aligned}$ |

otner private secondary schools for the scholastic year 1895-96-Continued.


TABLE 34.-Statistics of private high schools, endowed academies, seminaries, and


* Statistics of 1894-95.
other private secondary schools for the scho7astic year 1895-96-Continued.


Table 34.-Statistics of grivate high schools, endoved acadenies, seminaries, and


Statibtics of 1894-95.
other pricate secondary schools for the scholastio year 1895-96-Continned.


Table 34.-Statistics of pricate kigh schools, endowed academies, seminaries, and

other private seoondary schools for the scholastic year 1895-96-Continued.


Table 34.-Statistics of private high schools, cndoved acadentics; semindries, and

other private secondary schoots for the sckolastic year 1895-96-Continmed.


Table 34.-Statistics of private high sohools, endowed academies, seminaries, and


* Statistics of 1894-95.
other private secondary schools for the scholastic year 1895-95-Contiuued.



## CHAPTEER XXXVIII.

## STATISTICS OF NORMAL SCHOOLS.

The number of students pursuing training courses for teachers in various institutions for the scholastic year 1895-96 was 84,400 , an increase of 3,862 over the year 1894-95. There was an increase of 4,145 in the number of normal students in public normal schools and a decrease of 1,150 in the number in private normal schools. There was an increase of 624 in the number of normal students in universities and colleges, an increase of 1,437 in the number in public high schools, while there was a decrease of 1,194 in the number of normal students in private high schools and academies. The following table shows the number of normal students in each class of institutions for 1894-95 and for 1895-96:

Normal students reported for two years.

|  | 1894-95. | 1895-96. |
| :---: | :---: | :---: |
| In public normal schools | 36, 276 | 40, 421 |
| In private normal schools. | 21, ${ }_{6} \mathbf{4} \mathbf{4 2}$ | 80,777 |
| In public high schools .-.... | 6,809 | 8,246 |
| In private high schools, etc | 9, 124 | 7,930 |
| Total | 80,538 | 84, 400 |

The decrease in the number of normal students attending private institutions may be attributed to the prevailing financial depression. Teachers are seeking schools in which they can secure the best training for the least outlay of money. As the public normal schools increase in number and efficiency, the weaker private normal schools must lose their patronage. The past year has witnessed the demise of a number of these weak institutions, and others have retreated to the rank of private secondary schools. The public normal schools now have nearly half of all the normal students in the United States. At least 60 per cent of the 84,400 normal students were in public institutions. In nearly all the larger cities teachers' training classes are maintained in connection with the public high schools, and in many of these classes the training is not inferior to that given in the best State normal schools. Of the 7,026 normal students in colleges and universities, several hundred are in public institutions.

As many as 27 colleges and universities liave regularly organized departments of pedagogy and offer to teachers courses leading to degrees. Courses designed to meet the demand for the professional training of teachers are offered in more than 200 colleges and universities in the United States. For the year 1892-93 there were 5,232 students in 15.) such institutions receiving training as teachers. In 1893-94 there were 5,500 such students in 173 universities and colleges. The number in 1894-95 had increased to 6,402 students in 192 such institutions. In 1895-96 there were 7,026 normal students in 203 colleges and universities.

The number of graduates from the public normal schools was 8,105 , and the number from private normal schools was 2,190 , so that nearly 17 per cent of the students in public and private normal schools in 1895-96 were graduated at the end of
the year. If we may estimate a like percentage of normal graduates from the number of normal students in colleges and universities in public high schools and in private high schools and academies, the total number of graduates from the 84,400 normal students in 1895-96 would reach 14,180.

## PUBLIC NORMAL SCHOOLS.

The statistics of public normal schools are summarized in Tables 1 to 8 in this chapter, while the statistics for the individual schools are given in detail in Table 19.

In the 160 public normal schools there were 1,660 teachers instructing normal students, as may be seen from Table 1. In other departments maintained by these normal schools there were 532 teachers.

Pennsylvania has 15 public normal schools, New York has 14, Massachusetts 9 , Alabama 9; Maine, North Carolina, Ohio, and Wisconsin have 6 each; West Virginia, Mississippi, Minnesota, and Missouri have 5 each. Four States were withnut public normal schools at the time the reports were received. A large proportion of the public normal schools in the Southern States are for the training of colored teachers.

Table 2 shows that of the 40,421 students in the normal departments of public normal schools 11,922 were men and 28,492 were women. There were 898 students in business courses, 6,610 in other courses of secon lary grade, and 14,283 in elementary grades.

The total enrollment in all dopartments of public normal schools was 61,619, as may bo seen from Table 3. There were 20,585 children in the model schools not necessarily included in the total enrollment. Many schools use their own elementary departments as model schools, while others depend upon near-by public schools to supply practice classes.

The 1,329 colored normal students comprise only a small part of the enrollment in colored normal schools. A large proportion of the colored students must be classed in the elementary grades.

Table 4 shows the number of normal and other graduates from the public normal schools. There were 8,105 normal graduates- 1,762 men and 6,343 women. There were 190 graduates from business courses and 583 graduates from other courses.

The appropriations for the support of public normal schools, by States, counties, and cities, for the year 1895-96 aggregated $\$ 2,187,875$-an increase of $\$ 270,500$ over the previous year. Table 5 shows that the total income of the 160 normal schools so far as reported was $\$ 2,961,610$-an increase of $\$ 252,147$ over the previous year. Of this income the sum of $\$ 498,775$ was derived from tuition and other fees, $\$ 68,904$ from productive funds, and $\$ 206,056$ from sources not classified. Several schools failed to make financial reports.

Table 6, last column, shows that for the year 1895-96 the public normal schools received from States, counties, or cities appropriations for buiidings and improvements amounting to $\$ 1,124,884$-an increase of $\$ 120,901$ over the previous year.

The number of volumes reported in the libraries of 131 public normal schools was 391,082 . The total value of buildings, grounds, apparatus, etc., reported was $\$ 16,650,538$. The schools received $\$ 52,080$ in benefactions for the year. Many schools declined to state the money value of their endowments, and lience the $\$ 40,05.5$ under this head in Table 6 does not represent the aggregate endowment of the puhlic normal schools of the United States.

Tables 7 and 8 are recapitulations of public appropriations to public normal schools for the past six years.

PRIVATE NORMAL SCHOOLS.
The statistics of private normal schools are summarized in Tables 9 to 14, while the statistics of the 169 schools are given in detail in Table 20.

Table 9 shows that in the 169 private normal schools there were 954 teachers instructing normal students- 539 men and 415 women. There were 690 teachers for students in other departments, making a total of 1,644 teachers employed in the 169 schools.

There were $20,7 \pi 7$ students in the normal departments of these schools, 10,472 men and 10,305 women, as shown in Table 10. There were 4,224 students in business courses, 7.397 in other secondary grades, and 15, 104 in the elementary grades. The total enrollment in all departments was 48,042 as shown in Table 11. These schools had 3,481 pupils in their model schools, but a certain proportion of these are also included in the elementary grades as summarized in Table 10. In the
private colored normal schools of the Southern States there were 2,464 stadents pursuing teachers' training courses- 1,076 men and 1,388 women. In the same schools there were many more colored pupils in the elementary grades.

Table 12 shows that there were 2,190 graduates in 1896 from the normal departments of the 169 schools- 1,035 men and 1,155 women. There were 1,497 graduates from the business departments and 1,261 from other departments.

From Table 13 it is seen that the total income for private normal schools as reported to this office for $1895-96$ was $\$ 969,092$. Of this amount the sum of $\$ 515,-$ 42:3 was derived from tuition and other fees, and $\$ 89,135$ from productive funds. The sum of $\$ 18,872$ was received from public appropriations. It is probable that the greater part of the unclassified $\$ 365,662$ was derived from tuition fees, many schools having reported only their total income.

Table 14 summarizes the equipment of private normal schoois. The number of volumes in the 133 schools reporting libraries was 203,467 . The value of grounds, buildings, apparatus, etc., reported was $\$ 4,421,386$. The money value of endownments possessed by these schools was $\$ 2,487,200$. The value of benefactions received for the year $1895-96$ was $\$ 254,678$.

## DISTRIBUTION OF NORMAL STUDENTS.

Of the total number of students in teachers' training courses in public normal schools it is shown in Table 15 that the males comprised 29.49 per cent and the females 70.51 per cent. More than 20 per cent of the students graduated.

These percentages are contrasted with like percentages for the private normal schools. In these the stadents were divided almost equally between the sexes, there being 50.40 per cent males and 49.60 per cent fomales in the teachers' training courses. In the private normal schools only 10.54 per cent of the normal students graduated.

Table 16 shows that 193 colleges and universities had 7,026 students in normal courses, 3,149 males and $3,87 \%$ females. Ten other universities maintain pedagogical departments, but do not report normal students separately. The same table shows that 447 public high schools had 8,246 normal students, 2,534 males and 5,712 females. Private high schools and academies to the number of 439 reported 7,930 normal students, 3,547 males and $4,34.3$ females. Outside of the public and private normal schoois thero were thus reported 23,202 normal students.

A recapitulation of the totals of preceding table is given in Table 17. It shows the number of normal students in each of the five classes of institutions in each State and geographical division.

Table 18 is a list of the colleges and universities reporting students in training courses for teachers, showing also the number of norinal stadents in each for the past four years.

Tables 19 and 20 are the tables which give in detail the statistics of the 329 public and private normal schools reporting to this office for the scholastic year 1895-96.

Table 1.-Summary of statistics of public normal schools.
SCHOOLS AND INSTRUCTORS.


## Table 2.-summary of statistics of public normal schools.

STUDENTS AND COURSES OF STUDY.


Table 3.-Summary of statistics of public normal schools.
TOTAL ENROLLMENT OF STUDENTS.

| State or Territory. | Total enrollment in all departments. |  |  | Colored students included in normal department. |  |  | Number of children in model school. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male. | Female. | Total. | Male. | Fe. male. | Total. | Male. | $\begin{aligned} & \mathrm{Fe}- \\ & \text { male. } \end{aligned}$ | Total. |
| United States | 20, 493 | 41,116 | 61,619 | 514 | 815 | 1,329 | 9,964 | 10,621 | 20,585 |
| North Atlantic Division .- | 8,572 | 18,167 | 26, 739 | 6 | 31 | 37 | 5,062 | 5,333 | 10,395 |
| South Atlantic Division .- | 1,265 | 3,522 | 4,787 | 313 | 582 | 895 | 5,729 | 818 | 1,547 |
| South Central Division --- | 2,248 | 3,155 | 5,403 | 173 | 171 | 344 | 343 | 336 | 679 |
| North Central Division--- | 7,404 | 13, 501 | 20,905 | 21 | 30 | 51 | 3,096 | 3,193 | 6,289 |
| Western Division .-.-....- | 1,004 | 2,771 | 3,785 | 1 | 1 | 2 | , 734 | 941 | 1,675 |
| North Atlantic Division: Maine | 272 | 781 | 1,053 | 0 | 0 | 0 | 159 | 181 | 340 |
| New Hampshire | 110 | 230 | 1, 340 | 0 | 0 | 0 | 109 | 140 | 249 |
| Vermont...-- | 51 | 316 | 367 | 0 | 0 | 0 | 15 | 18 | 33 |
| Massachusetts | 100 | 1,339 | 1,439 | 0 | 6 | 6 | 973 | 485 | 1,458 |
| Rhode Island | 137 | 407 |  | 0 | 1 |  | 135 | 183 | 318 |
| Connecticut | 623 | 1,203 | 1,826 | 0 | 1 | 1 | 236 | 300 | 536 |
| New York | 3,040 | 7,724 | 10,764 | 3 | 15 | 18 | 1,893 | 2,269 | 4, 162 |
| New Jersey --..-----..- | 338 | 1,003 | 1,341 | 0 | 0 | 0 | 1,651 | 714 | 1,365 |
| Pennsylvania | 3,901 | 5, 164 | 9,065 | 3 | 8 | 11 | 891 | 1,043 | 1,934 |
| South Atlantic Division: <br> Delaware | 0 | 20 | 20 | 0 | 0 | 0 | 150 | 180 | 330 |
| Maryland --.-.-.-.-- | 21 | 393 | 414 |  |  |  | 11 | 48 | 59 |
| District of Columbia .- | 10 | 82 | 92 | 7 | 23 | 30 | 436 | 352 | 788 |
| Virginia --.... | 213 | 493 | 706 | 53 | 95 | 148 | 50 | 68 | 118 |
| West Virginia - | 488 | 584 | 1,072 | 14 | 18 | 32 |  |  |  |
| North Carolina | 292 | 1,000 | 1,292 | 236 | 441 | 677 | 48 | 64 | 112 |
| South Carolina | 0 | 335 | 335 |  |  |  | 25 | 35 | 80 |
|  | 140 | 487 | 627 | 0 | 0 | 0 | 9 | 71 | 80 |
| Florida | 101 | 128 | 229 | 3 | 5 | 8 | 0 | 0 | 0 |
| Kentucky | 78 | 305 | 383 |  |  |  | 130 | 119 | 249 |
| Tennessee | 420 | 515 | 935 |  |  |  |  |  |  |
| Alabama- | 829 | 1,099 | 1,928 | 115 | 123 | 238 | 155 | 156 | 311 |
| Mississippi | 445 | 423 | - 868 | 35 | 36 | 71 | 0 | 0 | 0 |
| Louisiana | 69 | 280 | 349 | 0 | 0 | 0 | 58 | 61 | 119 |
| Texas | 119 | 301 | 420 | 0 | 0 | 0 | 0 | 0 | 0 |
| Arkansas | 219 | 123 | 342 | 23 | 12 | 35 | 0 | 0 | 0 |
| Oklahoma----.... | 69 | 109 | 178 |  |  |  |  |  |  |
| Indian Territory .-...- |  |  |  |  |  |  |  |  |  |
| North Central Division: |  |  |  |  |  |  |  |  |  |
|  | 355 732 | 838 960 | 1,193 1,692 |  | 8 | 88 | 446 85 85 | 404 68 | 850 153 |
| Inlinois. | 1,138 | 1,661 | 2,799 | 4 | 6 | 10 | 551 | 583 | 1,134 |
| Michigan | -252 | 1,942 | 1,194 | 0 | 1 | 1 | 672 | 610 | 1,28\% |
| Wisconsin | 945 | 1,653 | 2,508 | 0 | 0 | 0 | 460 | 486 | 946 |
| Minnesota | 740 | 1,594 | 2,334 | 0 | 0 | 0 | 459 | 465 | 924 |
| Iowa - | 798 | 1,260 | 2,058 | 0 | 0 | 0 | 113 | 131 | 244 |
| Missouri | 1,523 | 2,496 | 4,019 | 0 | 0 | 0 | 121 | 159 | 280 |
| North Dakota | 1, 138 | -169 | , 307 | 0 | 0 | 0 | 41 | 45 | 86 |
| South Dakota | 165 | 408 | 573 | 1 | 1 | 2 | 74 | 131 | 205 |
| Nebraska | 125 | 278 | 403 | 0 | 0 | 0 |  |  |  |
| Kansas, | 493 | 1,242 | 1,735 | 8 | 8 | 16 | 74 | 1i1 | 185 |
| Western Division: Montana |  |  |  |  |  |  |  |  |  |
| Wyoming |  |  |  |  |  |  |  |  |  |
| Colorado | 198 | 419 | 617 | 1 | 1 | 2 | 101 | 136 | 237 |
| New Mexico | 13 | 40 | 53 |  |  |  |  |  |  |
| Arizona | 58 | 77 | 135 | 0 | 0 | 0 | 0 | 0 | 0 |
| Nevada |  |  |  |  |  |  |  |  |  |
| Idaho | 67 | 100 | 167 | 0 | 0 | 0 | 0 | 0 | , |
| Washingto | 133 | 263 | 396 | 0 | 0 | 0 | 128 | 124 | 250 |
| Oregon | 389 | 541 | 930 | 0 | 0 | 0 | 175 | 191 | 366 |
| California. | 156 | 1.331 | 1.487 | 0 | 0 | 0 | 330 | 490 | 880 |

Table 4.-Summary of statistics of public normal schools.
NUMBER OF NORMAL AND OTHER GRADUATES.


# Table 5.-Summary of statistics of public normal schcols. 

INCOME FROM VARIOUS SOURCES.

| State or Territory. | Appropri ated by States, counties, or cities for support for 1895-96. | Received from tuition and other fees. | Received from productive funds. | Received from other sources and unclassified. | $\begin{gathered} \text { Total } \\ \text { income for } \\ \text { the year } \\ 1890-96 . \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| United States | \$2,18\%, 8 \%̃ | \$498, 710 | 868, 904 | \$206, 056 | 82, 061,610 |
| North Atlantic Division | 88\%, 590 | 381,461 | 15,1:9 | 105, 954 | 1,341, 134 |
| South Atlantic Division | 146,592 | 31, 26\% |  | 22, 837 | 200, 691 |
| South Central Division. | 105, 043 | 25,939 | 3,975 | \%\%, 740 | 211, 697 |
| North Central Division. | \%69,900 | 97,361 | 48, 800 | 1,075 | 917, 136 |
| Western Division -- | 277,750 | 12, 752 |  | 450 | 290,952 |
| North Atlantic Division: |  |  |  |  |  |
| Maine | 27,350 | 2,530 |  | 65 | 10,325 |
| New Hampshire | 10,000 | 1,605 | 150 |  | 14,782 |
| Massachusetts | 138,294 |  |  | 1,493 | 140,047 |
| Rhode Island |  |  | 0 |  | 46, 000 |
| Connecticut | 444, 954 | 21,633 | 0 | 7,619 | 474, 2006 |
| New Jersey | 40,570 | 26,040 |  |  | 66,610 |
| Pennsylvania | 174, 390 | 279,073 | 15,979 | 89,192 | 558,634 |
| South Atlantic Dirision: Delaware | 9,042 |  | 0 |  | 9,042 |
| Maryland. | 10,500 | 8,541 |  | 3, 338 | 22,579 |
| District of |  |  |  | 1,850 | 38, 03 |
| West Virgin | 31,000 | 1,483 |  |  | 36, $5 \times 3$ |
| North Carolina | 20,750 | 12,800 |  | 4,149 | 37,693 |
| South Carolin | 32900 |  | 0 |  | 38,30 |
| Florida | \%,300 | 2,20 |  | 10,500 | 17,820 |
| South Central Division: |  |  |  |  | 13,38.5 |
| Kentucky | 10,350 | $\begin{array}{r}60 \\ 7,750 \\ \hline\end{array}$ | 3, $\begin{array}{r}75 \\ \hline 00\end{array}$ | 40,025 | 71, 800 |
| Alabama. | 22,418 | 10,376 | 100 | 27, 390 | 60, 284 |
| Mississippi. | 6,350 | 525 |  |  | 6,910 |
| Lotisiana | 13,750 | 1,455 |  | 900 | 18, 500 |
| Texas -... | 28,000 | 4, 000 |  | 2,500 | 6, 234 |
| Orlahoma | 4,950 | 1, 188 |  |  | 188 |
| Indian Territory |  |  |  |  |  |
| North Central Division: |  |  |  |  | 8,160 |
| Indiana | 65, 1,87 | $\stackrel{6,260}{2,300}$ |  |  | 68,127 |
| Illinois | 123,610 | 10,020 |  | 501 | 134, 139 |
| Michigan | 61. 400 | 8, 5 \% | 4,200) |  | 7, |
| Wisconsin | 165, 186 | 12,938 | 31,000 |  | 209, |
| Minnesota | 97.500 | 7,388 |  | 400 | $5{ }_{5}+703$ |
| Iowa. | 39.675 | 15,514 |  | 50 | 166, 449 |
| North Dak | 14, 19.30102 | 24, 3,445 | 690 |  | 23, 112 |
| Soutl Dakota | 12, \%(k) | 1, $1(10)$ |  |  | 13, 9000 |
| Nehraska. | 19,510 | 1,310) |  |  | 25, 20 |
| Kansas | 28, 250 | 4,0\%0) | 13,000) |  | 40, 20 |
| Western Division: Montana |  |  |  |  |  |
| Wroming |  |  |  |  |  |
| Colorado. <br> Now Mex | ${ }^{35} .0 \times 0$ |  |  |  | \%.5'x |
| Arizona | 6, 0 (0) | 445 | 10 | 0 | 6, 46 |
| Ctah |  |  |  |  |  |
| Itaho | 501) (\%) | $8(x)$ |  |  | $51.3 \times 1$ |
| Washington | 4:2, ( $\mathrm{N} \times(\mathrm{X})$ | 1, (n) c $^{\text {a }}$ |  |  | ${ }^{43.0000}$ |
| Oremon. | 15. (Na) | 5, (m) |  |  | 123, 833 |
| California | 121, 250 | 2.486 |  | 100 | 123,035 |

## Table 6.-Summary of statistics of public normal schools.

VALUE OF BUILDINGS AND OTHER PROPERTY.


Table 7.-Review of public normal school statistics, 1890-1896.
APPROPRIATIONS FROM STATE, COUNTY, OR CITY FOR SUPPORT.

| State or Territory. | 1890-91. | 1891-92. | 1892-93. | 1893-94. | 1894-95. | 1895-96. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United States <br> North Atlantic Division South Atlantic Division. South Central Division.. North Central Division. Western Division | \$1, 285, 700 | \$1,567,082 | \$1, 452,914 | \$1, 996, 271 | \$1,917, 375 | \$2, 187, 875 |
|  | 555, | 702,284 | 696, 603 | 907,010 | 773, 035 | 887, 590 |
|  | 86, 380 | 93, 260 | 62, 268 | 121, 460 | 141,017 | 146,592 |
|  | 86, 329 | 83, 800 | 50, 344 | 119, 949 | 113, 460 | 106,043 |
|  | 458, 006 | 527, 038 | 465, 319 | 651, 824 | 668, 063 | 769, 910 |
|  | 104,500 | 160,700 | 172,380 | 196, 028 | 221, 800 | 27\%, 750 |
| Nortli Atlantic Division: |  |  |  |  |  | 27,350 |
| New Hampshire | 7,000 | -9,000 | 12,000 | 12, 100 | 12, 000 | 10,009 |
| Vermont. | 7,176 | 8, $6 \% 0$ | 16, 100 | 13, 133 | 7,264 | 13,032 |
| Massachusetts | 74,650 | 105, 011 | 121, 731 | 129,164 | \%8, 397 | 138,294 |
| Rhode Island | 12, 874 | 14,000 | 14,000 | 16, 000 | 18,000 |  |
| Connecticut | 20,000 | 34, 600 | 49,000 | 79, 656 | 72, 010 | 39, 000 |
| New York | 335, 981 | 334, 847 | 336, 645 | 397, 523 | 360, 111 | 444,954 |
| New Jersey ............. | . 24,276 | 21,500 | 28,750 | 34, 083 | 40,570 | 40,5\%0 |
| Pennsylvania-......-- 53,528 150,000 89,777 206,035 159,093 $174,3: 0$ <br> South Atlantic Division:       |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Maryland | 10,500 | 10,500 | 10,500 | 10,500 | 10,540 | 10,500 |
| District of Columbia.-...............-......................................... |  |  |  |  |  |  |
| Virginia ${ }_{\text {West }}$ Virginia | 47,000 | 58, 500 | 17,000 | 27,950 | 30,290 | 31.000 35.100 |
| West Virginia | 14, 630 | 13, 430 | 15,000 | 18, 118 | 28, 2687 | 35.100 20,750 |
| North Carolina | 5,200 | 6, 000 | 4,300 | 29.235 | 19, 5 , 850 | 20,750 |
| South Carolina | 1,050 | 1,050 | 5,250 | 7,250 | 5.2,950 |  |
| Geor'gia |  | 3, 780 | 10,218 | 23,207 3,600 | 32,900 5,000 | 3, 7,30 |
|  |  |  |  |  |  |  |
|  |  |  |  | 23,588 |  | 10,350 <br> $20,2 \% 5$ |
| Tennessee | 11,097 31,419 | 16,000 31,000 | 27, 2004 | 1,510 | 1.5, 1800 | 2; 2,418 |
| Mississipp | 4,5:0 | 2, 500 | 2,500 | 3,950 | 8, 425 | 6, 350 |
| Louisiana | 10,0100 | 10, 010 | 12,500 | 12.5010 | 13,750 | 13. T30 |
| Texas | 20,000 | 20, 000 |  | 35, 0 ¢0) | 40,510 | 2s, 0 O) |
| Arkansas | 4,973 | 4,300 | 6,240 | 12, 510 | 8, 060 | 4,9.30 |
| Oklahoma |  |  | 6, 040 | 7,500 |  |  |
| Indian Territory --.- |  |  |  |  |  |  |
| North Central Division: | 5,000 | 6,000 | 1,50¢, | 800 | 5, 000 | 1,8n0 |
| Indiana | 30,000 | 41, 100 | 40,000 | 42, \%(6) | 40, 0110 | (13, 827 |
| Illinois | 96, 979 | 100, 104 | 56, 105 | 96,104 | 56, 50 | 123,610 |
| Michigan | 36, 360 | 49, 908 | 56, 647 | - 62.298 | 58, 450 | 61, 400 |
| Wisconsin | 86, 142 | 121, 201 | 123, 417 | 120.911 | 157, 271 | 169, 106 |
| Minnesota | 58, 509 | 68, 5140 | 76, 300 | 82. (100) | 88, 109 | 91, 30 |
| Iowa -- | 21,500 | 25, 100 | 21,000 | 27, 275 | 38, 52\% | 129 |
| Missouri North Dakota | 53, 0000 | 37. 250 | 26,250 23,000 | 112,561 $20,1(1)$ | 112,317 $2: 2$ 2, | 119, 19 |
| South Dakota | 24,009 | 21, 515 | 21, 100 | 26, 250 | 26,1001 | 12, 5 \% |
| Nelraska | 18, 850 | 19, 350 |  | 21, 20(4) | 30, 100 | 19,5 5 |
| Kansas. | 22, 175 | 23, 6\% | 20,000 | 9.125 | 6, 000 | 28,250 |
| Western Division: |  |  |  |  |  |  |
| W yoming |  |  |  |  |  |  |
| Colorarlo |  | 35, 0 (1) | 35, 000 | 35.1 (H) | 35, 1 (以) | 35.10 |
| New Mexico |  |  |  | 3, \%() |  | 7, (1) |
| Arizona <br> Utah | 7,000 | 6,000 |  | 7,200 | 0 | 6.104 |
| Nevarla |  |  |  |  |  |  |
| Idaho |  |  |  |  | 7, (1) | 50,51 |
| Washington | 19,150) | 28,309 | 43,880 | 37, 5, M $^{\text {a }}$ | 3:3, (10) | 42, (x) |
| Oregon | 100 |  | 48, 0100 | 18, 52 28 | $23.2(0)$ | 16. 0 N |
| California | 78,250 | 90,500 | 45,500 | 91, 300 | 117, (K) | 121..51 |

Table 8.--Review of public normal school statistics, 1890-1896.
PUBLIC APPROPRIATTONS FOR BUILDINGS AND IMPROVEMENTS.

| State or Territory. | 1800-91. | 1801-92. | 1892-93. | 1893-94. | 189495. | $18 \% \%-93$. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United States <br> North Atlantic Division South Aulantic Division South Central Division North Central Division Western Division | \$409,916 | \$394,635 | \$816, 826 | \$1,583, 309 | 81, 003, 933 | \$1, 124, 834 |
|  | 225, 412 | 169,050 | 48,516 | 856,640 | 449, 9\%9 | 50.2, 118 |
|  | 40,900 | 42,624 | 35, 074 | 49,580 | 100, 309 | 63,1u3 |
|  | 5, 500 | 11,948 | 24, 450 | 23, 250 | 11,200 | 9,798 |
|  | 71, 539 | 100,913 | 168, 686 | 374,799 | 320, 185 | 288,250 |
|  | 66, 565 | \%0, 100 | 105, 100 | 279,000 | 129,300 | 179,50) |
| North Atlantic Division: Maine New Hampshire | 279 | 5,000 0 | 2,000 <br> 0 | 12,500 | 39,000 | 1\%,000 |
| Vermont .-....- |  | 0 | 1,000 | 10,300 |  | 9 |
| Massachusetts | 1,500 | 25,500 | 200, 600 | $27 \%$, 200 |  | 195, (100 |
| Rhode Island. |  |  |  |  | 9 | 250,000 |
| Connecticut. | 25,000 | 0 | 75, 000 | 125, 000 | 240,000 | 20.000 |
| New York | 70, 633 | 44,550 | 92, 391 | 97,793 | 60, 142 | 140,869 |
| New Jersey | 48,000 |  | 12,009 | 10,010 | 10, 693 | 1, 219 |
|  | 80,000 | 94,000 | 103,125 | 324,877 | 100, 124 | 10, 000 |
| South Atlantic Division: |  |  |  |  |  | 5.112 |
| Maryland | 0 | 2,224 | 2,224 |  | 43,776 | 1: 031 |
| District of Columbia |  |  |  |  | 0 |  |
| Virginia.. | 1 | 0 | 2\% | 5, 050 |  | 5.195 |
| West Virginia | 37,900 | 40,400 | 27,300 | 20,000 | 42, 010 | [5, 006 |
| North Carolina |  | ${ }^{0}$ | 150 | 4, 630 | 5,033 |  |
| South Carolina | 0 | 0 | 2,010 |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Kentucky .-.........- | 0 |  |  | 2,500 |  |  |
| Tennessee | 0 | 4,000 | 0 |  |  | 1 |
| Alabama | 3,000 | 5,448 | 200 | 1,301) | 500 | 3, 00:3 |
| Mississippi |  |  | 0 |  |  | 0 |
| 1.ouisiana | 2,500 | 2,500 | 1,250 | 1,250 | 7,50) |  |
| Texas | 0 | 0 |  | 3,000 | 3, (\%) | $\bigcirc 500$ |
| Arkansas. | , | 0 | 6,010 | 8300 | 219) | 1, 29\% |
| Oklahoma |  |  | 17,000 | 15, 010 |  | 3, 0001 |
| North Central Division: |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Indiana | 0 | 0 | 40,000 | 40, 00:0 | 20, (6) | 1. 0 |
| Tllinois. | 4,060 | 0 |  | () | 40, 100 | 4\%, 0 (1i) |
| Michigan |  | 4,000 | 20,000 | 20,000 | 20,0\% 0 |  |
| Wisconsin | 1.139 | 22,913 | 2,685 | 20, 0 (\%) | 12,736 | 15.5, 810 |
| Minnesot | 15,009 | 25, 010 | 66,000 | 116,000 | 54, 501 | 11, 750 |
| Towe | 8,400 | 6,000 | 0 | 33,000 | 36, 1010 | 30, (10) |
| Missouri | 10,000 |  | 0 | 104, 479 | 131, 929 | 35, 4010 |
| North Dakota | 20,000 | 40,000 | 40,000 | 14,220 |  |  |
| South Dakota Nebraska -.. | 13,00k) | 3, 060 | 0 | 3.100 0 | (\%) |  |
| Kansas | 13,0 | 3,001 | 0 | 50,000 | 5,00 | 4,310 |
| Western Division: |  |  |  |  |  |  |
| W yoming |  |  |  |  |  |  |
| Colorarlo |  | 30,000 | 20, 000 | 35, 015 | 10,000 | 2), 1000 |
| New Mexico |  |  |  | 12, 0 (4) |  | 10,000 |
| Arizona | 11 | 0 |  | 8,000 | 1,3(3) | 11,500 |
| Ut:3h.-- |  |  |  |  |  |  |
| Nevada. |  |  |  |  |  |  |
| Idaho.. |  |  |  |  | 25, 0100 | \%0, 1 NK |
| Washington | 1.5(1) |  |  | 135, (0) | 6, 000 | 6i), (4) 3.1010 |
| ('alitornia |  | 1, 1010 | 10, 109 | 11, (NY) |  |  |
| ('alitoruia | (i5.) (0)6) | 33, 0100 | 75, (0)0 | 78, 000 | 80,0000 | 5. 000 |

Table 9.-Summary öf statistics of private normal schools.
SCHOOLS AND INSTRUCTORS.


TABLE 10,-Summary of statistics of private normal schools.
STUDENTS AND COURSES OF STUDY.


Table 11-Summary of statistics of private normal schools.
TOTAL ENROLLMENT OF STUDENTS, ETC.

| State or Territory. | Total enrollment in all departments. |  |  | Colored students in cluded in normal department. |  |  | Number of children in model schools. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male. | $\begin{aligned} & \text { Fe- } \\ & \text { male, } \end{aligned}$ | Total. | Male. | $\begin{aligned} & \mathrm{Fe}- \\ & \text { male. } \end{aligned}$ | Total. | Male | $\begin{gathered} \mathrm{Fe} \\ \text { male. } \end{gathered}$ | Total. |
| United States | 25, 989 | 22,053 | 48, 012 | 1,076 | 1,388 | 2,464 | 1,552 | 1,929 | 3,481 |
| North Atlantic Division. South Atlantic Division.South Central Division. North Central Division Western Division.......... | $\begin{array}{r} 918 \\ 3,028 \\ 4.983 \\ 16,247 \\ 813 \end{array}$ | $\begin{array}{r} 1,379 \\ 3,989 \\ 4,557 \\ 11,411 \\ 717 \end{array}$ | $\begin{array}{r}\text { r } \\ \hline 2,297 \\ 7,017 \\ 9,540 \\ 27658 \\ 1,530 \\ \hline\end{array}$ | $\begin{array}{r} 570 \\ 570 \\ 460 \\ 45 \\ 0 \\ \hline \end{array}$ | $\begin{array}{r} 1 \\ 843 \\ 544 \\ 3 \\ 0 \\ \hline \end{array}$ |  | $\begin{array}{r} 340 \\ 240 \\ 400 \\ 440 \\ 542 \\ 32 \end{array}$ | $\begin{array}{r} 407 \\ 372 \\ 4.8 \\ 6.02 \\ 40 \end{array}$ | $\begin{array}{r} 747 \\ 612 \\ 858 \\ 1,192 \\ 72 \\ \hline \end{array}$ |
| North Atlantic Division: Maine New Hampshire | 183 | 178 | 363 | 0 | 0 | 0 | 0 | 0 |  |
| Vermont......... Massachusetts | 0 | 172 | 172 |  |  |  | 0 | 12 | 12 |
| Conneeticut. | 0 | 31 | 31 |  | 1 | 1 | 80 | 9.0 | 75 |
| New York | 255 | 564 | 819 | 1 | 0 | 1 | 260 | 500 |  |
| Pewnsylvania | 478 | 434 | 912 | 0 | 0 | 0 | 0 | 0 | 0 |
| Scuîh Atlantic Di <br> Delaware |  |  |  |  |  |  |  |  |  |
| Maryland | 25 | 30 | 55 | 11 | 23 | 34 | 0 | 0 | 0 |
| Virginia $\qquad$ | 895 | ${ }_{966} 9$ | 1,860 | 179 | 26.3 | 441 | 151 | 194 | 15 |
| West Virginia | 251 | 336 | , 587 |  |  |  |  |  |  |
| North Carolina | 541 | 921 | 1,462 | 140 | 149 | 289 | 37 | 123 | 160 |
| South Carolina | ${ }^{9} 90$ | 888 | 1,578 | 121 | 248 | ${ }^{369}$ | 178 17 |  | $4{ }^{4}$ |
| Georgia | ${ }_{33}^{275}$ | 309 | 642 | 85 34 | ${ }_{36}^{122}$ | 207 |  |  |  |
| South Central Division: |  |  |  |  |  |  |  |  |  |
| Kentucky- | 846 1,592 | 1, $\begin{array}{r}754 \\ \hline 155\end{array}$ | 3,600 | 141 | 239 | 360 | 120 | ${ }_{118}^{40}$ | 208 |
| Alabama | 939 | 710 | 1,649 | 222 | 209 | 431 | 810 | \%i1 | 150 |
| Mississippi | 979 | 1,034 | 2,013 | 33 | 38 | 71 | 112 | 143 | 205 |
| Texas | 397 | 362 | 76 |  |  |  | 0 | () | 0 |
| Arkansas | 233 | 232 | 465 | 32 | 25 | 57 | 76 |  | 63 |
| Indian Territo |  |  |  |  |  |  |  |  |  |
| North Central Division: |  |  |  |  |  |  |  |  |  |
| Ohio Indiana | 5, ${ }^{3,564}$ | ${ }_{2}^{1,671}$ | $5,235$ |  |  | ${ }_{9}^{4}$ | $\begin{aligned} & 60 \\ & 55 \end{aligned}$ | $\begin{array}{r} 63 \\ 175 \end{array}$ | 1230 |
| nlinois | 1,499 | 1,174 | 2,673 | 34 | 0 | 34 | 50 | 60 | 10 |
| $\frac{\text { Michigan }}{W}$ | 341 | 542 | 883 | 0 | 0 | 0 | 0 | 0 | 18 |
| Wisconsin | $19 \%$ | ${ }_{71}^{97}$ | ${ }_{270}^{291}$ | 0 | 0 | 0 | ${ }_{\substack{10}}^{116}$ | ${ }_{70}$ | +17 |
| Iowa | 2,071 | 1,990 | 4,061 | 0 | 0 | 0 | 130 | 147 | 27 |
| Missouri. | 1,088 | 853 | 1,941 | 0 | 0 | 0 | 6 |  |  |
| South Dakot | 64 | 40 | 104 |  |  | 0 | 0 |  |  |
| Nebrask | 1,186 | 1,169 | 2,335 | 0 | 1 | 1 | 3 | 4 | 17 |
| Kansas | 914 | 813 | 1.727 | 0 | 0 |  | 0 |  |  |
|  | 4 | 67 | 111 |  |  |  |  |  |  |
| W yoming |  |  |  |  |  |  |  |  |  |
| New Mexico | 19 | 176 | 193 |  |  |  |  |  |  |
| Arizona | (65) | 276 | 951 |  |  | 0 |  | 0 |  |
| Nevada |  |  |  |  |  |  |  |  |  |
| Washingto |  |  |  |  |  |  |  |  |  |
| Orecon- |  |  |  |  |  |  |  |  |  |
| California | 10 | 128 | 133 | 0 |  | 0 | 3 | 4 |  |

Table 12.-Summary of statistics of private normal schools.
NUMBER OF NORMAL AND OTHER GRADUATES.

| State or Territory. | Normal graduates. |  |  | Graduates in business courses. |  |  | Graduates in other courses. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male. | Female. | Total. | Male. | $\begin{aligned} & \mathrm{Fe}- \\ & \text { male. } \end{aligned}$ | Total. | Male. | Female. | Total. |
| United States. | 1,035 | 1,155 | 2,190 | 1,130 | 367 | 1,4.97 | 707 | 554 | 1,261 |
| North Atlantic Division.South Atlantic Division. South Central Division. North Central Division.. Western Division | $\begin{array}{r} 36 \\ 111 \\ 223 \\ 660 \\ 5 \end{array}$ | 155 187 183 511 119 | $\begin{array}{r} 191 \\ 298 \\ 406 \\ 1,171 \\ 124 \end{array}$ | 12 50 102 954 12 | 13 9 40 303 2 | 25 59 142 1,257 14 | $\begin{array}{r} 8 \\ 27 \\ 33 \\ 639 \\ 0 \end{array}$ | $\begin{array}{r} 15 \\ 32 \\ 34 \\ 473 \\ 0 \end{array}$ | 23 59 67 1,112 0 |
| North Atlantic Division: Maine New Hampshire | 2 | 11 | 13 | 7 | 1 | 8 | 8 | 15 | 23 |
| Vermont. <br> Massachusetts. | 0 | 83 | 83 |  |  |  |  |  |  |
| Rhode Island. |  |  |  |  |  |  |  |  |  |
| Connecticut | 0 | 19 | 19 |  |  |  |  |  |  |
| New York | 1 | 29 | 30 | 0 | 0 | 0 | 0 | 0 | 0 |
| New Jersey |  |  |  |  |  |  |  |  |  |
| Pennsylvania --.....- | 33 | 13 | 46 | 5 | 12 | 17 | 0 | 1 | 0 |
| South Atlantic Division: Delaware | 4 | 3 | 7 |  |  |  |  |  |  |
| Maryland --........... | 1 | 1 | 2 |  |  |  |  |  |  |
| District of Columbia. | 0 | 18 | 18 | 0 | 0 | 0 | 0 | 0 | 0 |
| Virginia | 14 | 33 | 47 | 22 | 0 | 22 | 8 | 10 | 18 |
| West Virginia | 35 | 25 | 60 | 23 | 4 | 27 | 10 | 5 | 15 |
| North Carolina | 22 | 51 | 73 | 0 | 5 | 5 | 0 | 15 | 15 |
| South Carolina | 14 | 18 | 32 | 0 | 0 | 0 | 0 | 0 | 0 |
| Georgia | 8 | 19 | 27 | 0 | 0 | 0 | $\stackrel{2}{7}$ | 0 | 2 |
| Florida | 13 | 19 | 32 | 5 | 0 | 5 | 7 | 2 | 9 |
| Kentucky .-... | 124 | 94 | 218 | 39 | 28 | 67 | 1 | fi | 1 |
| Tennessee | 41 | 27 | 68 | 21 | 6 | 27 | 12 | 18 | 3 |
| Alabama | 2 | 10 | 12 | 4 | 0 | 4 | 1 | 2 | 位 |
| Mississippi | 39 | 33 | 72 | 36 | 6 | 42 | 13 | 11 | 24 |
| Louisiana. |  |  |  |  |  |  |  |  |  |
| Arkansas | 10 | 15 | 11 | 0 | 0 | 0 | 6 | 3 | 9 |
| Oklahoma. |  |  |  |  |  |  |  |  |  |
| Indian Territory |  |  |  |  |  |  |  |  |  |
| North Central Division: |  |  |  |  |  |  |  |  |  |
| Ohio...- | 85 | 40 | 125 | 115 | 14 | 129 | 138 | 38 | 176 |
| Indiana | 288 | 236 | 524 | 377 | 139 | 516 | 302 | 212 | 514 |
| Tllinois | 13 | 16 | 29 | 65 | 25 | 90 | 18 | 19 | 37 |
| Michigan | 14 | 17 | 31 | 18 | 14 | 32 | 12 | 16 | 28 |
| Wisconsin | 9 | 6 | 15 | 1 | 0 | 1 | 1 | 0 | 1 |
| Minnesota | 6 | 0 | 6 | 9 | 3 | 12 | 0 | 1 | 1 |
| Iowa | 108 | 88 | 196 | 181 | 57 | 238 | 99 | 107 | $20 f$ |
| Missouri | 9 | 9 | 18 | 35 | 11 | 46 | 22 | 27 | 49 |
| North Dakota |  |  |  |  |  |  |  |  |  |
| South Dakota | 1 | 2 |  | 0 | ${ }^{0}$ | 10 | - $\begin{array}{r}0 \\ 12\end{array}$ | 0 | 34 |
| Nebraska ---- | 95 | 77 | 172 | 103 | 17 | 120 | 12 | 22 | 34 |
| Kansas <br> Western Division: | 32 | 20 | 52 | 50 | 23 | 73 | 35 | 31 | 66 |
| Western Division: Montana | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wyoming. |  |  |  |  |  |  |  |  |  |
| Colorado | 0 | 18 | 18 |  |  |  |  |  |  |
| New Mexico |  |  |  |  |  |  |  |  |  |
| Arizona | 3 | 16 | 19 | 8 | 0 | 8 | 0 | 0 | 0 |
| Nevada |  |  |  |  |  |  |  |  |  |
| Idaho -- |  |  |  |  |  |  |  |  |  |
| Washington |  |  |  |  |  |  |  |  |  |
| California.-. | 2 |  |  |  | 2 | 6 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |

TABLE 13. -Sumanary of statistics of prevate normal schoots.
INCOME FROM VARIOUS SOURCES.

| State or Territory. |  | $\left\|\begin{array}{c} \text { Received } \\ \text { from } \\ \text { tuition } \\ \text { apd other } \\ \text { fees. } \end{array}\right\|$ | $\begin{gathered} \text { Received } \\ \text { from } \\ \text { produc } \\ \text { tive } \\ \text { funds. } \end{gathered}$ | Received from other and unclassified. | Total inincome for the year 1895-96. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| United States | \$18,872 |  | \$69, 130 |  | \$69,092 |
| North Atlantic Division South Atlantic Division. South Central Division.. North Central Division Western Division. | $\begin{aligned} & 790 \\ & 5.718 \\ & 7,744 \\ & 4,740 \\ & 0 \end{aligned}$ | $\begin{array}{r} 67,600 \\ z 8,218 \\ 789 \\ 6,085 \\ 32,066 \\ 28,454 \end{array}$ | $\begin{array}{r} 8,110 \\ 53,433 \\ 5,532 \\ 22,560 \end{array}$ | $\begin{aligned} & 3,400 \\ & 171,404 \\ & 12,4,496 \\ & 3,681 \\ & 32,831 \end{aligned}$ | $\begin{array}{r} 79,810 \\ 228,773 \\ 206,727 \\ 302,797 \\ 31,285 \\ \hline 627 \end{array}$ |
| North Atlantic Division: Maine <br>  | 590 | 5,300 | 750 |  | 6,550 |
| Vermont..-.-- | 0 | 2,203 |  |  | 2,200 |
| Rhode Island |  |  | , 000 |  | 7,000 |
| New York | 250 | 53000 | ,00 |  | 58,200 |
| New Jersey | 0 | 7, 100 | 360 | 3,490 | 10,860 |
| South Atlantic Division: |  | 1000 |  |  |  |
| Delaware <br> Maryland | 2,000 | 1,000 | 240 | 780 | 2,940 |
| District of Columbia |  |  |  |  | 178,141 |
| West Virginia |  | 5,081 | ${ }^{24,703}$ | - 808 | 7,592 |
| North Carolina | 2,068 | 3,023 | 2,680 | ${ }_{8}^{8 ; 918}$ | 16,669 13,341 |
| South Carolina | ${ }_{700}^{150}$ | 3,691 2604 | - $2,3,300$ | 8,200 10,316 | 18, 13,341 |
| Florida | 800 | 4,000 |  |  | 4,800 |
| South Central Division: Kentucky | 250 | 8,100 |  | ${ }_{700}^{7458}$ |  |
| Tennessee | 8,189 | 18,949 13,724 | 100 172 | 14, $\begin{aligned} & \text { 8488 } \\ & 8488\end{aligned}$ | 30,896 101,785 |
| Mississippi | 2,275 | 20,930 | 725 | 19,150 | 43,080 |
| Texas .-. |  | 4,125 |  |  | 11,099 |
| Atkansas Oklahoma | 0 | 8,2597 | 2,035 | 585 | 10,877 |
| Indian Territory |  |  |  |  |  |
| orth Central Division: Ohio. | 1,100 | 51,900 | 50 | 3,300 | 35,350 |
| Indiana |  | 132,953 |  |  |  |
| Michigan | 0 | 8,170 |  | 10,000 | 18, 170 |
| Wisconsin |  |  | 5,740 | 3,841 | $\begin{array}{r}9,581 \\ \hline, 750\end{array}$ |
| Minnesota <br> Iowa | 2,080 | $54,443$ | 1,200 | \%,500 | - |
| Missouri |  | 13,950 | 1,340 | , 45 | 15,335 |
| South Dakota |  | 1,390 |  | 2,190 |  |
| Nebraska. |  | 13,010 |  | 2,500 | 15,510 |
| Kansas, | 0 | 14,200 | 65 | 1,375 |  |
| Montana | 0 |  |  |  |  |
| Whoming |  |  |  |  |  |
| Now Mexico |  |  |  |  |  |
| Atah | 0 | 12,746 |  | 30,331 | 4, $0^{0} 7$ |
| $\begin{aligned} & \text { Nerade } \\ & \text { Idaho } \end{aligned}$ |  |  |  |  |  |
| Washington |  |  |  |  |  |
| Calionornia. | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 2,000 \\ & 13,708 \end{aligned}$ |  | 2,509 | 16,96 |

Table 14.-Summary of statistics of private normal schools.
VALUE OF BUILDINGS AND OTHER PROPERTY.

| State or Territory. | Schools\| reporting libra ries. | Volumes in libraries. | Estimated value of libraries. | Value of buildings, grounds, apparatus, etc. | Value of benefactions received 1895-96. | Total money value of endow. ment. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United States. | 133 | 203,467 | \$188, 144 | \$4, 421,386 | \$254, 678 | \$2, 487,200 |
| North Atlantic Division | 7 | 20,700 | 19,900 | 111,700 | 71,200 | 266, 000 |
| South Atlantic Division | 27 | 30, 668 | 19,540 | 897, 654 | 117, 869 | 1,203, 254 |
| South Central Division. | 36 | 41,803 | 46,114 | 800, 232 | 13, 299 | 270,200 |
| North Central Division | 57 | 103, 046 | 9t, 590 | 2,459, 800 | 52, 310 | 657, 746 |
| Western Division...-. - | 6 | 7,150 | 8,000 | $152,000$ | 0 | 0 |
| North Atlantic Division: <br> Maine | 2 | 6,200 | 4,100 | 32,000 | 1,020 | 10,000 |
| New Hampshire |  |  |  |  |  |  |
| Vermont .-.... |  |  |  |  |  |  |
| Massachusetts | 2 | 5,900 | 5,100 | 50,000 |  |  |
| Rhode Island |  |  |  |  |  |  |
| Connecticut |  |  |  |  |  |  |
| New York.- | 1 | 7,600 | 9,800 | 900, 000 | 65,000 | 250,000 |
| New Jersey |  |  |  |  |  |  |
| Pennsylvania South Atlantic Division: | 2 | 1,000 | 900 | 135, 000 | 5,200 | 6,000 |
| Southware -----....... | 1 | 3,000 | 3,000 |  |  |  |
| Maryland --.... | 2 | 1,500 | 1,500 | 3,000 | 0 | 0 |
| District of Columbia |  |  |  |  |  |  |
| Virginia --...- | 4 | 9,018 | 5,450 | 636,500 | 108,736 | 1,096,578 |
| West Virginia | 3 | 6,200 | 3,300 | 17,000 | 3, 910 | 65, 792 |
| North Carolina | 5 | 1,450 | 700 | 59,100 | 2,125 | 26, 200 |
| South Carolina | 4 | 2,100 | 1,840 | 70,000 | 1,000 | 51, 200 |
| Georrgia | 4 | 4,600 | 2,150 | 58, 554 | 1,598 | 40, 484 |
| Florida.. | 4 | 2,900 | 1,600 | 53,500 | 1,500 | 10,000 |
| South Central Division: |  |  |  |  |  |  |
| Kentucky | 9 | $\begin{array}{r}4,293 \\ 17 \\ \hline\end{array}$ | 4,310 | 59,500 | 100 7837 | 0 136,500 |
| Tennessee | 9 | 17,660 | 21,575 | 221, 500 | 7,837 | 136,500 |
| Alabama | 4 | 7,800 6,310 | 8,554 6,350 | 187, 732 | 5,000 | 30,000 2,500 |
| Louisiana |  | 6,810 |  |  |  | 2,500 |
| Texas - | 5 | 3,500 | 3,175 | 121,000 | 115 | 31,200 |
| Arkansas | 3 | 2,240 | 2,150 | 47, 000 | 247 | 70,000 |
| Oklahoma |  |  |  |  |  |  |
| Indian Territory |  |  |  |  |  |  |
| North Central Division: |  |  |  |  |  |  |
| Ohio.... | 8 | 19,425 | 26,340 | 279,000 | 1,075 |  |
| Indiana | 6 | 17, 400 | 16, 600 | 616,000 |  | 20,000 |
| Tllinois | 8 | 31, 000 | 15,000 | 234,500 | 25,000 | 135, 000 |
| Michigan | 4 | 2,805 | 4, 400 | 28,000 | 0 | 4,100 |
| Wisconsin | 1 | 2,852 | 2,700 | 100, 000 | 0 | 113, 346 |
| Minnesota | 2 | 2,900 | 9900 | 70,000 | 4,000 | 118, |
| Iowa.... | 12 | 10,666 | 10,850 | 541,000 | 2,850 | 4,000 |
| Missouri North Dakot | 5 | 1,820 | 1,350 | 82, 500 | 1,200 | 11,700 |
| North Dakota |  |  |  |  |  |  |
| South Dakota | 1 | 878 | 600 | 18,000 |  | 0 |
| Nebraska | 4 | 6,100 | 6,350 | 284, 800 | 18,185 | 134,800 |
| Western Division: | 6 | 9,200 | 9,500 | 206,000 | 0 | 66, 800 |
| Western Division: Montana $\qquad$ | 1 | 500 | 800 | 18,000 | 0 |  |
| Wyoming |  |  |  |  |  |  |
| Colorado | 1 | 400 | 400 |  |  |  |
| New Mexico |  |  |  |  |  |  |
| Arizona |  |  |  |  |  |  |
| Utah | 1 | 4, 750 | 5, 000 | 80,000 |  |  |
| Nevada |  |  |  |  |  |  |
| Washingtor |  |  |  |  |  |  |
| Oregon -- |  | $1 \%$ | 2iv) | 12,000 |  |  |
| California | $:$ | 1,3\% | 1. 6 ( $)^{(1)}$ | 4:2,090 | 0 | 0 |

TABLE 15.-Percentage of male and female students and percentage of graduates to total number in normal courses in public and private normal schools in 1895-96.

| State or Territory. | In public normal schools. |  |  | In private normal schools. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male. | Female. | Graduates. | Male. | Female. | Graduates. |
| United States. | 29.49 | 70.51 | 20. 05 | 50.40 | 49.60 | 10.54 |
| North Atlantic Division | 27.39 | 72.61 | 21. 70 | 38.04 | 61.96 | 17.64 |
| South Atlantic Division | 23.43 | 74.57 | 10.86 | 38.65 | 61.35 | 12. 41 |
| South Central Division.- | 40.15 | 59.85 | 11.93 | 51.42 | 48.58 | 11.45 |
| North Central Division | 32.47 | 67.53 | 20.19 | 54.24 | 45.76 | 12. 18 |
| Western Division. | 21.33 | 78.67 | 29.57 | 39.23 | 60.77 | 12.54 |
| North Atlantic Division: |  |  |  |  |  |  |
| Maine.-.--- | 22.89 1.10 | 77.18 98.90 | 24.01 18.68 | 44.03 0 | 55.0 | 8.18 |
| Vermont | 12. 89 | 87.11 | 18.49 | 0 | 0 | 0 |
| Massachusetts | 5.61 | 94.39 | 25.82 | 0 | 100.00 | 48.20 |
| Rhode Island. | . 88 | 99.12 | 6. 19 | 0 | 0 |  |
| Connecticut | 1.63 | 98.37 | 28.75 | 0 | 100.00 | 61.29 |
| New York | 21.63 | 78.37 | 22.05 | 7.22 | 92.78 | 30.93 |
| New Jersey | 8.30 | 91. 70 | 10.44 | 0 |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Maryland | 5.07 | 94.93 | 18.36 | 35.71 | 64.29 | 4. 76 |
| District of Columbia | 10.87 | 89.13 | 81.52 | 0 | 100.00 | 90.00 |
| Virginia | 19.06 | 80.94 | 17.83 | 38.55 | 61.45 | 6. 69 |
| West Virginia | 47.17 | 52.83 | 7.36 | 37.13 | 62.87 | 16. 26 |
| North Carolina | 17.31 | 82.69 | 3.20 | 39.43 | 60.57 | 16.08 |
| South Carolina | 0 | 100.00 | 14.67 | 32. 79 | 67.21 | 8. 67 |
| Georgia. | 31.11 | 68.89 | 1.11 | 41.70 | 58.30 | 16.00 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Kentucky | 23.08 50.70 | 76.92 49.30 | 25.87 0 | 56.03 49.81 | 43.97 50.19 | 25.03 6.40 |
| Tennessee | 50.70 41.77 | 49.30 58.23 | 10.49 | 49.81 51.22 | 50.19 48.78 | 2. 67 |
| Mississippi | 51.41 | 48.59 | 1.21 | 49.03 | 50.97 | 12. 70 |
| Louisiana. | 19.77 | 80.23 | 63.04 |  |  |  |
| Texas | 28.33 | 71. 67 | ${ }^{0}$ | 47.10 | 52.90 | 6. 30 |
| Arkansas | 65.52 | 34.48 | 5.17 | 55.78 | 44.22 | 5.53 |
| Oklahoma | 38.76 | 61.24 | 0 | 0 | 0 | 0 |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Indiana | 39.18 | 60.82 | 69.03 | 57.93 | 42.07 | 15. 84 |
| Illinois. | 33.76 | 66.24 | 11.42 | 51.35 | 48. 65 | 1. 95 |
| Michigan | 22.20 | 77.80 | 20.99 | 33.33 | 66. 67 | 5. 84 |
| Wisconsin | 34. 73 | 65.27 | 15.08 | 57.33 | 42. 67 | 20.00 |
| Minnesota | 22. 70 | 77.30 | 22.01 | 79.17 | 20.83 | 8.33 |
| Iowa. | 31.85 | 68.15 | 10.67 | 45.05 | 54.95 | 11.98 |
| Missouri. | 42.77 | 57.23 | 21.67 | 57.00 | 43.00 | 2.23 |
| North Dakota | 44.95 | 55.05 | 10.75 |  |  |  |
| South Dakota | 28.04 | 71.96 | 11.21 | 61.54 | 38.46 | 1.888 |
| Nebraska | 37.50 | 62.50 | 32.50 | 47.02 | 52.98 | 13.87 4.88 |
| Western Division: ${ }^{\text {W }}$ |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| Wyoming |  |  |  | 13. 0 | 50.50 | 0 |
| Colorado. | 23.15 | 76.85 | 7.40 | 7.07 | 92.93 | 9.78 |
| New Mexico | 24.53 | 75.47 | 11.32 | 0 | 0 | 0 |
| Arizona | 42.96 | 57.04 | 10.37 | 0 | 0 | ${ }^{0}$ |
| Utah. |  |  |  | 57.12 | 42.88 | 3.65 |
| Nevada |  |  |  | 0 | 0 | 0 |
| Idaho | 27.96 | 72.04 | 2.15 | 0 | 0 |  |
| Washington | 33.59 | 66.41 | . 25 | ${ }^{0}$ | 0 | 0 |
| Oregon ${ }_{\text {California }}$ | 40.63 10.49 | 59.37 89.51 | 15.91 50.98 | 48.15 2.36 | 51.85 97.64 | 68.50 |
|  |  | 8.51 | 50.98 |  |  |  |

TABLE 16．－Normal students in universities and colleges and public and private high schools and academies．

INSTITUTIONS AND STUDENTS．

| State or Territory． | In universities and colleges． |  |  |  | In public high |  |  |  | In private high schools． |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{aligned} & \text { ت⿹\zh26灬 } \\ & \text { H } \\ & \text { H. } \end{aligned}$ | $\begin{aligned} & \text { 奝 } \\ & 0 \\ & \text { du } \\ & \text { un } \end{aligned}$ | $\begin{aligned} & \dot{(1)} \\ & \text { 岂 } \end{aligned}$ |  | $$ |  | 㡙 | 淢 | $\begin{aligned} & \text { Nig } \\ & \stackrel{\rightharpoonup}{1} \end{aligned}$ |  |
| United S | 193 | 3，149 | 3，877 | 7，026 | 447 | 2，534 | 5， 712 | 8，246 | 439 | 3，587 | 4，343 | 7， 830 | 3，20 |
| North Atlantic Division． South Atlantic Division South Central Division North Central Division． | $\begin{aligned} & 22 \\ & 32 \\ & 38 \\ & 82 \end{aligned}$ | 232 429 640 1,458 | 390 645 757 1,360 | $\begin{array}{r} 622 \\ 1,074 \\ 1,397 \\ 1,398 \\ 2,818 \end{array}$ | 115 42 123 154 | $\begin{array}{r} 290 \\ 226 \\ 8,0 \\ 1,116 \end{array}$ | $\left.\begin{array}{r} 1,944 \\ 381 \\ 880 \\ 2,387 \end{array} \right\rvert\,$ | 2,234 610 1730 3,503 | $\begin{gathered} 87 \\ 80 \\ 142 \\ 104 \\ 102 \end{gathered}$ | 618 606 1,336 940 | 1,011 1,13 1,213 1,217 | 1,629 1,219 2,671 2,157 | 4,485 <br> 2,903 <br> 5,798 <br> 8,478 |
| Western Division． | 19 | 390 | 725 | 1，115 | 13 | 52 | 117 | 169 | 26 | 87 | 167 | 254 | 1，538 |
| North Atlantic Division： Maine <br> New Hampshire <br> vermont <br> Massachusetts <br> Connecticut <br> New York <br> New Jersey <br> Pennsylvania | $\begin{array}{\|r} 1 \\ 0 \\ 0 \\ 2 \\ 1 \\ 1 \\ 0 \\ 0 \\ 0 \\ 13 \end{array}$ | $\begin{array}{r} 0 \\ 0 \\ 0 \\ 0 \\ 20 \\ 0 \\ 73 \\ 0 \\ 139 \end{array}$ | $\begin{array}{r} 9 \\ 0 \\ 0 \\ 64 \\ 12 \\ 0 \\ 65 \\ 0 \\ 240 \end{array}$ | $\begin{array}{r} 9 \\ 0 \\ 0 \\ 64 \\ 32 \\ 0 \\ 138 \\ 0 \\ 079 \end{array}$ | $\begin{gathered} 3 \\ \hdashline 14 \\ 3 \\ \hdashline 1 \\ 61 \\ 5 \\ 28 \end{gathered}$ | 28 | 49 | 77 | 4 | 23 | 83 | 106 | 192 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | 5 | 30 | ${ }^{7}$ | 7 |
|  |  |  |  |  |  | 0 | 87 | 87 | 1 |  | 2 | 2 | 153 |
|  |  |  |  |  |  |  |  |  | 1 | ${ }_{3}^{6}$ | 9 | 9 | 1 |
|  |  |  |  |  |  | 201 | 712 | 913 | 22 | 85 | 217 | 302 | 1，353 |
|  |  |  |  |  |  | 2 | 134 | 136 | 7 | 17 <br> 17 <br> 85 | 49 | ${ }^{66}$ | 1，202 |
| South Atlantic Division： |  |  |  |  |  | －－．－－1 |  | 14 | 45 | ${ }_{2}^{0}$ | 613 | 30 | 143525 |
| Delaware |  | $\stackrel{0}{50}$ | $\begin{array}{r} 0 \\ 49 \end{array}$ | $\begin{gathered} 0 \\ 99 \end{gathered}$ | － |  | 13 |  | ${ }_{3}^{1}$ |  | $\begin{gathered} 7 \\ 28 \end{gathered}$ |  |  |
| District of Co | ${ }_{2}^{3}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Virginia | 4 | 130 | 14 | 144 | 12 | 126 | 204 | 330 | 9 | 48 | 9 | 27 | 601 |
| North Carolin |  | 10 | 5 | 165 |  |  |  |  |  | 48 |  |  | 09 |
| South Carolina |  | 66 | 106 | 172 | 3 | 10 | 15 | ${ }_{25} 5$ |  | 26 | ${ }_{5}$ | ${ }_{79}$ | ${ }_{276}$ |
| Georgia | 10 | 47 | 378 | 425 | 14 | 37 | 74 | 111 | 20 | 245 | 230 | 475 | 1，011 |
| South Central | 1 | $\begin{array}{r} 8 \\ 305 \\ 10 \\ 50 \\ 172 \\ 69 \\ 69 \\ 0 \\ 0 \\ 0 \end{array}$ | $\begin{aligned} & 10 \\ & 362 \end{aligned}$ | $\begin{gathered} 18 \\ 667 \end{gathered}$ | 7 | 32 | 54 | 288 | 4 | 2 | ${ }_{218}^{268}$ | 19 | 107 |
| Kentucky | 11 |  |  |  |  | 138 | 149 |  |  | 416 |  | 684465 | 9991,397 |
| Alabama |  |  |  |  | 11 |  |  |  | 31 | 247 |  |  |  |
| Mississippi |  |  | 155 | 205 | 24 | 181 | 214 | 395 | 26 | 115 | 260 | ${ }_{466}$ | 1，066 |
| Louisiana |  |  | 67 | 239 | 2 | 11 | 12 | 23 | 7 | 19 | 52 | 71 | 33 |
| Arkan |  |  | 123 | 192 | 39 | 224 | 221 | 445 |  | 161 | 182 | 343 | 980 |
| Oklahoma |  |  | 15 | 4 | 13 | 118 | 120 | 238 | 11 | 170 | 122 | 292 | 571 |
| Indian Territory．．．－ | ${ }_{0}$ |  | 0 | 0 |  |  |  |  | 2 | 2 |  | 10 | 10 |
| North Central Division： Ohin． |  |  | 233 | 521 |  |  |  | 816 |  |  | 15946 | ${ }_{71}^{296}$ | 1，633 |
| Indiana |  | 204 | 130 | 334 | ${ }_{7} 7$ |  |  |  |  |  |  |  |  |
| Michinois | 13 | $\begin{array}{r}219 \\ 93 \\ \hline 1\end{array}$ | 13916989 | 388182188 | 10211 | 96 89 | 15414114 | 1250230 | ${ }_{1}^{5}$ | 888 | 4012440 | 212 |  |
| Wisconsin |  |  |  |  |  | $\begin{array}{r}81 \\ 71 \\ 7 \\ \hline\end{array}$ |  |  |  | 111 |  | ${ }^{663}$ |  |
| Minneso |  | 128 | 129 | ＋99381 | 11 |  | ${ }_{69}^{132}$ | $\stackrel{203}{76}$ | － |  | 5 |  | 465 425 |
| Iowa | 11 | $\begin{array}{r}188 \\ 82 \\ \hline\end{array}$ | 2496610 | 438 | 20 | 8115515 | 213965 | 1，120 | ${ }_{29}^{12}$ | $\begin{aligned} & 54 \\ & 243 \\ & 169 \end{aligned}$ | 42317220 | 560389 | 1，291 |
| Missnuri |  |  |  |  |  |  |  |  |  |  |  |  |  |
| North Dak | $\frac{1}{4}$ | 8313838 | $\begin{aligned} & 12 \\ & 62 \\ & 74 \end{aligned}$ | $\begin{array}{r} 20 \\ 93 \\ 112 \end{array}$ | ， | 155 | 12 | $\stackrel{2}{2}$ | 29 | ${ }_{0}$ | $\begin{array}{r}520 \\ 42 \\ 4 \\ \hline\end{array}$ | 188 6.3 6.3 | 47166184 |
| Nebraska |  |  |  |  | $\left\|\begin{array}{l} 1 \\ 2 \\ 0 \end{array}\right\|$ |  | 199 | 183 | $\stackrel{4}{7}$ | $\begin{aligned} & 13 \\ & 13 \\ & 53 \end{aligned}$ | ${ }_{121}^{41}$ | $\begin{array}{r}54 \\ 182 \\ \hline\end{array}$ |  |
| Kansas．－． | 9 | 12 | 106 | 231 |  |  |  |  |  |  |  |  | ${ }_{752}^{184}$ |
| Western Divisi Montana |  |  | 24 | ${ }_{25} 5$ | 2 | 6 | 37 | 43 | $\begin{aligned} & 1 \\ & 1 \end{aligned}$ | 0 | 8 | ${ }_{9}^{3}$ | 6134316 |
| Wyoming | 11011 |  |  |  |  |  |  |  |  |  |  |  |  |
| Colorado－ |  | 0 |  |  | 2 | 19 | 12 | 31 |  |  |  |  |  |
| Arizona |  |  |  |  |  |  |  |  | 2 | 2 |  |  |  |
| Ut |  | 14 | 179 | 330 |  |  | 8 |  | 4 | 42 | 45 | 87－－－ | 103 |
| Nevad |  |  |  | 94 |  | 1 |  |  |  |  |  |  |  |
| Washingt |  | 2233178 | $\begin{array}{r} 90 \\ 61 \\ 676 \\ 276 \end{array}$ | $\begin{aligned} & 112 \\ & 94 \\ & 454 \end{aligned}$ | 1 | －10 | $\begin{gathered} 15 \\ \cdots 5 \end{gathered}$ | $\left.\begin{array}{r} 25 \\ -61 \end{array} \right\rvert\,$ | － | $\begin{array}{r}6 \\ 27 \\ 0 \\ \hline\end{array}$ | 6404240 | $\begin{aligned} & 12 \\ & \begin{array}{l} 87 \\ 57 \\ 51 \end{array} \end{aligned}$ | $\begin{gathered} 749 \\ 181 \\ 586 \end{gathered}$ |
| California | ${ }_{7}^{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| （1） |  |  |  |  | 5 |  |  |  |  |  |  |  |  |

 institutions.

TOTAL NUMBER OF NORMAL STUDENTS.


Table 18.-Colleges and universities reporting students in teachers' training courses.


* Has peclagogical department.

Table 18.-Colleges and universities reporting students in teachers' training courses-Continued.


* Has pedagogical department.

Table 18.-Colleges and universities reporting students in teachers' training courses-Continued.


* Has pedagogical department.

Table 18.-Colleges and universities eporting students in teachers' training courasurcontinued.


Table 18.-Colleges and universities reporting students in texachers' training courses-Continued.

| Location. | Institution. | Normal students. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 1893. | 1894. | 1895. | 1896. |  |  |
|  |  |  |  |  | 朢 |  | تٌ ¢ H |
| North Carolina-Continued. |  |  |  |  |  |  |  |
| Louisburg | Louisburg Fowale C | 13 |  | 25 |  |  |  |
| Mars Hill | Mrars Hill College .......-- |  |  |  | 20 | 30 | 50 |
| Ruthertord College | Shaw University. | 25 | 189 | 175 |  |  |  |
| Salisbary -......-- | Livingstone College | 25 | 52 | 53 | 29 | 23 | 52 |
| North Dakota. |  |  |  |  |  |  |  |
| Fargo University | Fargo College <br> University of North Dakota | 28 | 12 | 12 8 | 8 | 12 | 20 |
| Akron - .-............... | Buchtel College | 21 |  | 19 |  |  | Ohio. |
|  | Mount Union College | 21 | 135 | 80 | $\therefore$ |  |  |
| Ashland .-................ | Ashland University. |  |  | 35 | 20 | 15 | $3{ }^{\text {a }}$ |
| Athens | Ohio University* | 74 | 105 | 73 |  |  |  |
|  | Baldwin University |  |  | 11 | 10 | 5 | 15 |
| Delaware | Defiance College. | 50 | 34 | 59 | 22 | 17 | 39 |
| Findlay-............... | Ohio Wesleyan University |  | 313 | 62 | 12 | 10 | 107 |
|  | Glendale Female College | 8 |  |  |  |  |  |
| Hillsboro .-...------. | Hillsboro College | 87 | 50 |  |  |  |  |
|  | Hiram College. | 75 | 75 |  | 0 | 2 | 2 |
| Hopedale | Hopedale Normal College |  | 75 |  |  |  |  |
| Marietta | Lima College .- | 12 | 55 | 74 | 29 | 8 | 67 |
| New Concord | Muskingum College | 10 | 18 | 10 | 13 | 2 | 15 |
| Richmond Tiffin. | Richmond College. |  | 29 |  |  |  |  |
|  | Heidelberg University | 3 | 7 | 10 | 15 | 4 | 19 |
| Westerville --.... | Otterbein University |  |  | 25 | 8 | 6 | 14 |
| West Frarmington.. | Farmington College Wilberforce University | 43 | 68 | 107 | 50 | 57 | 107 |
| Wooster .-. | University of Wooster. |  |  | 104 | 21 | 12 | 33 |
| Yellow Springs. | Antioch College .... |  |  | 76 | 16 | 24 | 40 |
| Oregon. |  |  |  |  |  |  |  |
| Forest Grov | Pacific College | 16 |  |  |  |  |  |
|  | Philomath College | 10 |  |  |  |  |  |
| Salem -.... | Willamette University | 28 | 26 | 31 | 13 | 26 | 39 |
| University Park | Portland University . |  | 27 |  | 20 | 35 | 55 |
| Pennsylvania. |  |  |  |  |  |  |  |
| Allentown | Allentown College for Women Muhlenberg College |  |  |  | 0 20 | 38 | 34 |
| Annville.....---------..- | Lebanon Valley College | 2 | 14 | 6 | 6 | 5 | 11 |
| Beatty .-. | - St. Vincent College...... | 144 |  |  | 24 | 0 | 24 |
| Chambersburg Collegeville | - Wilson College - . |  | 4 | 27 |  |  | 9 |
| Gettysburg............... | - Pennsylvania College |  |  | 27 | 15 | 0 | 15 |
|  | Thiel College ......... |  |  | 7 | 7 | 5 | 12 |
| Greenville <br> Jefferson <br> New Berlin | Monongabela College | 50 | 67 | 58 | 4 | 0 | 4 |
|  | - Central Pennsylvania College | 9 | ${ }^{7}$ | 7 | 7 | 3 | 10 |
| Philadelphia Do | - Central High School ........ | - | 16 | 11 | 6 | 0 | 8 |
| Pittsbarg <br> Selinggrove: <br> Volant | Duquesne College ........... | 4 | 30 | 30 | 8 | 154 | 181 |
|  | - Susquehanna University |  |  |  | 12 | 1 | 18 |
|  | - Volant College ... | 80 |  |  |  |  |  |
| Rhode Island. |  |  |  |  |  |  |  |
| Providence............ | Brown University* .-..........-- .-. - - |  |  |  | 20 | 12 | 22 |
| South Carolina. |  |  |  |  |  |  |  |
| ColumblaDoDo | Allen University. <br> Columbla Female College <br> Snuth Carolina College |  |  | $\left\|\begin{array}{r} 88 \\ -14 \end{array}\right\|$ | 10025 | 1380 |  |
|  |  |  |  | 8 |  |  |
|  |  |  |  | 25 |  |  |

* Has pedagocical dopartment,

Table 18.-Colleges and universities reporting students in teachers' training courses-Continued.


- Has pedagogical department.

Table 18.-Colleges and universities reporting students in teachers' training courses-Continued.


[^93]Table 19.-Statistics of public


[^94]normal schools, 1895-96.


Table 19.-Statistics of public

normal schools, 1895-96-Continued.


Table 19．－Statistics of public

| Liocation． | Name of institution． | －Teachers． |  |  |  | Students． |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{array}{\|c\|} \hline \text { Entire } \\ \text { num- } \\ \text { ber } \\ \text { em- } \\ \text { ployed. } \end{array}$ |  | $\begin{gathered} \text { In- } \\ \text { struct } \\ \text { ing } \\ \text { normal } \\ \text { stu- } \\ \text { dents. } \end{gathered}$ |  | Entire number enrolled． |  | Below normal grade． |  | In nor－ mal course． |  |
|  |  |  |  |  |  | $\begin{aligned} & \text { y } \\ & \text { 雷 } \end{aligned}$ |  | 霞 | 㖪 | 年 |  |
| 1 | 2 | 8 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| MASS̀ACHUSETTS－－ continued． |  |  |  |  |  |  |  |  |  |  |  |
| Bridgewater | State Normal Sehool．．．． | 7 |  | 7 | 8 | 49 | 203 |  |  | 49 | 203 |
| Cambridgeport | Wellington School（Cam－ bridgeport Training School for Teachers）． | 1 | 3 | 1 | 3 | 0 | 39 |  |  | 0 | 39 |
| Fitchburg ．．．．．．．．．．－－ | Massachusetts State Nor－ mal School． | 4 | 2 | 4 | 2 | 0 | 46 | 0 | 0 | 0 | 46 |
| Framingham．．．．．．．． | State Normal School．－．．．．．．－ | 1 | 16 | 1 | 16 | 0 | 115 |  |  | 0 | 115 |
| Salem | －．－－do－－－－－－－－－－． | 4 | 11 | 4 | 11 | 0 | 221 | 0 | 0 | 0 | 221 |
| Westfield <br> Worcester |  | 4 | 11 | 4 | 4 | 9 | 86 202 |  |  | 9 8 | 202 |
| Worcester ．．．．．．．．．．．． | Massachusetts State Nor． mal School． | 4 | 8 | 4 | 8 | 3 | 202 |  |  | 3 | 202 |
| michigan． |  |  |  |  |  |  |  |  |  |  |  |
| Detroit | Detroit Normal Training | 1 | 23 | 1 | 4 | 0 | 119 |  |  | 0 | 119 |
| Mount Pleasant．．．－ | Michigan Central Normal | 2 | 3 | 2 | 3 | 30 | 60 | 15 | 30 | 15 | 30 |
| Ypsilanti | Michigan State Normal School． | 21 | 23 | 21 | 18 | 222 | 763 |  |  | 205 | 622 |
| School． <br> MINNESOTA． |  |  |  |  |  |  |  |  |  |  |  |
| Mankato | State Normal School |  | 16 | 5 |  | 226 |  |  | 186 | 98 49 | 301 143 |
| Moorhead | －．－do ．．．．．．．．．．．－－．．．．．．．．．．．．．－ | 4 | 7 | 4 | 7 | 58 | 167 | 9 93 | 24 | 149 | 143 265 |
| St．Cloud St．Paul | Teachers Training school． | 7 5 | 10 10 | 7 | 10 | 217 | 333 278 | 93 184 | 88 196 | 124 | 88 |
| St．Paul | State N ormal School．．．．．．． | 6 | 14 | ${ }^{5}$ | 5 4 | － 185 | 278 319 | 184 | 180 | 55 | 319 |
| MISSISSIPPI． |  |  |  |  |  |  |  |  |  |  |  |
| Ackerman． | Central Mississippl Normal | 7 | 4 | 1 | 0 | 75 | 85 | 55 | 72 | 15 | 15 |
| Blue Springs． | Institute．＊Normal Col． | 2 | 3 | 2 | 1 | 105 | 110 | 0 | 0 | 105 | 110 |
| Blue Springs． | lege．＊ | 2 | 3 | 2 | 1 | 10 | 110 | 0 | 0 |  |  |
| Holly Springs．．．．．．－ | Holly Springs Normal In－ stitute． | 2 | 2 | 2 | 0 | 90 | 60 | 60 | 40 | 30 | 20 |
|  | Mississippi State Normal | 4 | 1 | 2 | 0 | 105 | 108 | 70 | 72 | 35 | 36 |
| Louisville ．．．－．－－．．．－ | Louisville Normal School ．－－ | 1 | 2 | 1 | 0 | 70 | 60 |  |  | 70 | 80 |
| M18SOURI． |  |  |  |  |  |  |  |  |  |  |  |
| Cape Girardean Gainesville <br> Kirksville． $\qquad$ <br> St．Louis． <br> Warrensburg | State Normal Sehool－．．．．．．． | 8 |  |  |  | $17 \%$ | 149 |  |  | 177 | 148 |
|  | Gainesfille Nommal School．－ | 1 | 2 | 1 | 1 | 50 | 48 | 88 | 43 | 812 | 312 |
|  | State Normal School．．．．．．．． | 9 | 3 | 9 | 3 | 311 | 312 |  | ．．．．． | 311 | 234 |
|  | Normal and High School．．．－ | 25 | 48 | 0 | 7 | 577 | 1472 |  |  | 408 | 515 |
|  | Normal Sehool，second dis． trict． | 9 | 9 | 8 | 8 | 408 | 515 |  |  |  | 51. |
| NEBRASKA．trict． |  |  |  |  |  |  |  |  |  |  |  |
| Pern $\qquad$ NEW HAMPGHIRE | Nebraska State Normal | 5 | 8 | 5 | 5 | 1\％ | 278 | 136 | 147 | 45 | 75 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Plymouth ．．．．．．．．－－ | New Hampshire State Nor－ | 5 | 8 | 4 | 3 | 110 | 230 | 82 | 96 | 1 | 90 |
| NEW JERSEY． Elizabeth | Elizabeth Normal Trainin | 1 | 1 | 1 | 1 | 0 | 22 |  |  | 0 | 22 |
| Newark | Newarik Normal and Train． | 9 | 5 | 2 | 5 | 0 | 80 |  |  | 0 | 66 |
| Paterson | ing School． | 1 | ， | 1 | 2 | 0 | 60 |  | 0 | 0 | 60 |
|  | Paterson Normal Iraining | 1 | 2 | 1 | 2 | 0 | 60 | 0 | 0 | 0 | 60 |
| Prenton | New Jersey State and Model Schools． | 15 | 26 | 10 | 10 | 398 | 855 | 208 | 240 | 62 | 537 |

[^95]［normal schools，1895－96－Continued．

| Students． |  |  |  |  |  | Col－oredstu－dentsin nor－malcourse． |  | Grad． from norma |  | Grad－uatesfromothercourses． |  |  |  | Volumes in library. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| In basi－ ness course |  | In high school grades． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 思 |  | 嵲 | $\begin{aligned} & \dot{@} \\ & \text { 曽 } \\ & \text { 落 } \end{aligned}$ |  |  |  |  | $\left\lvert\, \begin{gathered} \text { 品 } \\ \text { 胃 } \end{gathered}\right.$ |  | 雪 |  |  |  |  |  |  |  |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |  | 26 | 29 | 28 | 29 | 30 |
|  |  |  |  | 165 | 185 |  |  | 19 | 69 | 0 | 0 | 4 | 38 | 00 | \＄420， 000 | 835， 813 | \＄59，000 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 40 | 2，281 | 150，000 | 16，500 |  |
| $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 0 |  |  | 33 | 44 | 0 |  |  |  | 0 | 0 | 4 | $\stackrel{38}{38}$ | 3，100 | 200，000 | 22， 230 | 31，000 |
| 0 | 0 | 0 | 0 | $\begin{aligned} & 76 \\ & 22 \end{aligned}$ | $\begin{aligned} & 67 \\ & 63 \\ & 23 \end{aligned}$ | 0 | $\begin{aligned} & \frac{1}{3} \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 3 \\ & 0 \end{aligned}$ | $\begin{aligned} & 56 \\ & 33 \\ & 53 \end{aligned}$ | 0 | 0 | 告 | 38 <br> 38 <br> 38 | 6，000 $\cdots$ 9 | 2200000 240,000 170,000 | 21，876 |  |
| 0 | 0 | 0 | 0 | 453 | 427 | 0 | 1 | 0 | 42 | 0 | 0 | 3 | 40 | 292 | 60，000 |  |  |
| 0 | 0 |  |  | 15 | 30 | 0 | 0 | 1 | 5 | 0 | 0 | 3 | 40 | 500 | 25，000 | 3，000 | 0 |
| 0 | 0 | 33 | 125 | 204 | 153 | 0 | 0 | 48 | 112 | 0 | 0 | 4 | 40 | 16，600 | 260，500 | 58，400 |  |
| 0 | 0 |  |  |  |  |  |  | ${ }_{14}^{14}$ |  |  |  |  |  | 4，000 | 150，000 | 26，000 |  |
| 0 | 0 | 0 | 0 | $\begin{aligned} & 59 \\ & 145 \\ & 184 \end{aligned}$ | $\begin{array}{\|l\|} \hline 50 \\ 105 \\ \hline 180 \end{array}$ | 0 | 0 | 㐌 | 18 89 89 | 0 | ${ }_{0}^{0}$ | 3 3 3 | $\begin{array}{\|c} 36 \\ 38 \\ 38 \end{array}$ | 1，185 | 100,000 136,620 | 17，000 | － 17.780 |
|  |  |  |  |  | 119 |  |  |  | 39 109 |  |  | $\stackrel{2}{5}$ | ${ }_{38}^{38}$ | 2,105 3,500 | $\begin{aligned} & 4,238 \\ & 200,000 \end{aligned}$ | $\begin{aligned} & 54,000 \\ & \end{aligned}$ | $\cdots$ |
| ${ }_{0}^{3}$ | 0 |  |  |  |  |  |  |  |  |  |  | 3 | 40 | 20 | 1，100 | 1，400 |  |
|  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 10 | 100 | 2，000 | 550 | 0 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4，000 | 2，000 |  |
| － 0 | 0 |  |  |  |  |  |  |  | 4 |  |  | 2 | 33 | 3，000 | 12，000 | 2，000 | 0 |
|  |  |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 40 | 150 | 2，000 | 400 | 0 |
| 0 | 0 | 0 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 0 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 0 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | ${ }^{93}$ |  |  |  |  |  |  |  | 11，000 | 5，000 |
| 12 | 74 |  |  | 63 | 62 |  |  | 18 | $1{ }^{\frac{1}{8}}$ |  |  | ${ }_{2}^{4}$ | 40 |  | $\begin{aligned} & 1,500 \\ & 250,000 \\ & 107 \end{aligned}$ |  |  |
| 0 | 0 |  |  | 88 | 97 | 0 |  |  | ${ }^{162}$ | $37$ | $\left\|\begin{array}{c} 153 \\ 0 \end{array}\right\|$ |  |  |  |  | $\left.\begin{gathered} 10,602 \\ 13,750 \end{gathered} \right\rvert\,$ | 80，000 |
|  |  | 0 | 0 |  |  | 0 | 0 | 18 | 21 | 0 | 0 | 3 | 38 | 6，000 | 200，000 | 19，500 | 8，000 |
| 0 | 0 | 27 | 4 | 100 | 140 | 0 | 0 | 0 | 17 | 0 | 17 | 2 | 40 | 1，800 | 76，000 | 10，000 |  |
|  |  |  |  |  |  |  |  | 0 | 13 |  |  | 2 | 40 |  |  |  |  |
|  |  |  | 0 | 197 | 200 | 0 | 0 | 0 | 3 | 0 | 3 | 2 | 40 | 40 | 33，000 | 12，570 |  |
| 0 | 0 | 0 | 0 |  | 198 | 0 | 0 | 0 | 28 | 0 | 0 | 2 | 42 | 50 | 80，000 | 0 |  |
|  |  | 70 | 78 |  |  | 0 | 0 | 2 | 1 | 18 |  | 3 |  | 8，000 |  | 28，000 | 0 |

Table 19．－Statistics of public

| Location． | Name of institution． | Teachers． |  |  |  | Students． |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Entire num－ ber ployed |  | $\begin{aligned} & \text { In- } \\ & \text { struct } \\ & \text { ing } \\ & \text { normal } \\ & \text { stu- } \\ & \text { dents. } \end{aligned}$ |  | Entire enrolled． |  | Below normal grade． |  | $\begin{gathered} \text { In nor- } \\ \text { mal } \\ \text { course. } \end{gathered}$ |  |
|  |  | 荘 | ¢ | 品 |  |  | $\begin{gathered} \text { d } \\ \text { 胢 } \\ \text { ت } \end{gathered}$ | $\begin{aligned} & \text { ब } \\ & \text { ज゙ } \end{aligned}$ |  |  |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| NEW MEXICO． Silver City．．．．．．．．． NEW YORK． | Normal Mexico． | 2 | 2 | 2 | 2 | 13 | 40 |  |  | 13 | 40 |
| Albany |  |  | 12 | 7 | 12 | 36 | 278 |  |  | 36 | 278 |
| Brockport | State Normal and Training |  | 514 | 5 |  |  | 591450 |  |  | 138 | 378 |
| Brooklyn | Training School for Teach－ | 2 | 24 | 2 | 24 | 350 |  | $\begin{aligned} & 167 \\ & 349 \end{aligned}$ | $\begin{aligned} & 160 \\ & 250 \end{aligned}$ | 1 | 200 |
| Buffalo | Buffalo State Normal | 6 | 17 | 6 | 7 | 230 | 670 | 185 | 264 | 63 | 380 |
| Cortland | State Normal and Training | 6 | 14 | 4 | 9 | 399 | 636 | 200 | 217 | 180 | 383 |
| Fredonia | State Normal School | 644 | $\begin{aligned} & 13 \\ & 17 \end{aligned}$ | 644 | 13 | ${ }_{425}^{380}$ | ${ }_{925}^{396}$ | ${ }_{200}^{150}$ | ${ }_{240}^{233}$ | 150 | 160660 |
| Geneseo | Geneseo State Normai |  |  |  |  |  |  |  |  |  |  |
| New Paltz． | State Normal and Training | 4 | 10 | 4 | 10 | 60 | 320 |  |  | 50300 |  |
| New York（Park ave．and 68th st．）． Oneonta | Normal．College，City of New York． | 7 | 37 | 6 | 15 | 150 | 1813 |  |  | 140 | 252 436 |
| Oswego－．．．．．．．．．．．．．．．． | Oswego State Normal and | 6 | 6 <br> 6 <br> 16 | ${ }_{6}^{6}$ | $\begin{aligned} & 11 \\ & 10 \end{aligned}$ | 150 36 | $\begin{aligned} & 465 \\ & 349 \end{aligned}$ | －－－ |  | 140 | ${ }_{349}^{436}$ |
| Plattsburg <br> Potsdam． | State Normal School． State Normal and Training | ${ }_{10}^{4}$ | 9 9 | $\begin{array}{l\|l} 4 & 9 \\ 9 & 8 \end{array}$ |  | $\begin{array}{l\|l\|} 9 & 284 \\ 8 & 345 \end{array}$ | $\begin{aligned} & 136 \\ & 657 \end{aligned}$ | $\begin{array}{r} 90 \\ 124 \end{array}$ | $\begin{aligned} & 114 \\ & 154 \end{aligned}$ | $\begin{gathered} 36 \\ 178 \end{gathered}$ | 180 385 |
| Syracuse $\qquad$ NORTH CAROLINA． | Syracuse High School <br> （Normal department）． |  | 520 |  | 2.2 | 0 | 38 |  | $\cdots \cdot \mid$ | 0 | 38 |
| Elizabeth City Fayetteville．．． | State Normal School <br> State Colored Normal | 2 | $\stackrel{1}{2}$ | $\stackrel{3}{2}$ | 1 | $\begin{gathered} 52 \\ 100 \end{gathered}$ | $\begin{aligned} & 123 \\ & 104 \end{aligned}$ | 26 | 50 | $\stackrel{52}{31}$ | ${ }_{1}^{123}$ |
| Goldsboro Greensboro | State Normal and Indus trial School． <br> Plymouth State Normal sichool． <br> State Normal School $\qquad$ | 2 1 <br> 5 22 |  |  |  | $\begin{array}{r} 45 \\ 0 \end{array}$ |  | $\begin{array}{r} 13 \\ 0 \end{array}$ | ${ }^{45}$ | ${ }^{32}$ | 82 404 |
| Plymouth |  | 2 | 2 | 2 | 2 | 52 | 132 | 17 | 56 | 3） | 76 |
| Salisbury |  |  |  |  | 1 | 43 | 70 | 36 | 52 | 7 | 18 |
| north dakota． |  |  |  | 1 | 3 |  |  |  |  |  |  |
| Mayville | State Normal School |  | $3$ | $\begin{aligned} & 5 \\ & 4 \end{aligned}$ |  | $\begin{aligned} & 3 \\ & 4 \end{aligned}$ | $\begin{aligned} & 87 \\ & 82 \end{aligned}$ | －．．．－ |  | $\begin{aligned} & 80 \\ & 58 \end{aligned}$ | $8{ }_{8}^{87}$ |
| OH |  |  |  |  |  |  |  |  |  |  |  |
| Cincinnati | Cincinnati Normal School．－ |  | － | 0 | 514 | $\begin{aligned} & 80 \\ & 58 \end{aligned}$ | $\begin{aligned} & 1364 \\ & 111 \end{aligned}$ | 0 |  | 0 136 <br> 0 111 <br> 0 -1 |  |
| Cleveland | Cleveland Normal Train－ |  |  |  |  | ${ }_{0}^{0}$ |  |  | 0 |  |  |  |
| Columbus． | Columbus Normal School ．．． | $\begin{array}{l\|l} 3 & 7 \\ 8 & 4 \\ 4 & 3 \\ 2 & 3 \end{array}$ |  | $\left\|\begin{array}{r} 3 \\ 8 \end{array}\right\|$ |  |  |  |  |  | 34502020 | 74383813939 |
| Fayette．．．． | Fayette Normal University． |  |  |  |  |  | 0 |  |  |  |  |
| Wadsworth | Geneva Normal Schol Wadsworth Normal |  |  | 2 |  |  | 69 | 178 |  |  |  |
| omiahoma |  |  |  |  |  |  |  |  |  |  |  |
| Edmond． | The NormalSchool of Okla－ homa． | 3 |  |  | ： |  | $3^{1} 69$ | 109 | 0 | 0 ： | 69109 |  |
| oregon． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Monmonth | State Normal School．．．．．．．． East Sregon State Normal school． | $\begin{array}{ll} 8 & 4 \\ 5 \end{array}$ |  | $\left\|\begin{array}{l} 8 \\ 3 \end{array}\right\|$ |  | $\begin{array}{ll} 4 \\ 1 & 201 \\ 1 \end{array}$ | $\underset{273}{273}$ | $\underset{131}{81}$ | $\begin{array}{\|c\|} 115 \\ 170 \end{array}$ | ${ }_{3}^{105}$ | 138 i1 |

normal sehools, 1895-96—Continued.


Table 19.-Statisties of public.

normal schools, 1895-96-Continued.


Table 19．－Statistics of public

| Location． | Name of institution． | Teachers． |  |  |  | Students． |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Entire num－ ber em－ ployed． |  | In－ struct－ ing normal stu－ dents． |  | Entire number enrolled． |  | Below normal grade． |  | In nor－ mal course． |  |
|  |  | 荘 | 㖪 | 追 | 家 | $\begin{aligned} & \dot{0} \\ & \text { 岕 } \end{aligned}$ |  | 宬 |  | 㖪 | 回 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| WASHINGTON． <br> Cheney $\qquad$ <br> Ellensburg $\qquad$ <br> west virginia． <br> Fairmont $\qquad$ | State Normal School．．．．．．．． Washington State Norma］ School． | $\begin{aligned} & 3 \\ & 4 \end{aligned}$ | 75 | 34 | $\begin{aligned} & 7 \\ & 5 \end{aligned}$ | $\begin{aligned} & 80 \\ & 53 \end{aligned}$ | $\begin{aligned} & 132 \\ & 131 \end{aligned}$ | 0 | $\cdots$ | 8053 | 132131 |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |
|  | Fairmont State Normal | 6 | 5 | 4 | 3 | 202 | 179 | 7 | 5 | 198 | 160 |
| Farm－－－－－－－－－－．．．－ | School． <br> The West Virginia Colored | 3 | 5 | 3 | 2 | 45 | 65 | 34 | 44 | 14 | 18 |
| Glenville | Glenville State Normal | 3 | 2 | 3 | 2 | 57 | 50 |  |  | 57 | 50 |
| Huntington ．．．．．．．．． | School． <br> Marshall College State Nor－ | 3 | 3 | 3 | 3 | 56 | 158 |  |  | 56 | 158 |
| Shepherdstown | mal School． <br> Shepherd College State |  |  |  |  | 60 | 40 |  |  | 60 | 40 |
| West Liberty $\qquad$ WISCONSIN． | Normal School． <br> WestLiberty State Normal School． | 3 | 2 | 3 | 1. | 68 | 92 | 60 | 72 | 6 | 12 |
| Milwaukee ．．．．．．．．．． | State Normal School．．．．．．－． |  | 10 | 4 | 5 | 30 | 1\％2 |  |  | 30 | 172 |
| Oshkosh．．．．．．．．．．．．．． |  | 8 | 19 | 8 | 14 | 192 | 440 |  |  | 192 | $\stackrel{4}{47}$ |
| Platteville | －．－do | 11 | 11 | 10 | 8 | 276 | 335 | 51 | 58 | 225 | 277 |
| River Falls． | do | 4 | 12 | 0 | 9 | 90 | 188 |  |  | 89 | ${ }_{179}^{185}$ |
| Stevens Point．．．．．．． | do | 7 | 10 | 7 | 7 | 187 | 25 | 83 | 76 | 104 | 179 226 |
| Whitewater．－．．．．．－． | －－．．do | 7 | 11 | 7 | 7 | 170 | 263 |  |  | 166 | 226 |

normal'schools, 1895-96-Continued.


Table 20．－Statistics of private

| Location． | Name of institution． | Teachers． |  |  |  | Students． |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Entire num． ber em－ ployed． |  |  |  | Entire number enrolled． |  | Below normal grade． |  | $\begin{aligned} & \text { In nor- } \\ & \text { mall } \\ & \text { course. } \end{aligned}$ |  |
|  |  | $\begin{aligned} & \dot{9} \\ & \text { 亗 } \end{aligned}$ |  | 吽 |  | @゙ |  | 呂 |  | 发 | 完 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Araba |  |  |  |  |  |  |  |  |  |  |  |
| Suntsville ${ }_{\text {Scottsboro }}^{\text {S }}$ ．．．．．．．．．． | Central Alabama Academy－ | 4 6 | ${ }_{6}^{2}$ | $\stackrel{4}{5}$ | ${ }_{0}^{2}$ | 100 | 102 | 40 45 | 7 55 5 | 8 | 19 10 |
| Selma Tuskegee | sity．${ }^{\text {surrell }}$ Academy | 2 | 6 |  |  | 137 | 150 | 90 | 88 | 17 | 40 |
|  | Tuskegee Normal and In－ custrial Institute． | 46 | 27 | 10 | 18 | 658 | 358 | 420 | －246 | 200 | 150 |
| Arkansas． |  |  |  |  |  |  |  |  |  |  |  |
| Berryville．．．．．．．．．－－－－－－－Southland | Clarke＇s Academy | 2 | 2 | 2 | 2 | 60 | 65 | 40 | 40 | 15 | 20 |
|  | Southland College and Nor－ | 3 | 6 | 2 | 4 | 109 | 124 | 76 | 87 | 32 | 25 |
| Sulphur Rock ．－． <br> CALIFORNIA． | Arkansas Normal School | 3 | 2 | 3 | 2 | 64 | 43 | 0 | 0 | 64 | 43 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Los Angeles．．．．．．．．． | Fröbel Institute． | 2 |  | 2 |  | 0 | 38 |  |  | 0 | 36 |
|  | Gilson＇s Normal and Special | 1 | 1 | 1 | 1 | 10 | 70 | 0 | 0 | 3 | 68 |
| San Francisco．．． <br> COLORADO． | Training School． | 0 | 4 | 0 | 4 | 0 | 20 | 0 | 0 | 0 | 20 |
|  | Training |  |  |  |  |  |  |  |  |  |  |
| Denver－．．．．．．．．．．．． | Denver Normal and Pre－ paratory School． | 4 | 5 | 4 | 4 | 19 | 176 | 6 | 5 | 13 | 171 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Norwich ．－．－．．．．－．－ | Norwich Normal School． | 2 | 10 | 2 | 10 | 0 | 31 |  |  | 0 | 31 |
| delaware． |  |  |  |  |  |  |  |  |  |  |  |
| Newark | Academy of Newark and | 2 | 1 | 2 | 1 | 18 | 12 | 5 | 4 | 13 | 8 |
| DIST．OF COLUMBIA． |  |  |  |  |  |  |  |  |  |  |  |
| Washington．．．．．．．． | Washington Kindergarten Normal Institute． | 0 | 4 | 0 | 2 | 0 | 20 |  |  | 0 | 20 |
| FLORIDA． |  |  |  |  |  |  |  |  |  |  |  |
| Jasper－ | Jasper Normal Institute．．．． | 4 | 4 | 3 | 2 | 158 | 140 | 62 | 59 | 45 | 39 |
| Live Oak | Florida Institute．．．．．．．．．．．．． | 2 | 3 | 2 | 2 | 44 | 64 | 20 | 32 | 24 | 32 |
| Orange Park ．－．．．．－－ | Orange Park Normal and Industrial School | 3 | 6 | 2 | 3 | 46 | 45 | 32 | 39 | 14 | 6 |
| Whité Springs ．．．．．－ | Florida Normal College and Business Institute． | 3 | 2 | 2 | 0 | 90 | 60 | 74 | 36 | 16 | 24 |
| GEORGIA． | Business Institute． |  |  |  |  |  |  |  |  |  |  |
| Augusta． | Paine Institute．．．．．．．．．．．．．．． |  |  |  |  | 107 | 98 | 41 | 30 | 67 | 65 |
| Demorest | Demorest Normal School．．． | 2 | 5 | 2 | 0 | 32 | 35 | 8 | 12 | 8 | 8 |
| Macon ．．．． | Ballard Normal School | 2 | 11 | 1 | 2 | 110 | 270 | 95 | 230 | 15 | 40 |
| illitots． | Allen Normal and Indus－ trial School | 0 | 6 | 0 | 8 | 28 | 108 | 21 | 90 | 3 | 17 |
|  |  |  |  |  |  |  |  |  |  |  |  |
| Addison ．．．．．．．．．．．．．－ | German Evangelical Lu－ | 8 | 0 | 8 | 0 | 204 | 0 | 127 | 0 | 77 | 0 |
|  | theran Teachers＇Semi－ nary． |  |  |  |  |  |  |  |  |  |  |
| Bushnell <br> Dizon $\qquad$ | Western Normal College－－ | 9 | 3 |  |  | 425 | 376 | 0 | 0 | 325 | 350 |
|  | Northern Illinois Normal | 6 | 1 | 8 | 2 | 96 | 88 |  |  | 40 | 53 |
| Galesburg．．．．．．．．．．． | Kindergarten Normal | 2 | 5 | 1 | 3 | 39 | 90 | 38 | 50 | 1 | 40 |
| Mncomb | $\begin{aligned} & \text { School. Mlinois Normal } \\ & \text { Western Mlatin } \end{aligned}$ | 20 |  | 7 | 1 | 2\％ | 199 | 50 | 45 | 100 | 72 |
|  | School and Business In－ | 20 | 5 | 7 | 1 | 200 | 180 | 50 |  |  |  |
| Mount Morris | Monnt Morris College | 8 | 5 | 1 | 1 | 188 | 132 | 82 | 84 | 28 | 2 |

normal schools, 1895-96.


Table 20.-Statistics of private

normal schools, 1895-96-Continued.


Table 20．－Statistics of private

| Location | Name of institution． | －Teachers． |  |  |  | Students． |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Entirenum－ber em－ployed． |  | $\begin{array}{\|c} \text { In- } \\ \text { struct- } \\ \text { ingnor- } \\ \text { mal } \\ \text { stu- } \\ \text { dents. } \end{array}$ |  | $\begin{aligned} & \text { Entire } \\ & \text { number } \\ & \text { enrolled. } \end{aligned}$ |  | Below normal grade． |  | $\begin{gathered} \text { In nor- } \\ \text { mal } \\ \text { course. } \end{gathered}$ |  |
|  |  |  |  |  | 䐴 | 骨 |  | $\begin{aligned} & \text { @் } \\ & \text { 合 } \end{aligned}$ |  | 䍏 |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| KENTU̇CKY－cont＇d． |  |  |  |  |  |  |  |  |  |  |  |
| Hardinsburg | Breckinridge Normal Col－ |  | 1 | 2 | 1 | 80 | 70 | 40 | 33 | 23 | 21 |
| Louisa． | Louisa The National Institute． |  | 2 | 2 | 0 | $\begin{aligned} & 60 \\ & 35 \\ & 3 \end{aligned}$ | $\begin{aligned} & 50 \\ & 30 \\ & 30 \end{aligned}$ | 12 | 110 | 40201 | 352014 |
| $\begin{aligned} & \text { Madisonvilie } \\ & \text { Do }-\ldots . . \end{aligned}$ |  |  | 2 | 2 | 1 1 2 |  |  |  |  |  |  |
| Magnolia | Magnolia Classical and Nor－ mal College． <br> Morehead Normal School． Central Normal School and Business College． | 2 | 2 | 1 | 1 | 40 | 55 | 15 | 35 | 25 | 20 |
| Morehead Waddy |  | $\stackrel{2}{4}$ |  | $\stackrel{2}{2}$ | 1 | $\begin{gathered} 80 \\ 105 \end{gathered}$ | $\begin{array}{r} 78 \\ 120 \end{array}$ | $\begin{aligned} & 48 \\ & 58 \end{aligned}$ | 5675 | $\stackrel{24}{25}$ | 3017 |
| maine |  |  |  |  |  |  |  |  |  |  |  |
| Bucksport | East Maine ConferenceSeminaryThe Hampden Academy．．．． | 5 | 6 | 2 |  | 135 | 123 | 0 | 0 | 2 | 38 |
| Hamppden |  | 1 |  | 0 |  | 50 | 55 | 5 | 4 | 45 | 51 |
| Maryca |  |  | 1 |  | 1 |  |  |  |  |  |  |
| Baltimore | Baltimore Normal school for the Education of Col－ ored Teachers． <br> Buckeystown Normal Trainng School． | 1 | 1 | 1 |  | 1114 | 23 |  |  | 11 | 23 |
|  |  | 1 |  |  | 1 |  |  |  |  |  |  |
| Buckeystow |  | 1 | 1 | 1 | 1 | 14 | 7 | 4 | 2 | 4 | 4 |
| massachusetts． |  |  |  |  |  |  |  |  |  |  |  |
| Boston | Chauncy Hall Normal Class Notre Dame TrainingSchool Kindergarten Normal Class． | 300 |  | 300 | 491 | 000 | $\begin{aligned} & 88 \\ & 62 \\ & 62 \end{aligned}$ |  |  | 000 | 886862 |
| Worcester |  |  | $\begin{aligned} & 4 \\ & 9 \\ & 1 \end{aligned}$ |  |  |  |  |  |  |  |  |
| michigan． |  |  |  |  |  |  |  |  |  |  |  |
| Fenton | Fenton Normal School <br> Flint Normal College and Business Institute． Oakside School <br> Petoskey Normal Schooi and Business College． | 320 | 4 | $\stackrel{2}{2}$ |  | $\begin{aligned} & 100 \\ & 100 \end{aligned}$ | ${ }_{125}^{137}$ | 0 | 0 | ${ }_{7}^{75}$ | 125 |
| Flint． |  |  |  |  | 1 |  |  |  |  |  |  |
| Owrosso Petoskey |  | 0 |  | $\begin{aligned} & 0 \\ & 1 \end{aligned}$ |  | $\begin{gathered} 13 \\ 128 \end{gathered}$ | $\begin{array}{r} 24 \\ 256 \end{array}$ | $\begin{aligned} & 2 \\ & 0 \end{aligned}$ | ${ }_{0}^{6}$ | ${ }_{28}^{1}$ | 120 |
| minnesota． |  |  | 4 |  | 1 |  |  |  |  |  |  |
| Moorhead New Ulm | Concordia College <br> Dr．Martin Luther College．． | 8 | 30 | 2 | 0 | $\begin{gathered} 147 \\ 52 \end{gathered}$ | 701 | 30 | 1 | 3522 | ${ }_{0}^{15}$ |
| MISSISSIPPI． |  |  |  |  |  |  |  |  |  |  |  |
| Houston | Mississippi Normal College． <br> Inka Normal Institute． <br> Meridian Academy． <br> Winston Normal High <br> School． <br> Mississippi Normal Institute <br> Tongaloo University，Nor－ <br> mal department． <br> Tula Normel Institute．．．．．． | 8 <br> 8 <br> 8 <br> 1 <br> 1 <br> 4 <br>  <br>  <br> 3 | $\begin{aligned} & 7 \\ & \mathbf{5} \\ & \mathbf{3} \\ & 2 \end{aligned}$ | $\begin{aligned} & 2 \\ & 3 \\ & 0 \\ & 1 \end{aligned}$ |  | $\begin{gathered} 127 \\ 2250 \\ 75 \\ 65 \end{gathered}$ | $\begin{gathered} 214 \\ 28 \\ 125 \\ 50 \\ 50 \end{gathered}$ | 491305020 | 67120120 | 33 | 471121617 |
| Inka Meridian |  |  |  |  | 32110 |  |  |  |  | 120 |  |
| Plattsburg |  |  |  |  |  |  |  |  | 25 | 10 |  |
| Sherman |  |  |  | ${ }_{3}^{3}$ |  | ${ }_{177}^{125}$ | $\begin{aligned} & 105 \\ & 183 \end{aligned}$ | $\begin{array}{r} 50 \\ 150 \end{array}$ | ${ }_{161}^{59}$ | 5025 | 4022 |
| Tonga |  |  | 17 |  | 0 3 |  |  |  |  |  |  |
| Tula |  |  | 4 | 2 |  | 100 | 125 | 70 | 80 | 30 | 35 |
| hissouri． |  |  |  |  | 0 | 100 |  |  |  |  |  |
| Chillicothe ．．．．． | Chillicothe Normal College． <br> Hoiper Institute．．．．．．．．．．． <br> Scotten＇s Normal and Busi－ <br> ness College． <br> The Marvilie Seminary－．．． <br> Thornfeld Normal Institute <br> loge． | $\left.\cdot \begin{array}{r} 15 \\ 4 \\ 2 \\ 3 \\ 5 \\ 3 \\ 3 \\ 4 \end{array} \right\rvert\,$ |  |  |  |  | $\begin{array}{\|} 429 \\ 50 \\ 70 \\ 70 \\ 70 \end{array}$ | $\begin{gathered} 212 \\ 40 \\ 30 \end{gathered}$ | $\begin{gathered} 170 \\ 43 \\ 40 \end{gathered}$ | 320141530 | 223111040 |
| Claricsburg．．．．．．．．． |  |  | $\begin{aligned} & 2 \\ & 1 \\ & 3 \\ & 8 \\ & 5 \\ & 2 \\ & 0 \\ & 0 \end{aligned}$ |  |  |  |  |  |  |  |  |
| Green Rtdge． |  |  |  |  |  |  |  |  |  |  |  |  |
| Maryville Thornield Weaubleau |  |  |  |  |  | $\begin{aligned} & 146 \\ & 50 \\ & 00 \end{aligned}$ | $\begin{aligned} & 0 \\ & 85 \\ & 10 \end{aligned}$ | $\begin{gathered} 0 \\ 80 \\ 10 \end{gathered}$ | 12 88 41 | 13 20 30 |  |

noxmal sehools, 1896-96-Continued.


Table 20.—Statistics of private

normal schools, 1895-96-Continued.


Table 20.-Statistics of private

normal schools, 1895-96-Continued.


## CHAPTER XXXIX.

## STATISTICAL REVIEW OF HIGHER EDUCATION, 1895-96.

The institutions for higher education in the United States are given in this report under the following headings: (1) Universities and colleges for men and for both sexes; (2) colleges for women; (3) schools of technology; (4) professional schools and departments. In the summarized and detailed tables of these institutions are given statistics concerning the entire institutions, and not of the collegiate departments only. It is a well-known fact that a large number of the institutions for higher education, especially in comparatively recently settled sections of the country, maintain preparatory departments for the secondary, and in some cases for the elementary education of pupils, as well as normal, business, music, art, and other departments of instruction. The number of students in attendance at such departments is of courseincluded in the column giving the total number of students in attendance at the institution as a whole. In the summarized and detailed tables great care has been taken to tabulate separately the number of students in the several departments of the institutions, so that it is an easy matter to ascertain the number of students that may properly be included under the general head of higher education. Counting all of the students in undergraduate and graduate departments of the classes of institutions named above, it is found that there were, during the year under consideration, 139,611 students in higher education, of which number 33,705 , or 24.14 per cent, were women. If professional students, including students in law, medicine, and theology, are excluded, there remain 97,377 students in undergraduate and graduate departments of colleges and schools of technology, 32,234 , or 33.1 per cent, being women.

The summarized statistics, showing the number of students in higher education in each class of institutions, as well as the total number in higher education in all of the institutions, are given by States and Territories in the table which follows, while the statistics concerning the several classes of institutions may be found on the pages following the combined table.

Summarized statistics of higher education (including students in undergraduate and graduate departments of universities and colleges, colleges for women, schools of technology, and in professional schools and departments).

| State or Territory. | Universities and colleges for men and for both sexes. |  |  |  | $\begin{gathered} \text { Institutes } \\ \text { of } \\ \text { technology. } \end{gathered}$ |  | Professional schools and departments. |  | Total number of students in higher education. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male. | Female. |  |  | Male. | $\begin{gathered} \text { Fe- } \\ \text { male } \end{gathered}$ | Male. | Female. | Male. | Female. |
| United States.- | 56,556 | 16,746 | 3,910 | 10,513 | 8,587 | 1,065 | 40,763 | 1,471 | 105,908 | 38,705 |
| North Atlantic Division. | 20,522 |  | 3,519 | 978 | 2,919 | 157 | 18, 701 | 472 | 87, 142 | 7,428 |
| South Atlantic Division. | 6,125 | 1,010 | , 385 | 4,889 | 1, 642 | 6 | 5,015 | 75 | 12,682 | 5,815 |
| South Contral Division.. | 7,086 | 2,383 |  | 8,684 | . 924 | 88 | 4,307 | 82 | 12,817 | 6,112 |
| North Contral Division.. | 19,388 | 9, 191 | ${ }_{2} 2$ | 1, 471 | 2,476 | 541 | 16, 4784 | 740 | 28,313 |  |
| Western Division........ | 3,460 | 1,860 | 22 | 1, 11 | -726 | 828 | 1,286 | 158 | 5,452 | 2,373 |

Summarized statistics of higher education (including students in undergraduate and graduate departments of universities and colleges, colleges for women, schools of technology, and in professional schools and departments)-Continued.

| State or Territory. | Universities and colleges for men and for both sexes. |  |  |  | $\begin{gathered} \text { Institutes } \\ \text { of } \\ \text { technology. } \end{gathered}$ |  | Professional schools and departments. |  | Total number of students in higher education. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male. | $\mathrm{Fe}-$ |  |  | Male | $\begin{gathered} \mathrm{Fe}- \\ \text { male } \end{gathered}$ | Male. | $\begin{array}{\|c} \text { Fe- } \\ \text { male. } \end{array}$ | Male. | $\mathrm{Fe}$ male. |
| North Atlantic Division: Maine $\qquad$ |  |  |  |  |  |  |  |  |  | 225 |
| New Hampshire--... | 393 | 12 |  | 15 | 74 | 19 | 143 | 0 | 610 | S |
| Vermont. |  | 92 |  |  |  | 0 |  | ${ }^{0}$ |  | 3,092 |
| Massachusetts | 3,926 | 390 120 | 2,368 | 144 | 1,493 | 75 | 2,097 | 115 | 7,516 | 3,092 155 |
| Connecticut. | 2,260 | 82 |  |  | 120 | 18 | 539 | 0 | 2,919 | 100 |
| New Yorlk | 5, 346 | 769 | 833 | 159 | 472 | 0 | 6,230 | 177 | 12,048 | 1,938 |
| New Jersey-. | 年, 1,408 | 0 686 | 298 | 17 | 384 | 0 | 6,479 3,797 | 180 | $\xrightarrow{2,269} \begin{aligned} & \text { 9,484 }\end{aligned}$ | 1,753 |
| South Atliatic Division: |  |  |  |  |  |  |  |  |  |  |
| Delaware. |  |  |  |  | 10 | 6 |  |  |  | ${ }^{6}$ |
| District of Columbia | -, 538 | 110 | 231 | 201 | 331 60 | 0 | 1,361 | 17 |  |  |
| Virginia - | 1,158 | 226 | 104 | 1,046 | 510 | 0 | 1,892 | 0 | 2,560 | 1,376 |
| West Virginia- | , 274 | 73 |  |  |  |  | 92 | 0 |  |  |
| North Carolina | 1,341 | 205 |  | 643 | 183 | 0 | 227 | 0 | 1,751 | 888 |
| South Carolina | 662 928 | 146 |  | 1,631 | 121 |  | 156 | 1 | 1,601 | 1,802 |
| Florida | 186 | 74 |  |  |  |  |  |  | 186 | ${ }^{74}$ |
| South Central Division: |  |  |  |  |  |  |  |  |  |  |
| Kentucky | ${ }_{2}^{1,205}$ | ${ }_{691}^{288}$ |  | ${ }^{810}$ |  |  | 1,745 1,299 | 19 | ${ }_{3}^{2,315}$ | 1, 157 |
| Alabama | 788 | 113 |  | ${ }^{1} 81$ | 258 |  | 1,228 | 0 | 1,274 | ${ }_{719}^{931}$ |
| Mississippi | 542 | 73 |  | 675 | 265 | 1 | 40 | 0 | 847 | 488 |
| Leuisiana | 1717 | 30.3 |  | 122 | 354 | 0 | 474 413 | 7 | 1, 1,958 | $6{ }^{6} 3$ |
| Arkansas. | ${ }^{606}$ | 394 |  | 50 |  |  | 108 | 0 | 714 | 444 |
| Oklahoma- | 7 | $\stackrel{3}{5}$ |  |  | 47 | 25 |  |  | 54 14 |  |
| North Central Division: | 14 |  |  |  |  |  |  |  |  |  |
| Ohio -...-- | ${ }^{3,637}$ | 1,605 |  | 358 | 229 |  | 2,584 | ${ }_{31}^{117}$ | 6,450 3,226 | 2, 880 |
| Inlinois | 1,876 | 1, 73.3 | 34 | 190 | 136 | 69 18 | 5,240 | 314 | 9,252 | 2,291 |
| Michigan | 1,938 | 1,013 |  |  | 456 | 31 | 1,636 | 75 | 4,030 | 1. 11 |
| Wisconsin | 1. 391 | ${ }_{6}^{505}$ |  | ${ }_{24}^{33}$ |  |  | ${ }_{6}^{618}$ | $\stackrel{0}{28}$ | $\xrightarrow{2,019}$ | ${ }_{74}$ |
| Minnesot |  | ${ }_{863}^{688}$ |  |  | 356 | 121 |  | ${ }_{67}$ | 3,020 | 1,105 |
| Missouri. | 1,786 | 89 |  | 78 |  |  | 2,910 | 77 | 4,696 | 1,6 |
| North Dakota | 66 | 33 |  |  | 21 | 8 |  |  | ${ }^{87}$ | 14 |
| South Dakota | 114 | 80 |  |  | 158 | 66 |  |  |  | 14 |
| Nansas.. | 1,056 | 553 |  | 58 | 419 | 28 | 173 | 13 | 1,648 | 852 |
| Western Division: |  |  |  |  |  |  |  |  |  |  |
| Montana | 19 | 8 |  |  | 15 | 17 |  |  | 34 12 |  |
| Colorado | 303 | 156 |  |  |  |  | 28 | 49 | 800 | 2 |
| New Mex | 0 | 0 |  |  | 26 | 13 |  |  | $1{ }_{11}$ |  |
| Arizona | ${ }_{86}^{11}$ | 13 86 |  |  | 121 | 65 |  |  | 217 | 15 |
| Nevadiu | 84 | 55 |  |  |  |  |  |  | ${ }_{3}^{84}$ |  |
| Washiu | 23 413 | 19 |  |  |  |  |  |  | ${ }_{510}$ | 31 |
| Oreyon- |  | 197 |  |  | 2) 4 | 135 |  |  | 592 |  |
| Californi | 2,293 | 1,049 | 22 | 11 |  |  | 818 | 84 | 3,103 | 1,166 |

Public institutions.- In the preceding table are included the number of students in all classes of higher institutions. public and private. In order that some idea may be formed as to the number of students receiving instruction in undergraduate and graduate courses of public institutions-that is, institutions founded or controlled by the State or minicipality-a table has been prepared, giving the number of stndents pursuing such courses at the following-named institutions:

Agricultural and Mechanical College, Anburn, Ala.
University of Alabama, University, Ala.

University of Arizona, Tucson, Ariz.
Arkansas Industrial University, Fayetteville, Ark.
University of California, Berkeley, Cal.
University of Colorado, Boulder, Colo.
Colorado Agricultural College, Fort Collins, Colo.
Colorado School of Mines, Golden, Colo.
Storrs Agricultural College, Storrs, Conn.
Delaware College, Newark, Del.
State College for Colored Students, Dover, Del.
Florida Agricultural College, Lake City, Fla.
Seminary West of the Suwanee River, Tallahassee, Fla.
University of Georgia, Athens, Ga.
State School of Technology, Atlanta, Ga.
Normal and Industrial College, Milledgevillè, Ga.
University of Idaho, Moscow, Idaho.
University of Illinois, Champaign, Ill.
Indiana University, Bloomington, Ind.
Purdue University, Lafayette, Ind.
Iowa Agricultural College, Ames, Iowa.
State University of Iowa, Iowa City, Iowa.
University of Kansas, Lawrence, Kans.
Kansas Agricultural College, Manhattan, Kans.
Agricultural and Mechanical College, Lexington, Ky.
Louisiana State University, Baton Rouge, La.
Maine State College, Orono, Me.
Maryland Agricultural College, College Park, Md.
United States Naval Acadeiny, Annapolis, Md.
Massachusetts Agricultural College, Amherst, Mass.
Massachusetts Institute of Technology, Boston, Mass.
University of Michigan, Ann Arbor, Mich.
Michigan Agricultural College, Agricultural College, Mich.
Michigan Mining School, Houghton, Mich.
University of Minnesota, Minneapolis, Minn.
Agricultural and Mechanical College, Agricultural College, Miss.
Mississippi Industrial Institute and College, Columbus, Miss.
Alcorn Agricultural and Mechanical College, Westside, Miss.
University of Mississippi, University, Miss.
University of Missouri, Columbia, Mo.
Agricultural and Mechanical College, Bozeman, Mont.
University of Montana, Missoula, Mont.
University of Nebraska, Lincoln, Nebr.
University of Nevada, Reno, Nev.
College of Agriculture and Mechanic Arts, Durham, N. H.
Newark Technical School, Newark, N. J.
University of New Mexico, Albuquerque, N. Mex.
College of Agriculture and Mechanic Arts, Mesilla Park, N. Mex.
New Mexico School of Mines, Socorro, N. Mex.
College of the City of New York, New York City, N. Y.
United States Military Academy, West Point, N. Y.
University of North Carolina, Chapel Hill, N. C.
College of Agriculture and Mechanic Arts, Raleigh, N. C.
Agricultural and Mechanical College for the (Jolored Race, Greensboro, N. C.
North Dakota Agricultural College, Fargo, N. Dak.
University of North Dakota, University, N. Dak.
Ohio University, Athens, Ohio.
Ohio State University, Columbus, Ohio.
Miami University, Oxford, Ohio.
University of Cincinnati, Cincianati, Ohio.
University of Oklahoma, Norman, Okla.
Agricultural and Mechanical College, Stillwater, Okla.
Oregon Agricultural College, Corvallis, Oreg.
University of Oregon, Eugene, Oreg.
Central High School, Philadelphia, Pa.
Pennsylvania State College, State College, Pa.
College of Agriculture and Mechanic Arts, Kingston, R. I.
College of Charleston, Charleston, S. C.
South Carolina Military Academy, Charleston, S. C.

Clemson Agricultural College，Clemson College，S．C．
South Carolina College，Columbia，S．C．
South Dakota Agricultural College，Brookings，S．Dak．
School of Mines，Rapid City，S．Dak．
University of South Dakota，Vermilion，S．Dak．
University of Tennessee，Knoxville，Tenn．
University of Texas，Austin，Tex．
Agricultural and Mechanical College，College Station，Tex．
Utah Agricultural College，Logan，Utah．
University of Utah，Salt Lake City，Utah．
University of Vermont，Burlington，Vt．
University of Virginia，Charlottesville，Va．
Agricultural and Mechanical College，Blacksburg，Va．
Virginia Military Institute，Lexington，Va．
State Agricultural College，Pullman，Wash．
University of Washington，Seattle，Wash．
West Virginia University，Morgantown，W．Va．
University of Wisconsin，Madison，Wis．
University of Wyoming，Laramie，Wyo．
Number of undergraduate and graduate students in public universities，colleges， and schools of technology．

| State or Territory． | Students． |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Collegiate depart－ ment． |  |  | Graduate department． |  |  |  |  |  | Total number of col－ legiate and grad－ uate students． |  |  |
|  |  |  |  | Resident． |  |  | Nonresi－ dent． |  |  |  |  |  |
|  | 㮰 | $\begin{aligned} & \text { जी } \\ & \text { ష्व } \\ & \text { In } \end{aligned}$ |  |  |  | $\begin{aligned} & \text { Wig } \\ & \text { Hi } \end{aligned}$ | $\begin{aligned} & \dot{\otimes} \\ & \text { ٌ̈̈ } \end{aligned}$ |  |  |  |  | $\begin{gathered} \text { ज⿹\zh26灬力 } \\ \text { Hi } \end{gathered}$ |
| United States | 19，514 | 5，621 | 25，135 | 89 | 273 | 962 | 155 | 44 | 199 | 20，358 | 5，938 | 26，296 |
| North Atlantic Division <br> South Atlantic Division <br> South Central Division <br> North Central Division <br> Western Dirision． $\qquad$ | $\begin{array}{r} 4,611 \\ 2,782 \\ 2,118 \\ -8,041 \\ 1,962 \\ \hline \end{array}$ | $\begin{array}{r} 213 \\ 346 \\ 499 \\ 8,329 \\ 1,234 \\ \hline \end{array}$ | $\begin{array}{r} 4,824 \\ 3,128 \\ 3,617 \\ 11,370 \\ 3,190 \\ \hline \end{array}$ | $\begin{array}{r} 28 \\ 54 \\ 49 \\ 464 \\ 494 \\ \hline 94 \\ \hline \end{array}$ | $\begin{array}{r} 3 \\ 1 \\ 7 \\ 204 \\ 58 \\ \hline \end{array}$ | $\begin{array}{\|c\|c} \hline 31 \\ 1 & 55 \\ \hline 46 \\ \hline 868 \\ \hline 152 \\ \hline \end{array}$ | 2 6 64 109 14 | $\begin{array}{r} 0 \\ 0 \\ 4 \\ 83 \\ 7 \end{array}$ | $\begin{array}{r} 2 \\ 6 \\ 28 \\ 148 \\ 142 \\ \hline 21 \end{array}$ | $\begin{aligned} & 4,641 \\ & 2,041 \\ & 2,841 \\ & 8,814 \\ & 2,070 \\ & \hline \end{aligned}$ | 216 <br> 347 <br> 610 <br> 3,566 <br> 1,299 | $\begin{array}{r} 4,857 \\ 8,189 \\ 2,701 \\ 1,780 \\ 3,309 \\ \hline \end{array}$ |
| North Atlantic Division： Maine New Hampshire Marmont Massachusetts $\qquad$ Connecticun $\qquad$ New York New Jersey | $\begin{array}{r} 243 \\ 73 \\ 190 \\ 1,272 \\ 122 \\ 1,093 \\ 120 \\ 1,438 \end{array}$ | $\begin{array}{r} 10 \\ 19 \\ 53 \\ .75 \\ .73 \\ 18 \\ 0 \\ 0 \\ 5 \end{array}$ | $\begin{array}{r} 203 \\ 92 \\ 943 \\ 1,247 \\ 945 \\ 1,138 \\ 1,193 \\ 1,443 \end{array}$ | $\begin{array}{r} 4 \\ 1 \\ 1 \\ 1 \\ 15 \\ 7 \\ 0 \\ 0 \\ 0 \\ 0 \end{array}$ | 0 1 0 0 2 0 0 0 0 0 | $\begin{array}{\|r} 4 \\ 1 \\ 2 \\ 2 \\ 15 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{array}$ | $\begin{aligned} & 1 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 1 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 1 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 1 \end{aligned}$ | $\begin{array}{r} 247 \\ 74 \\ 191 \\ 1,288 \\ 199 \\ 1,00 \\ 1,120 \\ 1,430 \end{array}$ | 10 19 54 54 75 35 18 0 0 0 | 257 93 245 1,363 104 108 1388 1083 120 1,441 |
| South Atlantic Division <br> Delaware <br> Maryland <br> Virginia <br> West Virginia <br> North Carolina <br> South Carolina <br> Georgia $\qquad$ | $\begin{array}{r} 1,438 \\ 8 \mathrm{i} \\ 331 \\ 740 \\ 729 \\ 500 \\ 518 \\ 859 \\ 124 \end{array}$ | $\begin{array}{r} 6 \\ \mathbf{0} \\ 0 \\ 35 \\ 0 \\ 13 \\ 130 \\ \hline 62 \end{array}$ | $\begin{array}{r} 1,443 \\ 87 \\ 331 \\ 740 \\ 164 \\ 500 \\ 531 \\ 599 \\ 178 \end{array}$ | 0 0 20 1 2 2 0 0 1 1 1 | $\begin{aligned} & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 1 \\ & 0 \end{aligned}$ |  | 1 0 0 0 0 0 0 0 0 | 0 0 0 0 0 0 0 0 0 0 | 1 0 0 0 0 0 0 0 0 0 | 81 81 761 130 1329 5218 380 127 | $\begin{array}{r}0 \\ 0 \\ 85 \\ 0 \\ 0 \\ 13 \\ 241 \\ \hline 68\end{array}$ | 831 781 768 165 569 631 601 179 |
| South Central Division： <br> Kentucky <br> Tennessee $\qquad$ <br> Alibama <br> Louisiana $\qquad$ <br> Texas $\qquad$ <br> Arkansas |  | $\begin{array}{r} 68 \\ 47 \\ 90 \\ 8 \\ 140 \\ 0 \\ 0 \\ 714 \\ 72 \\ 28 \end{array}$ |  | 1 1 8 9 15 5 11 11 0 0 |  |  | 0 0 0 0 24 0 0 0 0 | 0 0 0 0 4 0 0 0 0 | 1 0 0 0 2 2 0 0 0 0 | 167 244 411 471 140 683 121 54 54 | 47 97 98 8 144 14 120 72 28 28 | 835 419 615 140 103 193 |
| orth Central Division： OWIO <br> Indiama <br> Tinnois <br> Michiegan <br> Wheonsin <br> jowa． | $\begin{array}{r} 916 \\ 1,069 \\ 1,810 \\ 1,810 \\ 810 \\ 888 \\ 689 \end{array}$ | 295 303 129 623 415 476 263 | $\begin{aligned} & 1,211 \\ & 1,212 \\ & 1,896 \\ & 1,917 \\ & 1,25 \\ & 1,204 \end{aligned}$ | 46 64 14 149 68 108 34 34 | 13 24 12 18 18 20 25 |  | 0 0 5 2 9 17 0 18 | $\begin{array}{r} 0 \\ 2 \\ 0 \\ 8 \\ 8 \\ 0 \\ 0 \end{array}$ | $\begin{gathered} 0 \\ 7 \\ 2 \\ 12 \\ 128 \\ 0 \\ 28 \end{gathered}$ | $\begin{array}{r} 962 \\ 1,108 \\ 1,472 \\ 1,472 \\ 889 \\ 883 \\ 741 \end{array}$ | 308 329 138 544 441 508 808 | 1.270 1,437 1,684 2.016 1.330 1,501 1,001 |

Number of undergraduate and graduate students in public universities，colleges， and schools of technology－Continued．

| State or Territory | Students． |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Collegiate depart－ ment． |  |  | Graduate department． |  |  |  |  |  | Total number of col－ legiate and grad－ uate students． |  |  |
|  |  |  |  | Resident． |  |  | Nonresi－ dent． |  |  |  |  |  |
|  | $\begin{aligned} & \text { 灾 } \\ & \text { 感 } \end{aligned}$ |  |  | 商 |  |  | 追 |  | ． ¢ k | 聴 | 荘 | \％ |
| North Contral Division－ Continued． <br> Missouri |  |  |  |  |  |  |  |  | 0 |  |  |  |
| North Dakota | 386 60 | 34 | 94 | 12 | 0 | 2 | 0 | 0 | 0 | 403 62 | 79 34 | 482 |
| South Dakota | 172 | 100 | 272 | 6 | 6 | 12 | 17 | 5 | 22 | 195 | 111 | 306 |
| Nebraska．．．． | 412 | 317 | 729 | 15 | 23 | 38 | 28 | 3 | 31 | 455 | 343 | 798 |
| Kansas | 765 | 396 | 1，161 | 30 | 25 | 55 | 13 | 2 | 15 | 808 | 423 | 1，231 |
| Western Division： Montana $\qquad$ | 15 | 17 | 32 | 0. | 0 |  | 0 | 0 | 0 | 15 | 17 |  |
| W yoming | 11 | 19 | 20 | 1 | 0 | 1 | 0 | 0 | 0 | 12 | 19 | 21 |
| Colorado | 351 | 108 | 459 | 17 | 8 | 25 | 9 | 5 | 14 | 377 | 121 | 498 |
| New Mexico | 26 | 13 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 13 | 39 |
| Arizona | 10 | 13 | 23 | 1 | 0 | 1 | 0 | 0 | 0 | 11 | 13 | 24 |
| Nevada | 200 82 | 151 | 1351 | 0 | 9 | 0 | 0 | 0 | 0 | 200 84 | 151 | 351 |
| Idaho． | 23 | 19 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 19 | 42 |
| Washington | 256 | 175 | 431 | 1 | 1 | 2 | 0 | 0 | 0 | 257 | 176 | 433 |
| Oregon | 248 | 198 | ${ }^{446}$ | 0 | 2 | ${ }^{2}$ | 3 | 0 | 3 | 251 | 200 | 451 |
| California | 740 | 480 | 1，220 | 72 | 43 | 115 | 2 | 2 | 4 | 814 | 525 | 1，339 |

## I．－Universities and Colleges for Men and for Both Sexeis．

Institutions．－The number of universities and colleges for men and for both sexes from which reports were received at the close of the scholastic year 1895－96 is 484，being three more than were included under this head in 1894－95．The increase is，however，not due to an increase in the number of institutions，but to the fact that four institutions heretofore treated as schools of technology are now included in the table of universities and colleges．The institutions referred to are the Arkansas Industrial University，Fayetteville，Ark．；Florida Agricultural Col－ lege，Lake City，Fla．；Agricultural and Mechanical College of Kentucky，Lexing－ ton，Ky．，and Lehigh University，South Bethlehem，Pa．，all of which maintain courses of study leading to the A．B．degree，and have students in such courses． The Bureau has learned during the year of the suspension of the following named institutions：Napa College，Napa，Cal．；Central College，Enterprise，Kans．；Emi－ nence College，Eminence，Ky．；Garrard College，Lancaster，Ky．；Olympic Úniver－ sity，Olympia，Wash．；University of Seattle，Seattle，Wash．，and West Virginia College，Flemington，W．Va．Gale College，at Galesville，Wis．，has also suspended temporarily．

Of the 484 institutions， 79 are located in the North Atlantic Division， 70 in the South Atlantic Division， 87 in the South Central Division， 201 in the North Central Division，and 47 in the Western Division．Of the total number of institutions， 111 are reported as not being under the control of any particular religious denomination． The number of institutions controlled by the several denominations is given in Table 1，pages 1926－1931．The table includes not only the number of institutions， but it shows the number of professors and students in the undergraduate depart－ ments and the total amount of the endowments held by such institutions．In order that the table might not be too lengthy，the various branches of the several reli－ gious denominations are combined under one head．The number of nonsectarian institutions，as stated above，is 111，with an average endowment of $\$ 582,823$ ．

An examination of the detailed statistics concerning universitios and colleges discloses the fact that there are 188 such institutions that have no endowment， 54 have less than $\$ 35,000$ ，and only 4 have endowments exceeding $\$ 5,000,000$ ．A sum－ marized statement showing the number of institutions having endowments of various amounts is given in Table 2，page 1982，while the classification of institu－
tions according to the number of undergraduate students is shown in Table 8. From this table it may be seen that 278 institutions have less than 100 college students.
The number of institutions admitting women to undergraduate courses is 345 . The Western University of Pennsylvania at Allegheny, Pa., opened its doors to women at the beginning of the scholastic year 1895-96.
Professors and instructors. -The total number of professors and instructors employed by the 484 institutions was 12,277 , of which number 10,682 are men and 1,595 are women. The proportion of male and female teachers in the several departments, by geographical divisions, is as follows:

| Division. | Preparatory departments. |  | Collegiate departments. |  | Professional departments. |  | Total number. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male. | $\begin{aligned} & \text { Fe- } \\ & \text { male. } \end{aligned}$ | Male. | $\begin{aligned} & \mathrm{Fe}- \\ & \text { male. } \end{aligned}$ | Male. | $\underset{\text { male. }}{\mathrm{Fe}}$ | Male. | $\begin{gathered} \mathrm{Fe}- \\ \text { male. } \end{gathered}$ |
| United States | $\left\lvert\, \begin{aligned} & P_{\text {er cr }} . \\ & 71.06 \end{aligned}\right.$ | $\begin{gathered} \text { Perct. } \\ 28.94 \end{gathered}$ | $\begin{aligned} & \text { Per ct. } \\ & 89.01 \end{aligned}$ | $\begin{aligned} & \text { Per ct. } \\ & 10.99 \end{aligned}$ | Per ct | $\begin{aligned} & \text { Per ct. } \\ & 1.11 \end{aligned}$ | $\begin{gathered} \text { Per ct. } \\ 87.01 \end{gathered}$ | $\begin{array}{r} \text { Per ct. } \\ 12.99 \end{array}$ |
| North, Atlantic Division |  |  |  |  |  |  | 96. 95 | 3. 05 |
| South Atlantic Division | 72.12 | 27.88 | 88.77 | 11.23 | 100.00 |  | ${ }_{79}^{88} 86$ | ${ }_{20.65}^{11.54}$ |
| South Central Division. | 59.37 69.87 | - 40.63 | 83.25 88.37 | 16.75 | ${ }_{97.62}^{99.21}$ | 0.79 <br> 2.38 | 82.61 | 17.39 |
| Western Division..... | 72.36 | ${ }_{27} 64$ | ${ }_{85} 80$ | 14.80 | ${ }_{98.39}$ | 1.61 | 84.52 | 15.48 |

The average number of instructors per institution for the entire country was 25 , an increase of 1 instructor per institution over the figures for the preceding year.

Students. - The total number of students in attendance at the 484 institutions was 159,372 , an increase of 9,433 over the number for the year 1894-95. Of the total number of students, 29.5 per cent were in preparatory departments, 43.06 per cent in collegiate departments, 2.93 per cent in graduate departments, 15.96 per cent in professional departments, and 8.55 per cent in other departments, showing*a gain of nearly 1 per cent in favor of the undergraduate collegiate departments, and a decrease of 1.3 per cent in the proportion of students in preparatory departments. The number of instructors and students per institution in the several geographical divisions were as follows:

| Division. | Preparatory departments. |  | Collegiate departments. |  | Graduate departments. | Professional departments. |  | Total number. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\left.\begin{array}{\|c\|} \text { In- } \\ \text { struct } \\ \text { ors. } \end{array} \right\rvert\,$ | Students. | $\begin{aligned} & \text { In- } \\ & \text { struct- } \\ & \text { ors. } \end{aligned}$ | Students. | Students. | $\begin{aligned} & \text { In- } \\ & \text { struct- } \end{aligned}$ ors. | Sta dents | $\begin{gathered} \text { In- } \\ \text { struct- } \\ \text { ors. } \end{gathered}$ | Students. |
| United States. | 6 | 97 | 15 | 142 | 10 | 7 | 53 | 25 | 329 |
| North Atlantic Division.- |  |  |  |  | 22 | 14 | 102 | 43 | 481 |
| South Atlantic Division.- | 5 | 65 | 12 | 96 | 6 | 5 | 35 | 19 | 22 |
| South Central Division..- | 5 | 101 | 9 | 106 | 3 | 4 | 37 | 17 | $\stackrel{364}{3+8}$ |
| North Central Division... | 7 | 112 | 14 | 132 | 10 | ${ }_{8}^{6}$ | 52 | $\stackrel{24}{25}$ | $\stackrel{3}{276}$ |
| Western Division.......... | 7 | 105 | 14 | 100 | 7 | 8 | 27 | 25 |  |

Comparing the number of male and female students for the year under consideration with the number for the preceding year, it will be found that while the proportion of female students in all departments has increased but nine-tenths of 1 per cent, the proportion of such students in the undergradute collegiate departments has increased 1.5 per cent.

Of the 68,629 students reporter in collegiate departments, only 50,918 , or 74.2 per cent, were reported in courses of stady leading to a bachelor's degree. The distribution of students in degree courses was not reported by a number of institations, in some of which it is impossible to determine the degrees for which students will apply, owing to the system of "schools" maintained by such institututions. This is the case in a number of the Sonthern States. An examination of the table showing the proportion of students in the several degree courses will show that more than one-half of the students are pursuing courses of study leading to
the A. B. degree. The following statement, furnished by the president of Cornell University, will show the action concerning degrees taken by that institution:
"The faculty of Cornell University, at their session held May 22, took action providing for a single degree, bachelor of arts, for all students in the courses of liberal arts and sciences, irrespective of the studies elected, instead of A. B., Ph. B., and B. S., as at present (and B. L., as heretofore). In carrying this into effect the faculty cut out all specified requirements, aside from those for entrance, excepting military drill and physical culture. Otherwise the four-year course will be elective. To realize the change, one must remember that all the work of the freshman year of the general course has been 'required work,' and most of the sophomore; and that, hereby, students at Cornell may henceforth take A. B. on completion of a four-year course of study in which there is no Greek or Latin, or, of course, conversely, in which there is only Latin or Greek.
"The three definite sets of entrance requirements which have been built up are left intact. The candidate for admission to the A. B. course must, in addition to the preliminary subjects, offer either ( $a$ ) Greek or Latin, or (b) Latin and advanced French or German, or (c) advanced French, advanced German, and one year of advanced mathematics, including solid geometry, higher algebra, and plane and spherical trigonometry. In a word, the student upon entrance must prove himself well grounded in a systematic high-school course, having certain staple subjects, and covering part of the ground of an old-fashioned college course. Then, when he is admitted, he may take what he chooses, provided only he completes satisfactorily the amount prescribed for each term."

In a report received from the University of California it is stated that the $\mathrm{Ph} . \mathrm{B}$. degree is obsolescent and will be discontinued after 1899.

One of the gratifying features of higher education is the increasing number of students who remain at our higher institutions for advanced work, the number of graduate students in 1895-96 being 3,756, not including 917 nonresident graduate gtudents. In a number of the universities and colleges the graduate students have formed clubs or associations, and according to the Handbook of Graduate Courses there are now twenty-two such organizations, the oldest of which is the Harvard Graduate Club, formed in 1889. At a convention of graduate students held at the University of Pennsylvania, Philadelphia, Pa., January 3,1896, the Federation of Graduate Clubs was formed, the object being "to aid the development of gradmate study in America." One of the principal objects of the federation is to facilitate the migration of students from one institution to another while pursuing studies for a higher degree. A step in this direction has been taken by Harvard University, as will be seen by the following statement taken from the report of President Eliot for 1895-96:
"When the graduate school, or department, was first instituted, twenty-five years ago, the corporation and overseers were obliged to lay down by standing yotes, in advance of experience of their own, the rules under which the degrees of master of arts, doctor of philosophy, and doctor of science should be conferred. One of the rules was that a graduate of any other university than Harvard must spend at least two years at Harvard University, after taking his bachelor's degree, before he could be eligible for the degree of doctor of philosophy. Under the same rule, the minimum residence for the degree of doctor of science was declared to be three years for any graduate of another university. This standing rule set requirements for the two doctorates which were not in force with regard to any other of the ordinary degrees. The statute on degrees simply prescribes that there shall be at least one year's residence for any ordinary degree. On the 2d of March last the corporation rescinded this requirement of 1871 concerning the minimum residence for the degree of doctor of philosophy or doctor of science, and put these two degrees on the same footing as regards residence with all the other ordinary degrees. The overseers concurred in this action of the corporation. The object of this change was not to diminish the time required for procuring the degree of doctor. The minimum time for obtaining the doctorate seldom proves sufficient, and there is no tendency to reduce the requirements for the doctorates; on the contrary, the tendency has been to raise those requirements. Of the 140 persons who have obtained the Harvard degree of doctor of philosophy between 1873 and 1896, only 18 have obtained it in two years after taking the bachelor's degree. The repeal of the standing vote of 1871 is intended to encourage graduate students at all the American universities which maintain graduate schools to migrate from one university to another during the period of study for the doctorate, taking the degree at the university where they reside during the last year. The faculty and the governing boards thought it well to do away with the hindrance to migration toward Harvard which the rule of 1871 presented. They thought it would be safe to leave the requirement concerning residence to the general statute, without changing in the least the requirements as to study and attainments."

In the continual establishment of new fellowships may be found one of the causes for the increase in the number of graduate students. In the year under considerar tion there were reported 336 fellowships.

The graduate department of the University of Pennsylvania has been greatly strengthened by" a gift of $\$ 500,000$ from Provost Harrison. The purposes of the gift are stated to be: "(1) The establishment of scholarships and fellowships, intended solely for men of ability; (2) the increasing the library of the university, particularly by the acquisition of works of permanent use and of lasting reference, to and by the scholar; (3) the temporary relief from routine work, of professors of ability, in order that they may devote themselves to some special and graduate work; (4) the securing men of distinction to lecture, and, if the same shall be deemed advisable, the securing their residence at the university." Under the provisions of this gift there have been established in the graduate department 8 scholarships, 14 fellowships, and 5 senior fellowships. The scholarships are open to students who have taken a baccalaureate degree in arts or science at the University of Pennsylvania, and who have been resident students for at least two years prior to graduation. The scholarships are tenable for but one year, and entitle the holders to $\$ 100$ and free tuition in the graduate department of the university for one full academic year. The fellowships have a value of $\$ 600$, but the tuition fee of $\$ 100$ is deducted and applied to increasing and improving the equipment of their respective departments. Each of the fellowships is limited to some designated department of study. They are granted annually and may be once renewed. Applicants " must hold à baccalaureate degree of nontechnical character; must have pursued graduate work successfully for at least one year in residence at an acceptable college or university; must have a good reading knowledge of French and German, and must not already have taken the doctor's degree." Fellows must be candidates for the Ph. D. degree and must devote their entire time to the prosecution of their studies in residence at the university. The five senior fellowships are not designated by subjects. "They are open only to men who have taken the Ph. D. degree at the University of Pennsylvania. A senior fellow will be required to devote himself to some work of original research in the line of his specified subject. He will also do such teaching or lecturing in his subject as may from time to time be required by the head of his department, to a maximum of four hours a week. Residence is inuperative."
Degrees.-The total number of degrees, excluding degrees in law, medicine, and theology, granted to students during the year 1895-96 was 10,761 , of which number 8,840 were conferred on men and 1,921 on women. The number of different kinds of degrees conferred may be found in Tables 9 and 10.
The number of honorary degrees reported for the year was 755, being less by 140 than the number for the preceding year. The number of doctorates conferred was 506 , which is 120 less than were conferred in 1894-95. The degree of doctor of philosophy was conferred as an honorary degree by 16 institutions.

Property. The value of all the property owned by universities and colleges is reported at $\$ 243,655,868$, of which amount $\$ 109,562,433$ are reported as endowment funds, while the remainder represents the value of grounds, buildings, and apparatus used for instruction purposes by the institutions. The proportion of property held by the institutions of the several divisions is shown in the following tabular statement:

| Division. | Institutions. | Fellowships. | Scholarships. | Libra ries. | Appa ratus. | $\begin{gathered} \text { Grounds } \\ \text { and } \\ \text { build- } \\ \text { ings. } \end{gathered}$ | Productive funds. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| North Atlantic Division South Atlantic Division. South Central Division. North Central Division. Western Division.......... | Percent. $\begin{gathered} 16.8 \\ 14.5 \\ 18.0 \\ \frac{41.5}{9.7} \end{gathered}$ | $\begin{array}{\|r} \text { Percent. } \\ 47.6 \\ 9.8 \\ 6.9 \\ 33.8 \\ 1.8 \end{array}$ | $\begin{array}{r} \text { Percent. } \\ 49.7 \\ 10.8 \\ 11.1 \\ 2.6 \\ 8.8 \end{array}$ | $\begin{array}{\|r} \text { Percent. } \\ 46.2 \\ 110.8 \\ 7.2 \\ 8.0 \\ 4.8 \end{array}$ | $\begin{array}{r} \text { Percent. } \\ 48.8 \\ -\quad 8.2 \\ 6.1 \\ 82.2 \\ 7.2 \end{array}$ | $\begin{array}{r} \text { Per cent. } \\ 30.4 \\ 11.6 \\ 8.6 \\ 82.0 \\ 8.4 \end{array}$ | Per cent. <br> 53.1 <br> 7.8 <br> 6. <br> \%7. 6 <br> 6.8 |

Benefactions. -The total money value of gifts and bequests reported by these institutions was $\$ 8,342,728$, of which amount $\$ 2,200,000$ was received by the University of Chicago.

Tncome.-The total income from all sources, excluding benefactions, was $\$ 17,918,174$, an increase of more than $\$ 1,000,000$ over the income for the preceding year. Although the amount of productive funds was over $\$ 7,000,000$ greater than in 1894-95, the income from productive funds was less by almost $\$ 100,000$. This was caused, undoubtedly, by the financial stringency through which the country is
passing, and by a lowering of the rate of interest on investments. The proportion of income derived from the various sources by the institutions of the several divisions is as follows:

| Division. | Taition fees. | Productive funds. | State or municipal ap-propriations. | United States Government. | Other sources. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| United States | $\begin{array}{r} \text { Per cent. } \\ 37.3 \end{array}$ | Per cent. 29.3 | Pericent. 15.6 | Percent. 4.9 | Per cent. 12.9 |
| North Atlantic Division | 40.5 | 37.7 | 6.6 | 1.9 | 13.3 |
| South Atlantic Division | 38.0 | 23.8 | 11.2 | 14.9 | 12.1 |
| South Central Division | 38.8 | 28.4 | 13.5 | 8.3 | 11.0 |
| North Central Division | 36.8 | 23.6 | 24.3 | 3.3 | 12.0 |
| Western Division | 18.8 | 15.0 | 33.9 | 13.8 | 18.5 |

Comparing the figures in the above tabular statement with the figures for the preceding year, it will be found that there is a decrease of 2.4 per cent in the proportion of income derived from productive funds. The decrease is not limited to any particular section of the country, but is found in all of the geographical divisions. The proportion of income derived from tuition fees is less by one-half of 1 per cent than it was in 1894-95. The decrease in these two sources of income is, however, balanced by an increase of 2.9 per centin the proportion of income derived from-State, municipal, and national appropriations, the income from such sources amounting to \$3,676,481.

The statistics concerning universities and colleges are given by States and Territories in the following tables:'

Table 1．－Number of institutions controlled by the several religious denominations．

|  | Nonsectarian． |  |  |  | Roman Catholic． |  |  |  | Methodist Episcopal． |  |  |  | Baptist． |  |  |  | Presbyterian． |  |  |  | Congregational． |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State or T＇erritory． |  | Profossorg． |  |  |  | m R O \＃ \＃ \＃ H H |  |  |  |  | $\begin{aligned} & \text { of } \\ & \text { 品 } \\ & 0 \\ & 0 \\ & \text { D } \\ & \text { W2 } \end{aligned}$ |  |  |  |  |  |  |  |  | +3 品 品 0 0 盟 |  |  |  | +3 ロ 日 0 0 0 0 日 |
| United States | 111 | 2，848180 | 80，958 | 364，693，387 | 59 | 580 | 4，968 | \＄750，000 | 87 | 917 | 9，268 | \＄9，356，652 | 50 | 704 | 6，800 | \＄13，367，185 | 54 | 480 | 4，542， | \＄4，631， 735 | 26 | 465 | 4，103 | \＄8，610， 452 |
| North Atlantic Division－ | 22 | 1，035 | 10，553 | 38，687， 5 \％73 | 12 | 169 | 1，584 | 600，000 | 15 |  | 1，718 | $2,974,536$ 568,600 | 8. |  | 1，778 | 4，975， 551 $1,132,861$ | 5 | 67 51 | 826 569 | $1,269,235$ 209,000 | 1 |  | 2，816 | $\begin{array}{r} 7,008,966 \\ 6,000 \end{array}$ |
| South Atlantio Division－ South Central Division．－ | 20 | 250． | 2，445 | 5， $3,816,371$ | 9 | 89 | 498 | 600，000 | 20 | 169 | 1，534 | 1，427， 400 | 15 | 100 | 1，706 | 1， 440,114 | 15 | 114 | 1，249 | 1，006，500 | 2 | 16 | 89 | 29，835 |
| North Contral Division．．－ | 34 |  | 11，688 | 13，464，475 | 20 | 204 | 1，676 | 150，000 | 40 | 417 | 4， 291 | 4，021， 116 | 16 |  | 2，089 | 6，744， 659 | 25 |  | 1，854 | 2，147，000 | 16 | 189 | 1，108 | 1，410， 151 |
| Westera Division ．．．．．．．．－－ | 13 | 350 | 3，061 | 4，923，217 | 5 | 54 | 1， 539 | 150，0 | 7 | 68 | ， 387 | 365，000 | 2 | 9 | 2， 55. | 74，000 | 3 | 18 | 44 | 0 | 2 | 19 | 76 | 125， 500 |
| North Atlantic Division： <br> Maine |  |  |  |  |  |  |  |  |  |  |  |  | 2 | 26 | 425 | 816，256 |  |  |  |  | 1 | 18. | 243 | 552， 582 |
| New Hampshire |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 34 | 386 | 1，076，622 |
| Vermont－．．． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Massachusett． | 3 | 208 | 2，468 | 10，155， 814 | 2 | 28 | 277 | 0 | 1 | 24 | 385 | 723，852 |  |  |  |  |  |  |  |  | 2 | 41 | 456 | 1，400，000 |
| Rhodo Island |  |  |  |  |  |  |  |  | 1 | 34 | 285 | 1，128， 298 |  |  | ．50 | ，113，021 |  |  |  |  | 1 | 131 | 1，731 | 3， 979,762 |
| New York． | 7 | 422 | －8，437 | 17，876， 223 | － | 97 | 832 | 0 | 1 | 63 | 646 | 635， 743 | 3 | 53 | 392 | 2，646，274 |  |  |  |  |  |  |  |  |
| Now Jersey | 1. | 78 | 962 | a 3， 000,000 | 2 | 12 | 136 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pennsylvania．．．．．．．．－ | 9 | 270 | 3，338 | 4，871，046 | 5 | 32 | 339 | 0 | 2 | 24 | 402 | 486， 643 | 2 | 21 | 211 | 400，000 | 5 | 67 | 826 | 1，269， 235 |  |  |  |  |
| South Atlantic Division： <br> Delaware | 1 | 10 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Maryland ．－．．．．．．．．．．－－ | 3 | 97 | 355 | 3，030，000 | 4 | 40 | 309 |  | 1 | 5 | 10 | 22，000 |  |  |  |  | 1 |  | 32 | 0 |  |  |  |  |
| District of Columbia－ | 2 | 20 | 99 | －200，000 | 3 | 19 | 142 | 600，000 |  |  |  |  |  |  | 315 | 224， 532 |  |  |  |  |  |  |  |  |
| Virginia．．．． <br> West Virgin | 1 | 58 | 557 164 | 1，356，338 |  |  |  |  | 2 | 36 | 341 | 252，600 | 2 |  | 187 | 273， 000 | 1 | 14 | 160 | 10，000 |  |  |  |  |
| North Carolina | 2 | 24 38 | 889 | 114， 1150 |  |  |  |  | $\frac{1}{3}$ | 19 | 245 | 23，000 | 8 |  | 419 | 224，629 | 2 | 17 | 233 | 117，000 |  |  |  |  |
| South Carolina | 3 | 29 | 215 | 288， 700 |  |  |  |  | ， | 12 | 159 | 65，000 | 1 |  | 97 | 75， 000 | ， | 12 | 144 | 82，000 |  |  |  |  |
| Georgis． | 4 | 52 | 414 | 880， 663 |  |  |  |  | 5 | 32 | 546 | 206，000 |  |  | 138 | 235， 700 |  |  |  |  |  |  |  |  |
| Florids－－．．．－．．．－－ | 2 | 22 | 176 | 218，800 | 1 |  | 25 | 0 | 1 | 8 | 25 | 0 | 1 |  | 16 | 100，000 |  |  |  |  | 1 | 17 | 14 | 6，000 |
| South Central Division： Kentucky |  | 31 |  |  | 1 | 7 |  |  | 2 | 11 | 100 |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tennessee | 4 | 54 | 1，023 | 428，800 | 1 | 7 | 40 | 0 | 4 | 48 | 298 | 1，157，000 | 3 | 26 |  | ＇100， 000 |  | 66 |  | 468，000 | 1 | 11 | 56 | 21，835 |
| Alabama． | 4 | 24 | 406 | －800，000 | 2 | 30 | 191. | 0 |  | 7 | 143 | －65，000 |  | 11 | 162 | 1，500 |  |  |  |  |  |  |  |  |
| Mississippi | 2 | 19 | 889 | 540,000 |  |  |  |  |  | 15 | 130 | －107，000 |  |  | 162 | 42，000 |  |  |  |  |  |  |  |  |
| Louisiana | 3 | 61 | 516 | 1，446，571 |  | $\stackrel{22}{2}$ | 216 | 0 | 2 | 10 | 59 | 56，000 |  | 13 | ＋ 85 |  |  |  |  |  | 1 |  | 33 | 8，000 |
| Texas． | 2 | 40 | 580 | 578，000 | 8 | 23 | 210 | 0 |  | 33 | 320 | 0 | 2 | 13 | 3 306 |  | 2 |  | 258 54 | 98,000 20 |  |  |  |  |
| Arkanmas | 1 | 28 | 198 | 130，000 |  |  |  |  |  | 45 | 489 | 9 | 2 | 13 | 264 |  | 2 | 12 | 54 | 20，500 |  |  |  |  |
| Indlan Torritory． |  |  |  |  |  |  |  |  |  |  |  |  |  | 3 | $\left.\right\|^{---13}$ | －1，${ }^{-14}$ |  | 4 | 4 | 0 |  |  |  |  |


a Estimated.

Table 1.-Number of institutions controlled by the several religious denominations-Continued.

|  | Christian. |  |  |  | Unitod Brethren. |  |  |  | Protestant Episcopal. |  |  |  | Lutheran. |  |  |  | Friends. |  |  |  | Universalist. |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State or Territory, |  | $\begin{aligned} & \text { í } \\ & \text { o } \\ & \text { W } \\ & \text { © } \\ & \text { L } \\ & \text { 4 } \end{aligned}$ |  |  |  |  | $\begin{aligned} & \text { 品 } \\ & \text { 右 } \\ & \text { B } \\ & \text { B } \\ & 0 \end{aligned}$ |  |  | wi 0 0 0 0 0 0 0 0 0 0 |  |  |  |  |  | Endowment. | Institutions. |  |  |  |  |  |  |  |
| UnitedStates | 19 | 158 | 1,611 | \$728,007 | 11 | 63 | 503 | \$167,589 | 5 | 71 | 487 | \$1,576,621 | 23 | 179 | 1,624 | \$926,559 | 7 | 79 | 745 | \$868, 195 | 4 | 72 | 486 | \$2,062, 130 |
| North Atiantio Division . |  |  |  |  | 1 | 6 | 51 | 56,000 | 3 | 4.9 | 268 | 1,200,621 | 4. | 31 | 348 | 460,000 | 2 | $40$ | 281 | $659,195$ | 2 | 49 | 340 | 1,637, 130 |
| South Atlantic Division... Sonth Gentral Division |  | 17 |  | 100, 000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| South Central Division.... <br> North Central Division... | 11. | 41 | 615 786 | 207,177 408,830 | 8 |  |  |  | $\begin{aligned} & 1 \\ & 1 \end{aligned}$ | $\begin{array}{r} 14 \\ 8 \end{array}$ | $\begin{array}{r} 139 \\ 80 \end{array}$ | 265, 000 | 15 | 123 | 1,005 | 369,559 | 3 | -24- | 346 | 142,000 | ${ }^{-}$ | 23 | 146 | 425,000 |
| North Central Division... Western Division | 1 | $\begin{array}{r}18 \\ \hline\end{array}$ | 786 25 | 408,830 12,000 | 2 | 5 | ${ }^{781}$ | 100,90 10,689 | 1 |  |  | 205,000 | 15 | 12 | 1,005 | 36, 5 | 1 | 4 | 35 | 17,000 |  |  |  | - |
| North Atlantic Division: <br> Maine $\qquad$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| New Hampshire..... |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fermont |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 38 | 250 | 1,300,000 |
| Massachusetts |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 38 | 200 | 1,300,000 |
| Rhode Island |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Connecticut New York . |  |  | -..- |  |  |  |  |  | 2 | 20 | $\begin{aligned} & 134 \\ & 134 \end{aligned}$ | 500, 621 |  |  |  |  |  |  |  |  | 1 | 11 | 90 | 337,130 |
| Now Jersoy. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Pennsylvania........... |  |  |  |  | 1 | 6 | 51 | 56,000 | -- |  |  |  | 4 | 31 | 348 | 460,000 | 2 | 40 | 281 | 659,195 |  |  |  |  |
| South Atlantic Division: <br> Delaware |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Maryland |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| District of Columbia.- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Virginia |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 11 | 137 | 50,000 |  |  |  |  |  |  |  | --- |
| West Virginia. North Carolina | $\frac{1}{1}$ | 8 | 125 | 100,000 |  |  |  |  |  |  |  |  | 2 | 7 | 55 | 15,000 | 1 | 11 | 83 | 60,000 |  |  |  |  |
| South Carolina |  |  |  | 100,000 |  |  |  |  |  |  |  |  | 1 | 7 | 79 | 32,000 |  |  |  | 60,00 |  |  |  |  |
| Georgia .... |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| South Central Division: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Kontucky............... | 2 | 20 | 343 | 203, 477 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tonnessee | 8 | 10 | 208 | 3,700 |  |  |  |  | 1 | 14 | 139 | 111,000 |  |  |  |  |  |  |  |  |  |  |  |  |
| Alabama. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mississippl -........--** |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | - | 11 | 64 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Arkansas |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Oklahoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Indian Territory -->=ew |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |


| North Central Division: |  |  |  | 125,000 | 2 | 12 | 115 | 75,000 | 1 | 8 | 80 | 265, 000 | 3 | 28 | 291 | 180,000 | 1 | 5 | 43 | 40,000 | 1 | 9 | 98 | 250,000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ohio.................... | 1 | 117 | 142 | 123,000 | 1 | 3 | 20 | 13,000 |  |  |  |  | 1 | 8 | 105 |  | 1. |  |  |  |  | 14 | 48 | 175,000 |
| Indiana .................. | 1 | 9 | 92 | 45,000 | 1 | 7 | 39 | 2,900 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 175,000 |
| (4) Michigan |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 6. | 50 |  |  |  |  |  |  |  |  |  |
| M Minnesots | 1 | 10 | 51 | 0 |  |  |  |  |  |  |  |  | 3 | 28 | 156 | 56,032 | 1 | 7 | 96 | 0 |  |  |  |  |
| ¢ Iows .... | 2 | 19 | 178 | 179,830 | 1 | 11 | 52 | 0 |  | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| \% Morsour Nakota | 8 | 20 | 203 | 29,000 | 1 | 10 | 120 | 0 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| South Dakota | 2 |  |  |  |  |  |  |  | - | - |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| O Kansas ${ }^{\text {E }}$ Western Division: |  |  |  |  | 1 | $\begin{aligned} & 5 \\ & 4 \end{aligned}$ | 15 | 10,000 | - |  |  |  | 3 | 22 | 120 | 25,000 | -.. |  |  |  |  |  |  |  |
| Western Division: <br> Montana |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| W yoming |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Colorado- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Arizona. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Utah Nevads |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Idalo |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Washington |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 4 | 35 | 7,000 |  |  |  |  |
| Californis | 1 | 7 | 25 | 12,000 | 1 | $\stackrel{3}{2}$ | 16 | 6,000 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 1．－Number of institutions controlled by the several religious denominations－Continued．

| State or Territory． | German Evangelical． |  |  |  | Methodist Protestant． |  |  |  | Seventh－Day Adventist． |  |  |  | Reformed． |  |  |  | Other． |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 0 0 0 0 0 0 0 0 0 H 0 |  |  | Institutions． | $\begin{aligned} & \text { N } \\ & \text { On } \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & \text { L } \\ & \text { H. } \end{aligned}$ |  |  |  | $\begin{aligned} & \dot{2} \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |  | B 0 0 0 0 0 0 H H |  | $\begin{aligned} & \dot{2} \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & \sim \\ & \sim \end{aligned}$ | $\begin{aligned} & \text { 品 } \\ & \text { 品 } \\ & \text { o } \\ & \text { B } \\ & \text { की } \end{aligned}$ |  |  | $\begin{aligned} & \text { x } \\ & \text { in } \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & \text { in } \end{aligned}$ | $\begin{aligned} & \text { w } \\ & \text { a } \\ & \text { d } \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |  |
| United Statos | 3 | 19 | 190 | \＄4，175 | 2 | 31 | 394 | \＄85， 000 | 2 | 27 | 467 | 0 | 8 | 94 | 662 | \＄1，386，319 | 4 | 31 | 145 | \＄303， 427 |
| North Atlantic Division South Atlantic Division South Central Division．． | 1 | 6 | 4 | 4，1\％5 | 1 | 16 | 169 | 0 |  |  |  |  | 3 | 52 7 | 416 22 | $1,105,000$ 10,000 | $\cdot 1$ | 5 | 25 | 100，000 |
| North Contral Division． <br> Western Division ．．．．．．．． | 1 | 8 | 116 30 | 0 | 1 | 15 | 225 | 85，000 | 2 | －27 | 467 | 0 | 4 | －35 | 224 | 271，319 | 2 | 12 | 116 4 | $\begin{array}{r} 107,000 \\ 96,427 \end{array}$ |
| North Atlantic Division： Maino |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Now Hampshiro．．． <br> Vermont |  |  |  |  |  |  |  |  |  |  |  |  | －－－ |  |  |  |  |  |  |  |
| Massachusetts． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Rhodo Island． |  |  |  |  |  |  |  |  |  |  |  |  | － |  |  |  |  |  |  |  |
| Connecticut．． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| New York ．．．． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| New Jersey Pennsylvania | 1 | 6 | 44 | 4，175 |  |  |  |  |  | －－ |  |  | $1$ | $\begin{aligned} & 27 \\ & 25 \end{aligned}$ | $\begin{aligned} & 182 \\ & 234 \end{aligned}$ | $\begin{array}{r} * 750,000 \\ 355,000 \end{array}$ | a1 | 5 | 25 | 100，000 |
| South Atlantic Division： <br> Delawaro |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Maryland－－．．．．．．．． |  |  |  |  | 1 | 16 | 169 | 0 | －－－－ | －－－ |  |  |  |  |  |  |  |  |  | －－．－－－－－ |
| District of Columbia |  |  |  |  |  | －－－－ | －－－－ | －－－－－－－－－－－－ | －．．．－ | －－ | ．．． |  |  |  |  |  |  |  |  | －－－－－－－－ |
| West Virginis． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| North Carolina． |  |  |  |  |  |  |  |  |  |  |  |  | 1 | 7 | 22 | 10，000 |  |  |  | －－－－－－－－ |
| South Carolina． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Goorgia |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Florida ${ }_{\text {South Contral }}$ |  |  |  |  |  |  |  |  | －－－ | － | － |  | － | － |  |  |  |  |  |  |
| Kentucky ．．．．．．．．．．．． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tonnesseo |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Alabama．． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Mississippi |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Louisiana．．． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Texas ．．．． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Arkansas． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Oklahoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Indian Torritory． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |



Table 2.-Classification of universities and colleges according to the amount of endowment funds.

| State or Territory. | Institutions having- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| United State | 188 | 54 | 39 | 49 | 50 | 34 | 14 | 9 | 9 | 5 | 5. 3 | 3 | 2 | 2 | 13 | 3 | 3 | 3 | 0 |  |
| North Atlantic Division.... <br> South Atlantic Division <br> South Central Division...... <br> North Central Division. <br> Westerı Division. | $\begin{aligned} & 24 \\ & 28 \\ & 41 \\ & 69 \\ & 26 \end{aligned}$ | $\begin{gathered} 1 \\ 10 \\ 16 \\ 21 \\ 61 \end{gathered}$ | $\begin{array}{r}2 \\ 4 \\ 4 \\ 24 \\ 5 \\ \hline\end{array}$ | $\begin{array}{r} 3 \\ 7 \\ 8 \\ 2 \% \\ 4 \end{array}$ | $\begin{array}{r}7 \\ 9 \\ 8 \\ 23 \\ 3 \\ \hline\end{array}$ | $\begin{array}{r} 7 \\ 7 \\ 3 \\ 16 \\ 1 \\ \hline \end{array}$ | $\begin{aligned} & 1 \\ & 2 \\ & 2 \\ & 3 \end{aligned}$ |  | \|r | 2 2 1 1 |  |  | 2 | - | $\stackrel{5}{5}$ | 1 | 1 | 1 |  | 3 1 1 |
| North Atlantic Division: Maine New Hampshire |  |  |  |  |  |  | 1 | 1 | 1 |  |  |  |  |  | 1 |  |  |  |  |  |
|  |  |  |  |  |  |  | 1 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| Massachusetts Rhode Island. | 3 |  |  |  |  |  |  |  |  |  |  | 1 | 2 |  | ${ }_{2}^{2}$ |  |  |  |  |  |
| Connecticut. |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  | 1 |  |  |
| New York. <br> New Jersey | ${ }_{2}^{8}$ |  | 1 | 1 | 1 | 1 | 3 |  | 1 | 2 |  |  |  |  | 1 | 1 |  | 1 |  |  |
| Pennsylvania | 11 | 1 | 1 | 2 | 6 | 6 | 3 | 1 | 1 |  |  |  |  |  |  |  | 2 | 1 |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Maryland - | 7 | 1 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |
| District of Columbia |  |  |  |  |  | 2 |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |
| West Virginia. |  | ${ }^{2}$ | 1 |  | 2 |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |
| North Carolina |  | 5 | 1 |  | 4 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| South Carolina |  |  | 1 | 3 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Florida |  | 1 |  | 1 | 2 | 2 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Tennessee |  | $\frac{1}{8}$ | 1 | ${ }_{2}^{2}$ | 3 <br> 3 | 3 |  | 1 |  |  |  |  |  |  | 1 |  |  |  |  |  |
| Alabama | 2 | 1 |  | 1 |  |  | 1 |  | - |  |  |  |  |  |  |  |  |  |  |  |
| Louisiana. | 3 |  |  |  |  |  | 1 |  | 1 |  |  |  |  |  | 1 |  |  |  |  |  |
| Texas...- | 10 | 2 | 1 | 1 |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |
| Oklahoma | 1 |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| North Central Division: ${ }^{\text {a }}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Indiana. | ${ }_{9}^{5}$ | ${ }_{2}^{2}$ | $\frac{1}{7}$ | ${ }_{3}^{1}$ |  | 2 | 1 |  |  | 1 |  |  |  |  |  | 1 |  |  |  |  |
| Michigan |  |  |  |  |  | 3 |  |  | 1 |  |  |  |  |  |  | 1 |  |  |  |  |
| Wisconsin |  | $1$ |  |  |  | 2 |  | 2 |  |  |  |  |  |  |  |  |  |  |  |  |
| Iowa |  |  | 8 |  |  | 1 | 1 |  |  |  |  |  |  |  | 1 |  |  |  |  |  |
| Missouri. | 13 | 4 |  | 3 | 3 | 3 |  |  |  |  |  |  |  | 1 | 1 |  |  |  |  |  |
| South Dakota | 2 |  | $\frac{1}{2}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Nebraska. | 4 |  | 2 |  | 1 |  |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Wabhington. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Oretron <br> Californis |  | 8 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 1 |  |  |  |

Table 3.-Classification of universities and colleges according to the number of undergraduate college students.


Table 4.-Collegiate students in colleges for men and in coeducational colleges.


[^96]Table 5．－Professors and instructors in universities and colleges．

| State or Territory． |  | Preparatory departments． |  | Collegiate de－ partments． |  | Professional departments． |  | Total number （excluding duplicates）． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | $\begin{aligned} & \text {. } \\ & \text { H゙ } \\ & \text { H゙ } \end{aligned}$ |  | $\begin{aligned} & \text { 0. } \\ & \text { H゙ } \end{aligned}$ |  | 品 |  |
| United States | 484 | 2，075 | 845 | 6，285 | 776 | －3，286 | 37 | 10，682 | 1，595 |
| North Atlantic Division | 79 | 328 | 53 | 2，001 | 53 | 1，071 | 1 | 3，305 | 104 |
| South Atlantic Division | 70 | 238 | 92 | 727 | 92 | －363 | 0 | 1，181 | 154 |
| South Contral Division． | 87 | 244 | 167 | 671 | 135 | 377 | 3 | 1，191 | 810 |
| North Central Division | 201 | 1，011 | 436 | 2，345 | 402 | 1，109 | 27 | 4，028． | 848 |
| Western Division ．－．．．－ | 47 | 1，254 | 97 | 541 | 94 | － 366 | 6 | ， 977 | 179 |
| North Atlantic Division： <br> Maine <br> New Hampshire $\qquad$ <br> Vermont <br> Massachusetts $\qquad$ <br> Rhode Island $\qquad$ <br> Connecticut $\qquad$ <br> New York $\qquad$ <br> New Jersey <br> Pennsylvania． $\qquad$ |  |  |  |  |  |  |  |  |  |
|  | 3 | 0 | 0 | 44 | 0 | 20 | 0 | 62 | 0 |
|  | 1 | 0 | 0 | 34 | 0 | 15 | 0 | 46 58 | 0 |
|  | 9 | 42 | 2 | 354 | 5 | 312 | 0 | 679 | 8 |
|  | 1 | 0 | 0 | 75 | 0 | 0 | 0 | 75. | 0 |
|  | 3 | 0 | 0 | 185 | 0 | 83 | 0 | 280 | 0 |
|  | 22 | 176 | 8 | 655 | 21 | 340 | 0 | 1，133 | 24 |
|  | 4 | 12 | 5 | 117 | 0 | 3 | 0 | 129 | 5 |
|  | 34 | 98 | 38 | 500 | 27 | 276 | 1 | 843 | 67 |
| South Atlantic Division： |  |  |  |  |  |  |  |  |  |
| Delaware－－－－．．．－．．．．－ | 1 | 0 | 0 | 10 | 0 | 0 | 0 | 10 | 0 |
| Maryland－－．．－．－． | 10 | 48 | 6 | 153 | 13 | 32 | 0 | 208 | 16 |
| District of Columbia | 6 | 34 | 2 | 109 | 3 | 212 | 0 | 347 | 10 |
| Virginia． | 10 | 35 | 6 | 126 | 13 | 29 | 0 | 173 | 17 |
| West Virginia | 3 | 4 | 1 | 32 | 6 | 37 | 0 | 65 | 10 |
| North Carolina | 15 | 35 | 17 | 122 | 10 | 25 | 0 | 165 | 24 |
| South Carolina | 9 | 27 | 2 | 66 | 2 | 4 | 0 | 72 | 4 |
| Georgia－ | 10 | 24 | 33 | 71 | 24 | 24 | 0 | 99 | 40 |
| Florida－－－－．－－－ | B | 31 | 25 | 38 | 21 | 0 | 0 | 42 | 33 |
| South Central Division： |  |  |  |  |  |  |  |  |  |
| Kentucky | 13 24 | 32 69 | ${ }_{60}^{22}$ | 99 193 | 11 | 2989 | 0 | 160 450 | 30 108 |
| Alabama | 9 | 9 | 6 | ${ }_{68} 6$ | 7 | 8. | 0 | 85 | 13 |
| Mississippi | 5 | 11 | 5 | 34 | 8 | 5 | 0 | 45 | 9 |
| Louisiana． | 9 | 33 | 27 | 88 | 14 | 38 | 3 | 159 | 48 |
| Texas | 14 | 51 | 21 | 108 | 27 | 42 | 0 | 177 | 53 |
| Arkansas | 10 | 36 | 18 | 74 | 22 | 22 | 0 | 106 | 37 |
| Oklahoma．－ | 1 | 0 | 2 | 5 | 0 | 0 | 0 | 5 | 2 |
| Indian Territory | 2 | 3 | 6 | 4 | 3 | 1 | 0 | 4 | 10 |
| North Central Division： |  |  |  |  |  |  |  |  |  |
| Ohio | 37 15 | 199 | 71 | 423 | 60 | 163 | 1 | 719 | 158 |
| Indiana | 15 | 90 173 | 27 | 199 | 25 | 38 | 1 | 302 | 42 |
| Michigar． | 11 | 51 | 27 | 181 | 28 | 104 | 0 | 297 | 64 |
| Wisconsin | 9 | 48 | 10 | 160 | 18 | 22 | 0 | 215 | 23 |
| Minnesota | 10 | 50 | 14 | 155 | 28 | 133 | 0 | 297 | 38 |
| Towa． | 23 | 82 | 50 | 191 | 58 | 110 | 8 | 331 | 109 |
| Missouri | 28 | 103 | 77 | 224 | 89 | 74 | 0 | 407 | 124 |
| North Dakota | 3 | 16 | 7 | 19 | 8 | 0 | 0 | 20 | 9 |
| South Dakota | ${ }^{6}$ | 35 | 17 | 39 | 14 | 0 | 0 | 44 | 24 |
| Nebraska | 10 | 61 | 29 | 102 | 31 | 100 | 0 | 215 | 48 |
|  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
| Wyoming． | 1 | 10 | 2 | 10 | 2 | 0 | 0 | 10 | 13 |
| Colorado． | 5 | 41 | 11 | 67 | 9 | 188 | 0 | 188 | 18 |
| New Mexico | 1 | 5 | 3 | 0 | 0 | 0 | 0 | 5 | 8 |
| Arizona ．－． | 1 | 12 | 3 | 11 | 1 | 0 | 0 | 19 | 3 |
| Utah | ， | 25 | 3 | 34 | 8 | 0 | 0 | 36 | 10 |
| Nevada | 1 | 8 | 2 | 14 |  | 0 | 0 | 15 | 3 |
| Idaho | 1 | 13 | 3 | 13 | 8 | 0 | 0 | 18 | 3 |
| Washington | 9 | 24 | 15 | 62 | 20 | 0 | 0 | 74 | 28 |
| Oregon．．．－ | 8 | 33 | 19 | 41 | 15 | 50 | 0 | 107 |  |
| Calitornia． |  | 74 | 27 | 280 |  | 180 | 6 | 487 |  |

Table 6．－Students in universities and colleges．

| State or Territory． | Prepara－ tory de－ partments． |  | Collegiate depart－ ments． |  | Graduate departments． |  |  |  | Profes－ sional depart－ ments． |  | Total number． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Resident． | Nonresi－ dent． |  |  |  |  |  |
|  | 皆 |  |  |  |  | $\begin{aligned} & \dot{\Delta} \\ & \text { 玉゙ } \\ & \text { gig } \\ & \text { E, } \end{aligned}$ | 感 |  | $\begin{aligned} & \dot{\oplus} \\ & \text { 岂 } \end{aligned}$ |  | $\begin{aligned} & \text { 雫 } \end{aligned}$ |  |  |  |
| United States | 32，1221 | 14.892 | 52， 794 | 15，835 | 2，950 | 806 | 812 | 105 | 24，522 | 916 | 118， 140 | 41，232 |
| North Atlantic Division | 5， 601 | 653 | 18，971 | 2，077 | 1，317 | 196 | 234 | 29 | 7，831 | 209 | 34， 419 | 3，609 |
| South Atlantic Division | 3， 349 | 1，223 | 5，746 | 2，998 | 1，353 | 10 | 26 | 2 | 2，373 | 45 | 12， 460 | 3，078 |
| South Central Division． | 5， 409 | 3,415 | 6，938 | 2，298 | 93 | 81 | 55 | 4 | 3，174 | 25 | 16，209 | 6，715 |
| North Central Division | 14，666 | 7， 766 | 17， 905 | 8，693 | 984 | 435 | 474 | 63 | 10，060 | 448 | 47，005 | 22，923 |
| Western Division | 3，097 | 1， 835 | 3，234 | 1，769 | 203 | 84 | 23 | 7 | 1，081 | 189 | 8，04i | 4，907 |
| North Atlantic Division： Maine $\qquad$ | 0 | 0 | 507 | 161 | 0 | 0 | 0 | 0 | 147 | 3 | 623 | 163 |
| New Hampshi | 0 | 0 | 386 | 0 | 7 | 2 | 0 | 0 | 161 | 0 | 554 | 2 |
| Vermont | 0 | 0 | $25{ }^{\circ}$ | 91 | 1 | 1 | 0 | 0 | 185 | 0 | 493 | 92 |
| Massachuset | 451 | 25 | 3，489 | 347 | 409 | 43 | 28 | 0 | 1，964 | 112 | 6， 475 | 527 |
| Rhode Island | 0 | 0 | －654 | 96 | 15 | 14 | 70 | 10 | 1，${ }^{\text {d }}$ | 0 | ${ }^{7} 739$ | 120 |
| Connecticut | 0 | 0 | 2，091 | 59 | 168 | 23 | ， | 0 | 454 | 0 | 2，732 | 118 |
| New York | 3，218 | 98 | 4，863 | 668 | 405 | 83 | 78 | 18 | 2，538 | 83 | 11，000 | 1，068 |
| New Jersey | 178 | 30 | 1，280 | 0 | 119 | 0 | 7 | 0 | 0 | 0 | 1，584 | 30 |
| Pennsylvania－－．．．．．． | 1，754 | 500 | 5，444 | 655 | 193 | 30 | 50 | 1 | 2，382 | 11 | 10，219 | 1，489 |
| South Atlantic Division： Delaware |  |  |  | 0 |  |  |  |  | 0 | 0 | 71 | 0 |
| Maryland | 529 | 93 | 771 | 104 | 253 | 9 | 0 | 0 | 163 | 28 | 1，785 | 225 |
| District of Colu | 434 | 36 | 450 | 101 | 82 | 9 | 6 | 0 | 1，279 | 16 | 2，344 | 273 |
| Virginia | 488 | 59 | 1，156 | 226 | 2 | 0 | 0 | 0 | 1，400 | 0 | 2，046 | 305 |
| West Virginia | 145 | 0 | 1， 226 | 75 | 1 | 0 | 0 | 0 | 89 | 0 | ${ }^{2} 500$ | 114 |
| North Carolina | 668 | 361 | 1，313 | 208 | 11 | 0 | 17 | ） | 213 | 1 | 2，380 | 746 |
| South Carolina | 224 | 80 | 648 | 46 | 1 | 0 | 3 | 0 | 25 | 0 | 1，015 | 245 |
| Georgia | 583 | 385 | 928 | 170 | 0 | 0 | 0 | 0 | 199 | 0 | 1，845 | 884 |
| Florida | 278 | 209 | 183 | 73 | 3 | 1 | 0 | 0 | － | 0 | 474 | 286 |
| South Central Division： Kentucky |  |  |  |  | 3 |  | 0 |  | 517 | 0 | 2，956 | 951 |
| Tennessee | 1，553 | 1，094 | 1，954 | 688 | 50 | $\stackrel{4}{3}$ | 12 | 0 | 1，450 | 15 | 5，089 | 2，223 |
| Alabama | 1，273 | 204 | 1，788 | 113 | 0 | 0 | 0 | 0 | 1， 37 |  | 1，071 | 317 |
| Mississipp | 240 | 105 | 512 | 69 | 8 | 0 | 22 | 4 | 39 | 0 | 1，826 | 207 |
| Louisiana | 639 | 509 | 672 | 237 | 24. | 68 | 21 | ${ }_{0}^{4}$ | 482 | 1 | 1，992 | 1，071 |
| Texas．－ | 889 | 387 | 1，183 | 505 | 8 |  | ， | 0 | 505 | 9 | 2，581 | 950 |
| Arkansas． | 761 | 458 | 1606 | 394 | 0 | 0 | 0 | 0 | 134 | 0 | 1，5\％3 | 852 |
| Oklahoma | 72 | 61 | ， | 3 | 0 | ， | 0 | 0 | 5 | 0 | 84 | 64 |
| Indian Territory－．．．－ | 72 | 65 | 14 | 5 | 0 | 0 | 0 | 0 | 5 | 0 | 87 | 80 |
| North Central Division： Ohio | 3，003 | 1，221 |  |  | 75 | 38 | 279 |  | 835 | 12 |  | 4，062 |
| Indiana | 1，014 | 1，352 | 1，597 | 1，654 | 83 | 20 | 11 | 1 | 333 | 11 | 3，199 | 1，137 |
| Illinois． | 2， 636 | 1，378 | 3，334 | 1，497 | 493 | 227 | 49 | 11 | 3，989 | 200 | 10， 866 | 4，813 |
| Michigan | 940 | 598 | 1，871 | －989 | 50 | 16 | 17 | 8 | 1，383 | 91 | 4， 313 | 2，086 |
| Wisconsin | 717 | 150 | 1，308 | 531 | 66 | 18 | 17 | 8 | ＋411 | 7 | 2，662 | 862 |
| Minnesota | 460 | 277 | 1，396 | 654 | 108 | 34 | 2 | 0 | 896 | 33 | 3， 042 | 1，219 |
| Iowa．． | 1，517 | 984 | 1，407 | 822 | 39 | 25 | 28 | 16 | 1，060 | 75 | 4，284 | 2，553 |
| Missouri | 2，024 | 1，020 | 1，751 | 810 | 22 | 15 | 13 | 0 | ${ }^{1} 604$ | 1 | 4，897 | 2，144 |
| North Dakot | 191 | 179 | 164 | 35 | 0 | 0 | 2 | 1 | 0 | 0 | 264 | 262 |
| South Dakot | 278 | 270 | 108 | 76 | 2 | 2 | 4 | 0 | $\checkmark$ | 0 | 2 462 | 433 1,342 |
| Nebrask | 839 1,056 | 536 801 | 778 1,108 | 535 536 | 17 | 23 | 33 | 3 | 356 193 | 13 5 | 2,146 2,803 | 1,342 2,010 |
| Western Division： | 1，056 | 801 | 1，1008 | 536 | 29 | 15 | 19 | 2 | 193 | 5 | 2，803 | 2，010 |
| Montana．．．．－ | 96 | 76 |  | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 176 | 174 |
| WYoming | 35 | 62 | 11 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 47 | 71 |
| Colorado | 372 | 220 | 267 | 145 | 24 | 7 | 12 | 4 | 212 | 29 | 905 | 537 |
| New Mexico | 37 | 42 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | ， | 37 | 42 |
| Arizona | 49 | 27 | 10 | 13 | 1 | 0 | 0 | 0 | 0 |  | 60 | 40 |
| Utah． | 356 | 306 | 83 | 86 | 2 | 0 | 1 | 0 | 0 | 0 | 442 | 392 |
| Nevada | 38 | 10 | 82 | 51 | 2 | 4 | 0 | 0 | 0 | 0 | 160 | 174 |
| Idaho | 141 | 83 | 23 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 184 | 102 |
| Washin | 372 | 251 | 409 | 267 | $\stackrel{2}{8}$ | 1 | 2 | 0 | 12. | ${ }^{6}$ | \％97 | 1.53 |
| Oregon |  |  | 2，122 | 194 | ［ 2 | 2 70 | 4 | $\frac{1}{2}$ | 176 | 129 | $1,1(k)$ 4,134 | 1，050 |
| Caliform | 1，102 | 386 | 2，122 |  | 169 | 70 | 4 | 2 | 654 | 129 | 4，134 | 1，808 |

TABLE 7．－Students in courses of study in universities and colleges．

| State or Territory． |  | Per cent of students reported in degree courses pursuing courses of study leading to－ |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  | Otherfirst degrees． |  |  |
| United States | 50，918 | 54.85 | 9.40 | 8.26 | 21.32 | 1.89 | 1.18 | 1.87 | 1． 23 | 6，442 | 5，880 |
| North Atlantic Divisio | 18， 486 | 57.44 | 9.42 | 3.18 | 19.87 | 3.13 | 2.22 | 3．55 | 1.19 | 511 |  |
| South Atlantic，Division | 4，566 | 77.31 | 4.18 | 3.02 | 11.19 | 2.39 | 1.18 | ． 29 | 1． 44 | 814 | 371 |
| South Central Division | 5，077 | 54.09 | 4． 63 | 7.68 | 29． 56 | ． 67 | ． 89 | ． 29 | 2.19 | 1，213 | 1，221 |
| North Central Division． | 19，036 | 48.44 | 12． 44 | 12.38 | 22.73 | 1.19 | ． 44 | 1.32 | 1.06 | 2，809 | 3，394 |
| Western Division．．． | 3， 753 | 48.28 | 6.63 | 20.81. | 22：46 | ． 48 | ． 19 | ． 45 | ． 70 | 1，095 | 411 |
| North Atlantic Division： <br> Maine $\qquad$ <br> New Hampshire $\qquad$ <br> Vermollt． <br> Massachusetts $\qquad$ <br> Rhode Island $\qquad$ <br> Connecticut <br> New York $\qquad$ $\qquad$ <br> New Jersey $\qquad$ | 656 | 100.00 |  |  |  |  |  |  |  |  |  |
|  | 386 | 51.04 |  | 18.91 | 30.05 |  |  |  |  |  |  |
|  | 331 | 41.99 | 15.41 |  | 42． 60 |  |  |  |  |  |  |
|  | 3， 083 | 85． 96 | ． 26 |  | 13． 78 |  |  |  |  |  | 13 |
|  | ${ }^{531}$ | 52． 35 | 38.61 |  | ． 94 | 3.77 | 4． 33 |  |  | 32 |  |
|  | 2，178 | 66.25 41.84 | 30.67 <br> 9.82 | 8． 05 | 3.03 19.51 |  |  |  |  |  |  |
|  | 5， 053 1,135 | 41.84 60.26 | 9.82 | 8.23 | 19.51 29.43 | 3.72 8.69 | 4.95 | $\begin{array}{r}9.54 \\ .62 \\ \hline\end{array}$ | 2．39 | 134 | 264 |
|  | 5，133 | 47.89 | 6．12 | 1．91＂ | 31.17 | 5.06 | ${ }^{2.67}$ | 3． 27 | 1.91 | 345 | 202 |
| South Atlantic Division： Delaware $\qquad$ |  | $50.77$ | $60$ |  | $\begin{array}{r} 4.62 \\ 2.77 \\ 22.49 \\ 2.22 \end{array}$ | 15． 38 | 9.23 | 20.00 |  |  |  |
| Maryland－－－．－．．．－．．．．．．－－ | 830 | 96.15 |  | ． $48 \times$ |  |  |  |  |  |  | 6 |
| District of Columbia． | 369 | 77.51 |  |  |  |  |  |  |  | 52 |  |
| Virginia．－ | 451 | 92.24 |  | 5． 54 |  |  |  |  |  | 135 | 59 |
| West Virgin | 248 | 24． 60 |  | 20.97 |  | 08 | 19.35 |  |  | 15 | 128 |
| North Carolina | 1，192 | ${ }^{86} .86$ | 10.23 | ． 25 | 17．20 |  |  |  | 5． 46 | 161 | 95 |
| South Carolina | 472 | 88．23 | ． 42 |  | 13． 35 |  |  |  |  | 131 | 9 |
| Georgia | 852 | 77.58 | 7.28 |  | 13.61 | 1.41 |  |  | 2 | 223 | 12 |
| South Central Division： Kentucky Tennessee | 87 | 81.60 |  | 9.20 | 9.20 |  |  |  |  | 2 | 32 |
|  | 1，1528 | 44.2054.69 | 2.54 | 16． 55 | 28.86 | 1.09 | 4.35 |  |  |  |  |
|  |  |  | 4.43 | 16．16 | 34.98 | 1.08 | 4.35 |  | 1． 74 | 637 |  |
| Alabama | 1，716 | 70．67 |  | ． 14 | 27.79 | ． 84 | ． 60 |  |  | 14 | 75 |
| Mississipp | 354510 | 53.11 | 8． 39 |  | 43.50 |  |  |  |  | 78 | 6 |
| Louisiana |  | 46.08 |  |  | 40.00 |  |  |  | 92 | 239 | 152 |
| Texas． | 8566529 | $\begin{aligned} & 63.08 \\ & 42.64 \\ & 33.33 \end{aligned}$ | ． 85 | 19.63 | 14.95 | 1.99 |  |  |  | 192 | 151 |
| Arkansas－．．．．．．．．．．．．．． |  |  | 22． 70 | 5.52 | 25． 76 | ． 31 | ． 77 | 2.30 |  | 41 | 75 |
|  |  |  |  |  | 68.67 |  |  |  |  |  |  |
| North Central Division： <br> Ohio | 3，576 | 46.00 | 14.04 | 13．20 | 17.08 |  |  |  |  |  | 13 |
| Indiana | 1，974 | 74.97 <br> 46.90 | 4.56 | 1．17 | 10.54 | 1.16 | ． 61 | － 41 | 2． 2.38 | 334 | 106 |
| Illinois | $\begin{aligned} & 3,394 \\ & 1,820 \end{aligned}$ |  | 14．20 | 8． 22 | 32.12 |  |  |  | ． .56 | 881 | 779 |
| Michigan |  | $\begin{aligned} & 46.90 \\ & 37.25 \end{aligned}$ | 28．21 | 20．00 | 16．54 |  |  |  |  | 182 | 131 |
| Wisconsin | 1，366 |  | 7.08 | ＋35．80 | 28．99 |  |  |  |  | 99 | 45 |
| Minnesota | 1,2411,803 | 35．60 | 1．53 | 24． 10 | 28.11 | 2.10 | 1.93 | 6.13 | 2.50 | 258 | 129 |
| Iowa |  | 31.67 | 28.51 | 2． 99 | 34.94 | 1.88 |  |  | ． 06 | 437 | 513 |
| Missouri | 1，756 | 54.44 | 5.81 | 14.41 | 19.13 | 3． 47 | ． 40 | 1． 71 | 63 | 146 | 810 |
| North Dakot | $\begin{array}{r}1,86 \\ 132 \\ \hline\end{array}$ | 81． 40 | ． 78 | 8． 17.4 | 10．46 |  |  |  | 3．79 | ${ }_{98}^{20}$ | 2 |
| Nebraska |  | 66． 11 | ． 28 | ． 89 | 32． 74 |  |  |  |  | 112 | 7 |
| Kansas |  | 73.80 | 7.52 | 8．80 | 11.88 |  |  |  |  | 231 | 451 |
| Western Division | 12320305 | $\begin{aligned} & 21.74 \\ & 10.00 \\ & 43.28 \end{aligned}$ | $\begin{aligned} & 13.04 \\ & 10.00 \\ & 24.92 \end{aligned}$ | 30．00 | $\begin{aligned} & \text { 13.04 } \\ & 15.00 \\ & 20.00 \end{aligned}$ | －1．．．． | 35.00 | $5$ | 52.18 | 1525 | 17 |
| W yomin |  |  |  |  |  |  |  |  |  |  |  |
| Colorad |  |  |  | 4.92 |  | 1． 31 | －．．．．．． |  |  |  |  |
| New Me | 28 |  |  | $50.00$ | 100.00 |  |  |  |  | 1 | 18 |
| Utah | 18342 |  |  |  |  |  |  |  |  | 0 |  |
| Nevad |  | （1．65 | －．．．．． |  | 38.35 |  |  |  |  | 04 | 4 |
| Idaho |  |  |  |  | 38.09 | 11.05 |  |  |  |  |  |
| Wash | $\begin{array}{r} 347 \\ 188 \\ 2,688 \end{array}$ |  | $\begin{array}{r} 21.43 \\ 35.45 \\ 7.45 \\ .88 \end{array}$ |  | 81.12 | 1.73 |  |  | 3． 75 | 112 | 74 |
| Oregon |  |  |  | 24.47 | 27.68 |  |  |  | ． 88 | 94 | 812 |
| Californ |  |  |  | 28.69 | 19.64 |  |  |  |  | 434 | 212 |

Table 8.-Preparation of frestimen of universities and colleges.


Table 9．－Degrees conferred on men by universities and colleges．

State or Territory．

| United Stat | 4，456 |
| :---: | :---: |
| North Atiantic Diviaion | 2，126 |
| South Atuantic Division | 59 |
| South Contral Division． | 1334 |
| North Central Division． |  |
| Western Division．．． |  |
| North Atlantio Division： |  |
| New Hamphire |  |
| Vermont． | 23 |
| Massachusetts |  |
| Rhode Island | 6 |
| Connecticut |  |
| New Jorsey |  |
| New Jersey |  |
| South Atlantic Division： |  |
| Delaware． |  |
| Maryland District of ${ }^{\text {a }}$ |  |
| Virginia． | 72 |
| West Virginia |  |
| North Carolina |  |
| Georgia |  |
| Florida． |  |
| South Contral Division： |  |
| Tennessee |  |
| Alabama |  |
| Lississippi | A |
|  |  |
| Arkansas |  |


|  | Hosixiz | 哭 | A．B． |
| :---: | :---: | :---: | :---: |
|  |  | 5 | B． 5 ． |
|  | \％icitctis | 家 | Ph．B． |
| xのal |  | 莫 | B．L． |
|  |  | 皆 | B．C．E．and C．E． |
|  | トセズッ＂\％ | 哭 | B．M．E．and M．E． |
|  | Nector | \＆ | B．E．E．and E．E． |
|  | ¢ 心： | A | Min．E． |
|  | ¢o： | $\stackrel{\text { 旨 }}{ }$ | E．M． |
|  |  | F | B．Agr． |
|  | 汭： | \％ | B．Arch． |
|  | 1： | 0 | A．C． |
|  | （ $0: \begin{aligned} & \text { o }\end{aligned}$ | ar | Mus．B． |
| 1 1 1  <br> 1 1 1 1 <br> 1    | 豸ーム！ | 2 | B．Ped． |
|  | N0\％ | － | A．M． |
|  |  | 吕 | M．S． |
|  | －- 㐌： | H | M．L． |
|  |  | 8 | Ph．M． |
|  | （1） $\begin{aligned} & \text { ¢ } \\ & 1\end{aligned}$ | － | M．Agr． |
|  | \％ | ＋ | Pd．M． |
|  |  | ｜${ }^{+}$ | Pd．D． |
|  | $\rightarrow$ 盛冓娄而 | 1 | Ph．D． |
|  | ｜1：c：c |  | Litt．D． |

Arkansas．．．．．．．．．．

Table 9．－Degrees conferred on men by universities and colleges－Continued．

## State or Territory．

## North Central Division：

Ohio
Indians
Minols ．．－
Wisconsin
Minnesota
Minneso
Misuouri
North Dakots
North Dakota

Nebraska
Western Division
Montana
Wyoming
Colorado
Utah
Utah
Nevada
Washington
Oregon
California
$\qquad$
$\qquad$

| $\pm$ | $\dot{\infty} \dot{\dot{A}}$ | $\begin{aligned} & \text { qi } \\ & \text { 熍 } \end{aligned}$ | н ¢ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 330 | 69 | 72 | 18 | 11 | 4 |
| 154 | 36 | 32 | 12 | 2 |  |
| 196 | 126 | 70 | 10 |  |  |
| 96 | 98 | 60 | 18 | 1 | 1 |
| 57 | 55 | 15 | 44 |  |  |
| 57 | 34 | 11 | 12 | 4 | 4 |
| 87 | 56 | 49 | 4 | 6 |  |
| 109 | 27 | 19 | 15 | －－－－－ |  |
| 12 |  |  |  |  |  |
| 7 58 | 5 | 3 | 2 7 |  |  |
| 100 | 26 | 8 | 6 | 1 |  |
|  |  |  |  | 1 | 1 |
| 9 | 2 | 3 | －－－ |  |  |
| 1 | 2 7 | －－－－ |  |  |  |
|  |  |  |  | 2 |  |
| 10 | 8 | 4 |  |  |  |
| 15 | 4 | 2 | 4 |  |  |
| 160 | 53 | 26 | 12 | －－－ |  |

Table 10.-Degrees conferred on women by coeducational colleges and universities.


Table 11．－Honorary degrees conferred by universities and colleges．

| State or Territory． | $\stackrel{\square}{A}$ | 号 | $\begin{aligned} & \dot{A} \\ & \dot{H} \\ & \dot{\sim} \\ & \dot{\sim} \end{aligned}$ |  | $\begin{aligned} & \dot{A} \\ & E i \\ & \dot{\alpha} \end{aligned}$ | $\begin{aligned} & \dot{A} \\ & \dot{U} \\ & \dot{U} \end{aligned}$ | $\begin{aligned} & \dot{Q} \\ & \dot{q} \\ & \dot{q} \end{aligned}$ | $\begin{aligned} & \dot{A} \\ & \dot{\overrightarrow{y y}} \\ & \stackrel{y}{\mu} \end{aligned}$ | $\begin{aligned} & \dot{\infty} \\ & \dot{a} \\ & \dot{a} \end{aligned}$ | $\left\lvert\, \begin{aligned} & \dot{\lambda} \\ & \dot{4} \end{aligned}\right.$ | $\begin{aligned} & \dot{\mathrm{L}} \\ & \dot{\mathrm{e}} \end{aligned}$ | $\begin{aligned} & \mathrm{i} \\ & \mathrm{ei} \end{aligned}$ | $\begin{aligned} & \text { i } \\ & \text { 自 } \\ & \text { घ } \end{aligned}$ |  |  | $\begin{aligned} & \dot{9} \\ & \dot{4} \end{aligned}$ | $\begin{aligned} & \dot{Q} \\ & \dot{\infty} \end{aligned}$ | ¢ | 安 | ค |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United States ．－ | 310 | 147 | 8 | 6 | 2 | 2 | 23 | 3 | 5 | 217 | 10 | 2 | 1 | 1 | 1 | 4 | 8 | 2 | 1 | 2 |
| North Atlantic Division－－ | 89 | 61 25 | 1 | $\begin{aligned} & 3 \\ & 1 \end{aligned}$ | 2 |  | 6 | 1 |  | $\begin{aligned} & 76 \\ & 37 \end{aligned}$ | 4 |  |  |  |  | 3 | 7 | 2 | 1 | 2 |
| South Central Division．－－ | 41 | 7 |  |  |  |  | 3 |  |  | 26 |  |  | 1 |  |  |  |  |  |  |  |
| North Central Division－－－ | 122 | 50 | $\overline{3}$ | 2 | －－ | 1 | 8 | 1 | 5 | 76 | 6 | 2 |  | 1 | 1 | 1 | 1 |  |  |  |
| Western Division． | 4 | 4 |  |  |  | 1 |  | 1 |  | 2 |  |  |  |  | ．．． |  |  |  |  |  |
| North Atlantic Division： |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Maine－．．．－－－．－．－－－－－－ | 5 | 3 |  | 1 |  |  |  |  |  | 5 |  |  |  |  |  |  |  |  |  |  |
| New Hampshire | 3 | 3 |  |  |  |  |  |  |  | 6 |  |  |  |  |  |  |  |  |  |  |
| Vermont－－－－－－ | 3 | 2 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Massachusetts | 6 | 7 |  |  |  |  | 1 |  |  | 8 |  |  |  |  |  |  |  |  |  |  |
| Rhode Island | $\underset{7}{2}$ | 2 |  | 1 |  |  |  |  |  |  | 1 |  |  |  |  |  |  | $\begin{aligned} & 1 \\ & 1 \end{aligned}$ |  |  |
| Connecticut | 7 | 9 |  |  |  |  |  |  |  | 10 | 1 |  |  |  |  |  |  | 1 |  | 2 |
| New York． | 19 | 15 | 3 | 1 | 2 |  | 2 | 1 |  | 12 |  |  |  |  |  | 1 | 7 |  |  |  |
| New Jersey |  | 17 | 1 |  |  |  | 3 |  |  | 35 | 2 |  |  |  |  | 2 |  |  | 1 |  |
| South Atlantic Division： <br> Delaware |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Maryland | 8 |  |  |  |  |  |  |  |  | 6 |  |  |  |  |  |  |  |  |  |  |
| District of Columbia． | 4 |  | 1 |  |  |  | 3 |  |  | 3 |  |  |  |  |  |  |  |  |  |  |
| Virginia－－ | 9 |  |  |  |  |  |  |  |  | 1 |  |  |  |  |  |  |  |  |  |  |
| West Virginia | 1 |  |  | 1 |  |  | 1 |  |  | 8 |  |  |  |  |  |  |  |  |  |  |
| North Carolina | 20 |  |  |  |  |  |  |  |  | 6 |  |  |  |  |  |  |  |  |  |  |
| Georgia ．．．．．．． | 6 |  |  |  |  |  | 2 |  |  | 4 |  |  |  |  |  |  |  |  |  |  |
| Florida． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| South Central Division： |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Kentucky | 3 |  |  |  |  |  |  |  |  | 8 |  |  | 1 |  |  |  |  |  |  |  |
| Tennessee | 19 |  |  |  |  |  | 3 |  |  | 7 |  |  |  |  |  |  |  |  |  |  |
| Alabama－ | 6 |  |  |  |  |  |  |  |  | 6 |  |  |  |  |  |  |  |  |  |  |
| Mississippi | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Texas．．．． | 9 |  | 1 |  |  |  |  |  |  | 2 |  |  |  |  |  |  |  |  |  |  |
| Arkansas | 1 |  |  |  |  |  |  |  |  | 2 |  |  |  |  |  |  |  |  |  |  |
| Oklahoma |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| North Central Division： |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Indiana | 11 |  |  |  |  |  |  |  |  | 12 | 1 |  |  |  |  |  |  |  |  |  |
| Mlinois－ | 82 |  | 4 |  |  | － | 3 |  | 5 | 11 |  |  |  |  |  |  |  |  |  |  |
| Michigan | 10 |  | 8 | 1 |  |  |  |  |  | 5 | 1 | 1 |  |  |  |  | 1 |  |  |  |
| Wisconsin | 7 |  |  |  |  |  |  | 1 |  | 2 |  |  |  | 1 |  |  |  |  |  |  |
| Minnesota | 2 |  | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Iowa Missouri | 11 |  | 3 |  |  |  |  |  |  | 11 | 1 |  |  |  |  | 1 |  |  |  |  |
| Missouri North Dakota | 14 |  | 2 |  |  |  |  |  |  |  | 1 | 1 |  |  |  |  |  |  |  |  |
| South Dakota |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Nebraska． |  |  | 5 | 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Colorado $\qquad$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Arizona |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Nevada． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Washington． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Washington ．．．．．．．．．．．．．－ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| California |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

- Table 12.-Property of universities and colleges.

| State or Territory. |  |  | Libraries. |  | Value of scientific apparatus. | Value of grounds and buildings. | Productive funds. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Bound volumes. | Pamphlets. |  |  |  |
| United States - | 336 6, | 6,335 | 6, 453, 677 | 1,969,308 | \$15,986,780 | \$118, 106, 655 | \$109, 562, 433 |
|  | 16033231146 | $\begin{array}{r} 3,149 \\ 681 \\ 895 \\ 1,371 \\ 239 \end{array}$ | $\begin{array}{r} 2,984,474 \\ 697,305 \\ 466,026 \\ 1,998,432 \\ 307,440 \end{array}$ | $\begin{array}{r} 1,233,173 \\ 119,776 \\ 86,286 \\ 406,596 \\ 93,477 \\ \hline \end{array}$ | $\begin{gathered} 7,392,891 \\ 1,317,491 \\ \mathbf{5}, 173,336 \\ -1,151,488 \\ 1,574 \end{gathered}$ | $\begin{array}{r} 46,531,952 \\ 13,684,637 \\ 10,151,400 \\ 37,342,146 \\ 9,896,520 \end{array}$ | $\begin{array}{r} 58,137,482 \\ 8,585,712 \\ 7,038,397 \\ 30,142,009 \\ 5,658,833 \end{array}$ |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| North Atlantic Division: <br> Maine. <br> New Hampshire $\qquad$ <br> Vermont <br> Massachusetts. $\qquad$ <br> Rhode Island <br> Connecticut $\qquad$ $\qquad$ <br> New York <br> New Jersey. <br> Pennsylvania. | 0004921361728 |  |  |  |  |  | $\begin{aligned} & 1,368,838 \\ & 1,076,622 \end{aligned}$ |
|  |  | 20 | $\begin{array}{r} 106,412 \\ 75,000 \end{array}$ | $\begin{aligned} & 10,800 \\ & 20,000 \end{aligned}$ | 205,000 100,000 | $\begin{aligned} & 950,000 \\ & 500,000 \\ & 705,000 \end{aligned}$ |  |
|  |  | -145 | 67, 077 | 1,000 | 200,000 |  | $\begin{array}{r} 783,890 \\ 13,579,666 \end{array}$ |
|  |  | $\begin{aligned} & 642 \\ & 100 \end{aligned}$ | 686, 310 | 893, 725 | 1, 416, 000 | $\begin{array}{r} 70,000 \\ 7.596,000 \end{array}$ |  |
|  |  |  | 82,000313,500 | 20,00025,000 | 122, 350 | 1,177, 967 | $\begin{array}{r} 13,579,666 \\ 1,113,021 \end{array}$ |
|  |  | 101 |  |  | 641, 755 |  | $5,808,060$$21,996,091$ |
|  |  | 1,485 | 834, 731 | 148, 854 | 2, 883, 352 | 15, 5577,745 |  |
|  |  | 373 | $\begin{aligned} & 221,159 \\ & 598,285 \end{aligned}$ | 108,594 | - 720, 400 | 10, $5 \% 3,460$ | $21,996,091$ $3,750,000$ |
|  | 28 |  |  |  | 1,104, 034 |  | 8,661,294 |
| South Atlantic Division: Delaware |  | 30 | 7,590 | 7,198 | 44,056 | 82,200 | $\begin{array}{r} 88,000 \\ 3,052,000 \end{array}$ |
| Maryland | 216300030 | 190 | 171,500 | 32,50050,000 | 361,906250,000 | 2,003, 859 |  |
| District of |  | 119 | 111, 800 |  |  | $4,250,000$$2,462,000$ | $1,024,532$$1,941,938$ |
| Virginia |  | 0 103 <br> 0 0 | 150, 700 | 17, 000 | 199, 250 |  |  |
| West Virgi |  |  | 91, 1450 | 5,35821,150 | 79,000203,300 | 495, 000 | 1, 9414,938 |
| North Carolin |  | 197 |  |  |  | 1,506, 693 | 684, 629 |
| South Carolin |  | 18 | 69,80062,250 | 2,400 | 82, 000 | 1,852,000 |  |
| Georgia |  |  |  |  | 70,175 | 1,678.000 | $\begin{aligned} & 832,363 \\ & 324,800 \end{aligned}$ |
| Florida |  | - 8 | 15,750 | 4,950 | 27, 804 | 354,885 |  |
| South Central Division: |  |  |  |  |  |  |  |
| Tennessee | ${ }_{14}^{0}$ | . 384 | 150,550 | 15,113 | 125,400 331,875 | 1,352,000 | 2,290,335 |
| Alabama | 0 | 16 | 41,85030,500 | 7,00012,500 | 130, 111,900 | 1,022,000 | 366,500689,000 |
| Mississipp |  |  |  |  |  |  |  |
| Louisiana | 0 | 0 198 | 10, 15.152 | 10, 200 | 108, 000 | 1,755, 000 | 1,510,571 |
| Texas. | 3 3 3 | 18 |  | 5,10,4414 | 116,986 | 1,725,000 | $\begin{aligned} & 676,000 \\ & 150,500 \end{aligned}$ |
| Arkansas | 3 |  | 45,738 |  | 40,125 | 612,003 |  |
| Oklahoma | 0 | 0 | $\begin{aligned} & 2,000 \\ & 1,050 \end{aligned}$ | 800 | 7,000 | 50, 000 |  |
| Indian Territory. | 0 | 10 |  | 100 | 1,250 | 37, 000 | 1,614 |
| North Central Division: |  |  |  |  |  |  |  |
| Ohio --- | 31813122750000 | 243 21 | 404,296 187,840 | 77,321 10,250 | 864,400 344,000 | $7,507,038$ $4,047,422$ | 7,592,177 |
| Inlinois. |  | 374 | 519,647 | 112, 774 | 841, 700 | 8,060, 338 | 8,993, 605 |
| Michigan |  | 36965 | 206, 367 | 69,096 | 948, 350 | 2,111, 793 | 1,601,292 |
| Wisconsin |  |  | 116, 146 | 24, 245 | 654, 200 | 2,276,000 | 1, 1222,862 |
| Minnesota |  | 135 | 85, 130 | 20,750 | 235, 800 | 2, 682, 740 |  |
| Iowa |  |  | 146, 670 | 21,100 | 355, 772 | 2,506, 765 | 1,543, 171 |
| Missouri |  | 1100 | 154,162 | 41, 5972,500 | 402,20028,000 | 4, 455, 000 | 3. 454,839 |
| North Dakot |  |  | 7,30014,393 |  |  | 208,000 |  |
| South Da |  | 0 |  | 4, 061 | 23,300 | - 429,050 | 89,485$1,271,184$ |
| Nebraska |  | 17 | $\begin{aligned} & 63,460 \\ & 92,521 \end{aligned}$ |  | $205,866$ | 1,827,000 |  |
| Kansas. |  |  |  | $\begin{array}{r} 6,197 \\ 16,705 \end{array}$ | 247,800 | 1,731, 200 | 556,000 |
| Western Division: | 0 | 10 | 4,110 |  |  |  |  |
| W yoming | 0 | 0 | 3,382 | 2,150 | 50,000 | 150,000 |  |
| Colorado | 1 | 1 | 45,988 | 16,328 | 188,083 | 1,280, 080 | 467,492 |
| New Mex | 0 | 0 | 381 |  | 1,000 | 1, 40, 000 | 0 |
| Arizona |  |  | 1,720 |  | 48,272 | 74,587 |  |
| Utah |  | --130 | 18,500 | 10,600 | - 7,100 | 840,000 | 08,427 |
| Nevada |  | 0 | 4,882 | 3,115 | 24,409 | 120,000 |  |
| Washing |  | 0 | 21,502 | 13,617 | 7 44,010 | 860,000 | 4,,000 |
| Oregon |  | 0 䮈 | 25,360 | 11,304 | - 42,000 | 634, 000 | 888,890 |
| California | 5 | 5 54 | 178,025 | 21,500 | - 780,750 | 5,575, 858 | 4,680,764 |

Table 13. - Income of universities and colleges.

| State or Territory. | $\underset{\text { From }}{\text { Fuition }}$ fees. | From produc- tive funds. | From State or municipa appro- priations | From <br> United <br> Govern | From other sources. | Total income | Benefac- tions. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United State | \$6, 685, 097 | 85,241,358 | \$2,803,671 | 8872,810 | \$2,315,238 | \$17,918,174 | \$8,342, 728 |
| North Atlantic Dir ision <br> South Atlantic Division <br> South Central Division. <br> North Central Division. <br> Western Division | $\begin{array}{r} 3,026,349 \\ 569,935 \\ 583,364 \\ 2,259,266 \\ 246,183 \end{array}$ | $2,815,323$ 357,655 427,067 $1,44,729$ 196,584 | $\begin{array}{r} 495,186 \\ 168,825 \\ 203,406 \\ 1,493,138 \\ 443,116 \end{array}$ | $\begin{aligned} & 142,500 \\ & 224,054 \\ & 124,398 \\ & 201,858 \\ & 180,000 \\ & \hline \end{aligned}$ | $\begin{aligned} & 181,733 \\ & 166060 \\ & 733,404 \\ & 23,023 \end{aligned}$ | $\begin{aligned} & 7,471,370 \\ & 1,50,202 \\ & 1,50,301 \\ & 1,501, \\ & 6,13,395 \\ & 1,307,906 \\ & \hline \end{aligned}$ |  |
| Maine <br> New Hampshire <br> Vermont <br> Massachusetts <br> Rhode Island <br> Connecticut <br> New York <br> New Jersey. <br> Pennsylvania | $\begin{array}{r} 52,781 \\ 34,091 \\ 10,512 \\ 760,815 \\ 90,211 \\ 518,936 \\ 87,328 \\ 72,500 \\ 615,225 \end{array}$ | $\begin{array}{r} 62,887 \\ 36,960 \\ 30,502 \\ 710,402 \\ 55,843 \\ 58,830 \\ 98,560 \\ 990,159 \\ 205,000 \\ 436,977 \end{array}$ | 0 | 36,00 |  |  | 19,904 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  | 202, 036 | 1,676, 256 | 304,3 |
|  |  |  |  |  | 4,8 | 150, 936 | 28. |
|  |  |  |  |  | 49,650 | 8576, 396 | 003, |
|  |  |  |  | 36, 000 |  | ${ }_{313} 500$ | , |
|  |  |  | 35,740 | 36,00 | ,494 | 1, 6103, 436 |  |
| South Atlantic Division: <br> Delaware <br> Maryland <br> District of Columbia <br> Virginia <br> West Virginia <br> North Carolina <br> South Carolina. <br> Georgia <br> Florida | 1,582 |  | $20,575$ |  |  | 38,362 |  |
|  | 177\% 112 | 49, 909 |  | , 500 | 7,741,95041,950 |  |  |
|  | 124,267 | 108,575 | 85, 500 |  |  |  |  |
|  | 124,000 62,524 | 6,708 | 21,200 20,250 20 | 31,000 | 16, 690 64,297 609 | 340, 298 | 101, 805 |
|  |  | ${ }_{27,193}$ | 28,000 | 16,254 |  |  | 7,700 |
|  | 12,705 | 48,96919,817 |  |  |  |  |  |
|  |  |  | 9,500 | $\stackrel{1}{25,500}$ | $\begin{aligned} & 18,722 \\ & 18,156 \\ & 12,10 \end{aligned}$ | 79,678 | O00 |
| Kentucky | 63,956149,91269,25521,70086,713132,88661,7401,0006,202 | 64,70312,75830,75041,064103,50352,50312,10012,100 | $\begin{array}{r} 35,556 \\ 20,600 \\ 5,590 \\ 5,500 \\ 11,500 \\ 75,500 \\ .55,000 \\ 25,000 \\ 24,000 \\ 0 \end{array}$ | $\begin{array}{r} 32,955 \\ 36,000 \\ 0 \\ 0 \\ 05,170 \\ 00 \\ 30,273 \end{array}$ | $\begin{array}{r} 18,039 \\ 104,873 \\ 8,814 \\ 7,600 \\ 13,161 \\ 5,988 \\ 4,900 \end{array}$ |  | $\begin{array}{r} 32,750 \\ 50,565 \\ 6,462 \\ 15,200 \\ 6,225 \\ 38,732 \end{array}$ |
| Tennesse |  |  |  |  |  |  |  |
| Mississip |  |  |  |  |  |  |  |
| Louisian |  |  |  |  |  |  |  |
| Texas. |  |  |  |  |  |  |  |
| Arkans |  |  |  |  |  |  |  |
| Indian Te |  |  |  |  | 2,691 |  | 1,765 |
| Ohio.. | 31,336311,373237,773579,107282,8588,985106,387200,170318,4781,69916,53151,203117,739 |  |  |  |  |  | 282 |
| Indiana |  |  | 185,780438,0003300 | 21,00036,000 | 40, 480301,777 |  | $2,578,519$ |
| Illinois. |  |  |  |  |  |  |  |
| Michigan |  |  | 194,333 282,000 | $\begin{array}{ll} 0 \\ 37,000 \end{array}$ | 39,560 56,274 | $\begin{aligned} & 1,595,180 \\ & \hline 562,246 \\ & 5050 \end{aligned}$ | $\begin{gathered} 48,723 \\ 103,289 \end{gathered}$ |
| Minnesota |  |  | 110,071 | 37,000 | 42,13628,548 |  | 86, 3178 |
| Iowa |  |  |  |  |  |  |  |
| Missouri |  |  | $\begin{aligned} & 77,577 \\ & 33,000 \end{aligned}$ | $\begin{array}{r} 34,858 \\ 0 \end{array}$ | $\underset{\substack{16,841 \\ 8,046}}{ }$ | 623,921 42,245 | 420,067 |
| North Ca |  |  |  |  |  | 42, ${ }^{4,485}$ |  |
| Nebrask |  |  | 63,572 | ,000 | $\begin{aligned} & 11,9520 \\ & 16,584 \end{aligned}$ | 230, 547 | ${ }_{51,961}^{11,746}$ |
| Kansas |  | 28,004 | 108,000 |  |  |  |  |
| Montana |  | $\begin{array}{r} 0 \\ 0 \\ 24,675 \\ 0 \\ 0 \\ 15,000 \\ 230 \\ 12000 \\ 20,3429 \\ 135,322 \end{array}$ | 10,5003,60060,000114,0008,89762,0006,0005,4007,00030,000119,700 | $\begin{array}{r} 0 \\ 36,000 \\ 0 \\ 06,000 \\ 06 \\ 36,000 \\ 36,000 \\ 0 \\ 0 \\ 36,000 \end{array}$ | $\begin{array}{r} 3,900 \\ 93,812 \\ 13,812 \\ 1,708 \\ 0 \\ 0 \\ 191 \\ 19,570 \\ 4,372 \\ 197,600 \end{array}$ | 28,90040,826125,82714,22046,80573,700105,00041,000128,20579.300628,091 | 8,0000151,430 |
| Wyomi |  |  |  |  |  |  |  |
| Colorado |  |  |  |  |  |  |  |
| Arizona |  |  |  |  |  |  |  |
| Utal |  |  |  |  |  |  | 5,150 |
| Nerada |  |  |  |  |  |  |  |
| Washing |  |  |  |  |  |  | 48,300 |
| Oregon. |  |  |  |  |  |  | 428,200 |
| alkorna |  |  |  |  |  |  |  |

DIVISION A.
Institutions. -The number of institutions included in Division A for the year 1895-96 is 14, the decrease of one being due to the omission of the Cleveland College for Women, the statistics of which are included in the report of the Western Reserve University. This action was taken to avoid duplication of statistics.

Professors and instructors.-The number of professors and instructors in the 14 institutions was 514 , an average of about 37 instructors to each institution. Of the total number 221 are men and 293 women. But 20 instructors, all women, were employed in the preparatory departments.

Students.-There were enrolled in these institutions 4,328 students, of which number 3,718 were in regular collegiate departments, 192 were pursuing postgraduate studies, and but 254 were in preparatory departments. Of the students reported in undergraduate degree courses, 88.96 per cent were pursuing courses leading to the A. B. degree, 7.92 per cent to the B. L. degree, and 3.12 per cent to the B. S. degree. The number of students in pedagogical courses was 78. Ten of the 14 institutions reported the classes of institutions in which their freshman students were prepared for college. From the statistics given it is found that 47.1 per cent were prepared in public high schools, 40 per cent in private preparatory schools, 10.43 per cent in preparatory departments of colleges, and 2.47 per cent by private study.

Degrees.-The number of degrees conferred was 639, as follows: 459 A. B., 27 B. S., 105 B. L., 40 A. M., 5 Ph. D., and 3 Mus. B. All of the Ph. D. degrees were conferred by Bryn Mawr College. No honorary degrees were conferred by these. institutions.

Property.-The total value of all property reported is $\$ 10,460,052$, of which amount $\$ 4,412,537$ is productive endowment and the remainder is the value of the property used for instruction purposes. The number of fellowships owned by these institutions is 16, of which number 14 are held by Bryn Mawr College.

Income.-An examination of Table 6, page 1948, will show that the students of these institutions pay a much larger proportion of the expenses of the institutions than do the students of colleges for men and coeducational colleges. In the last two classes of institutions the tuition fees paid by students amount to but 37.3 per cent of the total income, while in the 14 colleges for women under considerafion the tuition fees are 59.1 per cent of the income. These institutions receive neither State nor municipal aid. The benefactions for the year amounted to $\$ 339,545$.

DIVISION B.
Institutions.-The number of institutions from which statistics were received is 148. Two institutions-Pittsburg Female College, Pittsburg, Pa., and Cumberland Female College, McMinnville, Tenn.-were reported during the year as having suspended operation. Of the total number of institutions, 117 are located in the Southern section of the country.

Professors.-The number of teachers employed was 2,038, of which number but 457 were men. The average number of teachers per institution was about 14.

Students. - There were reported by these institutions 20,335 students, of whom 1,581 graduated or completed their studies during the year. Of the total number of students', 10,321 were reported as collegiate students, 4,801 as preparatory students, and 1,937 as elementary students. Only 4,689 students were reported in courses of study leading to some bachelor's degree; 8,272 students were reported in music, and 2,451 in art.

Degrees.-While it was reported that 1,581 students had graduated, there were conferred but 944 degrees, including 147 degrees in music and art. There were conferred but two honorary degrees-one A. M. and one D. D.

Property. The total value of all property owned by these institutions is $\$ 10,416,014$, an average of $\$ 70,378$ per institution. Only 25 of the institutions report endowment funds, the total amounting to $\$ 896,021$, showing that these institntions must depend for existence almost entirely on the tuition and other fees paid by their students.

Income.-Receipts from tuition fees form 83.9 per cent of the total income of $\$ 2,267,050$, and receipts from " other sources," including, as a rule, profit on boarders, comprise 11.6 per cent of the income, leaving 4.5 per cent to be made up of State appropriations and income from endowment funds. Forr institutions received aid from their States during the year. The benefactions to these institutions amounted to $\$ 271,700$.

Table 1.-Professors and students in colleges for women, Division $A$.


Table 2.-Students in courses of study in colleges for women, Division $A$.

| State. | Students reported in under. graduate degree courses. | Per cent of students in undergraduate degree courses pursuing cour'ses leading to- |  |  | Students in pedagogical course. |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | A. B. degree. | B. L. degreo. | B. S. degree. |  |
| United States | 2,463 | 88.96 | 7.02 | 3.12 | 78 |
| North Atlantic Division | 2,128 | 89.52 | 6.91 | 3.57 | 68 10 |
| Nouth Atlantic Division | 280 33 | 100.00 | 916.97 | 3.03 |  |
| Western Division.. | 2 | 27.27 | 72.73 |  |  |
| North Atlantic Division: |  |  |  |  | 64 |
| New York | 1, 166 | 84.24 | 11.81 | 4.22 | 4 |
| New Jersey | 10 | 70.00 | 30.00 |  |  |
| Penusylvania | 241 | 100.00 |  |  |  |
| South Atlantic Division: |  |  |  |  |  |
| Maryland | 226 | 100. (0) |  |  | 10 |
| North Central ${ }^{\text {Viviniolor }}$ | 54 | 100.00 |  |  |  |
| mlinois | 33 |  | 96.97 | 3.03 |  |
| Western Division: California | 22 | 27.27 | \%\%. 73 |  |  |

Table 3.-Prepdration of freshmen of colleges for women, Division A.


Table 4.-Degrees conferred by colleges for women, Division $A$.


Table 5.-Property of colleges for women, Division A.

| State. | Number or ships. | Numscholar ships. | Libraries. |  | Value of scientific apparatus and libraries. | Value of grounds and buildings. | Productive funds. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Bound volumes. | Pamphlets. |  |  |  |
| United States <br> North Atlantic Division South Atlantic Division North Central Division. Western Division. | 16 | 214 | 158,512 | 9,650 | \$518, 191 | \$5,529, 324 | \$4,412,537 |
|  | 16 0 | 188 | 120,682 8,000 | 7,900 | 450,691 47,500 | $\begin{array}{r} 4,202,872 \\ 801,452 \end{array}$ | $3,803,553$ 482,667 |
|  |  | 4 | 5,850 | 250 | 10,000 | 125, 000 | 51,317 |
|  | 0 | 15 | 5,000 |  | 10,000 | 400,000 | 75,000 |
| North Atlantic Division: <br> Massachusetts <br> New York $\qquad$ <br> New Jersey $\qquad$ <br> Pennsylvania $\qquad$ $\qquad$ |  |  |  |  |  |  |  |
|  | 1 |  | 78,316 38,494 | 400 | $\begin{aligned} & 181,982 \\ & 198,709 \end{aligned}$ | 2,167,050 | $\begin{aligned} & 1,183,630 \\ & 1,359,823 \end{aligned}$ |
|  | 0 | 8 | 2,000 | 500 |  |  |  |
|  | 14 | 23 | 22,852 | 7,000 | 70,000 | 814,905 | 1,250,000 |
| Sonth Atlantic Division: Maryland |  |  |  |  |  |  |  |
| Maryland | 0 | 12 | 7,000 1,000 | 1,500 | 45,000 2,500 | $\begin{aligned} & 686,000 \\ & 115,452 \end{aligned}$ | $\begin{aligned} & 380,000 \\ & 102,667 \end{aligned}$ |
| North Central Division: |  |  | 1,000 |  | 2,500 | 110, 452 |  |
| M Ilinois |  | 4 | 5,850 | 250 | 10,000 | 120,000 | 51,317 |
| Californis..... | 0 | 15 | 5,000 |  | 10,000 | 400,000 | 75,000 |

Table 6.-Income of colleges for women, Division A.

| State. | From productive funds. | From trition fees. | From other sources. | Total income. | Benefactions. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| United States. | \$229,066 | \$702,973 | \$257,894 | \$1,189, 933. | \$339,545 |
| North Atlantic Division South Atlantic Division | 196,929 | $581,620$ |  |  | $\begin{array}{r} 274,980 \\ 63,210 \end{array}$ |
| South Atlantic DivisionNorth Central Division. | 26,896 2,136 | $\begin{aligned} & 33,575 \\ & 33,478 \end{aligned}$ | $\begin{array}{r} 27,300 \\ 2,641 \end{array}$ | $87,771$ | $\begin{gathered} 68,210 \\ 1,355 \end{gathered}$ |
| Western Division....- | 2,105 | 54,300 |  | 38,405 57 |  |
| North Atlantic Division: Massachusetts |  | 435, 444 | 33,785 | 539, 200 | 209,611 |
| New York .-. | 74,170 | 108, 376 | 189,168 | 371, 714 | 35, 610 |
| New Jersey |  | 8,000 |  | 8,000 |  |
| Pennsylvania | 52,788 | 29,800 | 5,000 | 87, 588 | 29,759 |
| South Atlantic Division: Maryland | 21,146 | 22,375 | 15,000 | 58,521 | 55,000 |
| - Virginia | 5,750 | 11, 200 | 12,300 | 29,250 | 8,210 |
| orth Central Division: nlinois | 2,136 | 33,478 | 2,641 | 38,255 | 1,355 |
| Western Division: California | 8,105 | 54,300 |  | 57,405 |  |

Table 7.-Professors and students in colleges for women, Division B.


Table 8.-Students in courses of study in colleges for women, Division B.

| State. |  | Per cent of students in degree courses pursuing courses of study leading to- |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | $\stackrel{\text { ® }}{8}$ <br>  |  |  |  |
| United States...-..... <br> North Atlantic Division.South Atlantic Division.South Central Division.... North Central Division. <br> Western Division | 4,689 | 58.54 | 1.26 | 18.70 | 15.95 | 5.55 | 508 | 8,272 | 2,451 |
|  | 389 | 62.73 | . 51 | 14.91 | 18.00 | 3.85 | 43 | 820 | 83 |
|  | 2,090 | 70.62 |  | 10.38 | 11.44 | 7.56 | 252 | 3, 279 | 975 |
|  | 1, 779 | 41.09 | 2.92 | 29.57 | 23.50 | 2.92 | 184 | 2,635 | 852 |
|  | 401 | 71.32 |  | 15. 71 | 4.24 | 8.73 | 9 | 1,452 | 401 |
|  | 30 | 26.67 | 16.67 | 43.33 | 13.33 |  | 20 | 1) 86 | 40 |
| North Atlantic Division: <br> Maine <br> New Hampshire $\qquad$ <br> Massachusetts. $\qquad$ <br> New Jersey <br> Pennsylvania <br> South Atlantic Division: <br> Maryland <br> Virginia $\qquad$ <br> North Carolina $\qquad$ <br> South Carolina $\qquad$ <br> Georgia | 13 | 100.00 |  |  |  |  | 9 | 100 | 24 |
|  |  |  |  |  |  |  |  | 30 | 25 |
|  | 7 |  |  | 85.71 | 14.29 |  |  | 10 | 5 |
|  | 369 | 62.60 | . 54 | 14.09 | 18.70 | 4.07 | 34 | 582 | 121 |
|  |  |  |  |  |  |  |  |  |  |
|  | 140 | 35.72 |  | 7.14 | 28.57 | 28.57 | 4 | 212 | 76 |
|  | 139 | 100.00 |  |  |  |  | 1 | 744 | 218 |
|  | 313 | 81.79 |  |  |  | 7.99 | 4 | 610 | 141 |
|  | 712 | 76.12 |  | 8. 43 | 7.02 | 8.43 | 41 | 611 | 246 |
|  | 786 | 62.21 |  | 14. 63 | 18.96 | 4.20 | 202 | 1,102 | 294 |
|  |  |  |  | 13.37 | 36.33 |  | 6 | 617 | 64 |
|  | 221 | 76.47 |  | 13.12 | 10.41 |  | 30 | 450 | 128 |
|  | 302 | 23.84 | .6. 62 | 51.00 | 14.90 | 3.64 | 21 | 568 | 156 |
|  | 566 | 30.74 | 5.65 | 42.58 | 16.61 | 4.42 | 127 | 639 | 322 |
|  | 97 | 38.14 |  | 15.47 | 45.36 | 1.03 |  | 86 | 21 |
|  | 47 | 36.17 |  | 42.0 就 | 21.28 |  |  | 225 | 36 |
|  | 45 | 22.22 |  |  | 44.45 | 33, 33 |  | 50 | 25 |
| \| North Central Division: |  |  |  |  |  |  |  |  |  |
| Ohio <br> Indiana | 51 25 | 100.00 100.00 |  |  |  |  |  | 100 35 | 22 |
| tllinois | 55 | 100.00 |  |  |  |  | 7 | 282 | 93 |
| Wisconsin | 19 | 15.79 |  | 68.42 | 15.79 |  |  | 37 | 21 |
| Minnesota | 19 | 36.84 |  | 42.11 | 21. 05 |  |  | 11 | 3 |
| Missouri | 177 | 50.85 |  | 23.73 | 5.65 | 19.77 | 2 | 898 | 232 |
| Kansas:-...-. | 55 | 100.00 |  |  |  |  |  | 89 | 30 |
| Western Division: California | 30 | 26.67 | 16.67 | 43.33 | 13.33 |  | 20 | 86 | 40 |

Table 9．－Degrees conferred by colleges for women，Division B．

| State． |  | ¢ | ஸ் | 退 | 官 | 第品 | $\dot{\text { di }}$ | ふ் | $\begin{aligned} & \dot{A} \\ & \dot{A} \end{aligned}$ | வं |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United States． | 244 | 419 | 82 | 35 | 118 | 29 | 4 | 3 | 9 | 1 | 1 | 1 |
| North Atlantic Division．．． South Atlantic Division． | 18 | 25 | 11 | 12 | 10 | 15 | 4 | 3 |  | 1 |  |  |
| South Central Division．．．． | 148 | 110 | 44 | 12 | 40 | 9 |  | － | 2 | －－．．－ | 1 | 1 |
| North Central Division．．．． | 55 | 49 | 1 | 11 | 31 | 3 |  |  | 7 |  | －－ |  |
| Western Division－－－－－－－－－ |  |  | 4 |  | 1 | 2 |  |  |  |  |  |  |
| North Atlantic Division： |  |  |  |  |  |  |  |  |  |  |  |  |
| Maine－－．．．－－．．． |  | 1 |  |  |  |  | 4 | 3 |  |  |  | －．．－ |
| New Hampshire．．－ | 3 |  |  |  |  |  |  |  |  | 1 |  |  |
| Pennsylvania－－．．．．－ | 15 | 24 | 11 |  | 10 |  |  |  |  |  |  |  |
| South Atlantic Division： <br> Maryland |  | 4 |  | 1 | 3 |  |  |  |  |  |  |  |
| Virginia－ | 2 | 28 |  |  | 8 | 6 |  |  |  |  |  |  |
| North Carolina | 2 | 30 | 2 | 5 | 6 | 2 |  |  |  |  |  |  |
| South Carolina． | 4 | 66 |  | 4 | 5 |  |  |  |  |  |  |  |
| Georgia－－．－．－．．．．．．．．． | 15 | 107 | 20 | 2 | 14 | 7 |  |  |  |  |  |  |
| South Central Division： Kentucky | 7 | 14 | 15 | 1 | 4 |  |  |  |  |  |  | 1 |
| Tennessee．－．．．－． | 29 | 27 | 15 2 | 7 | 13 |  |  |  | 2 |  | 1 |  |
| Alabama | 51 | 38 | 1 | 3 | 6 | 4 |  |  |  |  |  |  |
| Mississippi | 50 | 14 | 13 | 1 | 5 |  |  |  |  |  |  |  |
| Louisiana | 9 | 2 |  |  |  |  |  |  |  |  |  |  |
| Texas．－ | 2 | 14 | 10 |  | 12 | 5 |  |  |  |  |  |  |
| Arkansas－－．－－－．．．．．． |  | 1 | 3 |  |  |  |  |  |  |  |  |  |
| North Central Division： Ohio |  | 4 |  |  |  |  |  |  |  |  |  |  |
| Tllinois． |  | 9 |  |  | 6 |  |  |  |  |  |  |  |
| Minnesota |  | 1 |  |  |  |  |  |  |  |  |  |  |
| Missouri | 55 | 30 | 1 | 11 | 25 | 3 |  |  | 7 | －．．． |  |  |
| Western Division： |  |  |  |  |  |  |  |  |  |  |  |  |
| California |  |  | 4 |  | 1 | 2 |  |  |  |  |  | －－－ |

Table 10.-Property of colleges for women, Division B.

|  |  |
| :---: | ---: | ---: | ---: | ---: |
| State. |  |

Table 11. - Income of colleges for women, Division B.

| State. | From productive funds. | From tuition fees. | From State or municipal appropriations. | From other sources. | Total income. | Benefactions. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United States- | \$48,368 | \$1,902,902 | \$53,700 | \$262,080 | \$2,267,050 | \$271,700 |
| North Atlantic Division | 10,863 | 270, 896 | 100 | 114,022 | 395, 881 | 14,722 |
| South Atlantic Division | 6,570 | 582, 090 | 23,400 | 32, 494 | 644,554 | 134,200 |
| South Central Division. | 5,860 | 546,084 | 30,200 | 68,964 | 651, 108 | 53,000 |
| North Central Division |  | 473, 832 | - 0 | 46,600 | 545, 507 | $59,778$ |
| Western Division...... | 20 | 30,000 | 0 | 0 | 30,000 |  |
| North Atlantic Division: |  |  |  |  |  |  |
| Maine-.....--- | 6,300 | 8,900 |  | 600 | 15, 800 | 4,500 |
| New Hampshir | 1,000 | 4,000 | 0 | 15, 000 | 75,000 |  |
| New York. | 1,663 | 78,837 | 100 | - 2 , 122 | 82, 722 | 2,122 |
| New Jersey. |  | 3,118 |  |  | 3,118 |  |
| Pennsylvania | 1,900 | 161,041 |  | 36,300 | 199,241 | 8,100 |
| South Atlantic Division: Maryland |  | 64,000 |  |  | 64,000 | 600 |
| Virginia | 170 | 156, 215 | 0 | 9,929 | 166, 314 | 8,800 |
| West Virginia |  | 3,500 |  |  | 3,500 |  |
| North Carolina | 500 | 106, 675 | 0 | 6,825 | 114, 000 | 101,800 |
| South Carolina | 5,900 | 91,500 160,200 | 0 23,400 | 5,000 10,740 | $\mathbf{9 6 , 5 0 0}$ 200,240 | 101,800 23,000 |
| South Central Division:- | 5,900 | 160,200 | 23,400 | 10, 70 |  |  |
| Kentucky | 0 | 128,100 | 0 | 5,200 | 133,300 |  |
| Tennessee | 2,800 | 161,500 | 0 | 32, 600 | 196,900 |  |
| Alabama | 0 | 134, 400 | 0 | 7,500 | 141,900 | 2,500 20,000 |
| Mississippi | 00 | 69,684 | 27,000 | 19,664 | 116, 408 | 20, 000 |
| Louisiana | 3,000 | 11,900 | 3,200 | 1,200 | 19,300 | 30,000 |
| Arkansas | 0 | 3,500 | 0 | 2,500 | 6,000 |  |
| North Central Division: |  |  | 0 | 00 | 160,750 | 11,028 |
| Indiana | 0 | 11,000 | 0 | 5,000 | 16,000 | 1,500 |
| Illinois | 150 | 100,000 | 0 | 18,000 | 118, 150 | 5,000 |
| Wisconsin | 7,000 | 25,000 |  |  | 35, 000 | 27, 750 |
| Minnesota | 1,500 | 1,050 |  | 1,000 | 3, 550 | \%, 300 |
| Missouri | 6,600 | 165,157 | 0 | 18,100 9,000 | 184,850 30 | 11, 200 |
| Western Division: California | 0 | 30,000 | 0 | 0 | 30,000 | 10,000 |

## III.-SCHOOLS OF TECHNOLOGY.

Institutions.-The number of institutions included under schools of technology is 48 , three less than the preceding year. Four institutions heretofore classed as schools of technology have been transferred to the table of universities and colleges, while one new institution, the New Mexico School of Mines, has been added, making a net decrease of three institutions.

Professors and instructors. -The total number of professors and instructors reported was 1,118 , of which number 1,041 , or 93.1 per cent, taught in the regular collegiate departments. There were but 80 women employed in these institutions as teachers. The proportion of instructors in the several departments as compared with the proportion of institutions was as follows:

| Division. | Institutions. | Preparatory in-structors. | Collegiate in. structors. | Total number of in-structors. |
| :---: | :---: | :---: | :---: | :---: |
| North Atlantic Division South Atlantic Division South Central Divigion. North Contral Division Western Division. | $\begin{array}{r} \text { Per cent. } \\ 25.0 \\ 2.9 \\ 10.4 \\ 2.9 \\ 18.8 \end{array}$ | $\begin{array}{r} \text { Per cent. } \\ 13.0 \\ 19.6 \\ 19.6 \\ 28.2 \\ 19.6 \end{array}$ | Per cent. <br> 84.5 <br> 18.1 <br> 7.8 <br> 27.4 <br> 12.2 | Per cent. <br> 88.0 <br> 17.8 <br> 8.3 <br> 28.3 <br> 12.6 |

The average number of instructors per institution in the several geographical divisions was: North Atlantic Division, 31; South Atlantic Division, 18; South Central Division, 19; North Central Division, 29; Western Division, 16; and for all of the institutions, 23 .

Students.-The total number of students enrolled was 12,816 , of which number 2,217 were women. The proportion of students, by sex, in the various departments of the institutions of the several geographical divisions was as follows:

| Division. | Preparatory departments. |  | Collegiate departments. |  | Graduate departments. |  | Total number. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Male. | Female. | Male. | Female. | Male. | Female. | Male. | Female. |
| United States. | Perct. | $\begin{array}{r} \text { Per ct. } \\ 19.9 \end{array}$ | $\begin{gathered} \text { Per ct. } \\ 89.3 \end{gathered}$ | Per ct. 10.7 | Perct. 75.9 | Per ct. 24.1 | Per ct. 82.7 | Per ct. 17.3 |
| North Atlantic Division | 100.0 | 0 | 94.9 | 5.1 | 94.3 | 5.7 | 94.9 | 5.1 |
| South Atlantic Division | 94.5 | 5.5 | 99.6 | . 4 | 100.0 | 0 | 98.6 | 1.4 |
| South Central Division. | 90.5 | 9.5 | 96.5 | 3.5 | 100.0 | 0 | 94.5 | 5.5 |
| North Central Division | 71.5 | 28.5 | 83.0 | 17.0 | 63.6 | 36.4 | 68.3 | 31.7 |
| Western Division. | 64.7 | 35.3 | 69.3 | 30.7 | 40.0 | 60.0 | 67.2 | 32.8 |

The proportion of students in the several departments compared with the proportion of institutions was as follows:

| Division. | Institutions. | Prepara tory students. | Colle-giatestudents. | Graduate students. | Total number of stu. dents. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| North Atlantic Division | Percent. | Per cent. <br> 10.4 | Per cent. | Per cent. <br> 12.8 | Per cent. |
| South Atlantic Division. | 22.9 | 16.3 | 16.0 | 18.2 | 15.0 |
| South Central Division | 10.4 | 21.7 | 9.9 | 8.4 | 11.4 |
| North Central Division | 22.9 | 19.6 | 30.6 | 55.1 | 32.9 |
| Western Division. | 18.8 | 32.0 | 11.1 | 5.5 | 14.3 |

In many of the schools of technology the only degree conferred for the completion of an undergraduate course of study is that of bachelor of science, technical degrees in many instances being conferred only on the completion of graduate courses. Of the number of students reported in degree courses, 76.48 per cent were reported in courses of study leading to the B. S. degree.

The question asking for the classes of institutions in which freshmen were prepared was answered by 22 institutions. Reference to Table 3 will show that 70.57 per cent of the freshmen reported upon were prepared in public high schools, a much larger proportion than are prepared for universities and colleges by this class of institutions.

Degrees.-The total number of degrees conferred by the schools of technology is 1,005 , of which number 911 were conferred on men and 94 on women. Five honorary degrees were conferred by 3 institutions: 1 M . S. by the Colorado Agricultural College, 1 M. E., 1 Ph. M., and 1 Sc. D. by the Maine College of Agriculture and the Mechanic Arts, and 1 E. D. by Stevens Institute of Technology.

Property. -The total value of all property was reported at $\$ 24,105,242$, of which amount $\$ 10,384,293$ consists of productive endowment, the remainder being the value of the material equipment. The proportion of property held by the institutions of the several geographical divisions was as follows:

| Division. | Institutions. | Libraries. | Apparatus. | Grounds and buildings. | Productive funds. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| North Atlantic Division | Percent. 25. 0 | Per cent. 40.5 | Percent. 37.4 | Per cent. 45.7 | Percent. 26.4 |
| South Atlantic Division | 22.0 | 15.9 | 7.1 | 13.4 | 6.3 |
| South Central Division. | 10.4 | 7.2 | 4.4 | 7.3 | 6.4 |
| North Central Division | 22.9 | 28.2 | 42.8 | 26.2 | 58.6 |
| Western Division | 18.8 | 8.2 | 8.3 | 7.4 | 2.3 |

Benefactions.-The total amount of benefactions received by the schools of technology was $\$ 96,133$, of which amount $\$ 89,444$ was given to the Massachusetts Institute of Technology.

Income. -The total income of the 48 institutions was $\$ 3,526,018$, of which anount $\$ 1,667,703$ was appropriated by the (ieneral (iovernment and $\$ 734,629$ by the several States and Territories. Of the $\$ 460,60: 3$ derived from tuition fees, almost half
was reported by the Massachusetts Institute of Technology. The proportion of income derived from various sources by the institutions in the several geographical divisions was as follows:

| Division. | Tuition fees. | Productive funds. | State or munic-ipalap-propriations. | United States Government. | Other sources. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| United States | $\left.\begin{array}{\|r} \text { Per cent. } \\ 13.1 \end{array} \right\rvert\,$ | $\begin{array}{\|r} \text { Percent } \\ 13.9 \end{array}$ | $\begin{array}{r} \text { Percent. } \\ 20.8 \end{array}$ | Percent. 47.3 | Percent. 4.9 |
| North Atlantic Division | 26.7 | 9.3 | 10.5 | 49.3 | 4.2 |
| South Atlantic Division | 6.4 | 5.1 | 21.9 | 60.8 | 5.8 |
| South Central Division | . 9 | 17.6 | 25.2 | 49.0 | 7.8 $-\quad 4.7$ |
| North Central Division | 8.0 | 34. ${ }^{1} 9$ | 26.4 37.3 | 26.8 54.4 | $\begin{array}{r}-\quad 4.9 \\ \hline\end{array}$ |
| Western Division -.-.- | 1.5 | 2.9 | 37.3 | 54.4 | 3.9 |

Table 1.- Professors and students in schools of technology.


Table 2.-Students in courses of study of schools of technology.

| State or Territory. | Students reported in degree courses. | Per cent of students in degree courses pursuing courses of study leading to- |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | B. S. degree. | B. C. E. degree. | B. M. E. degree. | E. M. degree. | B. E. E. degree. | Other first degrees. |
| United States | 7,082 | 76.48 | 3.22 | 7.81 | 3.13 | 1.95 | 7.41 |
| North Atlantic Division | 2, 158 | 67.98 | 8.71 | 13.81 |  | 2.87 | 6.63 |
| South Atlantic Division | 1, 076 | 69.52 | 1.48 | 18.03 |  | 3.44 | 7.53 |
| South Central Division | 679 | 98.97 |  | . 44 |  | . 44 |  |
| North Central Division | 2,244 | 92. 60 | . 40 | 1. 51 | 4.19 | 1. 03 | . 27 |
| Western Division .-..... | 925 |  | 1. 62 | 2.60 | 13.73 | 1.40 | 31.89 |
| North Atlantic Division: Maine | 180 | 27.78 | 26.11 | 18.89 |  | 27.22 |  |
| New Hampshire | 85 50 | $100: 00$ 50.00 | 14.00 |  |  | 26.00 | 10.00 |
| Massachusetts | 1,211 | 100.00 |  |  |  |  | 10.00 |
| Rhode Island | 95 | 100.00 |  |  |  |  |  |
| Connecticut | 138 |  |  |  |  |  | 100.00 |
| New York | 135 | . 74 | 99.26 |  |  |  |  |
| New Jorsey <br> South Atlantic Division: | 264 |  |  | 100.00 |  |  |  |
| South Atlantic Division: <br> Delaware $\qquad$ | 16 | 98.75 |  |  |  |  | 6.25 |
| Maryland | 86 | 100.00 |  |  |  |  |  |
| Virginia. | 440 | 99.55 |  |  |  |  | 45 |
| North Carolina | 257 | 81.32 | 6.23 |  |  |  | 5.81 |
| South Carolina | 157 |  |  | 36. 30 |  | 23.57 | 40.13 |
| Georgia | 120 |  |  | 100.00 |  |  |  |
| South Central Division: |  |  |  |  |  |  |  |
| Alabama. | 241 | 97.10 |  | 1.24 | . 42 | 1.24 |  |
| Mississippi | 366 72 | 100.00 |  |  |  |  |  |
| Oklahoma <br> North Central Division: | 72 | 100.00 |  |  |  |  |  |
| Ohio | 228 | 100.00 |  |  |  |  |  |
| Indiana | 593 | 100.00 |  |  |  |  |  |
| Tllinois | 36 |  |  | 61.11 |  | 38.89 |  |
| Michigan | 487 | 80.70 |  |  | 19.30 |  |  |
| Towa-- | ${ }_{9}^{61}$ | 40.99 | 14.75 | 19.67 |  | 14.75 | 9.84 |
| North Dakota | 200 | 100.00 |  |  |  |  |  |
| South Dakota <br> Kansas $\qquad$ | 612 | 100.00 100.00 |  |  |  |  |  |
| Western Division: |  |  |  |  |  |  |  |
| Montana | 10 | 50.00 |  | 50.00 |  |  |  |
| Colorado | 314 | 58.28 | 1.27 |  | 38.54 | 1.91 |  |
| New Mexic | 43 | 74.42 |  | 11.63 | 13.95 |  |  |
| Washing | 188 57 | 100.00 |  |  |  |  |  |
| Oregon. | 815 | 2.86 | 15.63, | 1.59 |  | 1.27 | 98.65 |

Table 3.-Preparation of freshmen of schools of technology.

| State or Territory. | Institutions reporting. | Freshmen reported. | Per cent of freshmen prepared by- |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Preparatory departments of colleges. | Private preparatory schools. | $\begin{aligned} & \text { Public } \\ & \text { high } \\ & \text { schools. } \end{aligned}$ | Private study. |
| United States | 22 | 1,529 | 16.28 | 8.44 | 70.57 | 4.71 |
| North Atlantic Division | 5 | 353 |  | 14.17 | 83.00 | 2.83 |
| South Atlantic Division | 3 | 62 | 50.00 | 33.87 | 16.13 |  |
| South Contral Division. | 2 | 72 | 59.72 | 22.22 | 12.50 | 5.56 |
| North Central Division | 7 | 813 | - 7.75 | 4.55 | 83.03 | 4. 67 |
| Western Division........ | 5 | 229 | - 48.91 | 2.18 | 40.17 | 8. 74 |
| North Atlantic Division: <br> Maine <br> New Hampshire <br> Vermont <br> Massachusetts $\qquad$ <br> Connecticat |  |  |  |  |  |  |
|  | 1 | 100 |  | 26.00 | 74.00 |  |
|  | 1 | 25 |  | 16.00 | 64.00 | 20.00 |
|  | 1 | 20 |  |  | 100.00 |  |
|  | 1 | 70 |  | 28.58 | 64.28 | 7.14 |
|  | 1 | 138 |  |  | 100.00 |  |
| South Atlantic Division: |  |  |  |  |  |  |
| Delaware....-. .-...- | 1 | 7 | 85.71 | 14.29 |  |  |
| North Carolina | 1 | 15 | 66. 67 | 33.33 |  |  |
| Georgia | 1 | 40 | 37.50 | 37.50 | 25.00 |  |
| South Central Division: |  |  |  |  |  |  |
| Mississippi | 1 | 19 | 100.00 |  |  | 7.55 |
| Oklahoma | 1 | 53 | 45.28 | 30.19 | 16.98 | 7.55 |
| North Central Division: |  |  |  |  |  |  |
| Indiana. | 2 | 261 | 8.05 | 8.43 | 81.99 | 1.53 |
| Michigan | 1 | 108 | 6. 48 | 7.41 | 86.11 |  |
| Iowa.. | 1 | 147 | 14.97 |  | 64.62 | 20.41 |
| North Dakota | 1 | 9 | 55.56 |  | 44.44 |  |
| Kansas | 1 | 200 |  |  | 100.00 |  |
| Western Division: |  |  |  |  |  |  |
| Montana | 1 | 3 | 100.00 |  |  |  |
| Colorado | 2 | 103 | 26.22 | 4.85 | 49.52 | 19.41 |
| New Mexico | 1 | 13 | 92.31 |  | 7.69 |  |
| Oregon | 1 | 110 | 63.64 | 36.36 |  |  |

Table 4.-Degrees conferred on men by schools of technology.


Table 5.-Degrees conferred on women by schools of technology.


Table 6.-Property of schools of technology.

| State or Territory. | Num: ber of fellowships. | Number of schol-arships. | Libraries. |  | Value of scientific apparatus and libraries. | Value of grounds and buildings. | Productive funds. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Bound volumes. | Pamphlets. |  |  |  |
| United States <br> North Atlantic Division South Atlantic Division South Central Division .North Central Division.. Western Division | 12 | 621 | 340,993 | 12\%,983 | \$2,900, 120 | \$10,730, 8,2 | \$10, 384,293 |
|  | 2 | $3 \pm 5$ | 138, 190 | 49,614 | 1,119,473 | 4,907, 937 | , 739,733 |
|  | 8 | 231 | 54, 16\% | 6, 753 | 211, 500 | 1, 436, 254 | 650,260 |
|  | 0 | 7 | 24, 580 | 24, 238 | 133, 171 | 1. 784,486 | 659,650 |
|  | 2 | 38 | 96,076 | 28,340 | 1,279,275 | 2, 003,236 | 6,090,665 |
|  | 0 | 0 | 27,985 | 17,048 | 246, 70\% | 792,910 | 243,985 |
| th AtlanticMaineNew HampshVermont.....MassachusettRhode IslandConnecticutNew York.New Jersey | 0 | 1 | 9, | 3,000 |  | 191,566 | 219,912 |
|  | 0 |  | 3, 607 | 3, 522 | 45, 000 | 175, 331 | 80,000 |
|  | 0 | 31 | 5,000 |  |  | 150,000 | 3,000 |
|  | 2 | 281 | 59,510 | 14,922 | 395, 854 | 1,818,940 | 1, 745, 056 |
|  | 0 | 0 | 3,436 | 20,000 | 50,600 | 1, 137,100 | 50,000 |
|  | 0 | 0 | 2,700 | 2,209 | 6,000 | 90,000 | ${ }^{1} 1$ |
|  | 0 | 0 | 45,011 | 8,970 | 520,944 | $2,125,000$ | 141, 765 |
|  | 0 | 32 | 9, 600 |  | 58,000 | -320,000 | 500,000 |
| South Atlantic Division: Delaware | 0 | 0 | 300 | 140 | 1,000 | 14,800 | 0 |
| Maryland | 0 | 26 | 38,350 | 400 | 19,000 | 495, 400 | 115,943 |
| District of Columb | 0 | 1 | 100 | 200 | 4, 000 | 0 |  |
| Virginia | 8 | 204 | 12, 112 | 5,413 | 96,500 | 419,000 | 334,317 |
| North Carolin |  |  | 1, 800 | 600 | 6,000 | 152,054 | 125,000 |
| South Carolin |  |  | 1,500 |  | 50,000 | 295, 000 | 75, 000 |
| Georgia --...---..... | 0 | 0 |  |  | 3ă, 000 | 60, 000 |  |
| South Central Division: <br> Alabama |  | 7 | 9,757 | 9,000 | 73,600 | 155,360 | 253, 500 |
| Mississipp |  |  | 7,341 | 10,790 | 15,218 | 257,506 | 197, 150 |
| Texas . | 0 | 0 | 4,600 | 3,200 | 32, 393 | 331, 620 | 209,000 |
| Oklahoma | 0 | 0 | 2,882 | 1,248 | 12,000 | 40,000 | 0 |
| North Central Division: |  |  |  |  |  |  |  |
| Ohio.- | 2 | 36 0 | 1,000 14,739 | 4,297 | 75,000 300,000 | 425,000 555,000 | $2,000,000$ 860,000 |
| Illinois |  |  | 15, 000 | 4,2. | 438, 0100 | 500, 000 | 1,500,000 |
| Michiga | , | 2 | 30,348 | 6,700 | 186, 661 | 457, 736 | 547,279 |
| Towa | 0 | 0 | 11, 000 | 2,000 | 110,000 | 376, 040 | 681,034 |
| Nor'th Dak | 0 | 0 | 2,782 | 660 | 15, 514 | 100,500 |  |
| South Da | 0 | 0 | 4, 8:31 | 9,443 | 29, 1000 | 130,000 |  |
| Kansas--.-.--- | 0 | 0 | 16,376 | 5,300 | 125, 000 | 265, 000 | 502,352 |
| Western Division: Montana $\qquad$ | 0 | 0 | 2,286 | 1,100 |  |  | 0 |
| Colsrado | 0 | 0 | 13,568 | 8,498 | 110,412 | 271,000 | 150,000 |
| New Miexico | 0 | 0 | 3,125 | 2,800 | 34,000 | 85,910 | 0 |
| Utah | 0 | 0 | 2,899 | 2,325 | 40, 000 | 175,000 |  |
| Washington | 0 | 0 | 3,832 | 1,300 | 35,000 | 146,000 | 0208 |
| Oregon. | 0 | 0 | 2,275 | 1,025 | 17,295 | 100,000 | 93,985 |

TabLe 7.-Income of schools of technology.

| State or Territory. | $\begin{aligned} & \text { From } \\ & \text { trition } \\ & \text { fees. } \end{aligned}$ | From productive funds. | From State or municipal ap-propriations. | From United States Government. | From other sources. | Total income. | Benefactions. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| United States. | \$460,603 | \$191,446 | \$734,629 | 81, 06\%, 603 | \$171,68\% | \$3, 526,018 | \$96,133 |
| North Atlantic Division | 3:36, 025 | 116,499 | 131, 600 | 619,140 | 52,944 | 1,255,208 | 92,933 |
| South Atlantic Division | 51, 511 | 41,255 | 175, 525 | 487, 200 | 46, 1962 | 801,553 |  |
| South Central Division. | 2,421 | 46,388 | 66, 499 | 129,363 | 19, 693 | 264, 064 |  |
| North Central Division | 64,800 | 275, 588 | 212,759 | 216, 000 | 37, 731 | 806,878 | 2,800 |
| Western Division. | 5,846 | 11, 716 | 148,246 | 216, 000 | 15,50\% | 397,315 | 400 |
| North Atlantic Division: Maine | 0 | 5,915 | 20,000 | 36,000 | 20,071 | 81,986 |  |
| New Hampsh |  | 4,800 | 5,500 | 36, 000 | 3,371 | 49, 671 |  |
| Vermont--- | 1,500 | 125 | 3,100 | 0 | 0 | 4, 725 | 3,000 |
| Massachusetts | 245, 433 | 78,686 | 18,000 | 36,000 | 25, 101 | 403, 220 | 89, 444 |
| Rhode Island |  | 800 | 50, 000 | 36,000 |  | 86, 800 |  |
| Connecticut | 0 | 0 | 25, 000 | 22,000 | 0 | 47,000 |  |
| New York | 25, 770 | 6,511 |  | 453, 140 | 401 | 485, 82, | 289 |
| New Jersey | 63, 322 | 19,662 | 10,000 | 0 | 4,000 | 96,984 | 200 |
| South Atlantic Division: Delaware | 61 | 0 | 0 | 4,200 | 0 | 4,261 |  |
| Maryland | 12,555 | 6,142 | 6,000 | 400, 000 | 17, 779 | 442, 476 |  |
| District of Colum | 6,600 |  |  |  | 0 | 6,000 |  |
| Virginia | 10,235 | 21,859 | 60, 325 | 29, 000 | 20,669 | 142,088 |  |
| North Carolin | 2,460 | 7,500 | 17,500 | 28,500 | 1, 602 | 57,562 |  |
| South Carolina | 17, 700 | 5,754 | 69, 200 | 25,500 | 3, 512 | 121, 666 |  |
| Georgia -----...... | 2,500 |  | 22,500 |  | 2,500 | 27, 500 |  |
| South Central Division: <br> Alabama | 1,275 | 20,280 | 8,249 | 26,613 | 4,445 | 60, 862 |  |
| Mississippi | 1,146 | 11,888 | 30,250 | 36, 000 | 10,948 | 90, 172 |  |
| Texas - |  | 14, 280 | 28,000 | 30, 750 |  | 73, 030 | 0 |
| Oklahomal --...-.... | 0 |  | 0 | 36, 000 | 4,000 | 40,000 | 0 |
| North Central Division: Ohio | 16,700 | 44,687 | 0 | 0 | 5,843 | (1\% 230 |  |
| Indiana | 24,789 | 48,000 | 96,000 | 36,000 | 13,394 | 218,183 |  |
| Illinois | 21,648 | 75, 000 | 0 | 0 | 0 | 96, 648 |  |
| Michiga | 130 | 37,622 | 50,000 | 36,000 | 10,271 | 13+, 123 |  |
| Lowa | 0 | 43,291 | 28,589 | 36,060 | 0 | 10'\%, $8 \times(1)$ | $\overline{0}$ |
| North Dakota | 0 | 0 | 6,600 | 36,000 | 3,800 | 45, 409) | 2,800 |
| South Dakota | 1,533 |  | 15, 510 | 36,000 |  | 8:3, 033 |  |
| Kansas | 0 | 26,988 | 16,070 | 36,000 | 4,423 | 83, 481 |  |
| Western Division: |  |  |  |  |  |  |  |
| Colorado | 1,445 | 4,716 | 2,500 58,852 | 36,000 36,000 | 1,564 | 41,419 108,128 |  |
| New Mexic | 801 | - 0 | 12, 375 | 36, 000 | 8,203 | 49, 3 \% | 0 |
| Utal | 2,100 | 0 | 23,500 | 36, 000 | 2,092 | 633, 692 |  |
| Washingt |  | 0 | 50,019 | 36,000 | 3,078 | 89,097 | 0 |
| Oregon. | 1,500 | 7,000 | 1,000 | 36, 0c0 | 100 | 45,600 |  |

Table 8.-Statistics of universities and colleges for men and for both sexes.



Table 8．－Statistics of universities and colleges for men and for both sexes－Continued．

| Location． |  | Name． |  |  | Professors and instructors． |  |  |  |  |  |  |  | Students． |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Propar－ atory depart－ mont． |  |  | Colle－ giate depart－ ment． |  | Profes－ sional depart－ ments． |  | Total num－ ber． |  | Prepar． atory depart－ ment． |  | Collegiate depart－ ment． |  | Graduate de－ partment． |  |  |  | Profes－ sional depart－ ments． |  | Total number． |  |
|  |  |  |  |  |  |  | esi- |  |  |  |  |  |  |  |  |  |  |
|  |  | $\begin{aligned} & \text { 0. } \\ & \text { जin } \\ & \text { Fin } \end{aligned}$ |  |  |  | $\begin{aligned} & \dot{\text { ® }} \\ & \text { 品 } \end{aligned}$ |  |  |  | $\begin{gathered} \text { 泴 } \end{gathered}$ |  |  |  | 过 |  | ゅi |  |  |  |  |  | $\begin{aligned} & \dot{\Phi} \\ & \text { 䍏 } \end{aligned}$ |  | $\begin{aligned} & \text { ब゙ } \\ & \text { 玉 } \\ & \text { 玉 } \end{aligned}$ |  | 遜 |  |
|  | 1 |  |  |  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 1610 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 牊 |
|  | FLORIDA． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 81 | De Land－－．．．．．．．．．．．．－ | John B．Stetson University | 1887 | Bapt | 7 | 12 0 | 5 10 | 2 | 0 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 12 | 12 | 69 36 | 60 15 | 10 113 | 6 36 | 0 3 | 0 | 0 | 0 0 | 0 0 | 0 | 79 152 | 66 51 |
| 52 | Lake City－．．．．．．－．．．．．－ | Florida State Agricultural College． | 1884 | Nonsect－－ | 2 | 0 | 10 | 6 | 0 | 0 | 12 | 6 | 36 | 15 | 113 | 36 | 3 | 0 | 0 | 0 | 0 | 0 | 152 | 51 |
| 53 | Leegburg－．－．．．．．－．．．．－－ | Florida Conference College．－ | 1886 | M．E．So．－ | 5 | 2 | ${ }_{5}^{6}$ | 2 | 0 | 0 | ${ }_{5}^{6}$ | 4 | 24 | 14 | 13 | 12 | 0 | 0 | 0 | 0 0 | 0 5 | 0 0 | 42 | 29 0 |
| 54 |  | St．Leo Military College－－．．－－ Seminary West of the Su－ | 1890 185 | R． R No．．．．－ | 5 4 | 0 2 | 5 4 4 | 0 2 | 0 | 0 0 | 5 4 | 0 | 5 40 | 0 43 | $\xrightarrow{25}$ | 0 16 | 0 0 | 0 0 | 0 0 | 0 0 | 5 | 0 | 35 | 0 59 |
| 55 | Tallahsssee．．．．．．．－．－－－ | Seminary West of the Su－ wanee River． | 1857 | Nonsect．－ | 4 | 2 | 4 | 2 | 0 | 0 | 4 | 2 | 40 | 43 | 11 | 16 | 0 | 0 | 0 | 0 | ， | 0 | 5 | 5 |
| 58 | Winter Park．．－．．．．－－－ | Rollins College．－．－－－－．－．．．．．．． | 1885 | Cong ．．．．－ | 8 | 9 | 8 | 9 | 0 | 0. | 8 | 9 | 104 | 77 | 11 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 115 | 81 |
| 67 | Athens．－－－．．－－－－－－－－－ | University of Georgia．．．．．．．． | 1801 | Nonsect．－ | 0 | 0 | 20 | 0 | 17 | 0 | 37 | 0 | 0 | 0 | 239 | 0 | 0 | 0 | 0 | 0 | 183 | 0 | 422 | －${ }^{0}$ |
| 58 | Athanti | Atlanta University ．．．．．．．．．．．．． | 1869 | Nonsect．． | 8 | 14 | 8 | 14 | 0 | 0 | 8 | 14 | 67 | ${ }_{2}^{5}$ | 19 | 9 | 0 | 0 | 0 | 0 | 0 8 | 0 | 110 | 155 |
| 59 | －．．．do． | Morris Brown College．．．．－．－－ | 1885 | A．M．E．－ | 3 | 6 | 3 | 1 | 1 | 0 | 4 | 7 | 134 | 212 | 31 | 24 | 0 | 0 | 0 | 0 | 8. | 0 | 165 | 236 |
| 60 | Bowdon．．．－－－－－．．．－．－－ | Bowdon College．．．．．．．．．．．．．．．．－ | 1856 | Nonsect－－ | 0 | 2 | 2 | 0 | 0 | 0 | 2 | 2 | 35 | 40 | 26 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 61 139 | 70 37 |
| 61 |  | North Georgia Agricultural College． | 1873 | Nonsect．－ | 6 | 2 | 6 | 2 | 0 | 0 | 6 | 2 | 65 | 20 | 74 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 139 | 37 |
| 62 | Macon | Mercer University．．．．．．．．．．．．．． | 1837 | Bapt …－ | 1 | 0 | 11 | 0 | 4 | 0 | 16 | 0 | 58 | 0 | 138 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 204 | 0 |
| 63 | Oxford．－ | Emory College．．．．．－－－－－－－－－－－－－－ | 1837 | M．E．So．－ | 2 | 0 | 10 | 0 | 2 | 0 | 14 | 0 | 59 | 0 | 245 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 304 | 0 |
| 04 | 8outh Atlanta－－－－－－－－ |  | 1888 | M．E．．．．．． | 4 | 6 | 5 | 2 | 0 | 0 | 6 | 7 | 18 | 4 | 3 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 140 | 192 |
| 65 | Wrightsville ．．．．．．．－－ | Nannie Lon Warthen College | 1888 | M．E．So．．－ | 0 | 1 | 2 | 1 | 0 | 0 | 2 | 2 | 76 | 41 | 19 134 | 10 | 0 | 0 | 0 | 10 | 0 | 0 | 95 | ${ }_{1}^{51}$ |
| 63 | Young Earris．．．．．．．－－ | Young L．G．Harris College．． | 1887 | M．E．SO．－ | 0 | 2 | 4 | 4 | 0 | 0 | 4 | 6 | 71 | 63 | 134 | 80 | 0 | 0 | 0 | ＇0 | 0 | 0 | 205 | 143 |
| 67 | Moscow | University of Idaho | 1892 | Nonsect．－ | 13 | 3 | 13 | 3 | 0 | 0 | 13 | 3 | 141 | 83 | 23 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 184 | 102 |


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Table 8.-Statistics of universities and colleges for men and for both sexes-Continued.



Table 8.-Statistics of universities and colleges for men and for both sexes-Continued.'



|  | Location． | Name． | -タిu!uedo รо エधөగ | $\begin{aligned} & \text { Religious denomination } \\ & \text { controlling. } \end{aligned}$ | Profossors and instructors． |  |  |  |  |  |  |  | Students． |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Prepar－ atory depart－ ment． |  | Colle－ giate depart－ ment． |  | Profes－ sional depart－ ments． |  | Total num－ ber． |  | Prepar－ atory depart－ ment． |  | Collegiate depart－ ment． |  | Graduate de－ partment． |  |  |  | Profes－ sional depart－ ments． |  | Total number |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  | 愛 |  | 奥 |  |  |  |  | $\begin{aligned} & \dot{\text { ® }} \\ & \text { ब్g } \\ & \text { は } \\ & \text { E } \end{aligned}$ | 品 |  | 灾 |  |  |  | $\begin{aligned} & \dot{9} \\ & \underset{A g}{\text { 玉in }} \end{aligned}$ |  |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
|  | M18souri－cont＇d． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 230 | Bowhing Green．．．．．－ | Pike College．．．．．． | 1882 | Nonsect．－ | 2 | 3 | 2 | 2 | 0 | 0 | 2 | 5 | 20 | 30 | 35 | 80 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 110 |
| 231 | Cameron．．．．．．．－．．．．．．． | Missouri Wesleyan College．－ | 1883 | M．E．．．．．． | 0 | 2 | 4 | 4 | 0 | 0 | 5 | 7 | 60 | 50 | 65 | 75 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 125 |
| 20 | Canton．． | Christian University ．－．－－ | 1855 | Christian | 0 | 1. | 6 | 4 | 0 | 0 | 6 | 5 | 9 | 4 | 54 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 63 | 47 |
| \＄83 | Cape Glrarde | St．Vincent＇s College． | 1843 | R．C．．．．－－ | 4 | 0 | 3 | 0 | 0 | 0 | 4 | 0 | 14 | 0 | 6 | 0 | 0 | 0 | ． 0 | 0 | 0 | 0 | 20 | 0 |
| 284 | Columbis．．．． | Uniyersity of the State of Missouri． | 1842 | Nonsect．－ | 0 | 0 | 48 | 4 | 7 | 0 | 55 | 4 | 0 | 0 | 386 | 71 | 17 | 8 | 0 | 0 | 182 | 0 | 637 | 116 |
| 295 | Edinburg－－．．－－．．．．．．－ | Grand River Christian Union College． | 1850 | Christ．U． | 1 | 2 | 2 | 2 | 0 | 0 | 3 | 2 | 36 | 40 | 14 | 12 | 0 | 0 | 0 | 0 | 0 | 0. | 50 | 52 |
| 998 | Eayetto | Centrul Collego．．．．－ | 1857 | M．E．So－－ | 6 | 1 | 8 | 0 | 0 | 0 | 12 | 1 | 104 | 8 | 72 | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 177 | 12 |
| 237 | Palton． | Westminster College． | 1853 | Presb | 6 | 0 | 9 | 0 | 0 | － 0 | 10 | 0 | 20 | 0 | 85 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 110 | 0 |
| 238 | Glasgow | Pritchett School Institute | 1866 | Nonsect．－ | 2 | 3 | 5 | 1 | 0 | 0 | 7 | 4 | 27 | 32 | 21 | 21 | 2 | 2 | 0 | 0 | 0 | 0 | 50 | 55 |
| 259 | Greenfield | Ozark College | 1882 | Cum．Pres | 1 | 1 | 2 | 2 | 0 | 0 | 3 | 3 | 20 | 30 | 11 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 50 |
| 240 | La Grange | La Grange College | 1858 | Bapt ．－．－－ |  |  | 7 | 3 |  |  | 7 | 7 |  |  | 34 | 42 |  |  |  |  |  |  | 34 | 42 |
| 241 | Lawson ．．． | Lawson Presbyterian Col－ lege．＊ | 1891 | Presb ．－－－ | 1 | 0 | 3 | 1 | 0 | 0 | 4 | 1 | 13 | 12 | 34 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | 48 |
| 242 | Liberty ．．．．．．．．．．．．．．．．－ | William Jewell College．．．．．－－ | 1849 | Bapt ．．．．－－ | 7 | 0 | 10 | 0 | 0 | 0 | 17 | 0 | 200 | 0 | 136 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 344 | 0 |
| 243 | Marshall．－－－．－－ | Missouri Valley College．．．．．－－ | 1889 | Cum．Pres | 7 | 2 | 7 | 2 | 0 | 0 | 8 | 5 | 89 | 84 | 67 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 143 | 132 |
| 244 | Morrisvil | Morrisville College ．．．－．．．．．．．－－ | 1873 | M．E．So－－ | 0 | 1 | 4 | 1 | 0 | 0 | 4 | 4 | 27 | 20 | 23 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 39 |
| 245 | Neosho | Scarritt Collegiate Institute． | 1888 | M．E．So－－ | 4 | 2 | 3 | 0 | 0 | 0 | 7 | 2 | 40 | 60 | 30 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 96 |
| 246 | Parkville | Park College ．．．．．．．．．．－．－． | 1875 | Presb | 1 | 8 | 10 | 2 | 0 | 0 | 11 | 10 | 138 | 102 | 62 | 54 | 0 | 0 | 0 | 0 | 0 | 0 | 200 | 156 |
| 247 | St．Charles．．．．．．．．．．．．．． | St．Charles College．．．．．．．．．．．．－－ | 1837 | M．E．So．－ | 0 | 1 | 3 | 0 | 0 | 0 | 3 | 3 | 16 | 15 | 10 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 24 |
| 248 | St．Louis． | Christian Brothers College．－ | 1851 | R．C－－－－－ | 9 | 0 | 9 9 | 0 | 0 | 0 | 24 | 0 | 200 | －0 | 90 | ． 0 | 0 | 0 | 0 | 0 | 0 | 0 | 420 | 0 |
| 949 | －．．．．do | St．Louis University ．－．．．．．．．－ | 1829 | R．C－．．．．－ | 6 | 0 | 10 | 0 | 0 | 0 | 19 | 0 | 145 | 0 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 313 | 0 |
| 250 | －．．．do | Washington University ．．．．．．－ | 1859 | Nonsect．－ | 29 | 38 | 30 | 0 | 65 | 0 | 137 | 38 | 555 | 361 | 99 | 56 | 0 | 0 | 0 | 0 | 379 | 1 | 1，053 | 514 |
| 251 | Springfield | Drury College．．．．．．．．．．．．．．．．．－－ | 1873 | Cong－－．．． | 2 | 3 | 7 | 2 | 0 | 0 | 10 | 6 | 109 | 90 | 54 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 163 | 128 |
| 838 | Tarkio． | Tarkio College | 1883 | U．Presb－ | 2 | 2 | 4 | 3 | 0 | 0 | 11 | 7 | 27 | 15 | 47 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 125 | 129 |
| 258 | Trenton | Avalon College．－ | 1869 | U．B．．．．．． | 7 | 3 | 7 | 3 | 0 | 0 | 7 | 3 | 25 | 18 | 74 | 46 | 2 | 4 | 0 | 0 | 0 | 0 | 101 | 68 |
| $8 \%$ | Warrenton | Central Wesleyan College． | 1864 | M．E．＿．．．．－ | 2 | 2 | 6 | 0 | 2 | 0 | 12 | 2 | 47 | $\stackrel{3}{2}$ | 36 | 9 | 0 | 0 | 0 | 0 | 43 | 0 | 200 | 65 |



Table 8.-Statistics of universities and colleges for men and for both sexes-Continued.



| Shanv U | 1865 | Bapt |
| :---: | :---: | :---: |
| Suaw | 1858 | Nonsect-- |
| Livingstone Colleg | 1882 | A. M. E. Z |
| Wake Forest Colleg | 1834 | Bapt ---- |
| Wesverville College............ | 1873 | IM. E. So.- |
| Fargo Colleg | 1887 | Cong --..-- |
| University of North Dakota. | 1884 | Nonsect.- |
| RedRiver Valley University. | 1892 | M. H------ |
| Buchtel College | 1872 | Univ |
| Mount Union College | $1846{ }^{\circ}$ | M. E...... |
| Ashland University | 1879 | U. B-.-.-- |
| Ohlo University ... | 1809 | Nonsoct.- |
| Baldwin University | 1846 | M. E--...- |
| German Wallace College | 1864 | M. E--.... |
| Cerarville College | 1894 | Ref.Presb |
| St. Joseph's College | 1872 |  |
| St. Xavier College | 1840 | R. Consect-- |
| University of Cin | 1873 | Nonsect.- |
| Calvin College* | 1883 | Ref------ |
| St. Ignatius College | 1886 | R. C----- |
| Western Reserve University | 1826 | Nonsect.- |
| Capital University | 1850 | Luth .-.-- |
| Ohio State University | 1870 | Nonsect.- |
| Defiance College. | 1884 | Nonsect.- |
| Ohio Wesleyan University. | 1844 | M. E. |
| Findlay College | 1886 | Ch. of God |
| Kenyon College | 1826 | P. E.----- |
| Denison Univers | 1831 | Bapt ----- |
| Hiram College | 1850 | Christian |
| Lima College | 1893 | Luth .-.... |
| Marietta Colleg | 1835 | Nonsect.. |
| Franklin College | 1825 | Nonsect.- |
| Muskingum Coll | 1837 | U. Presb. |
| Oberlin College | 1833 | Nonsect.. |
| Miami University | 1824 | Nonsect.- |
| Richmond College | 1885 | Nonsect.. |
| Rio Grande Colleg | 1876 | Free Bapt |
| Scio College. | 1866 | M. E.----- |
| Wittenberg Coll | 1845 | Luth ....-- |
| Heidelberg Unive | 1850 | Ref |
| Otterbein University | 1847 | U. B---... |
| Wilberforce University* | 1855 | A. M. E.-- |
| Wilmington College | 1870 | Friends .- |
| University of Wooste | 1870 | Presb .-. |
| Antioch College. | 1852 | Nonsect.- |








 00000 H00 0, $00010000000000000000000000 \pi 000 \pi 00000$





[^97]Table 8．－Statistics of universities and colleges for men and for both sexes－Continued．

| ocation． |  | Name． | －8ụuedo ј0 د8ex | $\underset{\text { controlling．}}{\text { Religious denomion }}$ | ．Professors and instructors． |  |  |  |  |  |  |  | Students． |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \text { Prepar- } \\ & \text { atory } \\ & \text { depart- } \\ & \text { ment. } \end{aligned}$ |  |  | Colle－ giate depart ment． |  | Profes－sionaldepart－ments． |  | Total num－ ber． |  | Prepar－ atory depart－ ment． |  | Collegiate depart－ ment： |  | Graduate de－ partment． |  |  |  | Profes－ sional depart－ ments． |  | Total number． |  |
|  |  | Resi－ dent． |  |  |  |  | Non－ resi－ dent． |  |  |  |  |  |  |  |  |  |  |
|  |  | 器 |  |  |  | $\begin{aligned} & \dot{\oplus} \\ & \text { 舄 } \end{aligned}$ |  |  |  | $\begin{aligned} & \text { 骨 } \\ & \text { 感 } \end{aligned}$ |  | $\begin{aligned} & \dot{9} \\ & \text { 馬 } \end{aligned}$ |  | 状 |  |  |  |  |  | $\begin{aligned} & \text { 坔 } \end{aligned}$ |  | $\begin{aligned} & \dot{9} \\ & \text { ज⿹丁口コ } \end{aligned}$ |  |  | 器 |
|  | 1 |  |  |  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| 385 | oklanoma． <br> Norman $\qquad$ | University of Oklahoma | 1892 | Nonsect．－ | 0 | 2 | 5 | 0 | 0 | 0 | 5 | 2 | 72 | 61 | 7 | 3 | 0 | 0 | 0 | 0 | 5 | 0 | 84 | 64 |
| 353 | Eugene | University of Oregon | 1876 | Nonsect－－ | 12 | 3 | 14 |  | 14 | 0 | 28 |  | 118 | 62 | 72 | 79 | 0 | 2 | 0 | 0 | 144 | 18 | 334 | 161 |
| 354 | Forest Grove | Pacific University－－ | 1848 | Cong ．．．．－ | 6 | 3 | 6 | 2 | 0 | 0 | 9 | 5 | 87 | 60 | 16 | 14 | 2 | 0 | 0 | 0 | 0 | 0 | 105 | 95 |
| 355 | Lafayette | Lafayette Seminary－ | 1859 | U．Evang－ | 2 | $\stackrel{2}{2}$ | 3 | 2 | 0 | 0 | 3 | 3 | 10 | 12 | 9 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 33 |
| 356 | McMinnville | McMinnville College | 1859 | Bapt－－－－ | 3 | $\stackrel{2}{2}$ | 3 | 2 | 0 | 0 | 3 | ${ }_{2}^{2}$ | ${ }_{7}^{21}$ | 19 | 21 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 41 |
| 357 858 | Newberg | Pacific College－．．． | 1891 | Friends－－ | 2 | 2 | 3 | 1 | 1 | 0 | 5 3 | $\stackrel{2}{1}$ | 71 14 | 46 12 | ${ }_{28}^{18}$ | ${ }_{27}^{17}$ | 0 | 0 | 0 | 0 | 1 | 2 0 | 90 | 65 39 |
| 359 | Salem．．．． | Willamette University | 1844 | M．${ }^{\text {E }}$ | 0 | 1 | 3 4 | ${ }_{3}^{1}$ | 32 | 0 | $\begin{array}{r}3 \\ 43 \\ \hline\end{array}$ | 8 | 103 | 70 | 14 | $\stackrel{5}{5}$ | 0 | 0 | $\stackrel{1}{2}$ | 0 0 0 | 25 | 0 4 | 356 | 39 381 |
| 360 | University Park | Portland University． | 1891 | M．E | 3 | 2 | 5 | 1 | ${ }_{3}$ | 0 | 13 | 9 | 75 | 81 | 30 | 9 | 0 | 0 | $\stackrel{2}{2}$ | 1 | 6 | 1 | 117 | 328 |
|  | PENNSYLIVANIA． |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 361 | Allegheny | Western University of Penn－ | 1819 | Nonsect．－ | 0 | 0 | 18 | 0 | 81 | 0 | 88 | 0 | 0 | 0 | 159 | 2 | 0 | 0 | 0 | －0 | 416 | 6 | 575 | 8 |
| 362 | Allentown | Muhlenberg College． | 1867 | Lath | 4 | 0 | 9 | 0 | 0 | 0 | 12 | 0 | 54 | 0 | 106 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 160 | 0 |
| 303 | Annville | Lebanon Valley College | 1866 | U．B． | 0 | 4 | 5 | 1 | 0 | 0 | 6 | 5 | 34 | 14 | 39 | 12 | 1 | 0 | 4 | 0 | 0 | 0 | 84 | 56 |
| 884 | Beatty－．．． | St．Vincent College． | 1846 | R．C．．．． | 4 | 0 | 7 | 0 | 4 | 0 | 21 | 0 | 90 | 0 | 115 | 0 | 13 | 0 | 0 |  | 39 | 0 | 315 | 0 |
| 835 | Beaver Falls． | Geneva College．．． | 1848 | Ref．Presb | 1 | 1 | 7 | 3 | 0 | 0 | 8 | 4 | 55 | 33 | 44 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 111 | 115 |
| 3888 | Bethlehem．．． | Moravian College ．－．．．．．－－ | 1807 | Moravian | 0 | 0 | 5 | 0 | 3 | 0 |  | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 38 | 0 |
| 887 | Carlisle | Dickinson College．．．．．．．．．．．．－ | 1783 | M．E．－．．．－ | 5 | 1 | 13 | 1 | 7 | 0 | 25 | $\stackrel{2}{2}$ | 78 | 13 | 217 | 22 | 0 | 0 | 0 | 0 | 99 | 1 | 394 | 36 |
| 838 | Chester ． | Pennsylvania Military Col－ | 1862 | Nonsect－－ | 4 |  | 15 | 0 | 0 | 0 | 15 | 0 | 40 | 0 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 103 | 0 |
| $369$ | Callegeville．．．．．．．．．．－ | Ursinus College | 1870 | Ref． | ， |  | 11 | 0 | 5 | 0 | 17 | 4 | 79 | 22 | 60 | 6 | 0 | 0 | 0 | 0 | 31 | 0 | 170 | 28 |
| $870$ | Gettysburg． | Lafayette College－．．． | 1832 | Presb ．－．．－ | 0 3 | 0 | 28 12 | 0 | 0 | 0 | 128 | 0 | 69 | 8 | 128 | 6 | 27 0 | 0 | － | 0 | 0 | 0 | 308 | 0 |

Table 8.-Statistics of universities and colleges for men and for both sexes-Continued.



Table 8.-Statistics of universities and colleges for men and for both sexes-Continued.


* Statistics of 1894-95.

Table 8.-Statistics of universities and colleges-Continued.


Table 8.-Statistics of universities and colleges-Continued.



Table 8.-Statistics of universities and colleges-Continued.



Table 8.-Statistics of universities and colleges-Continued.



Table 8.-Statistics of universities and colleges-Continued.


|  |  |  |  | 200 | 75 | 1,000 | 25,000 | 14,000 | 3,000 | 1,000 |  |  | 500 | 4,500 | 4,500 | 40,000 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 297 | Central Christian College.....- | 1 | 11 | 1,500 | 700 | 1,000 | 35,000 |  |  | 0 | 0 | 0 | 0 | 2,850 | 5,025 | 5,000 |
| 29 | Southwest Baptist College .....- |  |  | 1,000 | 500 | 2,000 | 16,000 | 0 |  |  |  |  |  |  |  |  |
| 통ㅇ30 | Pike College. | 0 | 0 | 1200 | 100 | 1,000 | 25,000 |  | 3,918 |  |  |  | 2,389 |  |  |  |
| -331 | Missouri Wesleyan College | 0 | 0 | 1,200 |  | 2,000 | 45,000 | 15,000 | 2,500 | 1,000 |  |  |  |  |  |  |
| ¢083 | Christian University-...... | 0 | 0 | 12,000 | 2,000 | 12,000 | 75,000 |  |  |  |  |  |  |  |  |  |
| -234 | St. Vincent's of |  |  |  |  |  | 898 | 1,220 | 14,208 | 61,476 | 77,577 | 34,858 | 7,062 | 195, 181 |  |  |
|  | sourl | 4 | 6 | 2,126 | 30,122 | 136,500 |  |  |  |  |  |  |  |  |  |  |
| ${ }_{8}^{235}$ | Grand River Christian |  |  | $500^{\circ}$ |  |  | 20,000 | 130,000 | 5,000 6,078 | 7,643 | 0 | 0 | 0 | 13,721 |  | 295,000 |
| C0:36 | Central Colleg | 0 | 0 | 5,500 |  | 15,000 6,000 | 130,000 | 200,000 | 4,000 | 8,000 |  |  |  | 12,000 | 2,500 | 38,000 |
| 238 | Westminster Coll ${ }^{\text {Pritchett School Ins }}$ | 0 | 13 | 6, 350 |  | 19,500 | 45,000 | 77,000 | 3,500 | 6,000 |  |  |  | , 885 | $500^{-}$ |  |
| 238 | Ozark College....- | 0 | 2 | 500 | 1, 200 | 500 | 8,000 45,000 | 2,000 | 4,000 |  |  |  | 1,000 | 5,000 |  | 10,000 |
| 240 |  | 0 | 0 | 2,500 | 1,000 |  | 16,000 |  | 2,000 |  |  |  |  | 2,000 | 24,000 |  |
| 241 | Lswson Presbyterian College*- |  | 21 | 9,000 |  | 15,000 | 75,000 | 215,000 | 7,000 | 13,000 |  |  | 1,000 | 20,000 | 5,000 | 250,000 |
| 243 | Missouri Valley Colleg |  |  | 1,800 | 500 | 10,000 | 125,000 | 115,000 | 8,000 | 10,000 |  |  |  | 3,000 | 200 |  |
| 244 | Morrisville College. |  |  | 1,000 |  | 1,200 | 10,000 |  | 6,000 |  |  |  |  | 6,000 |  | 000 |
| 245 | Scarritt Collegiate I | 0 | 30 | 5,000 | 1,000 | 1,800 | 350,000 | 145,000 |  | 10,000 |  |  |  | 10, 000 | 0 |  |
| 247 | Pt. Charles College | 0 | 0 | 1,000 | 200 | 2,000 | 35,000 | 0 |  | 0 | 0 | 0 | 0 | 54,000 |  |  |
| 248 | Christian Brothers Col | - | 0 | 11,600 | 1,400 | 5,200 | 600,000 |  |  | 0 |  |  |  | 26,500 |  |  |
| 249 | St. Louis University* |  |  | 30,000 |  | 150,000 | 850,000 | 950,000 | 120,000 | 40,000 | 0 | 0 | 3,000 | 163,000 | 330,000 | 1,850,000 |
| 251 | Drury College... | 0 | 16 | 23,100 |  | 15,000 | 200,000 | 225, 000 | 7,500 | 10,047 |  |  | 275 | 17,82\% | 40,000 | 400, 000 |
| 252 | Tarkio College |  |  | 1,036 | 1,000 | 2,000 | 85,000 | 65, 000 | 5,639 | 3, |  |  | 225 | 9,205 | 2,341 | 130,000 |
| 253 | Avalon College |  |  |  |  |  | 50,000 |  |  | 4,500 | 0 | 0 | 1,000 | 10,500 | 4,000 | 162,500 |
| 254 | Central Wesleyan College | 0 | 0 | 5,000 |  | 500 | 92,000 | 70,000 | 5,000 | 4,500 |  |  | 1,000 | 10,500 |  | 16, 50 |
|  | montana. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 255 | College of Montana. |  |  | 2,000 | 4,000 | 3,000 | 80,000 |  |  |  |  |  | 900 |  | 8,000 |  |
| $\begin{gathered} 256 \\ 257 \end{gathered}$ | Montana Wesleyan University. University of Montana. | 0 | 10 | 750 1,360 | 900 425 | 750 8,000 | 100,000 35,000 |  | 10,000 |  | 10,500 |  |  | $\begin{aligned} & 10,500 \\ & 10,500 \end{aligned}$ |  |  |
|  | NEBRASKA. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 258 | University of Oma |  |  | 2,500 |  | 5,000 | 200,000 |  | 15,000 |  |  |  |  | 15,000 | 4,000 | 200,000 |
| 259 | Cotner University |  |  | 500 | 200 | 600 | 100,000 |  | 2,000 |  |  |  | 200 | 2,200 |  |  |
| 260 | Union College | 0 | 0 | 1,500 |  | 2,266 | 250,000 |  | 18,500 |  |  |  | 1,200 | 19,700 |  |  |
| 281 | Doane Colleg |  | 6 | 7,083 | 4,097 | 10,000 | 132,000 | 66,184 | 2,683 | 3,070 |  |  | 552 | 6,305 | 4,246 | 204,000 |
| 262 | Fairfield Colleg | 0 | 2 | 33800 | 200 | 150,000 | 30,000 700,000 | 1,000,000 | 2,870 | 60,000 | 63,572 | -36,000 | 7,000 | 169,442 |  | , |
| 284 | Gates College. | 0 | 3 | 5,000 | 1,000 | 6,000 | 25,000 | 25,000 | 1,250 | 1,250 |  |  |  | 2,500 | 2,000 | 50,000 |
| 265 | Creighton University |  |  | 9,600 | 500 | 25,000 | 200,000 | 150,000 |  | 7,500 |  |  |  | 7,500 | 0 | 200, 000 |
| 286 | Nebraska Wesleyan University |  |  | 2,600 | 200 | 6,000 | 150,000 | 30,000 | 4,500 | 1,000 |  |  | 3,000 | 8,500 2,400 | 1,500 |  |
| 20. | York Colleg |  |  | 600 |  | 500 | 40,000 |  | 2,400 |  |  |  |  | 2,400 | 1,00 |  |

Table 8.-Statistics of universities and colleges-Continued.



Table 8,-Statistics of universities and colleges-Continued.


## Weatern University of Penn-

 sylvania Muhlonberg Colilege Lebsnon Valley College St. Vincent Colleg Moravian College Dickinson College.....-.......... Ursinus Colloge Pennsylvania Callege. Thiel CollegeGroverford College Monongahela College ….............. Branknell University Lincoln University St. Francis College Allegheny College Central Ponnsylvania College. Westminster Coneg
Central College.............................. Duquesne College.
Holy Ghost College
Susquehanna University Lehigh University Swarthmore Colleg
Volant College
Washington and Jefferson Col-

REOODE ISLAND.
Brown University

7,500
100 $\xrightarrow{1}$

| 7,500 | 4,000 | 13,500 | 96,000 8,000 | 120,000 |
| :---: | :---: | :---: | :---: | :---: |
| - 100 | 50 500 | $\begin{array}{r}500 \\ 3,500 \\ \hline\end{array}$ | 8,000 30,000 |  |
| 2,040 | 500 | 3,500. | 35,000 | \% 7,000 |
| -500 | 600 | 600 500 | 25,000 10,000 | - 4,689 |
| 400 4,320 | 200 | 500 12 000 | 10,000 225,000 | 4,689 40,000 |
| 4,320 2,500 | 2,454 | 12,000 | 225,000 100,000 | 40,000 |
| 2,500 | 500 | 2,000 | 100,000 |  |
| 15,000 |  | 85,356 | 151,258 | 276,858 |
| 10,500 | 3,500 | 2,000 | 100, 000 | 137, 000 |
| 4,500 | 600 | 1,800 | 60,000 | 56,000 |
| 40,000 | 200 |  | 150,000 |  |
| 3,000 |  |  | 80,000 | 150,000 |
| 6,000 |  |  | 75,000 | 100,000 |
| 38,000 | 2,000 | 30,000 | 324,428 | 286,643 |
| 1,800 |  |  | 130,000 |  |
| 6,000 | 500 | 8,500 | 125,000 | 175,000 |
| 25, 400 |  | 50,000 | 650,000 | 330,000 |
| 23,000 |  | 75,000 | 275, 000 | 210,000. |
| 8,678 | 200 | 1,000 | 60,000 | 67,000 |
| 3,500 |  | 15,000 | 150,000 |  |
| 32, 200 | 7,000 | 80,000 | 400,000 | 270,000 |
| 300 | 100 |  | 30,000 |  |
| 18,424 | 2,5\%4 | 25, 000 | 122,000 | 180,000 |
| 16,000 |  |  | 250,000 | 400,000 |
| 15,000 |  | 16,000 | 212,000 | 394,800 |
| 5,000 |  |  | 60,000 | 0 |
| 14,000 | 12,000 | 100;000 | 200, 000 | 200, 000 |
| 4,463 | 300 | 4,000 | 22, 600 | 4,175 |
| 5,000 |  | 5,000 | 50,000 | 125,000 |
| 4,100 | 350 | 90,000 | 300, 000 |  |
| 8,000 | 800 | 6,000 | 200,000 |  |
| 40,000 | 75,000 | 375,378 | 2,909,874 | $2,077,188$ |
| 300 |  | 500 | - 0 | 0 |
| 2,000 | 500 | 6,000 | 300,000 |  |
| 5,000 |  | 5,000 | 52,000 | 46,000 |
| 00, 000 |  | 20,000 | 1,200,000 | 2,000,000 |
| 12,000 | 2,000 | 50,000 | 670,300 | 517,000 |
| 17,000 |  | 30,000 | 500, 000 | 389,195 |
| $\begin{array}{r} 7,500 \\ 120 \end{array}$ | 1,000 20 | 2,000 500 | $\begin{array}{r} 350,000 \\ 4,000 \end{array}$ | 0 |
| 12,500 |  | 20,000 | 270,000 | 269,435 |
| 82,000 | 20,000 | 122,350 | 1,177, 967 | 1,113, 021 |

* Statistics of 1894-95.

Table 8.-Statistics of universities and colleges-Continued.



Table 8.-Statistics of universities and colleges-Continued.



* Statistics of 1894-95.

Table 9.-Statistics of colleges


[^98]for women，Division $A$ ．

|  |  | $\square$ | Q | $\bigcirc$ | H200 | $\leqslant$ | $\infty$ | －9，$=1 \times$ | ¢ | $\pm$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| －seo．nos өqв．țud mo．x <br>  <br>  | 8 |  |  | $\begin{aligned} & 8 \\ & 8 \\ & \text { न- } \\ & \hline \end{aligned}$ |  |  |  |  |  | $\begin{aligned} & \text { on } \\ & \text { H } \\ & \text { on } \end{aligned}$ |
| ＊suoṭ甲ьвјөпеg | Ci |  |  | $\begin{aligned} & 8 \\ & 8 \\ & 150 \end{aligned}$ |  | $\begin{aligned} & 8 \\ & 0 \\ & 0 \\ & 5 \\ & 0 \end{aligned}$ |  |  | $\begin{aligned} & \text { io } \\ & \text { R } \\ & \text { 年 } \end{aligned}$ | $\begin{aligned} & \text { O} \\ & \text { N } \\ & \infty \end{aligned}$ |
| ＇0moout［870 I | 19 |  |  | $\begin{aligned} & \text { Cin } \\ & \text { No } \\ & \text { N } \end{aligned}$ | K్రn 18 | $\begin{aligned} & 10 / \\ & \text { 会 } \\ & 0 \\ & \text { बे } \end{aligned}$ | ${ }_{c}^{8}$ |  がぶニジ | $\begin{aligned} & \infty 8 \\ & 0 \\ & 0 \\ & 0 \\ & \hline 0 \end{aligned}$ | $\begin{aligned} & \text { Ki } \\ & \text { N } \\ & \text { \% } \end{aligned}$ |
| ¢゙＇sөoxnos лөपұо mox， | A |  | $\begin{aligned} & \text { 둥 } \\ & \text { \% } \end{aligned}$ | $\begin{aligned} & 8 \\ & 8 \\ & 25 \end{aligned}$ |  |  | $\vdots$ |  | O्Oㅇ | $\begin{aligned} & \text { ళ్ర } \\ & \text { ๙ิ } \end{aligned}$ |
|  | $\stackrel{90}{60}$ |  | $\begin{aligned} & \infty \\ & \stackrel{\infty}{4} \\ & \text { ¢ } \end{aligned}$ | $\begin{aligned} & 10 \\ & \text { iv } \\ & \text { 合 } \end{aligned}$ | 융Nㅠㅇ <br> 2 คֹణ゙さ | $\begin{aligned} & 10 \\ & 0 \\ & 0 \\ & \text { N } \end{aligned}$ | $\mathrm{C}_{0}^{0}$ |  |  | － |
| －at\％onpoxd mox，spand | Q |  | $\begin{aligned} & \stackrel{\circ}{\circ} \\ & \stackrel{\rightharpoonup}{\sim} \\ & \infty \end{aligned}$ | $\begin{aligned} & 0.0 \\ & \overrightarrow{4} \\ & \text { di } \end{aligned}$ |  | $\begin{aligned} & \overline{8} \\ & \text { H } \end{aligned}$ |  |  |  | ${ }^{\circ} \mathrm{C}$ |
| －spung estyonpoxd | $6$ | $\begin{aligned} & 8 \\ & 8 \\ & 10 \\ & 68 \end{aligned}$ | 聯 | $\begin{aligned} & 8 \\ & 8 \\ & 8 \\ & 8 \\ & 8 \end{aligned}$ |  |  | ！ |  | 8 8 8 in $i$ | $\begin{aligned} & \text { Ko } \\ & \text { N } \\ & \text { N } \end{aligned}$ |
| Sotul <br>  | ${ }_{\text {e }}$ | 8 8 8 8 | $\begin{aligned} & 8 \\ & 8 \\ & \text { N } \\ & \text { nin } \end{aligned}$ | $\begin{aligned} & 8 \\ & 8 \\ & 0 \\ & 0 \\ & 80 \end{aligned}$ |  |  | $\begin{aligned} & 8 \\ & \hline 0.0 \\ & \text { N } \end{aligned}$ |  |  | $\begin{aligned} & \text { 水 } \\ & \text { an } \\ & \text { an } \end{aligned}$ |
|  <br>  | $\stackrel{\text { ® }}{\sim}$ | $\begin{aligned} & 8 \\ & 8 \\ & 0 \\ & 80 \end{aligned}$ | $\begin{aligned} & 8 \\ & 8 \\ & 0 \\ & \hline 1 \end{aligned}$ | $\begin{aligned} & 8 \\ & 8 \\ & \text { की } \end{aligned}$ |  | $\begin{aligned} & 8 \\ & 8 \\ & 8 . \\ & 8 . \end{aligned}$ | ， |  | $\begin{aligned} & 8 \\ & 8 \\ & 8 \end{aligned}$ | \％ |
|  | 08 |  | $\stackrel{\square}{2}$ | $\begin{aligned} & 8 \\ & 0 \\ & n \\ & n \end{aligned}$ |  |  | 8 | \％¢\％： | 8 |  |
| 蜄 | ＊ | $8$ | $\begin{aligned} & \mathbf{8} \\ & { }_{20}^{6} \\ & 10 \end{aligned}$ | $8$ | $\begin{aligned} & 8888 \\ & \text { ROB } \\ & \text { ano } \end{aligned}$ | $\begin{aligned} & \% \\ & \text { \& } \\ & \text { मे } \end{aligned}$ | 芑 |  |  | $\begin{aligned} & 8 \\ & 8 \\ & i \end{aligned}$ |
| －sdiqsargioqos дo xequan | 嵒 | $\stackrel{15}{4}$ | ช |  |  | ¢ | \％ | Coccoto | \％ | $\stackrel{\square}{9}$ |


for women, Division B.


Table 10.-Statistics of colleges


[^99]for women, Division B-Continued.


Table 10.-Statistics of colleges

*Statistice of 1894-95.
for women, Division B-Continued.


Table 10.-Statistics of eolleges

for women, Division B-Continued.


Table 11．－Statistics of schools of technology．

| Location |  | Name． |  | Professors and instructors． |  |  |  |  |  | Students． |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Prepara－ tory depart－ ment． |  | Collegi－ ate depart－ ment． |  | Total number． |  | Prepara－ tory depart－ ment． |  | Collegiate department． |  | Graduate． |  |  |  | Total number． |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | $\underset{\underbrace{\circ}_{i}}{\substack{0 \\ \hline}}$ |  |  |  |  |  | $\begin{aligned} & \dot{\circ} \\ & \text { 骨 } \\ & \text { 名 } \\ & \text { ⿷匚 } \end{aligned}$ |  |  |  |  | $\begin{gathered} \stackrel{0}{\mathbf{N}} \\ \text { sin } \end{gathered}$ | 官 | $\begin{aligned} & \text { థ } \\ & \text { 今 } \\ & \mathbf{A} \end{aligned}$ |  | 吽 |  | 帯 |  | $\underset{⿷ 匚 ⿳ ⿻ コ 一 冖 巾 心 ㇒ ~}{\text { ⿷匚 }}$ |  |
|  | 1 |  |  |  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 1 | Auburn，Ala | Agricultural and Mechanical College of Ala－ bama． | 1872 | 1 | 0 | 26 18 | 0 | 27 19 | 0 4 | 33 34 | 0 18 | 249 127 | 7 50 | 9 0 | 0 2 | 0 0 | 0 1 | 291 161 | 7 71 |
| $\frac{2}{8}$ | Fort Colling，Colo Golden Colo． | State Agricultural College． School of Mines of the State of Colorado． | $\begin{aligned} & 1879 \\ & 1874 \end{aligned}$ | 1 | 0 0 | 18 | 4 0 | 19 | 4 <br> 0 | 34 0 | 18 0 | 127 | 50 | 0 3 | 2 | 0 0 0 | 1 | 161 | 71 1 |
| 3 | Storrs，Conn． |  | 1881 | 0 | 0 | 8 | 3 | 8 | 3 | 0 | 0 | 120 | 18 | 0 | 0 | 0 | 0 | 120 | 18 |
| 5 | Dover，Del．．． |  | 1892 | 1 | 0 | 2 | － 0 | 3 | 0 | 32 | 6 | 10 | 6 | 0 | 0 | 0 | 0 | 42 | 12 |
| 6 | Washington， $\mathrm{D}^{\text {．}}$ | Bliss School of Electricity | 1892 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 0 | 53 | 0 | 5 1 | $0$ | 2 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 60 156 | 0 |
| 7 | Atlanta，Ga． |  | 1888 | 10 | 0 2 | － 24 | 0 5 | － 6 | 18 | 189 | $\begin{array}{r}0 \\ 78 \\ \hline\end{array}$ | 126 | 18 | 0 | 0 | 0 | 0 | 380 | 742 |
| 8 | Chicago，Ill |  | 1893 | 10 0 | 2 0 | 44 | 5 | 36 49 | 18 | 189 | －8 | 1054 | 48 | 15 | 19 | 5 | 2 | 574 | 69 |
| 9 10 | Terre Haute，Ind |  | 1883 | 0 | 0 | 22 | 0 | 22 | 0 | 0 | 0 | 125 | 0 | 0 | 0 | 2 | 0 | 127 | 0 |
| 11 | A．mes，Iowa．．．． | Iowa State College of Agriculture and Me－ chanic Arts． | 1868 | 0 | 0 | 32 | 11 | 33 | 11 | 0 | 0 | 350 | 115 | 6 | 6 | 0 | 0 | 356 | 121 |
| 12 | Manhattan，Kans．．－．．．．－ | Kansas State Agricultural College．．．．－．．．－－－．－－ | 1863 | 0 | 0 | 19 | 5 | 19 | 5 | 0 | 0 | 404 | 211 | 12 | 17 | 3 | 0 | 419 | 228 |
| 13 | Orono，Me ．．．．．－－－－－－－－ | Maine State College of Agriculture and Me－ chanic Arts． | 1868 | 0 | 0 | 23 | 1 | 23 | 1 | 0 | 0 | 243 | 10 | 4 | 0 | 0 | 0 | 247 | 10 |
| 14 | Annapolis，Md．．．．．．．．．．．－ |  | 1845 | 0 | 0 | 62 | 0 | 62 | 0 | 0 | 0 | 245 | 0 | 0 | 0 | 0 | 0 | 245 | 0 |
| 15 | College Park，Mà |  | 1859 | 1 | 0 | 16 | 0 | 17 | 0 | 32 | 0 | 86 | 0 | 0 | 0 | 0 | 0 | 118 | 0 |
| 16 | Amherst，Mass．．．．．．．．．． | Massachusetts Agricultural College．－．－．－－－－－－－ | 1867 | 0 | 0 | 19 | 0 | 19 | 0 | 0 | 0 | ＋164 | 0 | 12 | 0 | 0 | 0 | 176 | 0 |
| 17 | Boston，Mass ．． | Massachusetts Institute of Technology－－－．－－－－－－－－ | 1865 | 0 | 0 | 120 | 1 | 120 | 1 | 0 | 0 | 1，108 | 75 | 3 | 0 | 1 | 0 | 1，112 | 75 |
| 18 | Worcester，Mass |  | 1868 | 0 | 0 | 30 | 0 | 30 | 0 | 0 | 0 | 1200 | 0 | 5 | 0 | 0 | 0 | 205 | 0 |
| 19 | Agricultural College， Mich． | Michigan State Agricultural College．－．－－－－－－－－ | 1857 | 0 | 0 | 30 | 1 | 30 | 1 | 0 | 0 | 335 | 27 | 24 | 4 | 3 | 0 | 362 | 31 |
| 20 | Houghton，Mich |  | 1886 | 0 | 0 | 16 | 0 | 16 | 0 | $\xrightarrow{0}$ | 0 | 94 | 0 | 0 9 | 0 | 0 | 0 | 94 328 | 0 |
| 21 | Agricultural College， Miss． | Mississippi Agricultural and Mechanical Col－ lege． | 1880 | 3 | 0 | 17 | 0 | 20 | 0 | 111 | 0 | 206 | 0 | 9 | 0 | 2 | 0 | 328 | 0 |
| 22 | Westside Miss．．．．．．．．．．．－ | Alcorn Agricultural and Mechanical College．．． |  | 12 | 0 | 7 | 0 | 13 | 0 | 267 | 8 | 48 | 1 | 0 | 0 | 0 | 0 | 315 | 9 |
| 28 | Bozeman，Mont．．．．．．．．．．－ | Montana College of Agriculture and Mechanic Arts． | 1893 | 2 | 1 | 7 | 2 | 9 | 3 | 65 | 31 | 15 | 17 | 0 | 0 | 0 | 0 | 80 | 48 |
| 24 | Durham，N．E．．．．．．．．．．．． | New Hampshire College of Agriculture and Mechanic Arts． | 1867 | 0 | 0 | 17 | 0 | 17 | 0 | 0 | 0 | 73 | 19 | 1 | 0 | 0 | 0 | 119 | 34 |
| 25 | Eioboken，N．J． | Stevens Institute of Technology ．－－－－．．．．．－－－－－．－－ | 1871 | 11 | 0 | 25 | 0 | 34 | 0 | 201 | 0 | 264 | 0 | 0 | 0 | 0 | 0 | 465 | 0 |


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[^100]Table 11.-Statistics of sehools of technology-Continued.



* Statistics of 1894-95.

Statistics of university extension.

| Location of center. | Subject of course. |  |  |  |  |  | -80 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| UNIVERSITY OF CALIFOR NIA. |  |  |  |  |  |  |  |
| San Francisco, Cal. | The Foundations of Pedagogical Method | 4 | 100 |  |  |  |  |
| Do . | Decoration and its History ................. | 4 | 150 |  |  |  |  |
| Do | The Poems of Schiller . . | 6 | 100 |  |  |  |  |
| Do | Goethe's Fraust - - | 6 | 120 |  |  |  |  |
| Do | Some Historical Problems of Mathematics. | 6 | 20 |  |  |  |  |
|  |  | 6 | 250 |  |  |  |  |
| Do | The Origin and Evolution of Art | 5 | 100 |  |  |  |  |
| LELAND STANFORD JUNIOR UNIVERSITY. |  |  |  |  |  |  |  |
| Coronado, Cal | Poets of the Nineteenth Century | 20 | 70 | 0 | 0 | 0 | 0 |
| San Diego, Cal .----....------ | Shakespeare --....-...-....-.......-.-- | 3 | 200 | 0 | 0 | 0 | 0 |
| San Jose, Cal | Voyages and Explorations on the Paciflc. | 4 | 70 | 20 | 0 | 0 |  |
| San Francisco, Cal.------------- | Society - .-. | 2 | 50 | ${ }^{5}$ | ${ }^{-}$ | 0 | 0 |
| Do---- | The Mind | 6 | 50 | 0 | 0 | 0 | 0 |
| Do | Modern Poetry | 6 | 60 | 0 | 0 | 0 | 0 |
| San Rafael, | English Literatür | 8 | 40 | 0 | 0 | 0 | 0 |
| San Jose, Cal | Fundamental Ethical Questions | 8 | 300 | 300 | 0 | 0 | 0 |
| San Diego, Ca | Selt-culture | 3 | 100 | 100 | 0 | 0 | 0 |
| San Jose, Cal | Electricity <br> Money | 5 | \%20 | 40 | 0 | 0 | 0 |
| Do.- | Transportation | 5 | 60 | 40 | 0 | 0 | 0 |
| San Diego, Cal .-.............- | Evolution in Human Society | 3 |  |  | - |  |  |
| CONNEGTICUT SOCIETY FOR THE EXTEENSION OF UNIversity teaching. |  |  |  |  |  |  |  |
| New Haven, Conn .----.....- | American Literature | 6 | 140 |  |  |  |  |
|  | Elizabethan Drama | 6 | 140 |  |  |  |  |
| Do | Geological Subjects | 3 | 140 |  |  |  |  |
| Do | Russian Literature | 3 | 140 |  |  |  |  |
| Meriden, | American Literature. |  |  |  |  |  |  |
|  | Sociology -.......-...... |  |  |  |  |  |  |
| Do -....---.... | Geology and Evolution....-. |  |  |  |  |  |  |
| Waterbury, Conn ............ | Literature as Craft; Literature as Art; Literature as Spiritual Power; Prose and Poetry. | 4 |  |  |  |  |  |
|  |  | , |  |  |  |  |  |
|  | History and Development of Architect ure. | 6 |  |  |  |  |  |
| State University ofiowa. |  |  |  |  | - |  |  |
| Cedar Rapids, Iowa........... | World Making, Geology, Zoology, Botany. | 12 | 400 |  | --. |  |  |
|  | Astronomy | 6 | 400 |  |  |  |  |
| Clear Lake, Iowa | Composite course: Geology (2), Astronomy (1), Botany (1). | 4 | 100 |  |  |  |  |
| Des Moines, Iowa.............. | Composite course: Geology (2), Polltical Science (2) Historry | 6 | 300 |  |  |  |  |
| Mason City, Iowa.............. | Composite course: Geology (2), Botany (2), Astronomy (2). | 6 | 200 | --.. |  |  |  |
| Olin, Iows. | Zoology .-.--...............- | 4 | 100 |  |  |  |  |
| Waterloo, Iow | Psychology | 4 | 250 |  |  |  |  |
| benzonia colleae. |  |  | , |  |  |  |  |
| Copemish and Thompsonville, Mich. | Scientiflc Basis for Christianity...----am- | 6 | 58 |  |  |  |  |
| Reed City, Mich | .do. | 4 | 92 |  |  |  |  |
| Ripley, N. Y | dor | 8 | 111 |  |  |  |  |
| Grand Rapids, Mich | --. do......................... | 4 | 194 |  |  |  |  |
| Manistee M Mic |  | 4 | 121 |  |  |  |  |
| Cadillac, Mrich | do. | 4 | 271 |  |  |  |  |
| Saginaw, Mich | do | 8 | 241 |  |  |  |  |
| Buifalo iv, |  | 8 | 18 I |  |  |  |  |
| Brasdell, N . |  | 9 | 818 |  |  |  |  |

## Statistics of university extension-Continued.

| Location of center. | Subject of course. |  |  |  |  |  | - |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CARLETON COLLEGE. |  |  |  |  |  |  |  |
| Minneapolis, Minn. | Theory and Practice of Biblical Instruc- | 12 | 30 |  |  |  |  |
| Madison, S. Dak | Great European Statesmen of the Nine- | 6 | 75 |  |  |  |  |
| UNIVERSITY OF THE STATE OF MISSOURI. | teenth Century. |  |  |  |  |  |  |
| Hannibai, Mo | Early English History |  | 75 |  |  |  |  |
| Do | Early English Literature | 5 | 75 |  |  |  |  |
| UNIVERSITY OF NEBRASKA. |  |  |  |  |  |  |  |
| Omaha, Nebr | Botany(Dr. Chas. E. Bessy, see syllabus)- |  |  |  |  |  |  |
|  | Geology (Dr. E. H. Barbour, see sylla- | 3 | 100 |  |  |  |  |
| Seward, Nebr. (Art Club) | bus). $\qquad$ | 3 | 125 |  |  |  |  |
| RUtGers colliege. |  |  |  |  |  |  |  |
| Newark, N.J | Astronomy.............a...................-- |  |  | 62 |  | 4 |  |
| Do | History (The Eastern Question) | 12 | 120 | 83 |  | ${ }^{3}$ |  |
| Plainfleld, D |  | 12 | 300 250 | 145 |  | 10 |  |
| South Orange | History (The Exastern Question) | 6 | ${ }^{20} 9$ | 22 |  | ${ }^{-7}$ |  |
| Do - | Art (Painting) ...--....-...-..... | 6 | 109 | 37 |  | 1 |  |
| Elizabeth, | History (Six English Statesmen) | 6 | 367 | 183 |  | 5 |  |
| Do. |  | ${ }^{6}$ | 178 | 22 |  | 4 |  |
| Moorestown, | Agricultural Botany | ${ }_{6}^{6}$ | ${ }^{69}$ | 28 |  |  |  |
| Allaire, N.J. | Agriculture | 6 | 30 20 | 28 |  | 2 |  |
| UNIVERSITY OF THE STATA OF NEW YORK. |  |  |  |  |  |  |  |
| Albany, N. Y ---------->.-. | History and Criticism of Painting. |  |  |  |  |  |  |
| American Institute, New York City. | Electric Engineering....................... | 10 |  |  |  | 13 |  |
|  | do | 10 |  |  |  | 9 |  |
| Buffalo, N. Y | Civil and Religious Liberty in America. | 10 | 140 | 81 | 7 | 7 |  |
| Do | English Literature <br> Strad Olub Work directa by | 10 | 179 |  | 4 | 11 | 8 |
| Kingaton, N. $\mathbf{Y}$ | Labor Problem ork directed by Li............... | 10 | 89 | 51. |  |  |  |
| Low ville, $\mathbf{N}$. ${ }^{\text {Y }}$.-.............. | Work divided into sections under local leaders. |  |  |  |  |  |  |
| Mount Vernon, N. Y |  | - 4 | 100 |  | 2 |  |  |
| Do | Ancient India and Persia | ${ }^{5}$ | 77 |  |  |  |  |
| Do | Chemistry --...-...-- | 12 | 118 |  |  |  |  |
|  | The England of the American Revolution. | 10. | 345 | 255 | 2 | 3 |  |
|  | Shakespeare | 10 | 577 | 415 | 8 | 2 |  |
|  | Physiology and Anatomy | 10 | ${ }^{53}$ | 243 |  |  |  |
|  | Development of Music. | 10 | 298 | 138 | --- |  |  |
| Salem, N. Y ......... | American Literature in the Colonial | 10 | 46 | 12 |  |  |  |
| Saratoga, N. Y | Period. ${ }^{\text {a }}$ ( |  |  |  |  |  |  |
|  | America and Burope in the Eighteenth Century. | 10 | 116 |  |  |  |  |
| Sing Sing. N. ${ }_{\text {Syracuse, }}$ Y. | Masterpieces of English Literature.... | - 10 | 160 | 158 | ${ }^{8}$ | ${ }^{6}$ | 0 |
|  | Leaders of Political Thought... | 10 | 120 |  | 14 |  |  |
| Utica, N, Y | Electricity up to Date....... | 10 | 93 | 47 | 1 |  |  |
| Whate Plains | Engish Language and Literatare | - 10 | 86 | 35 |  | 1 |  |
| Yonkers, N. | Zoolosic Greography .-....................... | - 10 | 111 | 10 |  |  |  |
| Do -.-.---------........ | English Literature........................... | - 6 | 180 | 27 | -... | 1 | 0 |
| UNIVEREITY OT OREGON. |  |  |  |  |  |  |  |
| Salem, Oreg. ............... | ..- Shakerpeare ................................. | . 6 | 70 |  |  |  |  |
| PACHEIC COLLEGE. |  |  |  |  |  |  |  |
| Newberg, Oreg ......... | ... English Literature | 18 | 25 | 25 |  |  |  |

Statistics of university extension-Continued.

| Location of center. | Subject of course. |  |  |  |  |  | 苞 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AMERICAN SOCIETY FOR THE EXTENSION OF UNIVERSITY TEACHING. |  |  |  |  |  |  |  |
| Afternoon Lectures, Philadelphia, Pa. <br> Do | Readings from Shakespeare's Plays...-- The History of Ireland.--....-.-...-. | 4 6 | 426 376 |  |  |  |  |
| Allentown, | Shakespeare: the Man and His Mi | 6 | 253 | 50 |  |  |  |
| Ansonia, Con | Evenings in Geology.......-...... | 6 | 150 | 120 |  |  |  |
| Association Local, Philadelphia, Pa. | The Making of English Literature to 1500. | 6 | 150 | 81 |  | 1 |  |
|  | The Renaissance and the Peformation-- | 6 | 1027 | 350 |  |  |  |
| D | The Reformation and the Revolution... Readings from Shakespeare | 7 | 940 | 300 |  | 2 |  |
| Do Diantic City | Readings from Shakespeare. <br> Between the Two Wars | 3 | 852 99 |  |  |  |  |
| Atlantic City, N. J | Between the Two Wars. | 6 | 99 | 85 |  |  |  |
| Bainbridge street, Philadelphia, Pa. | Municipal Government in Philadelphia. | 6 | 34 292 | 34 |  |  |  |
| Baltimo | Florentine Histor | 6 | 245 | 95 |  |  |  |
| Bangor, Me | The Canses of the Unequal Distribution of Wealth. | 6 | 86 | 78 | 4 | 2 |  |
| Bever | Epochs in American History.......-....-- | 6 | 84 | 20 |  |  |  |
| Bloomsbur | Between the Two Wars | 6 | 186 | 175 |  | 10 |  |
|  | Representative English Auth | ${ }^{6}$ | 45 | 43 |  |  |  |
| -Brooklyn Institute, N ew - York. | Florentine History | ${ }^{6}$ | 638 |  |  |  |  |
| Burlington, N. | ----do ---.-..... | 6 | 229 | 30 |  | 9 |  |
| Camden, | Earlier Plays of Shakesp | 6 | 102 | 25 | 3 | 3 |  |
| Do | The Age of Elizabeth. | 6 | 219 | 17 |  | 6 |  |
| Catonsville, | Some Historical and Literary Movements of the Nineteenth Century. | 6 | 87 | 50 |  |  |  |
| Chambersburg, Pa | Representative Americans | 4 | 125 | 115 |  |  |  |
| Chester, | Shakespeare: the Man and His Mind.... | 6 | 221 | 50 | 3 |  |  |
|  | Representative English Authors -- | 6 | 80 | 61 |  |  |  |
| Church of the Covenant, Philadelphia, Pa . <br> Concord, Mass | English Poets of the Revolution Age...- | 6 6 | 130 53 | 61 53 | 3 |  |  |
| Cumberland, M | English Poets of the Revoiution Age | 6 | 91 |  |  |  |  |
| Elizabeth, | Current Topics | 6 | 208 | 9 | 1 |  |  |
| Elkton, Md..---......---. | The Poetry of the Nineteenth Century. | - | 109 | 90 |  |  |  |
| Erie avenue, Philadelphia, Pa. | Representative Americans. | 5 | 225 | 225 |  |  |  |
| Farmington, Me ------------- | The Causes of the Unequal Distribution of Wealth. | 6 | 59 | 46 |  |  |  |
| Forty-ninth street, Philadelphia, Pa. | History of American Literature......... | 6 | 113 |  |  |  |  |
| Franklin, Pa .........-...---. | General Astrono | 6 | 269 | 88 |  | 7 |  |
| Do | English History- | 6 | 146 | 40 |  | 5 |  |
| Germa | Medireval England.- | 6 | 525 | 64 |  | 5 |  |
|  | Reformation in England | 6 | 525 | 41 |  | 5 |  |
| Greensburg | Representative English Authors | 6 | 230 | 200 |  |  |  |
| Greenville, Pa, | Representative Americans-...-.-........- | ${ }^{6}$ | ${ }_{117}^{136}$ | 75 |  |  |  |
| Haddonfleld, N. | First Quarter of the Nineteenth Century. | 6 | 117 |  |  |  |  |
| Dotet | The Great Repablic in its Youth | B | 127 | 122 |  |  |  |
| Hebrew --7terature Society, | Shakespeare: the Man and His Mind | 6 | 183 | 170 |  |  |  |
| Hebrew Literature Society, Philadelphia, Pa. | Municipal Government in Philadelphia. | 0 | 41 | 41 |  |  |  |
| Indiana, Pa -............- | Representative Americans. | 6 | 253 | 88 | 88 | 76 |  |
| Kensington, Philadelphia, Pa. | Elizabethan History ....... | 6 | 484 | 118 |  |  |  |
| Kutztown, Pa | Finglish Poets of the Revolution $A$ | 6 | 128 |  |  |  |  |
| Lancast | Great Leaders of Political Though | 6 | 216 |  |  |  |  |
|  | Florentine History |  | 201 | 65 |  |  |  |
| pha, $P$ a | Europe Ftnds Americs... | 0 | 31 |  |  |  |  |
| Pa . <br> Lock Faven, Pa | Representative Americans | 4 | 40 | 88 |  |  |  |
| Mariton, <br> Matuch Cl | Between the Two Ws The American Citize | 6 | 12\% | ${ }^{73}$ | 1 | 6 |  |
| Media, P | Life in Ancient Ci | 6 | 80 101 |  |  |  |  |
| orcer, | Representative A | 6 | 180 |  |  |  |  |

## Statistics of university extension-Continued.

| Location of center. | Subject of course. |  |  |  |  |  | ros |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AMERICAN SOCIETY FOR THE EXTENSION OF UNIversity teaching-c't'd. |  |  |  |  |  |  |  |
| Milford, De | Between the Two War | 6 | 118 | 14 |  |  |  |
| Moorestown, N. | The Making of England | 6 | 220 | 65 |  | 13 | 1 |
| MountHolly, N. J............- | English Poets of the Revolution A | 6 | 130 | 105 |  |  |  |
|  | Shakespeare: the Man and His Mind. | 6 | 127 | 101 |  |  |  |
| Mount Joy, Pa | Between the Two Wars | 6 | 66 | 65 |  |  |  |
| New Brighton, Pa | Representative Americans | - | 190 |  |  |  |  |
| New Hope, Pa | Age of Elizabeth | 6 | 73 | 45 |  |  |  |
| New York, N. Y................ | The American Citizen | 4 | 193 |  |  |  |  |
|  | Representative America | 6 | 296 |  |  |  |  |
| Nort Phil | The Development of Music | 6 | 358 430 | $\begin{aligned} & 158 \\ & 213 \end{aligned}$ | 1 |  |  |
| Do | The Making of Engla | 6 | 243 | 20 |  |  |  |
| Ogontż, | The Reformation and the | 6 | 150 |  |  |  |  |
| Orange, | Dynamical Geology, Part | 6 | 115. | 30 |  |  |  |
| Paterson | The Making of England | 6 | 219 | 74 |  | 12 | 3 |
| Paterson, N. J Phirchool, Philadelphia | The Development of Music | 6 | 162 | 43 |  |  |  |
| Peirce School, Philadelphian | Development of the United State | 6 | 140 |  |  |  |  |
| Phoenixville, Pa | Shakespeare: the Man an | 5 | 169 | 165 |  |  |  |
| Pittslua | Representative Americans | 6 | 280 |  |  |  |  |
| Do | Representative English Autho | - 6 | 286 | 132 |  |  |  |
| Portland | General Astronomy ---..-- |  | 255 | 86 |  |  |  |
| Portland | The Causes of the Unequal Distribution of Wealth. | 6 | 65 | 62 |  |  |  |
| Itsto | English Poets of the Revolution Age. | 6 | 189 | 160 |  | 3. |  |
| Do | Shakespeare: the Man and his Mind | 6 | 150 | 129 |  | 2 |  |
| Pottsv | English Poets of the Revolution Age |  | 150 |  |  |  |  |
| Deading | Shakespeare: the Man and his Mind - | 5 | 149 | 146 |  |  |  |
| Reading, | Historical Conception of English Char- | 4 | 100 |  |  |  |  |
| Richmond | The Development of Music .-...-.....- | 6 | 195 | 136 |  |  |  |
| Riverton, Saco, Me | Between the Two Wars .-. | 6 | 152 | 147 |  |  |  |
| Saco, M | The Causes of the Unequal Distribution of Wealth. | 6 | 24 | 19 |  |  |  |
| Shamokin, Pa | English Poets of the Revolution Age... |  | 102 | 102 |  |  |  |
| Smyrna, Del South Philadelphia, P | English Literature |  | 100 | 84 |  |  |  |
| South Philadelphia, Pa......- | American Literature <br> Political Economy | 6 | 88 | 88 |  | 8 | 8 |
| Spring Garden Institute, | Municipal Government in Philadelphia | ${ }_{6}^{6}$ | 50 51 | 46 | 1 |  |  |
| Philadelphia, Pa. | English Poets of |  |  |  |  |  |  |
| St. Timothys, Roxboro, Pa-. | Municipal Government in Philadelphia | 6 | 362 | 300 |  |  |  |
| Sunbury, Pa .-................. | English Poets of the Revolution Age... |  | 112 |  |  |  |  |
| Tamaqua, Pa | - do | 5 | 148 | 148 |  |  |  |
| Tarrytown, N | Great Leaders of Political Thought | 6 | 134 |  |  |  |  |
| Washington, | Florentine History-.................. | 5 | 521 | 207 |  |  |  |
| Wayne, Pa.... | English Poets of the Revolution Age Browning and Tennyson | ${ }^{6}$ | 189 | 84 100 |  |  |  |
| West Park, Philadelphia, Pa | English Literature ...... | 6 | 121 | 100 |  |  |  |
| West Philadelphia, Pa...... | Puritan Revolution | 8 | 225 | 44 |  | 7 |  |
| West Spruce street, Philadelphia, Pa. | English Poets of the Revolution Age | 8 | 143 | 108 |  |  |  |
| Wilkes Barre, Pa | Representativo Americans. | 6 | 205 | 77 | 40 | 8 |  |
| Wilmingurg, Pa |  | 8 | 50 |  |  |  |  |
| Young Friends Association, Philadelphia, P 。. | Great Englishmen. | 0 | 395 | 270 |  |  |  |
| UNIVEREITY OT WISCONBIN. |  |  |  |  |  |  |  |
| Evansville, W Stoughton, W | Eiconomic Problems of the Present Day | A | 125 | 85 |  |  |  |
| Waukesha, Wis |  | 6 | 120 | - |  |  |  |
| Berlin, Wi |  | 0 | 180 | 110 |  | 8 |  |
| Rudson |  | 6 | 175 | 150 |  |  |  |
| Mcnomonie, W |  | 8 | 175 | 150 |  |  |  |
| Fox Lake, Wis | Studies in Shakes | 8 | 1 | 125 |  |  |  |
| Sheboygan, Wis |  |  | 195 | 1i7 |  |  |  |

Statistics of university extension-Continued.

| Location of center. | Subject of course. |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| UNIVERSITY OF WISCONSIN -continued. |  |  |  |  |  |  |  |
| Tomah, Wis | Studies in Shakespeare |  | 93 | 50 |  |  |  |
| Neillsville, Wis |  | ${ }_{6}^{6}$ |  |  |  |  |  |
| Wausau, Wis. | English Life and | 6 | 250 | 125 |  |  |  |
| Port Washingto | -..-do | ${ }^{6}$ | 70 | ${ }_{6}^{67}$ |  | 5 |  |
| Cedarburg, W is | The Governmen | ${ }_{6}^{6}$ |  |  |  | 5 |  |
| Clintonville, W | do. | 6 | 86 | 60 |  |  |  |
| Antigo, Wis | do | 6 | 100 | 75 |  |  |  |
| Merrill, Wis. | do | ${ }_{6}^{6}$ | 65 63 | 39 |  |  |  |
| Marshfield, Wis |  | 6 |  | 15 |  |  |  |
| Milwaukee, Wis |  | 6 | 350 |  |  |  |  |
| Green Bay, Wis | Aspects of Evolution and Heredity. | ${ }^{6}$ |  | 60 |  |  |  |
| Chicago, Wis |  | 6 | 115 | 25 |  |  |  |
| Chippewa Falls, W | do |  | 160 | 60 |  |  |  |
| Oshkosh, Wis | American Development from 1789-1829 | 6 | 146 | 67 |  |  |  |
| Nanesville, Wis | -....do | ${ }^{6}$ | ${ }^{3} 60$ |  |  |  |  |
| Augusta, Wis | do |  | 150 | 50 |  |  |  |
| Hartford, Wi | Astronomy |  | 214 | ${ }_{6}^{59}$ |  |  |  |
| Racine, ${ }_{\text {Milwaukee }}$ Is , | -...-do- | ${ }_{6}$ | ${ }_{100}^{103}$ |  |  |  |  |
| Stoughton, W is | do |  | 81 |  |  |  |  |
| Milwaukee, W is | Greek Life | 6 | 40 |  |  |  |  |
| Joliet, ${ }^{\text {Do }}$ | do |  |  |  |  |  |  |
| Sheboygan, W | do | 6 | 175 | 150 |  | 10 |  |
| Poynette, Wis | American Writ | 6 | 82 | 10 |  |  |  |
| Black liviver Fall | do |  | 90 | 50 |  |  |  |
| Chippewa Falls |  |  | 125 | 75 |  |  |  |
| Milwaukee, Wis |  |  |  | 50 |  |  |  |
| Tomahawk, Wis | A Group of Social Philosophers | B | 125 | 75 |  |  |  |
| Oshkosh, Wis |  |  |  | 100 |  |  |  |
| Merrillan, Wis | The Constitu | 8 | 74 | 79 | 19 | 12 |  |
| Rice Lake, Wis- | - do. |  |  |  |  |  |  |
| Pewaukee, Wis | Problems in Ethics | ${ }^{6}$ | 30 50 | 30 |  |  |  |
| Grand Rapids, | A Few Current Problems in Economics. |  |  | 39 |  |  |  |
| Janesville, Wi | -do... |  | 120 | 103 |  |  |  |
| Milwaukee, Wis | Modern Views of Plant infe | 6 | 145 |  | i |  |  |
| Watertown, Wis..... | Political History of Europe in the Nine- | 6 | 98 | 8 |  |  |  |
| ilton | An Introduction to Economic Problems. |  |  |  |  |  |  |
| Cedarburg Wis--....------ | Historical Survey of Political Economy- |  | 45 | 34 |  |  |  |
| La Crosse | England of the Tudors and Stuarts .-- | ${ }_{6}$ | 200 |  |  |  |  |
| Austin, Il | Epysics of the World.......................... | 6 | 100 |  |  |  |  |

University of Chicago, Chicago, Ill. -The following statement concerning the university extension work of the University of Chicago was furnished by Mr. Newman Miller, correspondence-study secretary:

Along with many other features in connection with the University of Chicago, the idea of university extension has from the first played a very important part in its organization, and when the plan of this inatitution was formulated the university extension department was one of the prominent features, and the work received recognition in the shape of a eeparate division on an equal standing with the other divisions of the institution. In so doing, the university was the first institution in this country to recognize university extension in all its forms as an integral part in its organization. All nonresident work in connection with the university is done through this division, and three methods of work are recognized; First,
lecture-stridy courses given in Hllinois and adjacent States; second, classes given in Chicago and its immediate suburbs; third, corrospondence courses.

The officers in charge of the work are as follows: Prof. Edmund J. James, director, university extension division; Mr. Walter A. Payne, lecture-study secretary; Mr. Ira W. Howerth, class-study secretary; Mr. Newman Miller, corre-spondence-study secretary.

In previous years the work of the class-and correspondence-study departments has not been recognized and therefore'a complete summary of the work from the beginning is given in the accompanying pages.

In the lecture-study department a large variety of courses are offered in the following departments: Philosophy, pedagogy, political science, history, sociology, anthropology, comparative religion, the Semitic languages and literatures, romance languages and literatures, Germanic languages and literatures, the English language and literature, biblical literature in English, physics, chemistry, geology, zoology, neurology, botany, music, and art. Aside from this, courses on literature and history are offered in the French, German, and Norwegian languages. The work of the department for the past year is summarized as follows:

## The lecture-study department.

| Location of center. | Subject. | A verage attend ance at ance at lecture. | Average antendclass. |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
| Aurora, Dl - | Stories as a Mode of Thinking-.-------...- |  |  |
| Austin, ${ }^{\text {dil }}$ |  |  |  |
| Austin, Oak Park, |  |  |  |
|  | Shakespeare's Tragedies - -..............- | 19 |  |
| Chicago, Ill. (Armour Institute) Chicago, Mi. (Columbia School |  | 125 |  |
|  | Our Food <br> Painting and Sculpture | 73 |  |
| of Oratory). <br> Do. | Painting and Sculpture | 101 |  |
|  | ha |  |  |
|  | The Growth of the Brain <br> Pedagogical Studies |  |  |
| Chicago, Ill. (Cook County Normal School). <br> Do. |  |  |  |
|  | Pedagogical Studies. $\qquad$ <br> Evolution of the American Continent <br> Tragedies of Shakespeare <br> Shakespeare's Tragedies. <br> History and Civilization of Egypt $\qquad$ | 0 |  |
|  |  |  |  |
| Chicago, Englewood, ili" (Pilgrim Congregational Church). Chicago, Englewood, IIl. (Stewart avenue). <br> Chicago, Il. (Free Kindergarten) |  |  |  |
|  |  |  |  |
|  | Social Reform in Fiction...-.................- | 150 |  |
|  | The Growth of the Brain. $\qquad$ The Lyric and Epic Poetry of the Bibie. The Lyric and Epic Poetry of Six Live Problems in Municipal Sociology Pedagogical Studies. History of Judaism Shakespeare's Tragedies Movements of Thought in the Nineteenth Century. | 10 |  |
|  |  |  |  |
| Chicago, ini (Garfeld Park) |  | 00 |  |
| Chicago, iii. (Kenwood) <br> Chicago, III. (Klio Association) <br> Chicago, III. (Lake View) |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Chicago, IIl. (Leavitt street) <br> Chicago, II . (Millard avenue). $\begin{aligned} & \text { Do. } \\ & \text { Do. } \end{aligned}$ <br> Chicago, nil. (Newberry inibrary) <br> Chicago, III. (Oakland) <br> Do. |  | 30 |  |
|  | General Literature <br> First Steps in Human Progress Stories as a Mode of ThinkingPainting and Sculpture of Our Time Stories as a Mode of Thinking. History and Civilization of Egypt Special Course <br> Educational Psychology |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
|  |  |  |  |
| Chicago, Iil (Public school, District 8 ). <br> Chicago, II. (St. Gabriel's) |  |  |  |
|  | Social Reform in Fiction <br> Studies in Fiction. <br> Social Roform in Fiction <br> Studies in Flotion. |  |  |
| Chicago, 111 . (Sedgwick street). Chicago, Ill. (Sixth Presbyterian |  |  |  |
|  |  |  |  |
| Chicago, fil. (Steinway Hall).... | Hestory of Old T |  |  |
|  |  |  |  |
| Chicag | Histo |  |  |
|  |  |  |  |
|  | Scienc |  |  |
|  |  |  |  |
|  |  |  |  |
| Chicago, ${ }_{\text {ment }}$ (il. (University Set | Prophe |  |  |

## The lecture-study department-Continned.

Location of center.

Chicago Heights, 1 II
Cincinuati, Ohio (Walnut Hills)
Cincinnati, Ohio
Clinton, Iowa (Teachers' Institate).
Clinton, Iowa Do.
Danvilie, II
Do
Davenport, Iowa
Do
Dixon, Hil
Do.
Dubuque, Iowa
Evanston, 71
Flint, Mich
Freeport. Iil
Fort Madison, Iowa.
Geneseo, Ill
Goshen, Ind
Grand Rapids, Mich
Hammond, Ind Do
Hinsdale, ril Do.
Huntington, Ind
Indianapolis, Ind
Do
Do
Joliet, III
Do
Kalamazoo, Mich
Kankakee, Ill.
Keokuk, Iowa
La Crosse, Wis
La Fayette, Ind
La Grange, II
La Porte, Ind. Do.
Lebanon, Ind
Lincoln, tul
Lockport, 11
Mazon,
$\qquad$
Minneapolis, Minn
Do
Minneapolis, Minn. (Staniey Hall).
Moline, Il . Do
Morrison, Hi
Mount Carroli, $\mathrm{Hi}_{1}$
Niles, Mich
Ottawa, 11 .
Do.
Owosso, Mich
Parki Ridge, Il
Pekin, III
Peoria $n i$
Polo, IL
Rockford, il
Do.
Saginaw West Side, Mich
Saginaw East Side, Mich.
south Bend, Ind
po.
springfieli,
Streator, Ill

## Do.

Sterling, ii
Tremont, Hi
Valparaiso, Ind
Waikegan, ini
Winoni, Minn
Do.

| Subject. | $\begin{aligned} & \text { Average } \\ & \text { attend } \\ & \text { ance at } \\ & \text { lecture. } \end{aligned}$ | $\begin{array}{\|l\|l} \text { Average } \\ \text { attend- } \\ \text { ance at } \\ \text { class. } \end{array}$ |
| :---: | :---: | :---: |
| Studies in Fiction |  |  |
| Sociology -- | 150 | 150 |
| Wisdom and Oratory of the Bible Painting and Sculpture | 3215 |  |
| Shakespeare's Tracedies | 440 | 50 |
| Elements of Sociology | 300 |  |
| English Literature | 250 | 70 |
| Movements of Thought in the Nineteenth | 70 |  |
| Shakespeare's Trage | 350 | 0 |
| Lectures in Fiction | 20 | 0 |
| English Literature |  |  |
| Our Town.- |  |  |
| Native Races of North |  |  |
| Educational Psychology | ${ }^{7} 1$ |  |
| English Literature-- | 137 | 3 |
| Men Who Made the Nati | 145 | 135 |
| Social Reform in Fiction |  |  |
| Poetryas a Fine Art |  | 5 |
| Social Reform in Fictio | 200 |  |
| English Literature |  |  |
| General Course in Literatu |  |  |
| Plain Talks | 100 | 77 |
| General Course in Lite | 75 |  |
| Painting and Sculpte | 30 |  |
| American History |  | 33 |
| ric |  |  |
| Elements of Seciolo | 400 | 141 |
| Social Reform in Fiction | 275 |  |
| Eng E (ish Literatur |  |  |
| Men Who Made the | 100 |  |
| Social Reform in Fictio |  |  |
| History of Art. | 110 |  |
| Native Races of North Americm |  |  |
| Social Reform in Fictio |  |  |
| American Statesmen | 140 |  |
| Thought and Imagination in Sha |  |  |
| Social Reform in Fiction |  |  |
| Introduction to Study of Sociolog |  |  |
| Biblical Literature of Prophe |  |  |
| Shakespeare's Tragedies |  |  |
| Stories as a Mo |  | 240 |
| The Beginning of Christianit | 285 |  |
| Social Reform in Fiction | 170 | 170 |
| Early Representative Americans |  |  |
| Social Life in the Americ | 150 |  |
| Introduction to Strady of Sociolo | 75 | 7 |
| Social Reform in Fiction |  |  |
| English Literature | 88 | \% |
| Shakespeare's Tragedies |  |  |
| Early Representative An |  |  |
| Shakespeare's 'Tragedies | 874 | 7 |
| Plain Talks on Bacteri |  |  |
| American Literature | 18 | 14 |
| Six Live Problems in Municipal Sociology. | 65 |  |
| Shakespeare's'Tragedies | 35 |  |
| Poetry as a Fine Art | $14$ |  |
| Shakespeare's 'rragedies |  |  |
| Character Studies in American History... |  |  |
| Thought and Imagination in Shakespeare- |  | 16 |
| Early Man in Europe |  |  |
| Amerive races Literature. |  |  |
| Social Reform in Fiction | 193 | 13 |
| Studies in Biblical Litero | $3{ }^{3}$ | 170 |

150
Wociology - Wisdom Oratory of the Bible
Painting and Sculpture
Shakespeare's Tragedies
English Literature
Movements of Thought in the Nineteenth Century.
Lectures in Fiction
Eng Town.-.-.................................
Onative Races of North America
Educational Psychology
English Literature- Thinking
Men Who Made the Nati
Poetry as a Fine Art.....
Social Reform in Fiction
English Literature -
Sociology
General Course in Literature
Painting and Sculpture
American History
Lyric and Epic Poetry of the Bible
Elements of Seciology--
Mnglish Literature - Nho Made the Nation
Social Reform in Fiction
Native Races of North America
Social Reform in Fiction
American Statesmen
Thought and Imagination in Shakespeare-
Social Reform in Fiction
Introduction to Study of Sociology-
Biblical Literature of Prophecy
Shakespeare's Tragedies
Stories as a Mode of Thinking
Social Reform in Fiction
Social Reporm in Fiction.
Social Life in the American Colonies
Social Reform in Fiction
English Literatare
Shakespeare's Tragedies
Early Representative Americans
Plain Talks on Bacteria
English Literatare
American Literature
Six Live Problems in Municipal Sociology
hakespeare's Tragedies
Poetry as a Fine Art
Character Studies in American History.
Six Live Problems in Municipal Sociology
Thought and Imagination in Shakespeare
an in Eurode
Native races of North America
Social Reform in Fiction
Studies in Biblical Literature

Centers and courses.
Number of centers active during the autamn quarter ..... 61
Number of courses in progress ..... 71
Number of centers active during the winter quarter
41
41
Number of courses in progress
Number of courses in progress ..... 46 ..... 46
Number of centers active during the spring quarter ..... 4
Number of courses in progress
4
4
Total number of centers active season 1895-96
81
81
Total number of courses in progress season 1895-96 ..... 121
Number of courses by States.
Illinois ..... 82
In Chicago ..... 42
Outside of Chicago
40
40
Michigan ..... 7
Indiana ..... 15
Iowa ..... 9
Minnesota ..... 5
Ohio ..... 2
Wisconsin ..... 1
Total ..... 121
Total number of States represented ..... 7
Number of courses by departments.
Sociology and anthropology ..... 30
English language and literature ..... 45
History
9
9
Biblical literature in English ..... 12
Semitic (Egyptology) ..... 3 ..... 4
Art
Art
Geology ..... 1
Philosophy and pedagogy ..... 10
Neurology
2
2
Astronomy ..... 1
Botany ..... 2
Chemistry ..... 1
Political science ..... 1
Total ..... 121
Total number of departments represented ..... 13
Attendance.
Average attendance at each lecture ..... 209
Average attendance at each class ..... 162
Total attendance at lectures (121 courses) ..... 23,345
Lecturers.
Number of lecturers engaged during autumn quarter ..... 24
Number of lecturers engaged during winter quarter ..... 18 ..... 18
Number of lecturers engaged during spring quarter ..... 2
Total number of lecturers engaged during the season ..... 30

## CORRESPONDENCE-STUDY DEPARTMENT.

Correspondence instruction is offered in the following departments: Philosophy, pedagogy, political economy, political science, history, sociology, anthropology, comparative religion, the Semitic langaages and literatures. Biblical and patristic Greek, Sanskrit and Indo-Europeancomparative philology, the Greek language and literature, the Latin language and literature, Romance languages and literatures.

Germanic languages and literatures, the English language, literature and rhetoric, Biblical literature in English, mathematics, astronomy, botany, and church history. The work of this department for the past year is summarized as follows:

Summary of the work by departments.

| Department. | $\left\lvert\, \begin{gathered} \text { Number } \\ \text { instruct- } \\ \text { ors en- } \\ \text { gaged. } \end{gathered}\right.$ | Number courses in progs. | Enroll- |
| :---: | :---: | :---: | :---: |
| Philosophy and pedagogy |  |  |  |
| Political economy -.....-- |  |  | 10 |
| Political science...... | 6 | $\stackrel{2}{9}$ | ${ }^{6}$ |
| Sociology --..... | 1 | 2 | ${ }^{2}$ |
| Comparative religion | 1 | $\frac{1}{6}$ | 104 |
| Biblical and patristic Greek ....... |  | $\stackrel{1}{3}$ | 49 |
| Sanskrit -...-..... | 1 | 1 |  |
| Greek language and literature. | 4 | 5 | ${ }_{5}^{9}$ |
| Latin language and literature- | ${ }_{3}^{3}$ | $\begin{array}{r}17 \\ 3 \\ \hline\end{array}$ | $\stackrel{53}{9}$ |
| Romance languages and literatures. | ${ }_{4}^{4}$ | 5 | 18 |
| The English language, literature, and rh | 4 | 10 | 85 |
| Biblical literature in English.- | 3 | ${ }_{10}^{4}$ | ${ }_{48}^{32}$ |
| Mathematics .................. | 1 | 1 | 4 |
| Church history |  | 1 |  |
| Total. | 46 | 87 | 466 |

Enrollment.

Deduct names repeated

The work of the correspondence-study department of the University of Chicago has always been maintained upon an equal footing with that of the university proper. This close relation has deprived the work of what might be called popularity, and for this reason the enrollment has never been as large as might be expected for work of this kind. The following statistical table will be of interest with reference to the development of the work in connection with the University of Chicago for the past four years:


It will be noticed from the above table that the number of matriculated students has gradually increased; while the number of those not matriculated has gradually decreased. When the work of the correspondence-study department was inaugurated, there was a very large number of nonmatriculated students enrolled in divinity subjects, especially in the Semitic languages and literatures. The much better advantages now afforded for residence study along these lines has served to greatly decrease the number who desire this work by the correspondence method. The persons most interested in the work have been teachers and ministers of the gospel, and a large majority of the students have been classed as "special." During the past year 87 courses, representing 680 minors, have been in progress in 18 different departments. The total yearly enrollment has been 426.

## CLABS-STUDY DEPARTMENT.

One method of extending university instruction, obviously the best method when it can be employed, is that of organizing classes outside of the university to pursue the same lines of study that are followed within its walls. The great center of population in which the University of Chicago was located, presented a favorable opportunity for the practice of this method of carrying higher education to the people. This opportunity has not been neglected. From the beginning
the university has sought to form in convenient parts of the city and in suburban towns Saturday and evening classes, in which persons whose occupations or circumstances prevented their matriculation as resident students might still enjoy the benefits of university instruction.
Class instruction is offered in the following departments: Philosophy, pedagogy, political economy, political science, history, sociology, sanitary and domestic science, Latin, French, New Testament language and literature, Italian, English, chemistry, biology, botany, physiology, zoology, and archæology. The working terms of this branch of the work correspond almost exactly to the terms of the prblic-school year. The work for each quarter of the past year is summarized as

AUTUMN QUARTER.

| Location of class. | Subject: | Enroll- ment. |
| :---: | :---: | :---: |
| Brennan School | Latin Course for Teachers. | 28 |
| Carter School | Elements of Literature | 20 |
| Centennial Baptist Church | Romantic Poets .--- | 23 |
| Chicago Preparatory Scho | Elementary French |  |
| Cobb Lecture Hall. | Advanced Algebra |  |
| $\begin{aligned} & \text { Do } \\ & \text { Do } \end{aligned}$ | Psychology .-... | , |
| $\begin{aligned} & \text { Do } \\ & \text { Do } \end{aligned}$ | Solid Geometry- | 14 |
| Do | Advanced German |  |
|  | Elementary German. |  |
|  | Greek History --.-- -- |  |
| Do | Cicero --....- |  |
| Do | Vergil ........ |  |
| Do | Latin Course for Teachers | 22 |
|  | Elementary Algebra--... | 3 |
|  | Shakespeare -.....- |  |
|  | Political Economy |  |
| Do | Sociology -- |  |
| Do | English History |  |
| Crown Point, Ind | Political Economy | 40 |
| umberland Presbytertan Englewood. | Elementary French | 2 |
| Dore School. | American History |  |
| 6422 Drexelavenue | General History |  |
| 3646 Ellis avenu | Elementary French |  |
| Galesburg, I11 | Beginnings of Society | 15 |
| Haven School, | English Literature. | 100 |
| Loring School |  | 40 |
| 5100 Madison avenue |  | 21 |
| N ewberry Library | Latin Course for Teachers |  |
|  | Cosar ---.-.... | 11 |
| Oak Park, | French Literature. | ${ }^{2}$ |
| Do... | Shakespeare ....... | 36 |
| Sixth Presbyterian Chu | Elementary French | 18 |
| South Evanston, 11. | ...do do-........ |  |
| Turner Hall. | English Constitutional Histo | 2 |
| Turner Ha | German Prose | 20 |
| Walker Muserna | Mineraiogy and Petrolog |  |
| Western Union Building | American History. .-.... |  |
|  | Latin Course for Teachers |  |
|  | American Literature |  |
| Do | English Rhetoric and Comp | 8 |
|  | Plane Genmetry -- | 12 |
| Windermere Hotel | Advanced Latin... | 28 |
|  | Elementary German | 6 |

SUMMARY BY DEPARTMENTS.



SUMMARY BY DEPARTMENTS.

| Department. | $\begin{aligned} & \text { Number } \\ & \text { classes. } \end{aligned}$ | Enrollment. | Department. | Number classes. | Enrollment. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| German | 22627 | 7289975-687 | Latin <br> Political economy <br> Mathematics | $\begin{array}{r}8 \\ 8 \\ 5 \\ \hline\end{array}$ |  |
| Géology |  |  |  |  | ${ }^{6}$ |
| Greek English |  |  |  |  | 21 |
| French |  |  | Total....---.............- | 35 | 322 |
| History |  |  |  |  |  |

SPRING QUARTER.


## SUMMARY BY DEPARTMENTS.

| Department. | Number classes. | Enrollment. | Department. | Number classes. | Enrollment. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| American history | 2 | 41 | Political science | 1 | 2 |
| Latin --........... | 4 | 26 | Psychology .-... | 1 | 20 |
| Greek | 1 | 4 | Botany | 2 | 56 |
| Mathematics | $\stackrel{2}{8}$ | 15 | Chemistry | 1 | 3 |
| Political economy | 8 | 2 | Total | 25 | 195 |

GENERAL SUMMARY.
Enroliment during the autumn quarter ..... 625
Enrollment during the winter quarter ..... 322
Enrollment during the spring quarter. ..... 195
Total ..... 1,142
Number of classes during the autumn quarter ..... 51

Number of classes during the winter quarter

Number of classes during the winter quarter .....  ..... 35 .....  ..... 35
Number of classes during the spring quarter ..... 25 ..... 25
Total ..... 111
Average number per class during autumn quarter ..... 12
Average number per class during winter quarter
Average number per class during winter quarter ..... 9 ..... 9
Average number per class during spring quarter ..... 8
Average number per class during year ..... 10
Nuinber of instructors engaged during autumn quarter ..... 24
Number of instructors engaged during winter quarter ..... 20
Number of instructors engaged during spring quarter15
Total number of instructors conducting classes, 1895-96 ..... 35

Tabulated statement of nonresident class work, 1892-1896.
CLASS-STUDY DEPARTMENT.


$a$ No courses offered.

SUMMARY BY DEPARTMENTS.


A glance at the first table shows that the number of classes, as well as the number of students, has gradually increased from year to year. The total number of students enrolled during the year 1895-96 compares favorably with the number of students in residence at any time. The probability that in a few more years nonresident students will outnumber those in actual attendance, will strike many as an interesting proof of the importance of the work.
From the second table it may be observed that the most popular subjects, estimated by classes, have been Latin, English, mathematics, history, and political economy, in the order named. If estimated by actual attendance, English takes the lead, with Latin second and history third. History, English, Latin, French, and mathematics are the only subjects for which there has been a continual demand. The total number of classes for the four years is 235, with a total attendance of 2,423 .

## CHAPTER XL.

## STATISTICAL REVIEW OF PROFESSIONAL SCHOOLS.

There were 144 schools of theology, with 869 instructors and 8,017 students, a variation of only 33 from the number of students in attendance during the preceding year. Of the students in attendance, 2,953 , or 36.8 per cent, had received the degree of A. B. or B. S. Theological schools reported grounds and buildings valued at $\$ 12,648,216$, and endowment funds to the amount of $\$ 17,969,906$. Theological libraries contained $1,204,889$ volumes.
Law schools continue to show a rapid increase in the number of students in attendance, the 73 schools having an enrollment during 1895-96 of 9,780 students, an increase of 830 over the previous year. In addition to its regular law department, and not included in the statistics of law schools, the New York University has a special course of law lectures to women, which had an attendance of 80 in 1895-96, of whom 47 received the certificate of completion of the course. These lectures are designed to meet the wants of business women who "desire familiarity with the existing law, either for practical purposes, to assist their judgment as litigants, witnesses, and custodians of trust estates, or as a higher study for their mental development. They also furnish preparation for entrance upon the professional study of the law, with a view to active practice at the bar."

There were 116 regular schools of medicine, 20 homeopathic, 8 eclectic, 2 physiomedical, and 9 graduate. Students in regular schools lacked but one of numbering 20,000; homeopathic numbered 1,956, and eclectic 634. The proportion of students graduating in medicine was smaller than in any of the other classes, excepting theology, viz., medicine 22 per cent, law 30 per cent, dentistry 24 per cent, and pharmacy 28 per cent.

The North Atlantic and Western States had exactly the same proportion of students of regular schools of medicine and of homeopathic students, but the North Central States had a much larger proportion of homeopathic and eclectic students than of regular students. On the contrary, both the South Central and South Atlantic States had a much smaller proportion of homeopathic and eclectic students. In other words, homeopathy and eclecticism have their strongest foothold in the North Central States, and are weakest in the Southern States. These facts are clearly set forth in the following table:

Percentage of students of different schools of medicine in each section.

|  | Regular. | Homeopathic. | Eclectic. |
| :---: | :---: | :---: | :---: |
| North Central States |  |  |  |
| North Atlantic States | 81 | 81 | 12 |
| South Atlantic State | 14 18 | $\stackrel{2}{8}$ | ${ }_{7}$ |
| Weatern States...... | 8 | 8 |  |

The number of dental students in 1895-96 showed an increase of more than 1,000 over the number in 1894-95, $\mathrm{Viz}, 6,399$ in 1895-96 and 6,347 in 1894-95. Pharmaceutical students numbered 8,878 , with a difference of only 14 from the numher in 1894-95. The course of training in schools for nurses heretofore occupied two Fears as a rule, but there is a tendency now to lengthen the time to three years, fifteen schools reporting courses of three years in this report.

Table 1.-General summary of statistics of professional and allied schools, for 1895-96.

| Class of schools. | Schools. | Instructors. | Students. | Graduates. | Per cent graduating. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Theological. | 144 | 869 | 8,017 | 1,681 | 21 |
| Law. | 73 | 658 | 9,780 | 2,981 | 30 |
| Medical | 155 | 3,936 | 24, 437 | 4,947 | $a 22$ |
| Dental | 46 | 854 | 6,399 | 1,515 | 24 |
| Pharmaceutical | 44 | 354 | 3,873 | 1,083 | 28 |
| Veterinary | 10 | 139 | -382 | 134 | 35 |
| Nurse training | 177 |  | 5,094 | 1,773 | 35 |
| Total. | 649 | 6,810 | 57, 982 | 14,114 |  |

$a$ Students in post-graduate schools not included.
Table 2.-Summary of statistics of schools of theology, for 1895-96.

a So far as reported.

Table 3.-Summary of statistics of schoots of law, for 1895-96.

a So far as reported.

Table 4.-Summary of statistics of schools of medicine, dentistry, pharmacy, and for nurses and veterinarians, for 1895-96.


Table 4.-Summary of statistics of schools of medicine, dentistry, pharmacy, and for nurses and veterinarians, for 1895-96-Continued.


Table 4.-Summary of statistics of schools of medicine, dentistry, pharmacy, and for nurses and veterinarians, for 1895-96-Continued.


TabIe 4.-Summary of statistics of schools of medicine, dentistry, pharmacy, and for murses and veterinarians, for 1895-90-Continued.


Table 5.-Statistics of professional and allied schools for five years.

| Class. | Schools. |  |  |  |  | Instructors. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \stackrel{\circ}{0} \\ & \stackrel{1}{7} \\ & \text { in } \end{aligned}$ |  |  | $\begin{aligned} & 10 \\ & \frac{10}{10} \\ & \stackrel{1}{1} \\ & \end{aligned}$ |  |  | \% | ¢゙ ¢ ¢ ¢ | 18 ¢ \% \% | \% |
| Theological | $\begin{array}{r}141 \\ 58 \\ \hline\end{array}$ | 142 63 | 147 67 | 149 72 | 144 | 855 487 | 862 594 | 963 621 | 906 604 | 869 <br> 658 |
| Regular | 95 | 96 | 111 | 113 | 116 |  | 2,511 | 3,094 | 2,738 | 2,902 |
| Homeopathic | 14 | 16 | 19 | 20 | 20 | 299 | 390 | 478 | 476 | 493 |
| Eclectic .-... | 8 | 10 | 9 | 9 | 8 | 132 | 171 | 161 | 187 | 166 |
| Physiomedical | 2 | 2 | 3 | 2 | 2 | 39 | 34 | 62 | 46 | 43 |
| Graduate -- | 8 | 8 | 10 | 7 | 9 | 413 | 384 | 400 | 462 | 332 |
| Total medical | 127 | 132 | 152 | 151 | 155 | 3,323 | 3,490 | 4,195 | 3,909 | 3,936 |
| Dental. | 26 | 29 | 35 | 45 | 46 | 546 | 513 | 794 | 968 | 854 |
| Pharmaceutical | 29 | 31 | 35 | 39 | 44 | 216 | 264 | 283 | 317 | 354 |
| Nurse training | 36 8 | 47 7 | 66 8 | 131 | 177 10 | 105 | 114 | 118 | 132 | 139 |

Table 6.-Statistics of students and graduates of professional and allied schools for five years.

a First class graduating under three years' course.

TabLE 7.-Statistics of schools of theology, for 1895-96.


Table 7.-Statistics of schools of theology, for 1895-96-Continued.


Monnt Pio．．．．．．．．．．．．．．． Mount Plessant Iowa． Danville， Ky Lexington，Ky．．．．．． Louisville，Ky．．．．． ．．．．．do New Orleans，Ls．
Bangor, Me.
Lownston, Me
Raltimore, Md.......
Nchester, Md.
Mount St. Marys,
Md.
Westminster, Md.
Andover, Mass ....
Bcoton, Mass.
Cambridge, Mass..
-. do
do.
Newton Center,
Mass.
Tufts College, Mass.
Adrian, Mich
Hillsdale, Mich .....
Holland, Mich .


1 College（M．E． Theolog（M．E．）．
Theological Seminary of the Presby－ therian Church．
Theological Course of the College of the Bible（Disciples）．
Louisville Presbyterian Theological Seminary
Southern Baptist Theological Semi－ nary．
nary．University，Theological De－ partment（Cong．）
partment（Cong il Seminary（Cong．） Bangor Theologicalseminary（ W Bant．） Theological Seminary of St Sulnice Theological Seminary of St．Sulpic）． and St．Mary＇s University（R．C．） The Redemptorist College of llches ter（R．C．）．
Mount St．Mary＇s Theological Semi－
Westminster neological Seminary （Meth．P．）．
Audover Theological Seminary （Cong．）
Boston University School of The－ ology（M．E．）．
Divinity School of Harvard Univer sity（nonsec．）．
Episcopal Theological School（P．E．）
New Church Theological Schoo N（Now Jerusalem）． Newton Theological School（Bapt．）．
Tufts College Divinity School（Univ．）
Adrian College，School of Theology （Millsdale P．）
Hillsdale Colleg．Theological De－ partment（F W．Bapt．）．
Western Theological Seminary（Ref． Western Theological
Ch．in America）．

S．Fritschel，D．D．．．．．．．．．． Stephen Yerkes，D．D．，
senior prof．
W．McGarre
J．W．McGarrey
Wm．Hoge Marquess，
D．D．Whitsitt，D．D．，
LI．D．
George W．Henderson．
Levi L．Paine，D．D James A．Howe，D．D． A．L．Magnien，D．D．
Elias Fred Schauer
Edward P. Allen, D. D..

## James Thomas Ward，

 D．D．E
Marcus D．Buell，S．T．D．

| ¢8\％ | 感 | \％ | $\cdots$ | \％ | \％ | ¢ ${ }^{\text {¢ }}$ | 4 | \％ | 앙 | ¢ | 發 | \％ | 우⿰口欠 | \％ | \％ | \％ | $\ldots$ | \％ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\infty \infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | やや๗ | ＋ | ＋ | $\infty$ | $\infty$ | $\infty$ | ¢ | ¢＜＜ | $\infty$ | $\infty$ | $\infty$ | $\infty$ | $\infty$ |
| 年－1 |  |  | 8 | \％ |  | Hon |  | む |  | \％ | 8 | ${ }^{2} 8$ | ぶャ | ¢ | $\cdots$ | － |  | $\pm$ |
| cren | ＋ | 㖇 | $\stackrel{\sim}{\sim}$ | ， | － | ¢m＠ | $\stackrel{\text { g }}{ }$ | H |  | $\pi$ |  | 윽 | $0$ | 发 | 0 | $\alpha_{2}$ |  | － |
| 20． | ¢ | 建 | 8 | $\underset{\wp}{\infty}$ | $\stackrel{\sim}{\sim}$ | Spixio | \＆ | 앙 | K | ${ }^{2}$ | 역 | F | ${ }_{20}{ }^{\circ}$ | $\infty$ | F | 12 | ¢ | 9 |
| 00 | $\checkmark$ | $\bigcirc$ | $\sim$ | － | O | Tince | $\sim$ | $\bigcirc$ |  | H | \％ | $\infty$ | ヘ凶 | － | क | $\bigcirc$ | $\checkmark$ | $\cdots$ |
| $\infty \times 0$ |  |  |  | ＊ |  | －サゝ |  |  | ＋ | － | － |  |  |  | $\infty$ | $\infty$ |  |  |


| 3，600 |  | ${ }^{30,000}$ 㽬 | $11,886$ |
| :---: | :---: | :---: | :---: |
|  |  | 20，000 | $\text { 25, } 800$ |
| 6，000 | 1， 00 | 40，000 | 195，000 |
|  | 30，000 | 40，000 | 71，000 |
| 3，000 | 0 |  | 200， 000 |
| 25，000 | b 15，000 | 270，000 | 450，000 |
| 19，500 | 9，000 | 150，000 | 225， 000 |
| 3，500 | c 20，000 |  |  |
| 20，000 | 0 |  |  |
| 18，000 |  | 200，000 | 4，000 |
| 15，000 |  | 150，000 |  |
| 1，400 | 2，500 | 6，000 | 3，200 |
| 45，000． | 750 | 215，000 | 809，000 |
| 6，000 |  |  |  |
| 28，510 |  |  |  |
| 6，000 | d10，000 | 293，000 | 500，000 |
| 2，000 | 20，000 | 60，000 | 200，000 |
| 21，335 | e57，812 | 196，366 | $f 450,000$ |
| 1，000 | 0 | 0 | 20，000 |
| 5，000 |  | 0 | 83，200 |
| 4，000 | h5， 000 | 10，000 | 45，000 |

${ }^{*}$ In $1894-95$.
a From Mrs．Nettie F．McCormick，of Chicago，Virginia Library Building，value $\$ 114,000$ ．
$b$ Of this amount，$\$ 10,000$ was given by Mr．Joshua Levering，of Baltimore，Md．，for a gymnasium．
$c \mathrm{~L}$ ．W．Anthony，of Providence．R．I．，erected Roger Williams Hall for the exclusive use of the Divinity School．
e Mrs．Elizabeth M．Hills，of Newton Center，Mass．，gave $\$ 25,000$ toward the library building，and $\$ 20,000$ was received for the same purpose from the estate of 1．Joseph C．Hartshorn，late of Newton Center，Mass．
$f$ Approximately．
KFrom Mr．Peter Semelink．

|  |  |  |  |  |  |  |  | den |  |  | $\begin{aligned} & \text { gth } \\ & \text { rise. } \end{aligned}$ |  | $.$ | 官 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Location. | Name of school. |  | President or dean. |  |  |  | Graduating. |  |  |  | 宫 |  |  |  |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | , 12 | 13 | $14^{\prime}$ | 15 |
| 50 | Saginaw (West Side), Mich. | Evangelical Lutheran Seminary --...- | 1887 1857 | W. Linsenmann-----.-. | 2 4 | 3 | 12 35 | 2 |  | 3 4 | 40 40 | 1,000 8,000 | \$1,642 | \$12,000 | \$2,600 |
| 60 | Collegeville Minn.- | St. John's Seminary (R. C.) ------ | 1857 | Peter Engel, Ph. D------ | 4 | 0 | 35 | 14 |  | 4 | 40 | 8,000 | 0 |  |  |
| 61 | Faribault Minn ...- | Seabury Divinity School (P, E.) *-...- | 1860 | Alford A. Butler---- | 7 | 0 0 | 21 | 11 | 3 12 | 3 | 36 30 | 8,000 |  |  |  |
| 68 | Minneapolis, Minn. | Augsburg Seminary (Luth.) Wing Norwegian Evangelical | 1869 | Georg Sverdrup...---.-- | 2 | 0 | 32 24 | 11 | 12 | 3 | 30 |  |  | 60,000 25,000 | 50,000 1,000 |
| 68 | Red Wing, Minn---- | Red Wing Norwegian Evangelical Lutheran Seminary. | 1879 | H. H. Bergsland -..---:--- | 2 | 0 | 24 | 10 | 15 | 3 | 36 | 300 | 4,800 | 20,000 |  |
| 64 | Robbinsdale, Minn - | Luther Seminary......----.........-....-- | 1876 | J. B. Frich | 4 | 0 | 45 | 14 | 0 | 3 | 42 | 400 | 0 | 8,000 |  |
| 65 | St. Paul, Minn....... | --.-do - - .---..... | 1885 |  | 2 | 0 | 40 | 11 | 0 | 3 | 40 | - 500 |  | 30,000 | 290,000 |
| 68 | -...do - ........... | St. Paul Seminary (R.C.) | 1894 | Louis E. Caillet.--.-.-.--- | 10 | 0 | 75 | 6 | 0 | 4 | 40 | 3,500 | 8,000 | 340,000 | 260,000 |
| 67 | Morisant M | St. Stanislaus Seminary (R.C.) | 1823 | Frederick P. Hageman.- | 5 | 3 | 57 | 15 |  | 4 | 40 |  |  |  |  |
| 68 | St. Louls, Mo. | Concordia Theological Seminary (Lath.). | 1839 | Francis Pleper-...------ | 5 | 0 | 162 | 37 | 162 | 3 | 40 |  | 0 | 250,000 |  |
| 69 |  | Kenrick Diocesan Seminary (R. C.) - |  | P. V. Byrne |  | 0 | 75 |  |  | 3 | 40 | 5,000 |  | * 100,000 | * 0 |
| 70 | -....do | Theological Seminary of the German Evangelical Synod of North America, Eden College. | 1850 | Louis F. Hzeberle.-.-.-- | 3 | 2 | 73 | 26 |  | 3 | 40 | 4,050 | 4,811 | 100,000 | 0 |
| 71 | Warrenton, M | Central Wesleyan College (M. E.) .....- | 1864 | George B. Addicks - .-. -- | 2 | 2 | 43 | 5 |  | 3 | 40 |  | 0 | 0 | 25,000 |
| 78 | Blair, Nebr_......... | Trinity Seminary (Luth.) --.-.-.-...-- | 1886 | G. B. Christiansen | 2 | 0 | 9 | 3 | 0 | 3 | 28 |  | 1,600 | 14,000 | 0 |
| 73 | Omaha, Nebr-.....- | Presbyterian Theological Seminary -- | 1891 | M. B. Lowrie, D. D., chairman. | 7 | 2 | 31 | 8 | 11 | 3 | 32 | a 1,000 | 6,000 | 0 | 0 |
| 74 | Santee Agenoy, Nebr. | Jantee Normal Training School (Cong.). | 1870 | Alfred L. Riggs, D. D.--- | 2 | 0 | 7 |  |  | 3 | 36 | 0 |  |  |  |
| 75 | Bloomfield, N.J .-.. | German Theological School of Newark (Presb.). | 1869 | Charles E. Knox, D. | 3 | 2 | 21 | 5 | 0 | 3 | 36 | 4,500 |  | 25,000 | 53,000 |
| 76 | Madison, N.J. | Drew Theological Seminary (M.E.)*- | 1867 | Henry A. Buttz, | 6 | 2 | 144 | 44 | 56 | 3 | 35 | 32,138 |  | 460,000 | 366,500 |
| 77 | New Brunswick, N. J. | Seminary of the Reformed Dutch Church in America. | 1784 | S. M. Woodbridge, D.D.,LL.D. | 5 | 1 | 43 | 11 | 28 | 3 | 35 | 43,017 | ---- | 350,000 | 375,000 |

1812
1856 South Orange, N.J Seminary of the Immaculate ConcepNeminar ( C ).
Alfred University, Theological Department (7-Day Bapt.).
St. Bonaventure's Seminary (R. C.) Auburn
German Martin Luther Seminary. Canton Theological School (Univ.)* Hamilton Theological Seminary
(Bapt. General Prostant Episcopal Church. Protestant Episcopal Chinary in the Union Theological Seminary Rochester Theological Seminary (Bapt.).
St. Bernard's Seminary (R. O.) .......
St. Joseph's Provincial Seminsry (R.C.)

Biddle Unirege (r. . .) -.....Bidale St. Papl's Evangelical St. Paul's Evangelical Lutheran The German Wallace Colit
German Wallace College, Theological St. Charles Borromeo Seminary ( $\mathrm{R}_{\mathrm{m}} \mathrm{C}$. ) Hebrew Union College Lane Theological seminary ( Prac ) St. Mary's Theological S eminary (R.C)

Evangelical Lutheran Theological Union Biblical Seminary (U.Breth.
Divinity School of Kenyon College
Oberlin College, Department of Theology (Cong.).
Wittenberg College, Theological Department (Ev.Luth.).
Heidelberg. Theological Seminary Wilherforce
Dert University, Theological Department (A.M.E.).
Xenia Theological Seminary (U.
*In 1804-95.

Wm. Henry Green, D.D Joseph J. Synnott, D.D Boothe Colwell Davis.-
Joseph F. ButlerHenry M. Booth, D.D. LL.D.
Wm. Graham
Isaac M. Atwood, D. D.-. Sylrester Burnham,
D. D .

Eugene A. Hoffman,
D.D.,D.C.L., LL.D.. Thomas S. Hastings,
D.D.,LL.D.
A. H. Strong, D.D.,LL.D.

James J. Hartley John B. Weston, D. D.

## P


D. J. Sanders,D.D.
H.K. G. Doermann

William Nast
T. Withmes

Tsaac M. Wise
Isaac M. Wise-.............
N. A. Moes, D. D.,Lu.D
M. Loy, D.D.
G. A. Funkhouser, D.D
H. W. Jones, D.D.........

William G. Ballantine,
D.D., LL.D.

Samuel A. Ort, D. D.,
LL.D.
David Van Horne, D. D.
John G. Mitchell.-.......
James Harper, D. D., LL. D.




|  |  |
| :---: | :---: |
|  | 23,899 |
| $\begin{aligned} & 241,500 \\ & 300,000 \end{aligned}$ | 629,002 |
| $\begin{array}{r} 1,300 \\ 50,000 \\ 125,000 \end{array}$ | 148,794 |
| 1,353,000 | 1,010,848 |
| 500,000 | 1,400,000 |
| $\begin{array}{r} 250,000 \\ 40,000 \end{array}$ | 32,440 |
| 75,000 |  |
| 7,000 | 0 |
| 50,000 | 60,000 |
| 162,000 | 320,000 |
| 75,000 | 0 |
| 125, 000 |  |
| $\begin{aligned} & 40,000 \\ & 85,000 \end{aligned}$ | $\begin{array}{r} 80,000 \\ 100,000 \end{array}$ |
| 75,000 | 200,000 |
| 25,000 | 75,000 |
|  | 28,000 |
| 10,000 |  |
| 12,000 | 124, 804 |

Table 7.-Statistics of schools of theology, for 1895-96-Continued.

| Location. |  | Name of school. |  | President or dean. | $\begin{gathered} \text { In- } \\ \text { struct- } \\ \text { ors. } \end{gathered}$ |  | Students. |  |  | Length of course. |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Professors. | Special or assistant. |  | In attendance. |  |  | $\begin{aligned} & \dot{\infty} \\ & \frac{1}{5} \\ & \stackrel{y}{0} \\ & \text { p } \end{aligned}$ | $\cdot \tau e ə \mathcal{\Lambda} \text { u!̣ sצəə } M$ |  |  |  |  |
|  | 1 |  |  | 2 | 3 | 4 | 5 | 6 | ' 7 | 8 | 5 | 10 | 11 | 12 | 13 | 14 | 15 |
| 108 | Allegheny, P8.....- | Allegheny Theological Seminary (U. | 1825 | James A. Grier, D. D.--- | 4 | 6 | 86 | 28 | 81 | 3 | 30 | 7,000 | a \$50,000 | \$75,000 | \$225,000 |
| 109 | do | Reformed Presbyterian Theological <br> Seminary. | 1856 | David B. Willson | 2 | 0 | 17 | 3 | 15 | 4 | 20 | 3,400 | 1,345 | 25,000 | 74,207 |
| 110 | -do. -...-............ | Western Theological Seminary (Presb.). | 1827 | William H. Jeffers, D.D., LL. D. | 5 | 1 | 98 | 29 | 92 | 3 | 32 | 27,000 | 3,050 | 250,000 | 480,869 |
| 111 | Beatty, Pa | St. Vincent's Seminary (R.C.) | 1846 | Leander Schnerr -...... | 7 | 2 | 40 | 14 |  | 3 | 40 | 35,000 |  |  |  |
| 112 | Bethlehem, | Moravian Theological Seminary --..-- | 1807 | Augustus Schultze,D.D. | 4 | 0 | 12 | 12 | 9 | 2. | 40 |  |  |  |  |
| 113 | Chester, Pa | Crozer Theological Seminary (Bapt.) | 1868 | Henry G. Weston .-.-...- | 6 | 1 | 93 | 24 |  | 3 | 36 | 15, 000 | 20,000 |  | 437,500 |
| 114 | Collegeville, Pa.....- | Ursinus College, Theological Department (Ref. Ch.). | 1870 | James I. Good, D. D....-- | 5 | -- | 32 | 9 | 23 | 3 | 32 |  |  | 0 |  |
| 115 | Germantown Pa ... | St. Vincent's Seminary (R.C.) | 1868 | James McGill | 5 | 3 | 36 | \% |  | 4 | 40 | $12,000$ |  |  |  |
| 116 | Gottyslourg, Pa....-- | Evangelical Lutheran Theological Seminary. | 1826 | Milton Valentine, D. D., LL. D. | 4 | 0 | 62 | 22 | 52 | 3 | 36 | 11,000 | 54,928 | 160,000 | 181, 541 |
| 117 | Lancaster, Pr......-- | Theological Seminary of the Reformed Church.* | 1825 | Emanuel V.. Gerhart, D.D., LL.D. | 5 | 1 | 65 | 19 | 12 | 3 | 34 | 12,000 |  | 100,000 | 159,500 |
| 118 | Lincoln University, Ps. | Lincoln University, Theological Department (Presb.). | 1870 | Isaac N. Rendall, D. D.-- | 8 | 0 | 48 | 9 | 36 | 3 | 32 | 12,000 | 0 |  | 82,000 |
| 110 | Mesdiville, Pa........ | Meadville Theological School (Uni- | 1844 | George L. Cary, L. H. D-- | 5 | 2 | 33 | 9 | 2 | 3 | 38 |  |  | 50,000 | 34,300 |
| 120 | Overbrook, Pa....... | Theological Seminary of St. Charles Borromec (R. C.). | 1832 | John E. Fitz Mairice, D. D. | 12 | 1 | 145 | 16 | --- | 4 | 44 | 23,000 |  |  |  |
| 121 | Philadelphia, Pa...- | Evangelical Lutheran Theological | 1864 | Henry E. Jacobs, LL. D-- | 5 | 1 | 88 | 27 | 58 | 3 | 32 | 19,000 | ---------- | 150,000 | 6,500 |
| 120 | Selinsgrove, Pa .... | Susquehanna University, Theological Department (Luth.). | 1858 | J.R. Dimm, D. D. -------- | 2 | 1 | 10 | 2 | 3 | 3 | 39 | 5,000 |  |  | 40,000 |
| 123 | Villanova, Pa.......- | Monastery of St. Thomas of Villanova (R. C.). | 1843 | Thomas C. Middleton, D. D. | 4 | 0 | 19 | 4 |  |  | 40 |  |  |  |  |
| 124 | Columbia, S. C.o.du- | Theological Seminary of the Synods of South Carolins and Georgia. | 1831 | J. D. Tadlock, D. D., LL. D. | 5 | 1 | 27 | 6 | 19 | 3 | 32 | b20,000 | ---..------ | 50,000 | 222,000 |

Nowberry, S.C...
Chattanoogs, Tenn
Clarlssille, Tenn..
Knoxville, Tenn.. Lebanon, Tenz...

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Naghille, Tonn ..
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.....do. $\qquad$
....do $\qquad$
Sewanee, Tenn.
El Paso, Tex
Tehuacana, Tex..
(7) Bampden Sidney, Va.
Petarsburg, Va.... Richmond, Va
 nary Va .
Franliln, Wis
Milwantree Wis.....
Nashotah W is...
St. Francla, Wis....
${ }^{*}$ In 1801-95.
${ }^{*}$ In From Charles Lockhart, Pittsburg, Pa, $\$ 25,000$; James Law, Shushan, N. Y., $\$ 10,000$; Mrs. Röbert Jamison and Miss Tillie Arbuckle, Allegheny, Pa., $\$ 5,000$ each, and I. E. Hanna, Pittsburg, $\$ 5,000$.

Approximately.


Evangelical Lutheran Theological Evangelical Lutheran Theological U. S. Grant University, School of Theology (M. E.).
Southwestern Presbyterian UniverSouthwestern Presbyte
sity, Divinity se Theological School Knoxville College, Theological Schoo Cumberland (Cumb. Prest.). School (Cumb. Presb.).
Central Tennessee College, TheologCentral pernessee (M.E.). Fisk University Theolog
Fisk University, Theological Depart-
ment (Cong.). ment (Cong.).
Vanderbilt University, Biblical De University of the South, Theological
Universiment (P.E.).
Rio Grande Congregational Training Rio Gran
School.
Trinity University, Theological DeTrinity University, Theolog
Union Theological Seminary (Presb.)
Bishop Payne Divinity School (P.E.) Richmond Theological Seminary (Bapt.).
Protestant Episcopal Theological
Seminary.
$\qquad$
Mission House (Ref.) - .-................. Lutheran Theological Seminary......Seminary of St. Francis of Sales (R.C.)

1887
1891 1885 1885 1893 1853 $186 i$ 1892 1875 1878 1890 1824 1878
1886 1886 1823 1860 1860
1878
1842 1842.

WilliamL.Pressly, D. D.
G.T. Newesent, D.D

George Summey, D. D.

John Braden, D. D........
E. M. Cravath, D. D....
W. F.Tillett, D.D .......-
W. W. Moore, D. D.,
C.R. Irains, D. D
Charles H. Corey, D. D.

Joseph Packard,D.D ...
A: Hoenecke
Walter R.Gardner, D. D.
Joseph Rainer


a Decoased April 19, 1896.
$b$ Three years in the evening school.
c Average. $e$ On and after the academic year 1897, two years will be required in all cases.

of medicine, for 1895-96.

e Decoased June, 1808.
$f$ Course extended to four years.
TThis is a preparatory school
i The frst class ant 70 practitioners were in attendance upon graduate courses.
6 The frst class will graduate in June, 1897.

of medicine，for 1895－96－Continued．

| Instruct－ ors． |  | Students． |  |  | Length of course． |  | Fees． |  |  | Value of grounds and build－ ings． | Pro－ ductive funds． | Vol－ umes in library． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 婜 | $\begin{aligned} & \text { g } \\ & \text { a } \\ & \text { B } \end{aligned}$ | Graduating． | $\begin{gathered} \text { 岂 } \\ \text { H. } \\ \text { Wr } \end{gathered}$ |  |  |  |  |  |  |  |  |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |  |
| 16 | 12 | 260 | 0 | 61 | 4 | 26 | \＄100 | \＄30 | \＄470 | \＄150，000 |  | 500 | 45 |
| 12 | 11 | 0 | 36 | 8 | 4 | 28 | 100 | 30 | 430 |  | 0 |  |  |
| 31 | 0 | 92 | 21 | 13 | 4 | 36 | 125 | 30 | $\stackrel{4}{545}$ | 130，000 | 0 | 1，500 | 46 47 |
| 18 | $\stackrel{40}{22}$ | 507 138 | 0 |  | 4 | 34 | 200 | 30 | $a 750$ |  |  |  | 48 |
| 16 | 22 | 1388 | 36 65 | 51 | 4 4 | 32 36 | 100 | 30 | 430 300 |  |  | 300 | 49 |
| 21 | 24 | 275 | 0 | 80 |  |  |  |  |  |  |  |  |  |
| 11 | 11 | － 275 | 7 | 80 40 | 4 4 4 | $\begin{aligned} & 28 \\ & 26 \end{aligned}$ | $\begin{aligned} & 60 \\ & 50 \end{aligned}$ | $\begin{aligned} & 30 \\ & 25 \end{aligned}$ | $\begin{array}{r} 275 \\ 200 \end{array}$ | 50， 000 | 0 | 1，500 | 51 58 |
| 23 | 8 | 60 | 4 | 12 | 4 | 32 | 65 | 0 | 220 | 3，000 | 0 | 0 | 53 |
| 31 | 9 | 224 | 20 | 45 | 4 | 32 | 100 | 10 | 400 | 150，000 |  | 1，000 | 54 |
| 7 | 5 | 51 | 0 | 3 | 3 | 42 | （b） |  |  |  |  | 200 | 55 |
| 17 | 5゙ | 119 | 0 | $\stackrel{29}{53}$ | 3 3 | 31 29 | $c 60$ $c 50$ | 20 20 | 180 | 20,000 30 |  |  | 56 |
|  |  |  |  |  |  |  |  | 20 | 183 | 30，000 |  | 0 | 57 |
| 18 | 17 | $\xrightarrow{0}$ | 17 | 17 | 3 | 26 | 55 | 20 | 185 |  |  | 0 | 58 |
| 15 | ${ }_{0}^{4}$ | 41 | 0 4 | 17 | 3 3 3 | 26 24 | 45 50 50 | $\stackrel{25}{25}$ | 160 | 20，000 | －10，000 | 0 | 59 |
| 22 | 6 | 399 | ${ }_{0}^{4}$ | 70 | 3 3 3 | 24 | 50 55 |  | 188 | 75，000 | \＄10，000 | 250 | 60 |
| 25 | 7 | ． 85 | 0 | 26 | 3 | 28 | c 75 | 0 | a 160 | 125,000 40,000 | 0 |  | 61 |
| 20 | 7 | 339 | 0 | 73 | 3 | 24 | 50 | 25 | 210 | 75， 000 | 0 | 300 | 62 |
| 16 | 11 | 236 | 0 | 61 | 3 | 24 | 100 | 0 | 305 | 100，000 |  | 300 | 63 |
| 18 | 10 | 280 | 0 | 68 | 3 | 28 | 60 | 25 | 205 | 75，000 |  | 1.500 | 64 |
| 20 | 1 | 129 | 0 | 35 | 3 | 28 | 90 | 0 | 305 | 150，000 |  |  | 66 |
| 10 | 8 | 0 | 35 |  |  |  |  |  | a 225 |  |  |  |  |
| 26 | 2 | 60 | 3 | $\stackrel{21}{22}$ | 4 | 28 | 70 | 0 | a 2295 | 100，000 | 0 | 250 | 68 |
| 8 | 6 | 94 143 | 12 | 22 $* 30$ | 4 3 3 | 26 | 65 82 | 25 | 220 | 30，000 | 0 | 0 | 69 |
| 13 | 12 | 210 | 0 | 50 | ${ }_{3}^{3}$ | 29 | 100 | ${ }_{25}^{25}$ | $a 390$ 380 | 37,000 | 50 |  | 70 |
| 10 | 20 | 281 | 0 |  |  |  |  |  |  |  |  |  |  |
| 17 | 12 | ${ }^{281}$ | － 0 | － 18 | 3 | $\stackrel{26}{26}$ | $\begin{array}{r} 100 \\ 85 \end{array}$ | $\begin{aligned} & 25 \\ & 25 \end{aligned}$ | $\begin{array}{r} 475 \\ a 300 \end{array}$ | $\begin{array}{r} 225 ., 000 \\ 51,500 \\ \hline 10 \end{array}$ | 0 | 660 | 72 |
| 14 | 16 | 251 | 23 | 51 | d 3 | 30 | 100 | 30 | 330 | 160，000 | 0 | 4，852 | 74 |
| 11 | 15 | 461 | 0 | 98 | 3 | 28 | 170 | 30 | a 550 | 100，000 |  |  | 75 |
| 8 | 23 | 378 |  | 284 78 | $d^{\frac{4}{3}}$ | 34 31 | $\begin{aligned} & 200 \\ & 155 \end{aligned}$ | 25 | 850 | 25， 000 | － 0 | 0 | 76 |
| 11 |  |  |  |  |  |  |  |  |  | \％，00 | 0 | 0 | 77 |
| 11 | 10 | 0 | 79 | 5 | 4 | 32 | c120 | 30 | 515 | 75，000 | 0 | 825 | 78 |
| 15 | 16 | 77 | 7 | 23 | d 3 | 32 | 80 | 25 | 282 | 80，000 | 0 | 1，800 | 79 |
| 4 | 1 | 20 | 0 | $e 0$ | （e） | 38 | 90 | （e） |  |  |  | 1，200 | 80 |
| 7 | 0 | $\begin{aligned} & 40 \\ & 47 \end{aligned}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\stackrel{2}{10}$ | 3 | $\begin{aligned} & 32 \\ & 20 \end{aligned}$ | $\begin{aligned} & 75 \\ & 60 \end{aligned}$ | $\begin{aligned} & 25 \\ & 10 \end{aligned}$ | $\begin{array}{r} 280 \\ 310 \end{array}$ | 40，000 | 6，000 | 150 0 | 81 88 |
| 15 | 1 | 72 | 0 | 14. | 3 | 28 | 40 | 25 |  |  |  |  |  |
|  | 10 | 800 | 0 |  |  |  |  |  |  |  |  |  |  |
| 15 | 10 | 0 | 0 | 28 | 4 | 28 28 | 100 | \％${ }_{\text {\％}}^{5}$ | 430 | 20000 |  |  | 88 |
|  |  |  |  |  |  | 28 | 60 | 25 | 310 | 80，0 |  |  | 86 |
| 19 | 5 | 134 | 0 | 27 | c8 | 33 | 125 | 0 | 500 | 800，000 | 145，000 | 2，000 | 87 |
| 19 | 15 | 87 | 6 | ＋25 | 4 | 28 | 100 | 30 |  |  | 0 | 0 | 88 |

c Average．
d Four courses will be required hereafter．

of medicine, for 1895-96-Continued.

| Inistruct-ors. |  | Students. |  |  | Length of course. |  | Fees. |  |  | Value of grounds and buildings. | $\begin{aligned} & \text { Pro- } \\ & \text { ductive } \\ & \text { funds. } \end{aligned}$ | $\left\|\begin{array}{c} \text { Vol- } \\ \text { umes in } \\ \text { library. } \end{array}\right\|$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 产 | $\begin{aligned} & \text { ig } \\ & \text { 品 } \\ & B \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |  |
| $\begin{aligned} & 34 \\ & 14 \\ & 10 \end{aligned}$ | $\left.\begin{array}{r} 3 \\ 10 \\ 1 \end{array} \right\rvert\,$ |  | 20 0 5 | 59 76 | $\begin{array}{r} a 3 \\ 4 \\ 4 \end{array}$ | $\begin{aligned} & 25 \\ & 28 \\ & 28 \end{aligned}$ | $\begin{gathered} \$ 50 \\ \$ 0 \\ 70 \\ 40 \end{gathered}$ | $\begin{aligned} & \$ 10 \\ & \$ 25 \\ & 10 \end{aligned}$ | $\begin{array}{r} \$ 199 \\ 3250 \\ b 225 \end{array}$ | $\begin{array}{r} \$ 50,000 \\ 250,000 \\ 0 \end{array}$ | 0 | 500 | 89 90 91 |
| $\begin{aligned} & 16 \\ & 15 \end{aligned}$ | 1785 | $\begin{aligned} & 77 \\ & 62 \end{aligned}$ | $\begin{array}{r} 6 \\ 18 \end{array}$ | $\begin{aligned} & 19 \\ & 40 \end{aligned}$ | $\begin{aligned} & 4 \\ & 4 \end{aligned}$ | $\stackrel{24}{26}$ | 50 | 25 | 265 | 25,000 |  | 1,000 500 | ${ }_{93}^{92}$ |
| 12 | 0 | 15 | - 1 | 0 | 4 | 24 | 130 | 30 | 500 | 10,000 | 0 |  | 94 |
| 23 | 13 | 623 | 0 | $22 \%$ | 4 | 30 | 150 | 0 | 605 | 450,000 |  |  | 95 |
| 12 | 10. | 272 | 0 | 54 | 3 | 30 | 140 | 25 | 410 | 500,000 | 0 | 200 | 96 |
| 22 | 26 | 878 | 0 | 88 | 4 | 36 | 200 | 0 | b825 | * 400,000 | * \$52,500 |  | 97 |
| 8 | 23 | 0 | 156 | 23 | 4 | 33 | c129 | 0 | 516 | 101,000 | 105, 150 | 1,800 | 98 |
| $\begin{aligned} & 22 \\ & 8 \end{aligned}$ | $\underset{2}{20}$ | $\begin{gathered} 302 \\ 90 \end{gathered}$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 83 \\ & 20 \end{aligned}$ | $\begin{aligned} & 4 \\ & 3 \end{aligned}$ | ${ }_{20}^{25}$ | $\begin{array}{\|l\|l\|} 115 \\ c 90 \end{array}$ | $\begin{aligned} & 0 \\ & 30 \end{aligned}$ | $\begin{aligned} & 480 \\ & 300 \end{aligned}$ |  |  | 500 | 99 100 |
| 11 | 11 | 110 | 0 | 15 | 3 | 26. | 50 | 30 | 270 |  | 0 |  | 101 |
| $\begin{array}{r} 6 \\ 16 \\ 9 \\ 9 \\ 10 \\ 12 \end{array}$ | $\begin{array}{r} 0 \\ 2 \\ 3 \\ 10 \\ 20 \end{array}$ | 4 7 78 285 111 | 2 0 0 0 0 8 | 0 15 15 0 84 11 | $\begin{aligned} & 4 \\ & 8 \\ & 4 \\ & 9 \end{aligned}$ | $\begin{aligned} & 25 \\ & 24 \\ & 24 \\ & 24 \\ & 25 \end{aligned}$ | 25 100 30 75 30 | 10 20 20 25 25 10 | $\begin{aligned} & 135 \\ & 305 \\ & 175 \\ & 800 \\ & 140 \end{aligned}$ | 23,500 900 9000 30,000 | 9,000 <br> 0.000 | 0 0 480 600 | 102 103 104 105 108 |
| 11 | 5 | 134 | 0 |  |  |  |  |  |  |  |  | 600 | 106 |
| 9 | 6 | 110 | 0 |  |  |  |  |  |  |  |  |  |  |
|  |  | 110 | 0 | 23 | 3 | 28 | 100 | 25 | 315 | 30,000 | 0 | 500 | 108 |
| $\begin{aligned} & 8 \\ & 9 \\ & 7 \end{aligned}$ | $\begin{gathered} 9 \\ 12 \\ 18 \end{gathered}$ | $\begin{aligned} & { }^{*} 47 \\ & { }^{207} \\ & 185 \end{aligned}$ | $\begin{aligned} & 7 \\ & 0 \end{aligned}$ | $\begin{array}{r} * 18 \\ 33 \\ 32 \\ 52 \end{array}$ | $\begin{aligned} & 6 \\ & 8 \end{aligned}$ | 26 30 | $\begin{aligned} & 75 \\ & 0 \\ & 80 \end{aligned}$ | $\begin{aligned} & 25 \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 275 \\ & 85 \\ & 830 \end{aligned}$ | 800,000 |  | 1,685 | 109 110 111 |
| 10 | 15 | 139 | 0 | 34 | 3 | 28 | 85 | 30 | b285 | 100,000 | 0 |  | 112 |
| $\begin{array}{r} 18 \\ 6 \end{array}$ | 174 | $\begin{aligned} & 189 \\ & 171 \end{aligned}$ | 0 | $\begin{aligned} & 29 \\ & 44 \end{aligned}$ | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ | $\frac{28}{28}$ | $\begin{aligned} & 100 \\ & c 95 \end{aligned}$ | $\begin{array}{r} 30 \\ 0 \end{array}$ | $\begin{array}{r} 330 \\ 3300 \end{array}$ | 40,000 |  |  | 113 |
| $\begin{aligned} & 24 \\ & 19 \end{aligned}$ | $\begin{array}{r} 6 \\ 18 \end{array}$ | ${ }_{69}^{111}$ | $\begin{array}{r} 0 \\ 0 \end{array}$ | $\begin{aligned} & 13 \\ & 16 \end{aligned}$ | $3$ | $\stackrel{28}{28}$ | $\begin{gathered} 100 \\ d 95 \end{gathered}$ | $\begin{aligned} & 30 \\ & 30 \end{aligned}$ | $\begin{array}{r} 300 \\ b 300 \end{array}$ | 100,000 | $0$ | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 115 |
| $\underset{7}{20}$ | $\begin{aligned} & 0 \\ & 7 \end{aligned}$ | $\begin{aligned} & 70 \\ & 41 \end{aligned}$ | $\begin{gathered} 10 \\ 1 \end{gathered}$ | 30 4 4 | $\frac{4}{2}$ | $\begin{aligned} & 322 \\ & 28 \end{aligned}$ | $\begin{array}{r} 100 \\ 70 \end{array}$ | $\begin{aligned} & 40 \\ & 20 \end{aligned}$ | ${ }_{270}^{300}$ | 25,000 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | 200 | 1178 |
| 24 | 7 | 85 | 10 | 30 | 3 | 2 | 110 |  | 340 | 40,000 | 0 | 500 | 119 |
| $\begin{aligned} & 13 \\ & 13 \\ & 20 \end{aligned}$ | $\begin{array}{r} 2 \\ 15 \\ 15 \end{array}$ | $\begin{aligned} & 56 \\ & 50 \\ & 68 \end{aligned}$ | $\begin{array}{r} 6 \\ 8 \\ 14 \end{array}$ | $\begin{aligned} & 16 \\ & 12 \\ & 14 \end{aligned}$ | $\begin{aligned} & 8 \\ & 4 \end{aligned}$ | $\begin{gathered} 28 \\ 28 \\ 28 \end{gathered}$ | $\begin{array}{r} 75 \\ \begin{array}{r} 50 \\ 100 \end{array} \end{array}$ | - | $\begin{array}{r} 6245 \\ 275 \\ 325 \end{array}$ | 40,000 | 0 | $8,572$ | 120 121 122 |
| $\begin{aligned} & 12 \\ & 14 \end{aligned}$ | $\begin{aligned} & 8 \\ & 8 \end{aligned}$ | $\frac{24}{177}$ | $7$ | $\begin{aligned} & 12 \\ & 61 \end{aligned}$ | $\begin{aligned} & 8 \\ & 8 \end{aligned}$ | $\begin{aligned} & 28 \\ & 34 \end{aligned}$ | $\begin{aligned} & 75 \\ & 85 \end{aligned}$ | $\underset{25}{25}$ | $\begin{aligned} & 2505 \\ & 205 \end{aligned}$ | 00,000 | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 500 \\ & 800 \end{aligned}$ | 124 |
| $\begin{aligned} & 16 \\ & 18 \\ & 10 \end{aligned}$ | $\begin{aligned} & 2 \\ & \frac{4}{6} \end{aligned}$ | $\begin{aligned} & 19 \\ & 16 \\ & 24 \end{aligned}$ | $\begin{array}{r} 16 \\ 16 \\ 1 \\ \hline \end{array}$ | $\begin{aligned} & 11 \\ & 2 \\ & 10 \end{aligned}$ | $\begin{aligned} & 4 \\ & 1 \\ & 4 \\ & 4 \end{aligned}$ | $\begin{aligned} & 28 \\ & 28 \\ & 20 \end{aligned}$ | $\begin{gathered} 100 \\ 75 \\ 75 \end{gathered}$ | $\begin{aligned} & 40 \\ & 30 \\ & 20 \end{aligned}$ | $\begin{aligned} & 800 \\ & 245 \\ & 250 \end{aligned}$ | 8,000 |  | 800 | $\begin{aligned} & 1225 \\ & 128 \\ & 127 \end{aligned}$ |
| 19 |  |  |  |  | 4 |  |  |  | 280 | 125,000 |  | 2,000 | 128 |

Table 9.-Statistics of schools

|  | Location. | Name of school. |  | Dean. |
| :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 |
|  |  | HOMEOPATHIC-continued. |  |  |
| $\begin{aligned} & 139 \\ & 131 \end{aligned}$ | Chicago, tll. | Hahnemann Medical College | 1859 | C. H. Vila |
| 130 | do. | Hering Medical College. |  | Henry C. Allen |
| 132 | Iowa City, Iowa. | State University of Iowa, Homeopathic | 1877 | W. H. Dickinson |
| 133 | Louisville, Ky - | Southwestern Homeopathic Medical | 1893 | A. Leight Monroe..- |
| 134 | Baltimore, Md | Southern Homeopathic Medical College . | 1891 | Henry Chan |
|  | Boston, Mass | Boston University School of Medicine... | 1873 | I. Tisdale Thalbot - |
| 136 | Ann Arbor, Mich | University of Michigan, Homeopathic | 1875 | Wilbert B. Hinsdale |
| 137 | Minneapolis, Minn.- | University of Minnesota, College of | 1888 | A.P. Williamson |
| 138 | Kansas, City, Mo .... | Kansas City Homeopathic Medical Coi- | 1888 | William Davis Fos- |
| 139 | St. Louis, Mo. | Homegeopathic Medical College of Mis- | 1857 | William C. Richard- |
| 10 | New York, N. Y. | New Souri. | 1860 | Wm. Tod Helmuth .- |
| 141 | New | New York Medical College and Hospital for Women. | 1861 | Jennie de la M. Lo- |
| 142 | Cincinnati, Ohio | Pulte Medical College .....-.....-....... | 1872 | J. D. Buck - ${ }^{\text {zer }}$ - |
| 143 | Cleveland, Ohio ... | Cleveland University of Medicine and Surgery. | 1849 | William A. Phillips.- |
| 144 | Philadelphia, Pa ...- | Hahnemann Medical College physiomedical. | 1848 | Pemberton Dudley.- |
| 145 146 | Chicago, Inl- | Chicago Physiomedical College | 1891 | J. E. Roo |
|  |  | giradeate. |  |  |
| 147 | Chicago, Ill. | Chicago Ophthalmic College* |  | H. M. Martin |
| 118 |  | Chicago Polyclinic. | 1886 | Truman W. Millet... |
| 17\%) | New Orleans, La | Postgranluate Medical school | 1889 |  |
| 151 | St. Louis, Mo........ | St. Louis Postgraduate Scliool of Medi- | 1882 | P. G. Robinso |
| 152 | New York, N. Y..... | New York Polyclinic Medical school... | 188\% | J. Riddle Goffe..... |
| (1:3 | Philadelphia, Pa | New York Postgraduate Medical School | 1882 | Daniel B. S. Roosa |
|  | Philadelphia, Pa.... | Philadelphia Polyclinic and College for Graduates in Medicine. | 1882 | Max J. Steril, secretary. |
| 13) | do. | Pliladelphia Postgraduate School of Homeopathics. | 1890 | James T. Kent....... |

* In 16. $44-9.0$ a Average.
of medicine, for 1895-96-Continued.

$b$ Four courses will be required hereafter.
c Approximately.

Table 10.—Statistics of schools of dentistry, for 1895-96.



* In 1894-95
a Average cost of tuition.
b Approximately

Table 11.-Statistics of schools of pharmacy, for 1895-96.


$$
\begin{array}{|l|l|l|l}
\text { Auburn, Ala........... } & \begin{array}{l}
\text { Alahama Polytechnic Institute, Department of } \\
\text { Pharmacy, }
\end{array} & 1895 \\
\text { San Francisco, Cal } & \text { California College of Pharmacy, University of } \\
\text { California, }
\end{array}, 1873
$$

St. Louis, No
Newark, N. J
Albany, N. Y .........
Brooklyn $N$.
Buftalo, N. Y
New York, $\mathbb{N}$.
Raleigh. N
Ada, Ohio..................
Cincinnati, Ohio....
Columbus Ohio Columbus,
Pinacelphia.
Pittsburg, Pa Charleston

Nashville, Tenn.
do

University of Virginia, Va .
Seattle, Wash
Madison, Wis.

St. Louis College of Pharmacy. Now Jersey College of Pharmacy
Albany College of Pharmacy, Union University Brooklyn College of Pharmacy
Bufialo College of Pharmacy, University of Buffalo College of Pharmacy of the City of New York* College of Pharmacy pharmaceutical Department.Shaw University, Pharmaceutartment of Pharmacy.
Cincinnati College of Pharmacy, University of Cincinnati.
Cincinnati. Scio College, Department of Pharmacy Scio College, Depart of Pharmacy Pittsburg College of Pharmacy
Pittsburg Colle Department of Pharmacy of Medical College of State of South Carolina.
Central Tennessee College, Department of PharCentral
manderbilt University, Department of Pharmacy. University of Texas, school of Pharmacy........... University of Callege of Medicine, Department of Pharmacy.
University of Virginia, Department of Pharmacy University of Washington, Department of Pharmacy. University of Wisconsin, School of Pharmacy

In 1894.85.
In For the degree of Pharmaceutical Chemist two years are required. b A pproximately.
caverage. 1892 1881 1896 1886
1829 1829
1891 1891
1884

$e$ If completed in one year
fFor incidental expenses.

Table 12.-Statistics of schools of veterinary medicine, for 1895-96.

| Location. |  | Name of school. |  | Dean. | Instructors. |  | Students. |  | Length of course. |  | Fees. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \text { Regular pro- } \\ & \text { fessors. } \end{aligned}$ |  |  | む <br>  |  |  |  |  | $\begin{aligned} & \dot{\oplus} \\ & \text { ※ } \\ & \text { 日 } \\ & \text { \# } \\ & \text { ह } \\ & \text { E } \end{aligned}$ |  |  |
|  | 1 |  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 16 | 11 | 12 | 13 |
| $\begin{aligned} & 1 \\ & \frac{1}{3} \\ & 4 \\ & 8 \end{aligned}$ | San Francisco, Cal... Washington, D. G... Chicago, 11 . Tndianapolis, Ind..... Boston, Mass | University of California, Veterinary DepartmentNational Veterinary College. <br> Chicago Veterinary College. $\qquad$ <br> Indiana Veterinary College. <br> Harvard University, School of Veterinary Medi- | $\begin{aligned} & 1895 \\ & 1892 \\ & 1883 \\ & 1893 \\ & 1883 \end{aligned}$ | Frank W. Skaife Charles F. Dawson. Joseph Hughes, sec. Thos. L. Armstrong. Charles P. Lyman... | 8 11 10 10 11 | 2 2 2 8 8 10 | 14 21 50 8 55 | 0 15 24 3 13 | 3 2 2 3 2 3 | 27 26 26 26 26 39 | $\$ 100$ 100 80 75 150 | $\$ 25$ 10 10 20 | $\$ 355$ 235 250 175 $\alpha 475$ |
| 6 | Detroit, Mich........- | cine. Cotroit College of Medicine, Department of Vet- | 1891 | H. O. Walker...----- | 6 | 2 | 11 | 6 | 2 | 22 | 50 | 10 | 125 |
| 7 8 9 | New York, N. Y...... Columbus, Ohlo..... | erinary Surgery. <br> American Veterinary College............................. <br> New York College of Veterinary Surgeons........- <br> Ohio State University, School of Veterinary | $\begin{aligned} & 1875 \\ & 1857 \\ & 1884 \end{aligned}$ | A. ${ }^{\circ}$ F. Liautard Harry D. Gill. David S. White | 7 11 8 | 13 8 2 2 | 87 60 15 | $\begin{array}{r}26 \\ 29 \\ 2 \\ \hline\end{array}$ | 3 3 3 3 | 21 27 37 | $\begin{array}{r} 100 \\ 75 \\ 0 \end{array}$ | 25 25 5 | 370 295 65 |
| 10 | Philadelphia, Pa..... | Medicine. <br> University of Pennsylvania, Department of Veterinary Medicine. | 1884 | John Marshall.------ | 5 | 3 | 61 | 16 | 3 | 36 | 100 | 0 | 323 |

Table 18.-Statistics of training schools for nurses, for 1895-96.


Table 13.-Statistics of training schofs for nurses, for 1895-96-Contintued.


South Framingham Mnse
Springfield Mass
Waverley, Mass........... Worcester, Mass....... Ann Arbor, Mich........ Detroit, Mich................ Graud Rapids, Mich....
Duluth. Minn
Fergus Falls, Minn
Minneapolis, Minn .....

St. Paul, Minn ....do
St. Peter, Minn
Krases City. Mo
....-do.
-....-.................

St. Louis, Mo
......do.
Claremont. ${ }^{\text {N }}$.
Hanover, N. $\mathbf{H}$
Keone, N. H
Camden, N.J.
Elizaboth, N.J................
Morris Plains, N.J.....
Newark, N.J
Orange, N. J
Paterson, N. J.....................
Plainfleld, $N$.
Trenton, N.
Brooklyn, N. Y................
-.-.do.-.............................
.....do.
-...-do.
Bufla

In 1894-95.
a Male nurses, 920 and $\$ 25$.
a Male nurses, $\$ 20$ and $\$ 25$, women, $\$ 12$ and $\$ 15$.
b Male nurses, 23
cMale nurses get se1 per month first year and 522 second year.
d Board, lodging, washing, and uniforms are firnished.
1893
1898
1882
1883
1891
1884
1889
1894
1888
1890
1894
1892
-181
-1894
1892
1894
1892
1889
1884
1892
1895
1889
1893
1883
1895
1893
1892
1889
1890
1894
1886
1843
1883
1894
1880
1880
1880
1888
1888
1
eMale nurses get $\$ 10$ per month first year, $\$ 12$ second year; women get $\$ 100$ at graduation.
$f$ Uniforms are furnished.
$g$ Male nurses, $\$ 18$ to $\$ 25$; second year, $\$ 25$ to $\$ 30$.

Table 19.-Statistics of training schools for nurses, for 1895-96-Continued.

|  | Location. | Name of school. |  |
| :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 |
| 108 | Buffalo, N. Y. | Buffalo Woman's Hospital Training School | 1893 |
| 108 |  | Children's Hospital Training School | 1892 |
| 104 |  | Erie County Hospital Training School | 1894 |
| 105 |  | Lexington Heights Training School.. | 1891 |
| 108 | Elmira, in ${ }^{\text {x }}$ | Arnot Ogden Hospital Truining School | 1889 |
| 107 | Jamestown, N, Y.-....- | Women's Christian Association Hospital Training School | 1888 |
| 100 | New York, N. | City Hospital Male Training School, Blackwells Island | 1888 |
| 1110 | do | Free Hospital for Women, St. Andrew's Infirmary --..- | 1890 |
| 1112 |  | German Hospital Training School *- |  |
| 118 | do -......................... | Lebanon Hospital Training School | 1893 |
| 114 | do | Metropolitan Hospital Training School | 1892 |
| 115 |  | Mills Training School for Male Nurses, Bellevue Hospital | 1888 |
| 116 |  | Mount Sinai Gospital Training School................... | 1881 |
| 117 | do | New York City Training School (for women), Blackwells Island. | 1875 |
| 118 | ....do | New York Hospital Training School, Fifteenth street and Fifth avenue. | 1877 |
| 119 | ... do .---.-. .-...- .-. | New York Infirmary for Women and Children Training School. | 1894 |
| 120 | \% | Now Y ork Training School, Bellevue Hospital....-...... | 1873 |
| 121 |  | Presbyterian Hospital Training School | 1892 |
| 123 |  | St. Luke's Hospital Training School. | 1888 |
| 124 |  | St. Vincent's Hospital Training School* | 1894 |
| 125 |  | Sloane Maternity Hospital Training School | 1888 |
| 128 |  | Woman's Hospital Post Graduate Training school | 1895 |
| 127 | Bocheater, N. Y | Rochester City Hospital Training School. .-...-...........- | 1881 |
| 128 | -do | Rochester Homeopathic Hospital Training School | 1891 |
| 129 | Byracuse, N. | House of the Good Shepherd Training School..........- | 1885 |

Troy Hospital Training School Faxton Hospital Training School State Hospital Training School for Nurses Cincinnati Hospital Training School Cleveland Homeopathic Hospital Training School Cleveland State Hospital Training School
Toledo Hospital Training School.
City Hospital Training School
Good Samaritan Hospital Training Sciool
Allogheny General Huspital Training School Chester Hospital Training School
保
Training School of the Private Asylum for the Insane. McKeosport Hospital Training Scho Charity Hospital Training School
Jefferson Medical College Hospital Training School. --
Medico-Chirurgical Hospital Training School
Methodist Episcopal Hospital Training School*
Pennsylvania Hospital Training School
Philadelphia Hospital Training School
Philadelphia Lying-in Charity and Nurse School Polyclinic Hospital Training School. Presbyterian Hospital Training School Protestant Episcopal Hospital Training School St. Josephis Hospital Training School Samaritan Hospital Training SchoolUniversity Hospital Training Schoo Woman's Hospital Training School.-... Homeopathic Hospital Training School Western Pennsylvania Hospital Training Scho.................... Reading Hospital Training School.
Lackawanna Hospital Training School
Moses Taylor Hospital Training School

 City Hospital Training School Williamsport Hospital Training School Rhode Island Hospital Trainin
 City Hospital fraining Insane,
 John Sealy Hospital Training School....
Mary Fletcher Hospital Training School.-..........................
Hampton Training School for Nurses, Dixio Hospital.. City Hospital Training School
Trinity Hospital Training School
Wrinity Hospital Training School $\mathbf{W}$ isconsin Training School for Nurses
Wisconsin Training School for Nurses.

+4.


 Katharine Newman..... Susan E. Pitts - .-........... W. H. Webber H.C. Eyman Mabel Morrison Mrs. C. B. Hall Emily L. Loveridge Charlotte E. Perkins.. Lizzie D. Magee ........... S. Elizabeth Winter...... Mary E. Kelso-. Pena Schneider
Susan C. Earle Susan C. Earle
Minerva T. Daily Minerva T. Daily --....-. Jessie J. Glen .-.............. Lucy Walker--.Mrances D. Shetland Maud Banfield Caroline I. Mine Mary S. Littlefeld Annie E. Whelan.M. E.P. Davis $-\cdots$ Anna M. Fullerton Laura L. Lindley Elin K. Kraemer Miss N. J. Eger Miss N. J. Eger ............ Mary W. McKechnie. Virginia Loomis Leila Vincent Jones... Miss Irwin.
Mrances $\mathrm{E}^{2}$ Frances E. Wallace-..Augusta E. Guimminot Clara J. Churchill Susan B. SWanton Caroline L. Farnum Mrs. J. E. Johnson......
Lucy A. Bannister -..... Effie L. Barlow

a In 1894-95, lodging, washing, and uniform are furnished
$b$ Male nurses, 2 to $\$ 2$; women, $\$ 16$ to $\$ 19$.
c Male nurges, 12 first year, $\$ 15$ second year; women get uniform and board.
$d$ Sixth to twelfth month.
e Male nurses, $\$ 20$ and $\$ 25$; women, $\$ 10$ and $\$ 15$.

## CHAPTER XLI.

## COMMERCIAL AND BUSINESS SCHOOLS.

Returns from 398 commercial and business schools are tabulated in this report. Schools failing to report for two years in succession are dropped from the list. In the 398 business schools represented in the report for 1895-96 there were 1,913 instructors and 80,662 students. The total nuinber of graduates in the commercial course was 10,481 and in the amanuensis course 8,836 . The number of students in the day schools in all the geographical divisions was largely in excess of the number in the evening schools. The total number of students reported in the day schools was 64,901 and in the evening schools 15,911 . It will be seen by these figures that the day schools contain nearly four times as many students as the evening schools report. The total number of students in the commercial course reported by the 398 schools was $37,630-$ males 29,869 and females 7,761. The total number of students in the amanuensis course was 19,250 -males 8,312 and females 10,938. In the English course 11,870 students were reported-nales 8,630 and females 3,240 . In telegraphy there were 1,434-males 1,164 and females 270 .

In addition to the 37,630 students in the regular commercial courses of business schools, there were 51,182 commercial students in universities and colleges, in normal schools, in private high schools and academies, and in public high schools. This was an increase of 7,954 students in the above-named schools since the report of this Burean for 1894-95. (See the statistical summary on the two succeeding pages.)

The North Atlantic Division reported 116 schools, with a total of 639 instructors and 27,487 students. There were 3,963 graduates in the commercial course and 3,526 in the amanuensis course. The number of male students was 18,259 and the number of female students 9,228 . The day schools reported 20,667 and the evening schools 6,790 . The total number of students in the commercial courso was 10,493 -males 7,911 and females 2,582 . The total number of students in the amanuensis course was 5,609 -males 2,181 and females 3,428 . In the English course the number was 2,817-males 1,665 and females 652. In telegrapliy there were 219 students-males 183 and females 36 .

The South Atlantic Division reported 28 schools, 134 instructors, 5,364 students, and 1,250 graduates. The number of male students was 3,718 and female students 1,646. The total number of students in the commercial course was $2,4: 3$ imales 1,848 and females 589 . In the amanuensis course there were 1,830-males 889 and females 941 . In the English course there were 1,64\% students-1,110 males and $5 ; 7$ females. In telegraphy there were 75 students- 70 males and 5 fernales.

The South Central Division reported 33 schools, 160 instructors, and 6,414 stu-dents- $, 0,03$ males, and 1,361 females. The number of graduates was 1,748 . The total number in the day schools was 5,52.5, in evening schools 889 . In the commercial course the number of male students was 3,373 , female students 5.54. In the amanuensis course there were 733 male students and 735 female students; in the English course, males $88: 3$ and fernales 186; in telegraphy, males $1 i 5$ and females 42 .

Tho North Central Division reports $4 \pi$ per cent of the total number of commercial schools, instructors, and students representerl in this annual report. The number of institutions reported was 186, the number of instructors $7 \times 8$, and the number of students :32,4\%. The male students numbered $22.16 \%$ and the femalo studerits 10,248 . The number of students in the day schools was $2 \pi, 083$, in the evening schools 5, m. The number of students in the commercial course was $1 f ;, 013$-nales 12,681 , females 3,$13 ; 3$. In the ananuensis course the number was 8.7.5 males $3,70: 3$ and females 5,042 : in the English course 5,121 -males 3,911 and females 1.210; in telegraphy 817 -males $6{ }^{2} 0$ and females 147 .

The Western Division reported 35 schools, 192 instructors, and 8,912 students. The number of mate students was 5,976 and fenale students 2,966 . The number of stulents in the day schools was $7,2.58$ and in the evening schools 1,641 . The number of gradnates reported was $1,9 \% 9$. The number of students in the commercial course was $4, \tilde{6} 0$-males 3,8 , 5 i and females 903 ; in the amanuensis course, $1.5!4$ mafs son and females 792 : in the English course, 1,716 -males 1 , $0 f 1$ and females (jos; in telegraphy, 106 -males 66 and females 40.

| States and divisions. |  | Instructors. |  |  | Pupils. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 品 |  | $\begin{aligned} & \text { ศ్g } \\ & \stackrel{0}{0} \\ & \text { H } \end{aligned}$ |  |  | $\begin{aligned} & \text { न్ } \\ & \text { से } \\ & \text { से } \end{aligned}$ |  |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| United States | 398 | 1,338 | 575 | 1,913 | 55, 173 | 25,489 | 80,662 | 64,901 | 15,911 |
|  | 116 | 445 | 194 | 639 | 18,259 | 9,228 | 27,487 | 20,667 | 6,790 |
|  | 6 | 16 | 9 | 25 | 989 | 458 | 1,447 | 1,279 | 168 |
|  | 3 | 7 | 3 | 10 | 143 | 77 | 1,220 | 1, 180 | 40 |
|  | 2 | 3 | 1 | 4 | 99 | 46 | 145 | 97 | 48 |
|  | 15 | 60 | 44 | 104 | 2,010 | 1,862 | 3,872 | 2,966 | 906 |
|  | 4 | 16 | 5 | 21 | 470 | -264 | 734 | . 571 | 163 |
|  | 10 | 27 | 20 | 47 | 1,020 | 615. | 1,635 | 1,320 | 315 |
|  | 30 | 116 | 55 | 171 | 5,255 | 2,447 | 7,702 | 6,338 | 1,334 |
|  | $\begin{array}{r}7 \\ \hline\end{array}$ | 182 168 | 13 44 | + 212 | 1,311 | 2, 552 | 1,863 | 1,081 | 182 3,034 |
|  | ,39 | 168 | 44 | 212 | 6,962 | 2,907 | 8,869 | 6,835 | 3,034 |
| South Atlantic Division. | 28 | 84 | 50 | 134 | 3,718 | 1,646 | 5,364 | 4,368 | 996 |
| Delaware Maryland | 1 | 4 | 6 1 | 10 | 236 | 83 | 319 | 226 319 | 93 |
| District of Columbia | 4 | 13 | 18 | 31 | 731 | 568 | 1,297 | 1,020 | 277 |
| Virginia | 6 | 16 | 9 | 25 | 512 | 174 | 1,686 | 606 | 80 |
| West Virginia | 2 | 6 | 3 | 9 | 335 | 151 | 486 | 305 | 181 |
| North Carolina | 5 | 11 | 3 | 14 | 309 | 113 | 422 | 405 | 17 |
| South Carolina | 1 | 1 | 0 | 1 | 5 | 0 | 5 | 5 | 0 |
| Georgia. | 6 | 22 | 10 | 32 | 1,206 | 444 | 1,650 | 1,427 | 223 |
| Florida | 1 | 3 | 0 | 3 | 57 | 10 | 67 | 55 | 12 |
| South Central Division.-.-. | 33 | 128 | 32 | 160 | 5,053 | 1,361 | 6,414 | 5,525 | 889 |
| Kentucky | 2 | 11 | 2 | 13 | 564 | 194 | 758 | 693 | 65 |
| Tennessee | 6 | 21 | 3 | 24 | - 886 | 242 | 1,128 | 1,054 | 74 |
| Alabama | 1 | 3 | 0 | 3 | - 110 | 45 | -155 | 105 | 50 |
| Mississippi | 5 | 31 | 4 | 35 | 698 | 55 | 753 | 748 | 5 |
| Louisiana | 15 | 9 | 2 | 11 | 339 | 73 | 412 | 297 | 115 |
| Texas..... | 15 3 | 45 | 18 8 | 11 | 1,955 | 666 86 | 2,621 587 | 2,261 | 360 200 |
| Oklahoma |  |  |  |  |  |  |  |  |  |
| North Central Division | 186 | 554 | 234 | 788 | 22, 167 | 10,288 | 32,455 | 27,083 | 5,552 |
| Ohio | 31 | 72 | 28 | 100 | 2,462 | 1,081 | 3,543 | 8,067 | 476 |
| Illinois | 36 | 181 | 53 | 184 | 6,220 | 3,026 | 9,246 | 7,831 | 1,415 |
| Indiana. | 20 | 70 | 33 | 103 | 2,576 | .1,572 | 4, 148 | 3,344 | -984 |
| Michigan | 16 | 46 | 15 | 61 | 1,833 | - 829 | 2,662 | 2,113 | 549 |
| W isconsin | 16 | 32 | 20 | 52 | 1,184 | 383 | 1,567 | 1,183 | 388 |
| Minnesota | 15 | 89. | 15 | 54 | 1, 488 | 768 | 2,252 | 1,882 | 380 |
| Mowa .... | 20 | 48 | 35 17 | 88 | 2,320 | 975 676 | 3,295 $\mathbf{2 , 4 4 1}$ | 2,930 1,886 | 365 555 |
| North Dakota | 14 | 48 | 170 | ${ }_{6}^{6}$ | $\begin{array}{r}1,765 \\ \hline 94\end{array}$ | 676 | 2,441 | 1,880 140 | 22 |
| South Dakota |  | 5 | 1 | 6 | 124 | 60 | 184 | 147 | - 37 |
| Nebraska | 8 | 28 | 9 | 35 | 1,601 | 666 | 2,267 | 1,958 | 309 |
| Kansas | 7 | 16 | 8 | 24 | -504 | 184 | 688 | 592 | 98 |
| Western Division. | 35 | 127 | 65 | 192 | 5,976 | 2,966 | 8,942 | 7,258 | 1,684 |
| Montans <br> W yoming <br> Colorado | - 3 | 14 | 5 | 19 | 520 | 206 | 728 | 528 | 188 |
|  | - 4 | 7 | 7 | 14 | 582 | 818 | 895 | 546 | 349 |
| New Mexico <br> Arizona |  | 2 | 1 | 8 | 0 | 24 | 74 | 64 | 10 |
| Utah Neved |  | 5 | 1 | 8 | 211 | 168 | 434 | 815 | 119 |
| Idakio |  |  |  |  |  |  |  |  | 3 |
|  |  | 8 | $\frac{1}{8}$ | 1 |  | 278 | 64 | 508 | 138 |
|  | 4 | 15 | 10 | 25 |  | 812 | 807 | 735 | 72 |
| Calfornia | 17 | 74 | 37 | 111 | 8,602 | 1,658 | 5,320 | 4,523 | 797 |

and business schools, 1895-96.


Statistics of commercial and


- From 1894-95.
business schools, 1895-96.


*From 1804-9\%.
business schools, 1895-96-Continued.


- From 1804-95.
-business schools, 1895-96-Continued.



*From 1894-95.
business schools, 1895-96-Continued.


Statistics of commercial and


- From 1894-85.
business schools, 1895-96-Continued.


| Post-office. | Name. |
| :---: | :---: |
| 1 | 2 |
| NEW HAMPSHIRE. |  |
| Concord | Smith's Business College. |
| Portsmouth.......- | Smith's Academy and Commercial Col- |

$\square]$ In
$\qquad$ A. B. Miservey Lewis E. Smith.......

Camden
Jersey City
Newark
Abrahamson College of Business and Shorthand.
Drake's Business College
Coleman's National Business College and School of Shorthand and Typewriting.
-...-do-.....................-.
Newark Business College
New Jersey Business College........................
Abrahamson College of Business and Shorthand.*
Stewart Business College*
NEW YORK.
Albany
Albany Business College

Lowell Business College
Riley Business College and Institute of Shorthand.
Binghamton-......
..-.do.-....-........-
Brooklyn
Buffalo
Buffalo
Chatham
Corning
Elmira
Fort Edward......
Fort Plain.
Geneva $\qquad$
--do
Gloversville.
Hornellsville
Jamestown
Lima
Newburg-
New Yosk.

Heffley School of Commerce.
St. James Commercial School
Buffalo Business University.
Caton's National Business College*
Whiteman's Telegraph School and Rail-
road Business College.*
Kerst's National Business College*.......
Elmira School of Commerce
Haley's Business College
Porter School of Business Training ${ }^{\text { }}$
Geneva Business Training College
Geneva Shorthand College
Business College
Hornellsville Business and Shorthand College.
The Jamestown Business College Association, Limited.
Genesee Wesleyan Seminary Business College.*
Spencerian Institute of Business and Shorthand.
Metropolitan Shorthand School
Packard's Business College.
The Paine Uptown Business College
Walworth's Business and Stenographic College.
Niagara Falls
Oswego
Rochester
sichenectiady
Troy-....................
morth carolina.
Augusta.
Groensboro..........
Siler Clty.........

Niagara Business College *
Chafiee's Phonographic Institute
The Institute*
Rochester Business Üniversity.
Underhill's University *
Schenectady Busineas College
Troy Business College.

Hndges Business College
Greenshoro Business College

Chas. M. Abrahamson.

William E. Drake
H. Coleman

Martin Mulvey
C. P. Miller
C. M. Abrahamson

Thomas J. Stewart.

John R. Carnell
J. E. Bloomer

John F. Riley
Norman P. Heffiey.
Rev. Brother John.
C. U. Johnson
S. G. Hurst .....

Frank Whiteman
J. T. Kerst

Sherman Esty.
J. W. Haley

Eirnest W. Coveli
Ansel E. Mackey
Rohert E. Hadden
U. G. Patterson
C. E. Willard
H. E. V. Porter
W. H. Ruse
A. L. Spencer
W. L. Mason
S. S. Packard
H. W. Remington

Geo L. and Jno. C
Walworth.
H. J. King
W. G. Chaffee

Charles Unteneiner
A. S. Osborn and 8 .
C. Williams.
B. S. Underhill
F. C. Hovey

Thomas H. shields
J. D. Hodges
E. J. Hodges
J. A. W. Thompion

In-structors.

- From 1894-85.
business schools, 1895-96-Continued.


* From 1894-95.
business schools, 1895-96-Continued.

Post－office．
1

| PENNsYL＿TANIA－ |
| :---: |
| continued． |

Easton
Harrisburg
Hazleton
Lancaster
do－
Lebanon
Lock Haven
Meadville
Norristown
Oil City
Philadelphia
do．
Pittsburg
．．．．do
Pottsville
．．．do
Reading
Scranton
$\qquad$
Easton College of Business
Erie Business University
Harrisburg Business College．
School of Commerce＊
Hazleton Business College＊
Keystone Business College＊
Lancaster Business College
Lebanon Business College
Lock Haven Commercial College
Smith＇s Business College
Schissler College of Business
The Tubbs Business College．
Palms Business College．
Peirce School．
Actual Business College
Duffs Mercantile College
Martin＇s Shorthand School．
Commercial School
Wood＇s Business College
Interstate Commercial College
Williams＇s Business College
Shamokin Business College
Shenandoah
Shenandoah
Union City
Wood＇s Business College．
Towanda Business and Shorthand College Luce＇s Commercial College
Washington Business College
Wood＇s Wilkes Barre College
Washington．
Wood＇s Wilkes Barre Co
Potts Shorthand School
Williamsport Commercial and School of Shorthand．

## RHODE ISLAND．

Pawtucket
Providence
do
do
SOUTH CAROLINA．
Charleston
BOUTH DAKOTA．
Aberdeen
Sioux Falls $\qquad$
Pawtucket Business College＊
Providence Bryan and Stratton Busi－
ness College
Scholfield＇s Commercial College
Spencerian Business College＊
Charloston Mercantile School $\qquad$
Aberdeen Business College ．．．．．．．．．．．．．．．．．．．．
TENNESSEE．

```
Chattanooga
Knozville
```

．．．．．do $\qquad$
－．－．．do
Tamintile
－．．．．do
Sioux Falls Business College
Mountain City Business College．
Knoxville Business College
McAllon＇s Business and Shorthand Col－ lege．
Young＇s College of Shorthand
Draughon＇s Practical Business College．
Jennings＇s Business College
TEXA8．

## Austin

Belton
Corsicana

${ }^{*}$ From 1894－05．
business schools, 1895-96-Continued.


Statistics of commercial and


[^101]business schools, 1895-96-Continued.

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## CHAPTER XLII.

## EDUCATION OF THE COLORED RACE.

References to preceding reports of the United States Bureau of Education, in which this subject has been treated: In annual reports-1870, pp. 61, 337-339; 1871, pp. 6, 7, 61-70; 1872, pp. xvii, xviii; 1873, p. lxvi; 1875, p. xxiii; 1876, p. xvi; 1877, pp. xxxiii-xxxviii; 1878, pp. xxyiii-xxxiv; 1879, pp. xxxix-xlv; 1880, p. lviii; 1881, p. lxxxii; 1882-83, pp. liv, xlviii-lvi, xlix, 85; 1883-84, p. liv; 1884-85, p. lxvii; 1885-86, pp. 596, 650-656; 1886-87, pp. 790, 874-881; 1887-88, pp. 20, 21, 167, 169, 988-998; 1888-89, pp. 768, 1412-1439; 1889-90, pp. 620, 621, 624, 634, 1073-1102, 1388-1392, 1395-1485; 1890-91, pp. 620, 624, 792, 808, 915, $961-980,1469$; 1891-92, pp. 8, 686, 688, 713, 861-867, 1002, 1234-1237; 1892-93, pp. 15, 442, 1551-1572, 1976; 1893-94, pp. 1019-1061; 1894-95, pp. 1331-1424; also in Circulars of Information-No. 3, 1883, p. 63; No. 2, 1886, pp. 123-133; No. 3 , 1888, p. 122; No. 5, 1888, pp. 53, $54,59,60,80-86$; No. 1, 1892, p. 71. Special Report on District of Columbia for 1869, pp. 193, 300, 301-400. Special report, New Orleans Exposition, 1884-85, pp. 468-470, 775-781.
The estimated number of persons 5 to 18 years of age in the sixteen Southern States and the District of Columbia for the scholastic year 1895-96 was $8,562,970$. Of this number $5,768,680$ were white and $2,794,290$ were colored. The total enrollment in the public schools of the South was $5,291,013$, the enrollment in the white schools being $3,861,300$, or 66.93 per cent of the white children of school age, and the enrollment in the colored schools $1,429,713$, or 51.16 per cent of the colored children of school age. While the colored children constitute 32.63 per cent of the school population of the South, they make but 27 per cent of the school enrollment. In the District of Columbia and in Kentucky the per cent of colored children enrolled is higher than for the white children. In Alabama and South Carolina the per cent of attendance is higher for the colored than for white children. For the entire South the average daily attendance was 66.28 per cent of the enrollment for the whits children and 62.04 per cent of the enrollment for the colored children. These statistics for each of the sixteen Southern States and the District of Columbia are given in Table 1 on the following page.

The total expenditure for public schools in the South for $1895-96$ was $\$ 30,729,819$. In only one or two States are separate accounts kept of the expenditure of money for the colored schools, but at a low estimation the cost of public schools for the coloried race for $1895-96$ was not less than $\$ 6,500,000$. Table 2 shows that from 1870 to 1896 the cost of public schools in the South was $\$ 483,777,467$. Between $\$ 90,000,000$ and $\$ 95,000,000$ of this sum must have been expended for the education of the colored children. The same table shows the enrollment in the white and colored schools for each year, and also the total expenditure for each year from 1870-71 to 1895-96.

## SECONDARY AND HIGHER EDUCATION.

For the year 1890-96 this Bureaur received reports from 178 schools for the secondary and higher education of the colored race. Three of these schools are in Pennsylvania, two in Ohio, two in Indiana, one in Illinois, and one in New Jersey. All the others are within the boundaries of the former slave States. Table 3 shows the number of these schools in each State and the number of teachers and students for each State. The total enrollment in these 178 schools was 40,12\%. The number in the elementary grades was 25,092, in the secondary 18,568 , and in the collegiate grades 1,455 . The number of teachers employed was 1,826. The statistics of these schools are given in detail in Tables 9 and 10.

Table 1. -Common school statistics, classified by race, 1895-36.

| State. | Estimated number of persons 5 to 18 years of age. |  | Percentages of the whole. |  | Pupils enrolled in the public schools. |  | Per cent of persons 5 to 18 years enrolled. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | White. | Colored. | White. | Colored. | White. | Colored. | White. | Colored. |
| Alabama | 328,700 | 281, 600 | 53.85 | 46.15 | a 198, 710 | a 120,816 | $a 60.45$ | a 42.90 |
| Arkansas --....- | 32\%,700 | 126, 700 | $7 \% .06$ | 27.94 | 218, 299 | 78,276 | 66.82 | 61.79 |
| Belaware (1891-92) | 39,850 | 8,980 | 81.60 | 18.40 | 28, 316 | 4,858 | 71.05 | 54.09 |
| District of Columbi | 44, 800 | 24,640 | 64. 51 | 35.49 | 27, 289 | 15,175 | ${ }_{71}^{60.91}$ | ${ }_{52} 61.59$ |
| Florida <br> Georgia | 89,130 369,000 | 70,670 346,300 | 55.79 51.59 | 44.21 48.41 | 63,586 253,516 | 36,787 170,270 | 71.35 68.70 | 52.06 49.16 |
| Kentucky | 557, 400 | 95, 400 | 85.38 | 14.62 | 337, 618 | 182,508 | 68.57 | 65.54 |
| Louisiana | 203, 400 | 218, 700 | 48.42 | 51.58 | 88, 400 | 65,917 | 48.38 | 30.44 |
| Maryland | 263, 300 | 75,900 | 77.62 | 22.38 | 179, 408 | 39,954 | 68.14 | 52.65 |
| Mississippi (1894-95) | 212, 700 | 309, 800 | 40.71 | 59.29 | 162, 830 | 187, 785 | 76.56 | 60.61 |
| Missouri.. | 881, 200 | 53, 600 | 94. 26 | 5.74 | 631,957 | 32,990 | 71.72 | 61.54 |
| North Carolina | 389, 700 | 233, 700 | 62.52 | 37.48 | 244,376 | 126,544 | 62.70 | 54.14 |
| South Carolina | 174, 200 | 292, 200 | 37.34 | 62.66 | 109,159 | 123,178 | 62.67 | 42.15 |
| Tennessee (1894- | 475, 100 | 160, 300 | 74.77 | 25.23 | 377, 626 | 100, 499 | 79.48 | 62.70 |
| Texas. | 800, 500 | 245, 500 | 76.55 | 23.45 | 481, 419 | 185, 149 | 60.13 | 55.05 |
| Virginia | 338, 700 | 241,000 | 58.43 | 41.57 | 240,356 | 121, 777 | 70.96 | 50.52 |
| West Vir | 274, 300 | 11,300 |  |  | 208, 435 | 7,230 |  |  |
| TTotal <br> Total, $1889-90$ | $\begin{aligned} & 5,768,680 \\ & b 5,132,948 \end{aligned}$ | $\begin{aligned} & 2,794,290 \\ & b 2,510,847 \end{aligned}$ | $\begin{aligned} & 67.37 \\ & 67.15 \end{aligned}$ | $\begin{aligned} & 32.63 \\ & 32.85 \end{aligned}$ | $\begin{aligned} & 3,861,300 \\ & 3,402,420 \end{aligned}$ | $\begin{aligned} & 1,489,713 \\ & 1,296,959 \end{aligned}$ | $\begin{aligned} & 66.93 \\ & 66.28 \end{aligned}$ | $\begin{aligned} & 51.16 \\ & 51.66 \end{aligned}$ |
| State. | Average daily attendance. |  |  | Per cent of enrollment. |  | Number of teachers. |  |  |
|  | White. | Colo |  | White. | Colore | Whi |  | Colored. |
| Alabama | $\begin{array}{r} a 124,300 \\ 128,460 \\ \hline \end{array}$ | a 79,700 |  | $\begin{array}{r} 662.56 \\ 58.84 \end{array}$ | a 65.98 | 4,831 |  | $2,350$ |
| rkansas |  |  |  |  |  |  |  | 106 |
| District of Columb | a 19,746 | 11, 295 |  | a69.74 | a6f. 66 |  |  | 343579 |
| Florida ............. | 20,858 41,992 | $\begin{aligned} & 24,143 \\ & 89,246 \end{aligned}$ |  | 69.03 | $\begin{array}{r}74.43 \\ -65 \\ \hline\end{array}$ | $\begin{array}{r} 688 \\ 1,929 \end{array}$ |  |  |
| Georgia | 154, 896 |  |  | 61.11 | 58. 29 | 5, ${ }^{1}, 888$ |  | 3,053 |
| Kentucky | 247, 203 | 99,39,658 |  | 73.23 | 63.44 | 4 8, 8,727 |  | 1,482 |
| Louisiana | 70,373103,798 | 44,943 |  | 71.52 | 88.1148.63 | 2,576 |  | 1961 |
| Maryland |  | 19, 429 |  | 57.86 |  | 3,892 |  | 724 |
| Mississippi (1894-95) | - 99,048 | 108,635 |  | 00.81 | 48.63 55. 19 | 9 - $\begin{array}{r}4,591 \\ 14,114\end{array}$ |  | 3,284 |
| Missouri. | a 415,388155,899 |  |  | a 65.72 | a 83.71 |  |  | $\begin{array}{r} 780 \\ 2,750 \\ \hline \end{array}$ |
| North Carolin |  | a ${ }^{21,020}$ |  | 83.79 | 59.93 | 1 - 14, 114 |  |  |
| Soutin Carolina | 78, 391 | 75,82698,810 |  | 77.88 | 74.52 | 2 2,688 |  | 1,759 |
| Tennessee (1894-95) | 270, 982 \% 67,348 |  |  | 71.77 | 67.0068.85 | 7,048 |  | 1,865 |
| Texas | 349,913 90,336 |  |  | 72.70 |  | 10,470 <br> 6,320 |  | 2,097 |
| Virginia <br> West Vi | 141,8 138,6 |  | ,703 | $59.01$ $65.54$ | 55.60 |  |  |  |
| Total Total, 1888-80 | $\begin{aligned} & 2,559,666 \\ & 2,165,249 \end{aligned}$ | $\begin{array}{r} 886,994 \\ 818,710 \end{array}$ |  | $\begin{aligned} & 68.28 \\ & 63.83 \end{aligned}$ | $\begin{aligned} & 62.44 \\ & 62.42 \end{aligned}$ | $\begin{aligned} & 91,049 \\ & 78,903 \end{aligned}$ |  | $\begin{aligned} & 28,499 \\ & 24,072 \end{aligned}$ |

a Approximately.
$b$ United States Census.
Table 2.-Sixteen former slave States and the District of Columbia.

| Year. | Common school enrollment. |  | Expenditures (both races). | Year. | Comman school enrollment. |  | Phypenct titures (both races). |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | White. | Colored. |  |  | White | Colored. |  |
| 1870-71 |  |  |  | 1884-85 | 2,676,911 | 1,030,463 | $\$ 19,253,874$ |
| 1871-72 |  |  | 11,623,238 | $1885-86$ | $2,773,145$ | $1,048,659$ | $20,208,115$ |
| 1872 |  |  | 11, 176,048 | 1886-87 | $2,975,773$ | $1,118,550$ | $20,821,969$ |
| $1878-24$ |  |  | 11,823,775 | 1887-88 | 3,110,603 | 1, 140,405 | $21,810,15 \%$ $28,171,8 i 8$ |
| $\frac{187455}{18 \times 5-76}$ |  |  | 13, 1221,514 | 1888-89 | 3,187,830 | 1,213,092 | 23,171, 210 |
|  | 1,827,139 | 55i, 50 | 11,231,073 | 1880-91 | 3,500,624 | 1,229,519 | 24,600,311 |
| 1509 | 2,034,1966 | EJ5, 150 | 12,083,091 | 1801-92 | 8, 0077,549 | 1,254,316 | 27, 091.488 |
|  | 2,013,684 | 685,942 | 12,174, 141 | 1802- | 3, 697 , 899 | 1,367,515 | 28,535, 38 |
|  | 2,215,644 | 734, 709 | 12,678, 685 | 1035 | 3,835,503 | 1, 424,956 | 29,223, 516 |
| 1201-12 | 2,24,877 | 802, 874 | $\begin{aligned} & 18,650,814 \\ & 15 \end{aligned}$ | $\begin{aligned} & 1894 \\ & 1895 \end{aligned}$ | $\begin{aligned} & 3,45,414 \\ & 3,861,300 \end{aligned}$ | $\begin{aligned} & 1,441,282 \\ & 1,429,713 \end{aligned}$ | 30, 382,82918 |
| 108\% | 2,30,110 | 817, 210 | 16,363,471 | 185 | 3,861,300 | 1,229,713 | 30, 200,810 |
| 1883- | 2,516,448 | 1,008, 213 | 17,884,508 | Tot |  |  | 483, 777, $46 \%$ |

Table 4 shows that in the 178 schools there were 1,494 students in classical courses, 1,345 in scientific courses, 9,139 in English courses, and 398 in business comrses. Table 5 shows that 4,672 students were in normal courses. There were 826 graduates from high school courses, 966 from normal courses, and 161 from collegiate courses.

Table 6 is an exhibit of the number of students in professional courses in the colored schools. The total number in professional courses was 1,319 , only 126 of these being females. There were 703 students and 76 graduates in schools and departments of theology, ${ }^{4} 124$ students and 20 graduates in law, 286 students and 30 graduates in medicine, 32 students and 6 graduates in dentistry, 48 students and 13 graduates in pharmacy, and 126 students and 40 graduates in nurse training.

Table 7 is a summary of the statistics of industrial training in the 128 colored schools. The number receiving industrial training was 12,341 , the number of males being $4,4^{77} 6$ and of females 7,865 . The table shows that the number being trained in farm and garden work was 1,098 , in carpentry 1,821 , in bricklaying 254, in plastering 165, in painting 257 , in tin and sheet-metal work 126, in forging 327 , in machine-shop work 223 , in shoemaking 165, in printing 565, in sewing $6 ; 302$, in cooking 2,455, and in other trades not named 1,6\%7. The details of the statistics of industrial training are given in Table 10.

The financial statistics of the colored schools of secondary and higher grade are summarized in Table 8. These schools received in benefactions during the scholastic year 1895-96 the sum of $\$ 323,718$. The income of these schools aggregated $\$ 1,117.569$. Of this amount the sum of $\$ 289,845$ was derived from public funds, $\$ 92,297$ from productive funds, and $\$ 124,481$ from tuition fees. The sources of the unclassified income of $\$ 610,946$ are uncertain. Many schools reported only total incomes for 1895-96.

INTERYIEWS WITH LEADING EDUCATORS OF THE COLORED RACE.
Tnterviews with bishops of the African Methodist Church and with leading educators of the colored race were printed in the New Orleans Times-Democrat of January 24, 1897. Those who read, in the Report of the United States Commissioner of Education for 1894-95, the two chapters on the Education of the Colored Race will be interested in these interviews. The Times-Democrat made the following editorial comment:
"Eiducation for the Negro.
"We publish elsewhere interviews with the presidents of the several colored colleges of this city, the bishops of the African Methodist Church now in New Orleans, and others interested in the education of the colored race, upon a subject, than which there is none more important before the South and the country to-day. It is a part-and the most important part-of the great negro problem of the United States. What is better for the education of the negro-a classical education or an industrial and mechanical education? Shall we turn his ambition in the direction of the learned professions rather than toward the industries?
"When we consider that there are $8,000,000$ negroes in this country, that they constitute one-ninth of its population, and in several of the Southern States are in a majority, we can form some idea of the importance of this matter of educating them and making them useful and valuable citizens.
"A great deal of work has been done already. Over $\$ \$(1,000,000$ liave been expended on colored schools and colleges since 1876 alone. Thirty-three years have passed since the emancipation proclamation-a full generation-and we ought by this time to gather some fruit from the millions expended on the education of the negro. What do the results show-that a classical education or an industrial or mechanical one is better for the present condition and needs of the negro and for the Sonth:
"•The two sides of the case are well stated by Prof. Booker T. Washington, president of the Triskegee Normal and Industrial Institute, of Alabama, on the one hand, and President Edward Cushing Mitchell. of Leland University, in this city, on the other.

- President Mitchell takes a very decided stand against simple industrial education. Ae calls attention to the fac't that the Northern colleges, which in many cases began with mannal labor schools, have abandoned this appendage to their curriculum. Ought we to insist,' he asks, 'upon putting a yoke upon the necks of our bretbren in black which neither we nor our fathers were able to bear:' And he ralls attention to the fact that the report of the Burean of Education for 1880-90 shows that the grarduates of $1 i$ colored schools in which industrial instruction is

Table 3．－Teachers and students in institutions for the colored race in 1895－96．

a Two schools not reporting．
Table 4．－Classification of colored students，by courses of study，1895－96．

| State． | Students in classical course． |  |  | Students in sci－ entific courses． |  |  | Students in English course． |  |  | Students in business cbarse． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \dot{\otimes} \\ & \text { 榃 } \end{aligned}$ |  | $\begin{aligned} & \text { \$in } \\ & \text { सी } \end{aligned}$ | 竒 |  | $\begin{aligned} & \text { H. } \\ & \text { से } \end{aligned}$ | 蓖 | 界 |  | $\begin{aligned} & \dot{9} \\ & \text { 気 } \end{aligned}$ | 䔍 | ¢ H H |
| Alabama | 17 | 4 | 21 | 12 | 12 | 24 | 472 | 518 |  | 10 | 8 | 18 |
| Arkansas． | 28 | 24 | 52 | $\begin{aligned} & 17 \\ & 10 \end{aligned}$ | ， 22 | 39 | 224 | 141 | 305 | 8 | 4 | 12 |
| Delaware | $100$ | 233 |  | $10$ | 194 |  | 32 56 58 | ${ }^{7} 9$ | 38 131 | 65 | 61 | 16 |
| Florida |  |  |  |  |  |  | 230 | 221 | 551 |  |  |  |
| Georgia | 86 | 54 | 140 | 21 | 8 | 20 | 432 | 645 | 1，077 |  | 0 |  |
| Indiana | 45 | 70 | 115 | 0 | 0 | 0 | 11 | ${ }_{0}$ | ${ }_{0} 3$ | 0 | 0 |  |
| Kentucky | 7 | 0 | 7 |  |  |  | 113 | 245 | 358 | 0 | 15 | 15 |
| Louisiana | 32 | 16 | 48 | 12 | 0 | 12 | 207 | 299 | 476 | 20 | 10 | 80 |
| Marylard | 3 | 7 | 41 |  |  |  | 102 | 248 | 350 |  |  |  |
| Misssouri | 15 | 8 | 104 | 47 | 108 | 155 | 45 | ${ }^{3} 5$ | 100 | 28 | 83 | 61 |
| New Jersey | 10 | 12. | 2 | 8 | 10 | 18 | 10 | 14 | 24 |  |  |  |
| North Car |  | 20 | 85 | 80 | 125 | 205 | 489 | 653 | 1，142 | 91 | 14 |  |
| Ohio－．．．．－ | 115 | 0 | 115 | 15 | 7 | 22 | 77 | 5 | ${ }_{34}^{139}$ | 9 | 8 |  |
| South Carolin | 40 | 17 | 57 | $2{ }^{2}$ | 24 | 45 | 317 | 44 | 759 | 81 | 41 | \％ |
| Tennessee | 189 | 67 | 208 | 85 | 19 | 6 | 395 | 518 | 908 |  |  |  |
| Texas． | ${ }_{10}^{2}$ | 0 | ＋280 |  |  | 271 | 88 | 186 879 | ${ }_{728}^{288}$ | $\begin{aligned} & 4 \\ & 0 \end{aligned}$ | ${ }_{0}^{6}$ |  |
| West Virginia | 18 | 4 | 62 |  |  |  | 2 | 42 | 74 |  |  |  |
| Total | 874 | 620 | 1，494 | 520 | 825 | 1，345 | 3，043 | 5，188 | 9，130 | 208 | 106 | 398 |

given in carpentering, farming, shoemaking, etc., have generally drifted off into the professions. Out of 1,243 graduates of these schools 693 are teachers, 117 ministers, 163 physicians, 116 lawyers, while only 12 are farmers, and 5 following mechanical pursuits ( 2 printers, 1 carpenter, and 2 unclassified). From these facts, President Mitchell reaches the conclusion that industrial education is not what the negro needs, but the same higher or classical education provided for the whites.
"We think President Mitchell altogether wrong in his conclusions. It is the same mistake that was made when the suffrage was given the negro. Those who gave it so hastily and prematurely imagined that the fifteenth amendment would immediately make the negro a valuable citizen and endow him with all the political experience which it has taken the white race centuries-and centuries of struggle, too-to secure. There could have been no more unfortunate mistake for the negro and the South. The saturnalia that prevailed between 1868 and 1872 in consequence of conferring of the franchise on a people not yet fitted for it not only cost the South millions of dollars and thousands of lives, but did the negro race a serious injustice, setting back its civilization, arousing old prejudices, and causing even its most ardent friends to doubt its ability for the higher development and civilization.
"Mr. Mitchell would have us do in education what was attempted in politics, but failed. He himself recognizes that the white race began with industrial schools, and as it adranced, steadily elevated its schools, widened its curriculum, and raised the standard of education. He would have the negro at the very start try to do what the whites have taken centuries to reach. He would begin with classical cducation, a policy which will cause only discontent and failure. It is not what we should offer a race only just struggling to the front, steeped in ignorance, the fruit of centuries of slavery. If it were proposed to establish a dozen great universities like Oxford and Cambridge in the heart of Africa, as a means of checking cannibalism and raising and developing the natives, and bringing them civilization and prosperity, it would cause a national protest as a pure waste of money, and yet this would be only an exaggeration of President Mitchell's proposition.
"His statistics, which are the strongest point of his argument, really prove nothing. It may be true that a large proportion of the negroes edncated in the colored colleges hare drifted into the professions. It is equally true that a considerable proportion of them drifted into politics in 1868-1872; but we must not conclude from this that what the negro wants is a political instead of an industrial education. We see that among the college graduates there are ten ministers to every one farmer. We will not accept this as proof that what the negroes need is more theology. There are a thousand negroes engaged in farming for every one who enters the church, and if the farmers were only better taught low to cultivate their lands they would be better off materially and morally. The poverty and the ignorance of the negro race are keeping up a sick rate, a death rate, and a prison rate which are preventing that advance it would otherwise make.
"It is natural that half the graduates of the colored normal and industrial schools should become teachers. In providing for a race whose education has been so long neglected, the first graduates will naturally devote themselves to teaching. President Mitchell says that in giving an industrial education to a negro you help only the individual. His own statistics disprove this, for so far a majority of these graduates have devoted themselves to scattering among the race the information which they themselves have gained. The industrial schools are teaching not a few negroes better work, but through them the entire colored race.
"In marked contrast aro the views of Prof. Pooker T. Washington. president of the Tuskeges Normal and Industrial Institute, one of the leadiny representatives of his race, certainly in the field of edtucation. Professor Washington has had the hest opportunities of studying the question thoroughly and practically. The institnts over which he presides has lone good work for the negro, and its graduates have carried the lessons lenmed there thronghont the South. One of its best fruits is the conference now lield each year at Tuskegee of representatives of the negro race from all parts of the Union to discuss questions affecting its interests.
.. 'I am convinced,' says Professor Washington, 'that whether the negro reccives much or little edncation, whether it be called high or low, we have reached the point in our development where a large proportion of those who are heing educated should, while they are receiving their education or after they have received it, be taught to conneret their education with some industrial pursuit.'
"Professor Washington thinks, as we do, that in the present condition of the nefro, the first thing for him to learn is how to secure an independent position in the industrial world, how to work and to work intelligently. if the colored colleges drop industrial education and turn their attention solely to graduating theolo'ians, lawyers, etc., he sees that the negro will very soon bo crowded out of

Table 5.-Number of nommal students and graduates in 1895-96.


Table 6.-Colored professional students and graduates in 1895-96.

the industries in the South, as he already is in the North. Even in slavery he was taught carpentering, blacksmithing, and kindred mechanical trades. If he abandon this field, he will close the avenues of employment to himself and drift into a condition of uselessness. It will be a bad thing for the race if it allows itself to be driven out of every industry upon which its living depends, and is satisfied with book learning alone, in which it is naturally at a great disadvantage in competition with the whites, if for no other reason because the latter has had the advantage of centuries of schooling. It will be giving up the field where, because of his strength, the negro can compete most successfully for a field where he is at the greatest disadvantage.
"Professor Washington notes sadly the tendency of the negroes to neglect the very industry by which nine-tenths of them make their living-farming. To the adrocates of 'the higher education,' it is hardly worth while to teach the negro how to farm intelligently and profitably, although thousands of white youths are learning scientific agriculture; and it is actually pointed to with pride instead of sorrow that twenty negroes who receive a better education follow theology and law for one who follows agriculture, the profession with which his race has been connected for all time.
"We are glad to see that nearly all the colored men interviewed by us, and particularly those of Southern birth, agree with Professor Washington that what their race needs most is industrial education, rather than simple book learning.
"They are right, and it is an auspicious sign to see them recognizing the potency of industry, and seeing the right road for the elevation of their race. The philanthropy of the North has given millions of dollars to the education of the colored race. The spirit of justice of the Southern people has given ten times as much. The negroes constitute so large a proportion of the population of the South that their prosperity and morality, even their health, affect the entire body politic. It is in negro sections of our cities where the first rules of sanitation are defied that are bred the diseases which sweep through the white residential districts and carry off thousands-victims of negro ignorance and neglect; and the moral atmosphere of these negro Ghettos more or less permeates the whole community.
"A few months ago the American Economic Association issued among its publications, The Race Traits and Tendencies of the American Negro, by Frederick L. Hoffman, F.S. S., statistician of the Prudential Insurance Company of America. It is-the best book yet issued on the subject, the fruit of years of close study of the subject and absolutely free of bias; yet the conclusion Mr. Hoffman reached was:
"'Instead of making the race more independent, modern educational and philanthropic efforts have succeeded in making it even more dependent on the white race at the present time than it was previous to education. It remains to be seen how far a knowledge of the facts about its own diminishing vitality, low state of morality, and economic efficiency will stimulate the race in adopting a higher standard. Unless a change takes place, a scheme that will strike at the fundamental errors that underlie the conduct of the higher race toward the lower, the gradual extinction (of the negro) is only a question of time.'
"Unless the negro race can make a proper place for itself, unless it can find work to do for which it is fitted, it will meet, Mr. Hoffman predicts, the same fate as every other colored race coming into conflict with the Anglo-Saxon-extinction. The preachers and the lawyers and the colored editors will not prevent this, but those who render the negroes industrially independent, find them work to do, improve their material condition, and with that improvement bring about higher spirit of self-confidence and morality.
"The child must be taught to stand before it tries running. The negro is in his infancy as a free man. He should have solid foundations of education first, and open the industries to his race, instead of depending too much on the higher classical education, There has been a disposition of late by many to declare that education is doing the negro more harm than good. The Senate Labor Committee found a number of witnesses to testify to that effect. The Chattanooga Tradesman, after a searching inquiry of the employers of colored labor, learned from them that education generally detracted from a negro's efficiency. We know to the contrary from the experience of every race that this can not be so, and is no more true of the negro than of the white man. It is not education that is causing any lack of efficiency, but the kind of education. It should, for the present at least. be mainly industrial, intended to advance the condition of the negro, to assure him work, and to improve his material status. Whether it will be well afterwards to establish higher universities for the colored race, we may leave to time to determine. We should give him a chance now to improve and raise himself. To give him a classical education in his present condition is like giving a stone to him who asks for bread.

Table 17．－Industrial training of colored studeñts in 1895－96．


Table 8．－Financial summary of the 178 colored schools．

| State． |  |  |  |  |  |  |  | ＂置 © ：Hin品品寝 우ㅁㅜㅜ눙 4 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Alabama | \＄32， 670 | 12，950 | 811， 425 | \＄384，782 | \＄7，000 | 812，63 |  |  | ${ }^{12} 20,256$ |
| Arkansas | 2， 747 | 5，550 | 5，925 | 167， 000 | 9，450 | 5，93 | 2，065 | 4，378 |  |
| District | （1） | 17，550 | 11，300 | 895， 0000 |  |  | 500 |  | 56， 683 |
| Florida |  | 3，316 | 2，656 | 9\％， 875 | 2，800 |  |  | 13，388 | 100， 634 |
| Georgia | 35，284 | 34,469 50 | 29,190 100 | 1，202， 22.50 | 18,750 1,300 | 15，364 | 5，122 | 63， 388 | 1，300 |
| Indiana |  | 400 | 800 | ， |  |  |  |  |  |
| Kentucky | 23,618 1,125 | 10，301 | 7，425 | 182， 8864 | ${ }_{7}^{9,900}$ | 5,230 5,281 | 8，900 | 20，106 | 89，787 |
| Maryla |  | 2，450 | 1，400 | －95， 000 | 9，000 | 2，3i6 | 584 |  | 528 |
| Mississip | 1，366 | 13， 205 | 15，275 | 309，500 | 18，308 | ， 1 |  | 27，817 | 71， 423 |
| M Missouri | 28.000 | 1，000 | ${ }_{500}$ | 18．1200 | 68，000 | 2，142 |  | 3，000 | 7 7，000 |
| North Caroli | 40，945 | 20， 683 | 18，095 | 656， 102 | 21，（177 | 8,700 | 775 | ${ }^{36}$ | 67，388 |
| Ohio． | 8，000 | 5，000 | 2,500 | ${ }^{255,0}$ | 12，500 | 8，500 | 2，38） | 8 ， | 2\％，000 |
| Pennsylvani | 8，552 | 14， 7 ， 2000 | 8，500 | 340,800 | 17，840 |  | 1, | 20， 113 | 49，228 |
| Teanessee | 10，163 | 20， 494 | 20，958 | 765， 600 | 2，856 | 16， 52 | 1，630 | 72， 811 | 83，814 |
| Texas | ， 84 | 6，3 | 4，650 | 297，550 | 25，80 | 18，740 | 30 | ${ }^{30} \mathbf{0 4}$ | 73，488 |
| West Vurginia | 110，500 | 18，000 | 3，550 | 903，500 100,000 | 8，${ }^{15000}$ | ${ }^{8,450}$ | 1，250 | 15， 708 | 10，408 |
| Total | 223，718 | 209，001 | 168，574 | 7，524，948 | 289，845 | 124， 818 | 82， 297 | 610， 046 | 1，117，580 |

"The Times-Democrat gives below interviews with the bishops of the African Methodist Church, now in this city, with the presidents of the several colored colleges in New Orleans, the president of the Tuskegee (Ala.) Normal and Industrial Institute, and with a number of the more prominent representative colored men of New Orleans interested in the matter of education. The Times-Democrat has sought in these interviews to shed some light on the matter of the education of the negro-a subject that is attracting great attention just now, and is being: earnestly and extensiyely discussed pro and con.
"The questions propounded to the presidents of the several colored colleges were as follows:
"1. How many pupils do you graduate each year?
"2. What are these young men and women fitted for when they leave your institutions?
"3. Have you any knowledge of what becomes of them after leaving your care?
"4. Can you make any estimate as to what percentage of them secure useful and lucrative occupations?
" 5 . What is your candid opinion, after years of experience, as to the advisability of the higher education of the negro, i. $\theta_{\text {., a }}$ a classical education, as opposed to an industrial or mechanical education?
"The last question, it will be seen, is the most important, and is the one upon which light is most sought. A very large sum of money is being expended each year on the education of the negro, and large educational funds are being created for their benefit. It is, therefore, important to know what is being accomplished in the way of his education, and what system is yielding the best fruit. Are those colleges which confine themselves mainly to a classical education doing the most good, or those mainly employed in turning the colored youth to industrial puirsuits? A full and complete answer to this question will probably largely influence future donations. It is to secure such an answer that the Times-Democrat has interviewed those who, from their position as the heads of leading colored colleges or from their association with or knowledge of the negro, are best able to speak authoritatively on this matter.
"BOOKER T. WASHINGTON.
"Tuskegee, Ala., January 21.
" To the Editor of the Times-Democrat:
"The Tuskegee Normal and Industrial Institute graduates from forty to fiftyfive young men and women each year from its industrial and literature departments. When these men and women graduate they are fitted to become teachers in the public schools or to work at various trades or industries, such as carpentry, wheelwrighting, blacksmithing, foundry work, machinists, tinsmiths, harness making, shoemaking, printing, farming, dairying, horticulture, stock raising, house painting, brick making, brick masonry, plastering, mattress making, tailoring, sewing, millinery work, laundering, general housekeeping, cooking, and nursing.
"We have a definite plan of keeping closely up with the work accomplished by our graduates after they leave us. In fact, one teacher devotes a large portion of his time to the work of visiting our graduates and in keeping up in various ways with the work done by them. It is safe in saying at least 90 per cent of those who graduate from this institution secure useful and lucrative positions. In fact, most of them are usually engaged before they graduate. Especially is this true of those who graduate from our various industrial departments. So great is the demand from all parts of the South for our graduates who understand the various industrial pursuits, especially agriculture, dairying, carpentry, etc., that we can not begin to supply this demand. Only this week we received applications from two prominent white men, one in Florida and another in Alabama, for men to take charge of large modern dairy establishments.
"I have never been opposed to what is called the higher education of the negro, but after years of experience I am convinced that, whether the negro receives much or little education, whether it be called high or low, we have reached the point in our development where a larger proportion of those who are educated should, while they are receiving their education or after they have received it, be taught to connect their education with some industrial pursuit. To the masses of the negroes in our present condition intellectual training means little except as the negro can use that education along industrial lines in securing for himself an independent position in the industrial world. There should be a more vital and practical connection between the negro's educated brain and his opportunity for
earning an independent living. I do not mean to say that all educated colored men should have industrial training, for we need colored men in the professions. By reason of our failure to give more attention to industrial development we are running the risk of losing the most valuable thing which we got out of slavery. American slavery, as bad as it was, made the Southern white men do business with the negro for two hundred and fifty years. If a white man wanted a house built or a suit of clothes made during slavery, he consulted a negro about the building of that house or the making of those clothes. Thus the two races for two hundred and fifty years were brought into business contact, which left the negro at the close of the war in possession of all the skilled labor, as well as other lines of industry in the South.
"The question which is now pressing upon us more and more each year is, 'Can we hold on to this skilled labor in the face of a large number of men and women of other races from Europe and from the North and West who are continually coming into the South?' These foreigners are not only educated in their brains, but are skilled in their hands. In other words, they have brains coupled with skilled hands, and as a result we are forced more and more every day to compete with these foreigners.
"Heretofore we have left this competition almost wholly to the ignorant men and women who learned their trades during slavery. I claim that a large proportion of the colored men and women who are educated in the colleges should take up industrial pursuits, should start brick yards, steam laundries, become contractors, become trained nurses, intelligent farmers, so that we will not be driven out of every industry on which our life depends. Mere book education not coupled with industrial training too often takes the young man from the farm and makes him yield to the temptation of trying to earn a living in a city by the use of his wits.
"Notwithstanding the fact that nine-tenths of the colored people in the Gulf States earn their living by agriculture in some form, if we leave out what has been done by Hampton and Tuskegee we have done almost nothing in educating the people in the very industry in which they must earn their living. I claim that we should so educate the young colored man that he will not leave the farm, but will return to the farm after he has secured his education, and show his father and mother how, by the use of improved machinery, and by properly enriching the land, they can raise 50 bushels of corn on an acre of land where only 15 bushels were growing lefore. When a negro owns and caltivates the best farm and is the largest taxpayer in his county, his white neighbors will not object very long to his voting, and having that vote honestly counted.
"Booker T. Washington.

> "EDWARD r'USHING MITCHELI.
"President Edward Cushing Mitchell, A. M., D. D., of Leland University, entertains very pronounced views regarding the importance of a higher education for the colored race. In this connection he pointed out that no people had ever taken rank among the civilized nations of the earth without colleges which were the fountains of learning and of a higher civilization. The colleges had always preceded the common-school systems, which were really the outgrowth of the colleges. This country had sulddenly found within its borders a new nation, a people having a population of about $8,000,000$ admitted to citizenship. The question was, as to whether this vast population should be subjected to the same influences which had made a great nation of the American people or left to grope in the darkness of somizavagery. To say that the negro did not need the same educational advantare, which hat raised the white American to his present moral and intellectnal status was to assume a noral and intellectual snperiority for the African race.
"In answer to a question as to the desirability of industrial education for the negro in lien of the higher collegrate course. Dr. Mitchell reforred the guestioner to the following extract from one of his public utterances as an explicit expression of his views on the sulpecet:

- What shall we say now about the relation of industrial training to our problem: Industrial training is good and ureful to some prrcons, if they can afford time to take it. But in its application to the negro, several facts should le clearly understo ot.
"1. It appears not to the generally lanown in the North that in the Sonth all tradey and occapations are open to the negro, and always have been. Before the war slaves were taught mechanic arts, becanse they thereby became more profitabl - to their masters. And now every village has its negro mechanies. who are patromized both by white and crlored employers, and any who wish to learn trades can to so.
" 2. It is a mistake to suppose that industrial education can be wisely applied to the beginnings of school life. Said the Rev. A. D. Mayo, than whom no man in America is better acquainted with the condition and wants of the South: "There are two specious, an-American notions now masquerading under the taking phrase, "Industrial Education:" First, that it is possible or desirable to train large bodies of youth to superior industrial skill without a basis of sound elementary education. You can not polish a brickbat, and you can not make a good workman of a plantation negro or a white ignoramus until you first wake up his mind and give him the mental discipline and knowledge that comes from an good school. * * * Second, that it is possible or desirable to train masses of American children on the European idea that the child will follow the calling of his father. Class education has no place in the order of society, and the American people will never accept it in any form. The industrial training needed in the South must be obtained by the entablishment of special schools of improved housekeeping for girls, with mechanical training for such boys as desire it. * * * And this training should be given impartially to both races, without regard to the thousand and one theories of what the colored man can not do.'-Address for National Educational Association, August 9, 1873.
"3. Industrial training is expensive of time and money as compared with its results as a civilizer. When you have trained one stadent, you have simply fitted one man to. earn an ordinary living. When you have given a college education to a man with brains, you have sent forth an instrumentality that will affect hundreds of thousands.
"Said Chauncey M. Depew, in his address at the tenth convocation of the University of Chicago, in April, 1895: 'I acknowledge the position and usefulness of the business college, the manual-training school, the technological institute, the scientific school, and the schools of mines, medicine, law, and theology. They are of infinite importance to the youth who has not the money, the time, or the opportumity to secure a liberal education. They are of equal benefit to the college graduate who has had a liberal education in training him for his selected pursuit. But the theorist, or rather the practical men who are the architects of their own fortunes, and who are proclaiming on every occasion that a liberal education is a waste of time for a business man, and that the boy who starts early and is trained only for his one pursuit is destined for a larger success, are doing infinite harm to the ambitious youth of this country. The college, in its four years of discipline, training, teaching, and development, makes the boy the man. His Latin and his Greek, his rhetoric and his logie, his science and his philosophy, his mathematics and his history have little or nothing to do with law or medicine or theology, and still less to do with manufacturing, or mining, or storekeeping, or stocks, or grain, or provisions. But they have given to the youth, when he has graduated, the command of that superb intelligence with which God has ondowed him, by which, for the purpose of a living or a fortune, he grasps his profegsiom or his business and speedily overtakes the boy who, abandoning college opportunities, gave his narrow fife to the narrowing pursuit of the one thing by which he expected to earn a living. The college-bred man has an equal opportunity for bread and butter, but beyond that he becomes a citizen of commanding infiuence and a leader in every community where he settles.'
"4. Industrial training is liable to divert attention from the real aim and end of education, which is a developed manhood. The young scholar can not serve two masters. It requires all the energy there is in a boy to nerve him to the high resolve that in spite of all difficulties he will patiently discipline himself until he becomes a man. This is one reason why our Northern colleges, which in many cases began as inanual-labor schools, have abandoned this appendage to their curriculum. Ought we to insist on 'putting a yoke upon the necks' of our brethren in black 'which neither we nor our fathers were able to bear?'
"Finally. Experience seems to show that industrial education does not educate, even in trades. In the report of the Bureau of Education for 1889-90 is a full statistical table of the lines of business in which the graduates of seventeen colored. schools are employed. In all these schools industrial instruction is given, such as carpentry, tinning, painting, whip making, plastering, shoomaking, tailoring, blacksmithing, farming, gardening, etc. Ont of 1,248 graduates of these schools there are found to be only 12 farmers, 2 mechanics, and 1 carpenter. The names of the universities are: 'Allen,' South Carolina: 'Atlanta,' Georgia; 'Berea,' Kentucky; 'Central Tennessee,' Tennessee; 'Claflin,' South Carolina: 'Fiske,' Tennessee; 'Knoxville,' Tennessee: 'Livingstone,' North Carolina: 'New Orleans,' Louisiana; 'Paul Quinn,'Texas; 'Philander Smith,' Arkansas: 'Roger Williams,' Tennessec: 'Rust,' Miscissippi: 'Southern,' Louisiana: 'Straight, Louisiana; 'Tuskegee,' Alabama! 'Wilberforce,' Ohio.
"The employment of the graduates were: Teachers, 693; ministers, 117; physicians, 163; lawyers, 116; college professors, 27; editors, 5 ; merchants, 15 ; farmers, 12; carpenters, 1; United States Government service, 36 ; druggists, 5; dentists, 14; bookkeepers, 2; printers, 2; mechanics, 2; butchers, 3; other pursuits, 30.
"The money appropriated to these schools by the Slater fund from 1884 to 1894 was $\$ 439,981.78$.
${ }^{6}$ L. G. ADKINSON.
"President L. G. Adkinson, A. M., D. D., of the New Orleans University, said that, while he believed in the value of an industrial education for the youth of any race, white or black, he would not be in favor of in any way curtailing the present curriculum in use in the colleges for the colored race. As far as his own experience taught him, there was apparently little danger of any plethora of colored graduates in the near future. In the first place, a majority of colored students had so little means available for the securing of an education that very few of them were in a position to take an extended college course, and, in the second place, they were, in most instances, so anxious to go out in life and earn a livelihood that they were inclined to leave college as soon as they had become qualified to teach in the public schools for their own race, and, as the demand for teachers generally exceeded the supply, they had no difficulty in obtaining satisfactory employment.
"As to the effect of a higher education upon the young people of the colored race, he had always found it beneficial, from a moral as well as from an intellectual point of view. The training received by the young men and women not only gave them a clearer and broader view of their responsibilities in life, butitendowed them with greater steadiness of purpose and business sense.
"Among the more advanced students this improvement in moral and intellectual character had always been more marked than among the students who had left the college from the lower grades, but, as far as he had been able to trace them, he had not learned of a single student, male or female, who had gone out to lead a life of vice or idleness after having spent two years or more in the Southern University. In fact, he had not known of a single instance in which one of his students or ex-students had been arrested for lawbreaking of any kind. He believed that higher education was as beneficial to the one race as the other, but he thought that, as far as practicable, an industrial education should go hand in hand with a literary or scientific training.
"In proof of his belief that a higher education was good for the young people of the colored race, President Adkinson pointed out the records of the lives of the past graduates of the New Orleans University, many of whom are now occupying honorable positions in the literary and educational world, while all were reputably and creditably employed.
"He was also of the opinion that a college training was beneficial to colored boys and girls who contemplated going into domestic service. Many of the students who were then attending the college were devoting their spare time to domestic service in families who lived near the college, and their employers had always expressed themselves as more than satisfied with their services.
" PRESIDENT HENRY A. HILL.
"President Henry A. Hiil, of the Southern University, expressed the opinion that there was no conflict between industrial and the higher collegiate education. He was of opinion that the two should go hand in hand to build up anything like a desirable manhood. If one or the other had to be neglected, he would consider it desirable to cling to the education of the inind rather than of the hands. Just as the mind was the more important part of man, so it was of importance that it should not be neglected. A collegiate education never failed to make a man brighter, to give him broader and more comprehensive views, and to make in all respects a better man of him. It was trite in these days to talk of the importance of education for the masses, as everybody admitted it to he of the last importance. It was not the negroes who had the advantages of a collegiate training who went to the bad, but in ninety-nine cases out of one hundred the negroes who could neither read nor write. A skillful mechanic who was lacking in intelligence was not likely to be a good nor successful member of society. As far as the Southern University was concerned, its students were mostly young men and women without means, and as soon as they harl gone far enougll in their studies to enable them to earn a comfortable livelihood they generally left the college to take such situations as might be open to them. In fact, since the establishment of the Southern University not one hall as yet taken the full collegiate course. Some had become fairly advanced, and they were now doing well. They were not all
engaged in professional pursuits. Among those whom he could most readily call to mind, several were engaged in mechanical pursuits, such as plastering, bricklaying, carpentering, and they were all doing well, most of them being now employers of labor and engaged in prosperous business. These men were good mechanics and intelligent business men, much more so than they would have been had they not had the advantage of a few sessions at college.
"Of the female pupils who had attended the college for two or three years, most of them were teachers, while the others were in most instances married. Some were milliners or dressmakers, but all had proven by their lives after leaving college that they had been materially benefited by the training they had received. The demand for colored school-teachers was so active that it seemed as if the colleges situated in New Orleans could not turn them out fast enough to meet the wants of the State in this direction. This was true of the boys as well as the girls trained in the local universities. Among the boys and girls who had found it impossible to remain long enough at the college to fit themselves for teaching, many had taken situations as domestic servants, and they had been found to be very desirable for this purpose. They were much more intelligent and better behaved than those who had no education. They knew their places better, and were much more apt to hold a situation than those who had not attended college. They were in all respects brighter and more trustworthy.
"In the Southern University all received an industrial as well as a collegiate training. This he considered of great importance. Boys who had spent several years in a college without having their muscles as well as their minds developed found it a great hardship to engage in manual labor after leaving college. Their muscles had become lax through protracted disuse, and to them, for a time at least, severe manual labor meant severe pain that was almost unendurable. Whether a boy was white or colored, he did not believe in educating one portion of his system without the other. He did not believe that the industrial training at all interfered with the collegiate training proper, for the training of the muscles could go on at the same time as the training of the mind in such a way that the one would in no way retard the other. Anyone who had had long experience in educating young children had not failed to notice how utterly impossible it was for many of them to keep still. They would squirm and twist restlessiy in their seats. This was not perversity nor natural unruliness, but simply the demand of nature for the exercise of their muscles. To such children a very moderate amount of industrial training was a positive luxury, a rest and relaxation, and he had always found that they took kindly to it. If their industrial training continued to be neglected, they would in time become less impatient of restraint. This did not mean that they were becoming more obedient and tractable, but only that their muscles had begun to be vitiated in quality through disuse, a condition that was in all respects highly undesirable.
"Upon the whole, President Hill was unqualifiedly opposed to the curtailing of the curriculum for colored students, whom he considered quite as likely to be benefited by a higher education as white students could be.


## " R. L. DESDUNES.

"R. L. Desdunes said: "While the right of acquiring education of any sort or degree is not to be denied, yet that subject, like others, may properly divide the opinions of mankind. I regard as education the use we make of our sense to accomplish the ends of our existence. This definition leads me to consider availing education as the best to be desired. I mean that training of nur faculties best calculated to promote our own happiness and the happincss of other.s. Parents should consult, surroundings, and from the inexorable logic of those surroundings pluck the rule of their conduct in what concerns the welfare of their children.
" " The colored man of to-day may or may not be the colored man of to-morrow, and for that reason ho should live for the all-absorbing present. If he teaches his child how to work in skilled labor, he places in the possession of that child the key to self-support, self-reliance, and dutifulness. As all philosophy may be resumed into what man owes to his Gorl, to his family, to himself, to his neighbor, and humanity, it is therefore wise in him to pursue such a course in life as will more easily and more successfully help him to come up to the requirements of his manifest destiny. The past has proven that an elementary clucation, coupled with the manual training I advocate by preference. has secured for some colored people in the United States most satisfactory results. Before the war it was the custom amoner the free colored families to send their children to school up to the age of 14, in some cases 15 . After that time they were apprenticed up to 20 and 21 years. This rule applied to girls and boys. That sort of education furnished to
this city some of its best mechanics and seamstresses, and developed a population which, in point of intelligence, respectability, and industrious habits, could compare without disadvantage with any other of the same size and opportunities. It was a working population, yet it produced its poets, musicians, painters, etc. The book known as "Les Cenelles" is the fruit of their leisure. Lanusse and Questy were carpenters, Dede was a cigar maker, Populus a bricklayer, and Hewlett could turn his hand at almost any trade.
" "The colored man of to-day should not seek after higher education, not because he deserves it less than his more fortunate fellow-man, but because it is not profitable once in a thousand times. The average colored classic with his high Latin and Greek in this country is a literary Tantalus, only allowed to see, but withoutpower to conquer. Let us have the skilled workman and the needlewoman; they will do more good for the present than this multitude of collegiates who for the want of opportunity lapse into servility or rascality.'
" BISHOP W. B. DERRICK.
"Bishop W. B. Derrick, of New York, said that so far as the present generation of the colored race is concerned he favored educating the youth in the industrial and mechanical branches, without so much attention being paid to their scientific and professional education.
"'I think it will be better,' he said, 'for these girls and boys to have a thorough education in the common-school branches, with special training in mechanics and agriculture, than to pursue the higher or classical education.
" 'It is for this reason that I am opposed to the so-called higher education of the present generation of the colored youth; that the race has not yet amassed sufficient wealth to enable these higher educated youths to take their place in their professions where, of necessity, they must bo supported until they obtain a start. In other words, the boys' parents are not rich enough to both edncate them and sapport them while they make a start in the professions. And the time has not yet come when the negro can successfully pose as an ornament to society with advantage to his race. No; I think that the negro will advance more surely and rapidly by educating them gradually. Teach this generation how to work and manufacture or conduct business enterprises. When they have amassed the wealth, then let their children be educated for whatever anybody else is educated--the professions and all branches of knowledge and culture.'

## " osicAle ATWOOI).

"President Oscar Atwond, A. M., of Straight University, while deprecating any realuction or curtailment of the college curriculum, entertained very pronounced views as to the great value of an industrial training, which, in his opinion, ought always to be constantly associated with the education of the young people of both sexes. The institution over which he presided took the youngest pupils into the kinclergarten department and undertook to train them up to final graduation, although there was only a sinall proportion of the pupils whom they advised to undertake the full course. They usually had about 600 pupils of all grades in the institution, and the average number graduated annually from the highest grade dicl not oxceed 1.\%. It was their practice to encomrage mone but the brightest students to take the full course, although those who contemplated entering the Christian ministry were encouraged to reach as high attainments as their circunstances would permit. He conducterl the interviewer over the promises, taking particular pains to point out the completeness of the industrial department, which is thoroushly equipped and well appointod for the purpose it is intended to serve. The boys show admirable proficiency in calinetmaking and joiner work. printing. and other occmpations. while the mochanicaldrawings wore excellent. The female students are all taught plain sewing. dressmaking, needle and fancy work, and the prodnct of these industrial clacies was fomed in all instances to lie extromely recditable.
" $A \rightarrow$ to the benefit to be given in the young people of the colored race throngh a careful college training, President Atwool rutertained much the same views as those expressed by the other college presilents interviewerl on the subject althongh he laid rather mnre stress upon the vilur and importance of an industrial training than nyy of the uthers.
"BISHOP J. C. EMBRY.
"Bishop J. C. Embry said the tendency of the day was unquestionably toward mechanical and industrial education in both colored and white educational institutions. The changed and changing conditions of this country made the enlargement of this system of education absolutely necessary if the greatest good and best results were to be obtained for the youth of the country. On the one hand the apprentice system that once obtained had practically passed away, while on the other hand the skilled mechanics and artisans of Europe were pouring into this country year after year and driving out such American labor as was not fitted to meet it. The effects of this immigration were being seriously felt, and the necessity of meeting it is fully realized in the East by both white and colored educators. The African-American colored colleges and institutions, Bishop Embry said, were reaching out and adding mechanical instruction whenever the opportunity offered.

## "BISHOPS ARNETT AND SALTER.

" Bishop B. W. Arnett, of Ohio, said that he thought it was for the best advantage of the negro race to get all the education he could, both common-school and in the higher branches. 'It is shown by the records,' he said, 'that even when all the youth are offered the advantages of higher education, not more than onefifth are able from one reason or another to avail themselves of it. The proportion of one-fifth I do not regard as too high for the number of those in the protessions, and, therefore, I see no good reason for confining the education of the negro strictly to the industrial and mechanical branches.'
"Bishop M. B. Salter, of South Carolina, said: 'Let the negro get all the education he can, both with their hands and in their heads.'
" BISEIOP H. M. TURNER.
"Bishop H. M. Turner said that during the present generation, at least, the greatest efforts of the educators should be directed to the industrial and mechamical training of negro children. In this field there was a much wider range for work and development, and it was much easier to succeed under the conditions that prevail and were likely to continue in a large degree for years to come than in the arts and professions. Bishop Turner said he had many scholars educated in the higher branches for whom he could find no employment.

> " BISHOP B. F. LAEE.
"Bishop B. F. Lee said he favored following the same eflucational system that had made the white man strong and great and independent; withont properly training the hand, all intellectual development is useless. 'Simply elevating the intellect,' said the Bishop, 'only makes man vicions. The educational system should be blended. Some should be trained as thinkers, while others should be educated in mechanical and industrial callings.'

> ' COL. JAMES JEW'S.
"Col. James Lewis said while colleges were essential for the higher attaimments of the race, the inclination for usefulness of a child could liest be ascrertainerl at home and in the schoolroom. Those children showing aptness for the professions or mathematics or mechanics shomld then he trained according to the bent of their mincl. Colonel Lewis said the race was sadly in need of more normal, mechaniral, and industrial schonls.

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 educatorl as a race. but as anyboly else. Why make any distinctioni: sicomblly,
 taught to the nergro. In other worde, I think the negres shombl be wheaterl just ike anyborly else, withont resurd t , his eolor or race.".

Table 9.-Schools for the education of the colored

race-teachers, students, and courses of study.


Table 9.-Sehools for the education of the colored race-

teathers, students, and courses of study-Continmed.


Table 9.-Schools for the education of the colored race-

|  |  |  |  |  | achers. |  | Pup | ils | nrol | lled. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | State and postoffice. | Name of school. | Religious denomi- | White | $\begin{aligned} & \text { Col- } \\ & \text { ored } \end{aligned}$ |  | Tot |  | ElEl <br> ma <br> grad | en- |
|  |  |  |  |  |  | $$ |  |  | 商 | 號 |
|  | 1 | 2 | 3 | 45 | 7 | 8 | 9 | 10 | 11 | 12 |
|  | MTSSISSIPPI-con- tinued. |  |  |  |  |  |  |  |  |  |
| 79 | Holly Springs | Mississippi State Colored | Nonsect. |  | 3 | 2.6 | 107 | 106 | 30 | 40 |
| $\begin{aligned} & 80 \\ & 81 \end{aligned}$ | Jackson Meridia | Jackson College. Lincoln Schog | Bapt .... |  |  |  |  |  |  |  |
| $\begin{aligned} & 81 \\ & 82 \\ & 82 \end{aligned}$ |  | Lincoin School-...-....-- | M. C ------- |  |  |  |  | 112 |  | 86 |
| $\begin{aligned} & 83 \\ & 84 \end{aligned}$ | Tongeloo | Nangaloo University |  |  |  |  |  |  |  | 168 |
| 85 | Westside $\qquad$ MISSOURI. | Alcorn Agricultural and Mechanical College. | Nonsect.. |  | 16 | 16 | 319 | 18 | 232 | 7 |
| 86 | Boonville.......... | Sumner High S |  |  |  |  | 5 125 | 141 | 113 | 126 |
| $\begin{aligned} & 87 \\ & 88 \end{aligned}$ | Hefferson City-...-- | Douglass High Scho | Nonsect.- |  |  | 11 |  |  |  |  |
| $\begin{aligned} & 89 \\ & 89 \\ & 80 \end{aligned}$ | Kansas City- | Lincoln High Schooi. | Nonsect.- |  |  |  | 38 | 91 |  | 0 |
| $\begin{aligned} & 90 \\ & 91 \end{aligned}$ | Mill spring--- | Hale's College* ${ }_{\text {George }}$. Smith Colloge | Nonsect.. | 4 |  | 11 | 48 | 25 | 51 | $5^{5}$ |
|  | NEW JERSEY. |  |  |  |  |  |  |  |  |  |
| 92 | Bordentown. | Manual Training and In- | Nonsect-- |  | 2 | 46 | 35 | 40 | 24 | 25 |
|  | north carolina. |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & 93 \\ & 94 \end{aligned}$ | Ashboro Beaufort | Ashboro Normal School *- |  |  |  |  |  | 90 50 |  | 41 |
| 95 | Charlotte- | Bidale University ${ }^{\text {Cla }}$--- | Presb |  |  |  |  |  |  |  |
|  | Clinton... | Clinton Colored Graded | Nonsect.- |  |  |  | 240 | 44 | 20 | 30 |
| 97 | Concord | Scotia Seminary | Presb |  |  | 6 |  | 288 |  | 24 |
| 98 | Elizabeth City | State Colored Normai school | Nonsect |  |  |  |  | 181 | 10 | 4 |
| 99 | Fayetterille |  | Nonsect. |  |  |  |  |  |  | 33 |
| 100 | Franklinton. | Albion Academy Normai | Presb |  | - | 4. | (104 | 131 | 15 | 18 |
| 101 | do | Franklinton Christian | Christian | 1 |  |  |  | 79 | 38 | 47 |
| 102 | do | College. ${ }^{\text {Cate }}$ (olored Normal | Nonsect- |  |  |  |  | 116 |  | 26 |
| 103 | Goldsbor | Schovi.* | N |  |  |  |  |  |  |  |
| 104 | Greensboro |  | Nonsect.. |  |  | 17 | 45 | 15 | 0 | 0 |
|  |  | ical College for the Colored Race. |  |  |  |  |  |  |  |  |
| 105 106 |  | Bennett College a..... | Meth |  |  | 510 |  | 108 |  |  |
| 106 | High Point .-. | High Point Normal and | Friends .- |  | 10 | 24 | 94 | 117 | 94 | 117 |
| 108 | Kings Mountain. | Lincoln Academy. | Cong -...- |  |  | 0 |  |  | 67 | 131 |
| 109 | Peedee..-...- | Whitin Normal School*- | Nonsect. |  | ${ }_{0}{ }^{1} 1$ | 1 | ${ }_{142}^{38}$ | 43 | 12 | 18 |
|  | Plymor |  |  |  |  |  |  |  |  |  |
| 111 | Raleigh. | St. Augustine's School.-- | Nonsec |  |  | 12 | 91 | 137 |  | 112 |
| 112 | R Roldovi | Shaw University -...-.- | Bapt...-- |  |  | 4 | 158 | 189 | 40 | 51 |
| 114 | Sallisbary | Livingston College | Aonsect:- |  |  | 1 |  | 240 |  | 43 |
| 115 | -...do ... | State Colored Normai | Nonsect.- |  | 03 |  | 43 | 70 | 36 | 52 |
|  |  | Shiloh Institute*..... |  |  |  |  |  |  |  | 28 |
| 117 | Wilmington | Gregory Normal Institute | Nonsect.. |  |  |  |  | 190 |  | 134 |
|  | Windsor ... | Rankin-Richards Insti- | Nonsect. |  |  |  | 42 | 84 | 28 | 56 |
| 119 | Winton...-.-.... | Wsters Normal Institute. | Bapt ....- | 0 | 02 | 35 | 82 | 96 | 43 | 62 |
| 139 | Wiliberfore |  |  |  |  |  |  |  |  |  |
| 1 | Xonia | Colored High School. | A.M.Es |  | ${ }_{1}^{8}$ | ${ }_{3}^{18}$ |  | 130 | 7 | 03 |
|  |  | of 1804-05. |  | tatist | ties of | 1893 |  |  |  |  |

teachers, students, and courses of study-Continued.


Table 9.-Schools for the edueation of the colored race-

técichers; students, and courses of study-Continued.


Table 9.-Schools for the education of the colored race-

*Statistics of 1894-95.
teachers, students, and courses of study-Continued.


Table 10.-Schools for the education of the colored race-

narofessional and industrial training-equipment and inoome.


Table 10.-Schools for the education of the colored race-

professional and-industrial training-equipment and income-Continued.

| Chief sources of support. |  |  |  |  |  |  |  | $\begin{aligned} & \text { Total income for the year } \\ & 1895-96 \text {. } \end{aligned}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21 | 22 | 28 | 24 | 25 | 26 | 27 | 28 | 29 |  |
| A. M. E. Ch. |  | 3,000 | $\begin{aligned} & \$ 78,000 \\ & 150,000 \end{aligned}$ |  | $\begin{array}{\|} \$ 1,190 \\ 2,206 \end{array}$ | 0 | $\begin{gathered} \begin{array}{c} 94,310 \\ 20,174 \end{array} \end{gathered}$ | 55,500 22,380 | ${ }_{39}^{38}$ |
| Tuition and henevolence -...... |  | ${ }^{200}$ | 20,000 | 0 | 1,340 |  |  | 1, 310 | 40 |
| Presb. men | 8250 | 390 | 25,000 | 0 | 300 |  | 3,200 | 3,500 | 41 |
| §. Col. M. E. Ch |  | 400 | 14, 484 |  | 264 | \$1,905 | 5,648 | 7,817 | 42 |
| State and United States |  | 100 | 25,000 | $\overline{0}$ | \% |  | 15,000 | 15,000 | 44 |
| Western Union Bapt. Assn | 2 | 0 |  | \$360 | 25 | 0 | 23 | 408 | 45 |
| Benevolence and tuition. Am. M. Assn. and tuition | 14 | 850 3,000 | 11,000 30,550 | 0 | (6250 | ${ }_{225}^{672}$ | 4,135 | 5,432 | ${ }_{47}^{46}$ |
| Am. M. Assn. and benevolence F. A. and S. Ed. S. M. E. Ch. Endowment | 280 5,80 |  |  | - 0 | $\begin{gathered} 1,1,288 \\ 11,550 \\ \hline \end{gathered}$ | 0 | 280 | $\begin{aligned} & 7,1 ; 505 \\ & 1,973 \\ & 1,950 \end{aligned}$ | 49 50 51 |
| Am. M. Assn. and tuitions |  | 200 | 8,570 | 0 | 390 | 540 | 0 | 030 | 5. |
| Stato |  | 50 | 2,500 | 1,300 | - 0 | 0 | 0 | 1,300 | 54 |
| State and United States | 23,543 | 8, 500 | 113,450 |  | 3,500 | 3,200 | 0 |  | 57 |
| Tuition. |  |  |  |  | 1,000 |  | 300 |  |  |
| A. M, Assn -......... | 15 | 300 | 15,000 | 0 |  |  |  | 080 | 60 |
| State |  | 170 | 25; 850 |  |  |  |  | 4,170 | ${ }^{61}$ |
| Endowment. |  | 1,000 | 40,000 |  |  | 2,400 |  | 2,400 | ${ }^{65}$ |
| S. Ed. Soc. M. E. Ch. and | 0 | $1,000$ | 175, 000 109,000 | 0 | 3,281 | 3,500 400 | $\begin{gathered} \cdots 500 \\ 4,600 \end{gathered}$ | $\begin{array}{r} 4,000 \\ 8,281 \\ 8,21 \end{array}$ | 67 68 |
| United States and State Am. Miss. Assn | 625 | $\begin{aligned} & \frac{1}{2}, 160 \\ & \hline \end{aligned}$ | $\begin{gathered} 59,881 \\ 125,000 \end{gathered}$ | 7,500 | $2,000$ | $800$ | $\begin{array}{r} 14,006 \\ 1,000 \end{array}$ | $\begin{aligned} & 21,508 \\ & 8,600 \end{aligned}$ | 69 70 |
| Clty |  | 250 |  |  |  |  |  |  | T1 |
| M. E. Ch |  | 2,000 | 45,000 |  | 1,252 | 584 | 18, 804 | 15,800 | ${ }_{73}^{72}$ |
| State and city. |  | 200 | 35,000 | 6,500 |  |  | 5, 614 | 12,114 | 74 |
| Onited States and State |  |  | 15,000 | 2,500 | 1,114 |  |  | 3,014 | 75 |

Table 10.-Schools for the education of the colored race-


[^102]professional and irdustrial training-equipment and income-Continued.


Table 10.-Schools for the education of the colored race-

professional and industrial training-equipment and income-Continued.


Table 10.-Schools for the education of the colored race-


* Statistics of 1894-95.
professional and industrial training-equipment and income-Continued.



## CHAPTER XLIII.

## SCHOOLS FOR THE DEFECTIVE CLASSES.

Summary of statistics of State public schools for the blind, 1895-96.


Sumnary of statistics of State public schools for the blind, 1895-96-Continued.


Statistics of State public schools for the blind, 1895-96.




* From 1894-95.

Summary of statistics of public day schools for the deaf，1895－96．

| State and division． | －nұı7su！suof7 sequinN | Instructors． |  |  |  |  |  | Pupils． |  |  |  |  |  |  |  |  | Volumes in library. |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 恖 |  | $\begin{aligned} & \text { Wi } \\ & \text { 品 } \end{aligned}$ |  |  |  | 感 |  |  |  |  |  |  | Kindergarton. |  |  |  |  |  |  |
| 1 | 2 | 3 | 4 | 5 | ${ }^{6}$ | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21. | 22 |
| United States． | 20 | 10 | B7 | 77 | 56 | 0 | 9 | 344 | 271 | 615 | 182 | 205 | 9 | 1 | 32 | 39 | 1，976 | \＄200 | \＄202， 900 | \＄99，224 | \＄103，161 |
| North Atlantic Division | 3 | 2 | 27 | 29 | 27 | 0 | 7 | 137 | 120 | 257 | 74 | 65 | 0 | 1 | 10 | 16 | 1，657 | 0 | 194， 000 | 81，635 | 81，328 |
| Maino ．．．．．．．．．．．．．． Massachusetts．．． Rhode Island．．．．． | $\begin{aligned} & 1 \\ & 1 \\ & 1 \end{aligned}$ | 0 0 0 | $\begin{array}{r} 8 \\ 12 \\ 7 \end{array}$ | $\begin{array}{r} 8 \\ 12 \\ 9 \end{array}$ | $\begin{array}{r} 8 \\ 13 \\ 7 \end{array}$ | 0 | 1 3 3 | 46 57 34 34 | $\begin{aligned} & 30 \\ & 61 \\ & 29 \end{aligned}$ | 76 118 63 | 74 | $\stackrel{2}{28}$ | 0 | 1 | 9 0 1 | 12 4 | $\begin{aligned} & 600 \\ & 805 \\ & 855 \\ & 202 \end{aligned}$ | 0 | $\begin{aligned} & 30,000 \\ & 98,000 \\ & 66,000 \end{aligned}$ | $\begin{aligned} & 32,680 \\ & 18,955 \\ & 30,000 \end{aligned}$ | $\begin{aligned} & 32,680 \\ & 18,955 \\ & 29,693 \end{aligned}$ |
| North Contral Division． | 17 | 8 | 40 | 48 | 29 | 0 | 2 | 207 | 151 | 358 | 108 | 140 | 9 | 0 | 22 | 23 | 310 | －200 | 8，900 | 17，589 | 21，833 |
| Ohin | 3 1 | 2 | $\stackrel{9}{9}$ | 11 | 7 | 0 | 0 | 48 6 | 36 3 | 84 8 | 39 | 7. | 0 | 0 | 22 | 0 | 95 | $\begin{aligned} & 100 \\ & 100 \end{aligned}$ |  | 6，545 | 6，545 |
| nlinots．．． | 1 | 8 | 8 | 11 | 2 | 4 | 1 | $\begin{array}{r}41 \\ 7 \\ \hline\end{array}$ | 29 6 | 70 13 | 20 |  |  |  |  |  |  |  |  |  |  |
| Michigan． Minnesota | 1 | 0 | 1 | $\frac{1}{2}$ | $\frac{1}{2}$ |  |  | 17 | 10 | ${ }_{27}^{13}$ | － 11 | 16 | 0 |  |  |  |  |  |  |  |  |
| Missouri． | 1 | 1 | ${ }^{8}$ | 4 | $1{ }^{16}$ | 9 | 0 | 19 | 19 | 38 117 | 138 | 0 |  |  | 0 | 18 |  |  |  |  | 2，620 |
| Wisconsin | 0 | 1 | 17 | 18 | 36 | 2 | 1 | 69 | 48 | 117 |  | 117 |  | 0 |  | 10 |  |  | 8，900 | 11，044． | 12，668 |

Statistics of public day schools for the deaf，1895－96．

|  | Post－affice． | Name． | Executive officer． | Instructors． |  |  |  |  | Pupils． |  |  |  |  |  |  |  |  | $\text { 'Błṭac red } 7500 \text { [Bnuuv }$ |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 商 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
| 1 | Chicago（Schiller Building），II． | Chicago Day Schools for the Derf． | Mary McCowan ．－．． | 3 | 8 | 2 | 4 | 1 | 41 |  | 20 |  |  |  |  |  |  |  |  |  |  |  |
| $\stackrel{3}{3}$ | Evansville，Ind． Portland，Me． | Day School for the Deaf． Portland School for the Deaf The Horace Mann School for the Deaf． | Paul Lange EHzabeth R．Taylor Miss Serah Fuller． | 1  <br> 0 8 <br> 0 12 <br>   |  |  |  |  | 6 48 | 30 |  |  | 9 |  | 9 |  |  | \＄100 |  |  |  | 32，650 |
| 4 | Portland，Me．．．．．．．．． bury st．），Mass． |  |  |  |  | 12 | 0 | 3 | 47 | 61 | ${ }_{0}$ | 2 | 0 | 1 | 9 | 13 | 600 885 | 169 | 0 | 98，000 | 18， 955 | 18，955 |
| B | Detroit，Mich．．．．．．．． | Detroit Day School for the Deaf． | Miss M．Lizzie Don－ ohoe． | 0 | 1 | 1 |  |  | 5 | 2 |  |  |  |  |  |  |  |  |  |  |  |  |
| C | Minneapolis，Minn ．－ | Minneapolis Day School for |  |  | 2 | 2 |  |  |  | 10 | 11 | 16 |  |  |  |  |  |  |  |  |  |  |
| 7 | St．Louis（9th and Weshington ats．）， Mo． | the Deaf． <br> St．Louis Day School for the Deaf． | James H．Cloud． |  | $1{ }^{3}$ | 1 | 0 | 0 | 19 | 19 | 38 | 0 | 0 |  | 0 | 13 | 0 | 69 |  |  |  | 2，620 |
| 8 | Cincinnati（431 West 9th st．），Ohio． | Oral school for the Deaf． | Miss Virginis A． Osborn． |  | 10 | 5 |  | 2 | 20 | 14 |  |  |  | 0 | 7 | 0 | \％ 6 | 100 |  |  | 4，045 | 4，045 |
|  | Cincinnati，Ohio．．．．－ | Public School for the Deaf＊ |  |  |  |  |  | 0 |  |  |  |  |  |  |  | 0 |  |  |  |  |  |  |
| 10 | Cleveland，Ohio．．．．．． | The Cleveland Day School for the Deaf | John H．Geary |  | \％ | 2 | $10$ | 0 |  | 18 | 39 | 8 | 0 |  | 15 | 0 | 5 | 43 | 100 |  | 2，500 | 2，500 |
| 11 | Providence，R．I．．．．－ | Rhode Island Institute for the Deaf． | Laura De L．Rich－ |  | 7 | $\%$ | $\cdots$ | 3 |  | 29 |  |  |  |  | 1 |  | 968 | 241 |  | 66，000 | 30，000 | 20，693 |
| 12 | Ean Claire（1234 South niver st．）， Wis． | Eau Claire Day School for the Deaf． | ards． <br> Prof．J．K．McGre－ gor． | 0 | 1 | 1 | 0 | 0 | 0 | 5 | 0 | ？ | 0 | 0 | 0 | 0 |  | 125 |  |  |  | 604 |
| 13 | Fond du Lac，Wis．．． | School for the Deaf | Anna Sullivan． | $\begin{aligned} & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \\ & 1 \end{aligned}$ | 1 | 0 | 0 |  | 4 | 0 | $\dagger$ | 0 | 0 | 0 | 0 |  | 125 |  |  |  | 630 |
| 14 | La Crosse，Wis．．．．．． | La Crosse Ural School for the Deaf | Albert Hardy． |  |  |  | 0 | 1 | 2 | 6 | ， |  | 0 | － | 2 | 0 |  | 121 |  |  | 850 | 850 |
| 15 | Manitowoc，Wis．．．．． | Manitowoc Day School for the Deaf． | G．G．Sedgewick | 0 |  |  |  |  | 7 | 2 | 0 | 0 | 0 | 0 |  | 0 |  |  |  |  | 1，019 | 1，019 |

Statistics of public day schools for the deaf，1895－96－Continued．


Summary of statistics of private schools for the deaf，1895－96．

| State and division． | $\begin{aligned} & \text { Number of insti- } \\ & \text { tutions. } \end{aligned}$ | Instructors． |  |  |  |  |  | Pupils． |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\stackrel{\dot{\Xi}}{\stackrel{I}{c}}$ |  | $\begin{aligned} & \text { ज⿹⿺㇉一⿰丨丨⿱一⿵冂丶 } \\ & \text { En } \end{aligned}$ |  |  |  | 㐓 |  | $\begin{aligned} & \text { जुं } \\ & \text { से } \\ & \text { E. } \end{aligned}$ |  |  |  |  |  |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 |
| United States | 16 | 18 | \％ 0 | S8 | 6.5 | $\because 8$ | $\because$ | 310 | 284 | 594 | 233 | 251 | 73 | 109 | 40 | 41 |
| North Atlantic Division | 6 | 8 | 33 | 41 | 35 | 20 | 6 | 139 | 109 | 248 | 16 | 189 | 23 | 1 | 26 | 25 |
| Massachusetts． Connecticut New York．． | 3 1 $\sim$ $\sim$ | 1 4 3 | 25 0 8 8 | 26 4 11 | 20 4 11 | 18 0 $\sim$ $\sim$ | 0 | 110 10 19 | 80 12 17 | 190 2 20 36 | 16 0 | 151 22 16 | 23 0 | 0 1 | 10 6 10 | 21 0 4 |
| South Atlantic Division | 1 | 2 | 2 | 4 | 2 |  |  | 15 | 10 | 25 |  | 25 |  |  |  |  |
| Maryland． | 1 | 2 | 2 | 4 | 2 |  |  | 15 | 10 | 25 |  | 25 |  | － |  |  |
| South Central Division | 1 | 0 | 4 | 4 |  |  | 6 | 31 | 21 | 59 | 29 | 0 | 25 | 33 |  | 0 |
| Louisiana | 1 | 0 | 4 | 4 | － |  | 6 | 31 | 21 | 52 | 29 | 0 | 25 | 33 | －－．．－－ | 0 |
| North Central Division． | 8 | 8 | 31 | 39 | 28 | 8 | 11 | 125 | 144 | 269 | 188 | $3 \pi$ | 2 | 75 | 14 | 16 |
| Ohio |  | 0 | 3 | 3 | 3 | 0 |  | 5 | 5 | 10 | 8 | 2 | 0 | 8 |  |  |
| Illinois． | 2 | 0 | 16 | 16 | 15 | ${ }_{6}$ | 2 | 7 | 63 | 137 | 103 | 34 |  | 19 | 14 | 7 |
| Michigan | －1 | 3 | 1 | 4 | 3 |  | 0 | 14 | 20 | 34 | 34 | 0 | 0 | 0 | 0 | 6 |
| Wisconsin | 1 | 4 | $\stackrel{3}{0}$ | ${ }_{6}^{6}$ | $\stackrel{2}{0}$ | 0 | 5 | 15 | 14 | $\stackrel{9}{5}$ | 2 | 1 | ${ }_{5}$ | 1 | 0 | 0 |
| Missouri． | 2 | 0 | 9 | 9 | 5 | 2 | 4 | 15 |  | 54 | 21 | 0 | 20 | $47^{7}$ | 0 | 0 |


|  |  | Name. | Executive officer. | Instructors. |  |  |  |  | Pupils. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Post-office. |  |  | 忌 |  |  | 'quөũdonosəр โexny |  | 品 |  |  |  | $\begin{aligned} & \text { Tanght by manual } \\ & \text { method. } \end{aligned}$ |  | Kindergarten. |  |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|  | Mystio, Oonn .-......... | Mystic Oral School | Mrs. Clara M. H. | 0 | 4 | 4 | 0 | 1 | 10 | 12 | 0 | 22 | 0 | 1 | 0 | 0 |
|  | Chicago ( 400 South May st. II | Ephpheta School for the Deaf | Mary C. Hendriek. |  | 10 | 9 |  | 1 | 51 | 52 | 103 |  |  | 19 |  | 2 |
| 0 | Chicago 16550 Yale gre. II. | The McCowan Oral School for Young Deaf Children- | Louise Morgan | 0 | 6 | 6 | 6 | 1 | 23 | 11 | 0 | 34 | 0 | 0 | 14 | 7 |
|  | ave.), 1 m . <br> Dabuque, Iowa.......... <br> Chinchube | Eastern Iows School for the Deaf. Charitable Deaf-Mute Institution of the Holy Rosary. | De Coursey French. <br> Very Rev. Canon H. | 1 | 0 | 0 | 0 | 0 0 | ${ }_{31}^{2}$ | $\begin{array}{r} 3 \\ 21 \\ \hline \end{array}$ | $\underset{29}{0}$ | $\begin{array}{r} 1 \\ 1 \\ 0 \\ \end{array}$ | 25 | 33 | 0 | 0 |
| 8 | Baltimore, Md. .-..... | F. Knapp's Institute -----...-...................-- | William A. Knapp | 2 | 2 | 2 |  |  | 15 | 10 |  | 25 |  |  |  |  |
|  | Beverly (118 Elliot st.), Mass. | Now Ingland Industrial School for Deaf-Mutes | Nellie H. Swett.......- | 0 | 3 | 1 |  | 2 | 14 | 10 | 16 | 1 | 3 |  |  | 1 |
|  |  | Clark School for the Deaf. | Caroline A. Yale. | 1 | 18 | 18 | 18 | 3 | 78 | 68 | 0 | 140 | 0 | 0 | 0 | 19 |
|  | West Mediord, Mass.. | The Sarah Fuller Home for Little Children who Cannot Hear. | Eliza L. Clark -- | 0 | 4 | 1 | 0 | 0 | 8 | 2 | 0 | 10 | 0 | 0 | 10 | 1 |
| 10 | North Detroit, Mich .- | German Evangelical Lutheran Deaf and Dumb Asylum. | Hermann Uhlig.-... | 3 | 1 | 3 |  | 0 | 14 | 20 | 34 | 0 | 0 | 0 | 0 | 6 |
| 11 | St. Louis (1849 Cass ave.), Mo. | Maria Consilia Deaf-Mute Institute.........--............ | Sister M. Adelè |  | 7 | 3 | 2 | 3 | 4 | 37 | 21 | 0 | 20 | 35 | 0 | 0 |
| 12 | South St.Louis (Longwood place), Mo. | St. Joseph Deaf-Mute Institute | Sister M. Adelena |  | 2 | 2 | .-. | 1 | 11 | 2 | 0 | 0 | 0 | 12 | 0 | 0 |
| 13 | Albany (North Pine ave.), N. Y. | Albany Home School for the Oral Instruction of the Deaf. | Anna M. Black |  | 4 | 4 |  |  | 12 | 8 |  |  |  |  | 10 | 4 |
| 14 | New York (4e West 76th st.), N. Y. | The Wright-Humason School. .-..............-....-.......... | J. D. Wright, M. A., Thas. A. Humason, | 3 | 4 | 7 | 2 |  | 7 | 9 |  | 16 |  |  |  |  |
| 15 | Cincinnati (6th st.), Ohio. | Convent of Notre Dame .-................................... | Sister Mary of the Sacred Heart. | 0 | 3 | 3 | 0 | 0 | 5 | 5 | 8 | 2 | 0 | 8 |  | 3 |
| 16 | St. Francis, Wis........ | St. John's Catholic Deaf-Mute Institute..............-. | Rev. M, A. Gerend.... | 4 | 2 | 2 | 0 | 5 | 15 | 14 | 22 | 1 | 0 | 1 | 0 |  |

Summary of statistics of State public institutions for the deaf, 1895-96.


Summary of statistics of State public institutions for the deaf, 1895-96-Continued.


Statistics of State public institutions for the deaf, 1595-96.







| Post－offlce． |  | Name． | Executive officer． | Instructors． |  |  |  | Pupils． |  |  |  |  |  |  | Receipts． |  | Exponditures． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \dot{y} \\ & \text { 品 } \end{aligned}$ |  |  |  |  | 兇 |  |  | $\begin{gathered} \text { 苞 } \\ \text { 号 } \end{gathered}$ |  |  |  |  |  |  |  |
|  | 1 |  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 1 | Eldridge，Cal | The California Home for the Care and Training of Feeble． | Austin Edgar Os－ borne，M．D． | 2 | 6 | 2 |  | 235 | 208 |  | 22 |  | \＄350 | \＄433， 394 | 864，395 | 0 | 0 | \＄68，480 |
| 2 | Lincoln， 11. |  | J．Whitfield Smith ． | 0 | 13 | 7 | 12 | 338 | 273 | 50 | \％ | 200 | 500 | 314，500 | 103，477 | \＄10，000 | \＄12，000 | 101，417 |
| 3 | Fort Wayne，Ind ．－． | Minded Children． <br> Indiana School for Feeble－ | Alexander Johnson ． | 12 | 11 | 15 | 24 | 294 | 259 | 25 | 190 | 400 | 400 | 32，000 | 76，800 |  | 1，800 | 75，800 |
| 4 | Glenwood，Iowa | Minded Youth． <br> Iows Institution for Feeble－ | F．M．Powell，M．D．． |  | 14 | 13 | 29 | 398 | 291 | 40 | \％ | 400 | 200 | 330，000 |  |  | 05，800 | 90，370 |
| 5 | Winfleld，Kans | Minded Childaren． <br> Kansas State Asylum for Iai－ | C．S．Newlon，M．D． | 0 | 3 | 0 | 19 | 49 | 61 | 32 | 0 | 94 | 100 | 55，900 | 17，988 | 4，370 | 1，360 | 18，400 |
| $\div 1$ | Frankfort，Ǩy．．．．．． Waverley，Mass．－． | otic and Imbecile Youth． Feeble－Minded Institute． Massachusetts School for the | J．P．Huff Walter E．Fernald | ${ }_{3}^{0}$ | $\begin{aligned} & 4 \\ & 9 \end{aligned}$ | ${ }_{6}^{2}$ |  | ${ }_{269}^{65}$ | $\begin{gathered} 55 \\ 182 \\ 182 \end{gathered}$ |  | ${ }_{98}^{0}$ | 668 | 860 | $\begin{array}{r} 155,000 \\ 20,884 \end{array}$ | －17，988 |  | 1，000 | $\begin{aligned} & 3,000 \\ & 61,174 \end{aligned}$ |
| 8 | Lapeer，Micili．．．．．．．－ | Feeble－Minded． <br> The Michigan Home for the | W， |  | 0 | 4 | 10 | 112 | 108 | 26 | ${ }^{\circ}$ | 25 |  | 67，000 | 35，000 |  | 7，000 | 28，000 |
| 9 | Faribault，Main | Feeble－Mindedand Epileptic． Minnesota School for the Fee－ ble－Minded． | Arthur C．Rugers， | 2 | － | 2 | 29 | 246 | 227 | 51 | 62 | 100 | 998 | 325，000 | 85，500 | 57，000 | 57，000 | 35，500 |
| 10 | Beatrice，Nebr ． | Nebraska Institution for Feo－ | J．M．Armstrong．．．．． | 1 |  | 2 |  | 111 | 98 |  |  | 100 | 200 | 120，000 | 36，038 |  |  | 33， 038 |
| 11 | Vineland，N．J．．．．．．． | The New Jersey Training Schoool for Feeble－Minded Children． | S．Olin Garrison， M．A． | 2 | 11 | 5 | 40 | 167 | 68 | 20 |  | 500 |  | 100，000 | 69，590 | 16，498 | 16，498 | 48，474 |
| 12 | do | Nowler Jersey State Institution | Mary J．Dunlap， |  | 18 |  |  |  | 94 | 16 | 82 | 500 | 1，000 | 40，000 | 20，000 |  |  | 20，000 |
| 13 | Newark，N．Y．． New York，N． Y | New York Stato Custodial Asylum for Feeble－Minded School for Feeble－Minded． | C．M．W．Winspear | 0 | 5 |  | $31$ | 0 | $\left\lvert\, \begin{aligned} & 399 \\ & 203 \end{aligned}\right.$ | co | 24 | 195 | 0 | 152，052 | 48，300 | 1\％，17\％ | 18，358 | 48，401 |

Statistics of State public institutions for the feeble－minded，1895－96－Continued．

| Post－affloe． |  | Name． | Executive officer． | Instructors． |  |  |  | Pupils． |  |  |  |  |  | $\begin{aligned} & \text { Value of grounds } \\ & \text { and buildings. } \end{aligned}$ | Receipts． |  | Expenditures． |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 覂 |  |  |  |  | 㤙 |  |  | $\begin{aligned} & \text { 品 } \\ & \text { Ey } \end{aligned}$ |  |  |  |  |  |  |  |
|  | 1 |  | 2 | 3 | 4 | 5 | 6 | 7 | 8 | （1） | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
| 15 | Byracuse，N．Y．．．．．．． | Syracuse State Institution for | James C．Carson．．． | 1 | 12 | 10 | 38 | 311 | 296 |  | 27 |  |  | \＄421，331 | 397，280 | \＄5，335 | \＄8，497 | \＄93，243 |
| 10 | Columbus，Ohio ．．．－ | The Ohio Institution for the Education of Feeble－Minded | G．A．Doren ．－－－－－．－． | 2 | 23 | 8 | 50 | 619 | 412 |  | 178 | 2，101 | －－．．－－ | 698，831 | 198，509 | 11，939 | 249 | 140，014 |
| 17 | Elwya，Pa | The Pennsylvania Training School for Feeble－Minded | Martin W．Barr | 1 | 21 | 121 | 18 | 586 | 410 | 72 | 125 |  |  | 555，595 | 219，495 |  |  | 219，495 |
| 5 | Thncouver，Wesh ．－ | Washington Sohool for De－ fective Youth． | James Watson．．．．－．－ | 1 | 1 | 1 | 5 | 32 | 24 | 26 | 56 |  | －－－ | ，25，000 | 20，000 | 300 | 300 | 28,000 |

Summary of statistics of private schools for the feeble－minded，1895－96．

| Division and State． |  | Instructors． |  |  |  |  | Pupils． |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \text { 灾 } \\ & \text { 㥻 } \end{aligned}$ |  | $\begin{aligned} & \text { Ti } \\ & \substack{0 \\ \hline \\ \hline} \end{aligned}$ |  |  | 品 |  | $\begin{aligned} & \text { Tin } \\ & \text { Hib } \\ & \hline \end{aligned}$ |  | 曾 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| United States． | 10 | 9 | 40 | 48 | 17 | 54 | 237 | 185 | 402 | 105 | 157 |
| North Atlantic Division | 8 | 5 | 33 | 38 | 37 | 46 | 201 | 144 | 345 | ${ }^{63}$ | 122 |
| Massachusetts <br> Connecticut $\qquad$ <br> New York <br> New Jersey $\qquad$ | $\begin{aligned} & 3 \\ & 1 \\ & 1 \\ & 1 \\ & 8 \end{aligned}$ | $\begin{aligned} & 1 \\ & 2 \\ & 0 \\ & 2 \end{aligned}$ | $\begin{array}{r} 9 \\ 3 \\ 1 \\ 20 \end{array}$ | $\begin{array}{r} 10 \\ 5 \\ 1 \\ 22 \end{array}$ | $\begin{gathered} 23 \\ 4 \\ 1 \\ 1 \\ \hline \end{gathered}$ | $\begin{gathered} 23 \\ 10 \\ 3 \\ 10 \end{gathered}$ | $\begin{aligned} & 55 \\ & 98 \\ & 21 \\ & 27 \end{aligned}$ | $\begin{aligned} & 21 \\ & 61 \\ & 63 \\ & 39 \end{aligned}$ | $\begin{array}{r} 78 \\ \hline 159 \\ 44 \\ \hline 66 \end{array}$ | $\begin{gathered} 13 \\ 30 \\ 0 \\ 20 \end{gathered}$ | 24 41 44 .13 |
| South Atlantic Division． | 1 | 2 | 3 | 5 | 4 | 1 | 21 | 0 | 27 | 12 | 12 |
| Maryland－．．．．． | 1 | 2 | 3 | 5 | 4 | 1 | 21 | 0 | 27 | 12 | 12 |
| North Central Division． | 1 | 2 | 4 | 0 | 6 | 7 | 15 | 15 | 30 | 30 | 30 |
| Michigan．．． | 1 | 2 | 4 | 0 | 6 | 7 | 15 | 15 | 30 | 30 | 30 |

Statistics of private schools for the feeble－minded，1895－96．

|  |  |  |  | Instructors． |  |  |  | Pupils． |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Post－offlce． | Name． | Executive officer． | 产 | 莒 |  |  | 㸷 | 罭 |  | 总 |
|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| 1 | Lakeville，Conn ． | Connecticut School for Imbeciles． | Geo．W．Knight， M．D． | 2 | 3 | 4 | 10 | 98 | 61 | 30 | 41 |
| 2 | Ellicott City，Md． | Font Hill Institu－ tion for Feeble－ Minded and Epi－ leptic Children． | Sam＇İJ．Fort，M．D．－ | 2 | 3 | 4 | 1 | 21 | 6 | 12 | 12 |
| 3 | Amherst，Mass． | Home School Ner． vous and Delicate Children． | Mrs．W．D．Herrick．－ | 1 | 2 | 2 | 3 | 0 | 1 |  |  |
| 4 | Barre，Mass．．．．．－ | Private Institution for the Education of Feeble－Minded Youth． | G．A．Brown，Mrs． C．D．Brown． |  | 5 | 10 | 20 | 43 | 17 | 7 | 21 |
| 5 | Fayville，Mass．．． | Hillside school for Feeble and Back－ ward Children． | Mra．Mary A．F．D． Green． |  | 2 | 5 | 0 | 3 | 3 | 0 | 3 |
| 6 | Kalamazoo，Mich | Willbur School and Home for the Fee ble－Minded． | C．T．Wilbur，M．D．－ | 2 | 4 | 6 | 7 | 15 | 15 | 30 | 30 |
| 7 | Cranbury，N．J．． | Private Home and School for Enfee－ bled and Undevel－ oped Minds． | C．F．Garrison ．．．．．．－ | 1 | 2 | 2 | 1 | 7 | 10 | 6 | 2 |
| 8 | Haddonfleld， N．J． | Haddonfield Train－ ing School． | M．Bancroft，J．W． Cox． |  | 7 | 5 | 7 | 0 | 15 | －．． | 7 |
| 9 | Ol ange，N．J．．．．． | The Seguin School for Children of Arrested Develop－ | Elsie M．Seguin．．．．．． | 0 | 11 | 2 | 2 | 11 | 14 | 14 | 4 |
| 10 | Amityville，N．Y． | Brunswick Home School． | S．R．Williams．．．．．．． |  | 1 | 1 | 3 | 21 | 23 | 0 | 44 |

## CHAPTER XLIV.

## REFORM SCHOOLS.

Summary of statistics of reform schools, 1895-96.

| State and division. | Number of schools. | 'ธләчэъәт јо лоqu्यn |  |  | Inmates. |  |  | 若 | Expenditurez. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | 俞 |  |  | $\begin{aligned} & \text { Value of grounds } \\ & \text { buildings. } \end{aligned}$ |  |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | (1) | 10 | 11 |
| United State | ¢0 | 450 | 19,327 | 11,798 | 16.961 | 4,117 | 21,0\%8 | \$16, 125, 292 | 3509,606 | -83,439, 618 |
| Norih Atlantic Division. | 34 | 208 | 0,101 | 5,635 | 8,223 | 1,426 | 9,649 | 8,704, 051 | 189,777 | 983, 082 |
| Maino | 2 | 3 | 221 | 94 130 | 151 | 70 24 | 221 | 135,000 40,000 | 3,000 | 40,639 9,000 |
| Vermont. | 1 | 3 | 110 | 30 | 93 | 16 | 109 | 10, 000 | 1,000 | 6,000 |
| Massachusetts | 10 | 26 | 640 | 592 | 921 | 119 | 1,040 | 803, 510 | 20,953 | 174, 609 |
| Rhode Island. | 2 | 8 | 302 | 108 | 285 | 37 | 302 | 400, 000 | 294 | 59,159 |
| Connecticut | 2 | 15 | 713 | 289 | 469 | 244 | 713 | 750, c00 | 5.545 | 112,955 |
| New York $b$ | 9 | 107 | 4,33\% | 8,215 | 3,906 | 436 | 4,342 | 3,722, 022 | 104, 295 | 178,255 |
| New Jersey |  | 12 | 765 | 285 | 1. 598 | 187 | , 765 | 455, 87\% | 19,520 | 125, 276 |
| Pennsylvani | 4 | 31 | 2,018 | 914 | 1,705 | 313 | 2,018 | 2,55\%, 641 | 35,170 | 287, 088 |
| South Atlantic Division. | 11 | 48 | 1,074 | 1,188 | 1,527 | 152 | 1,678 | 1,162,300 | 28,977 | 167,4\%2 |
| Delawar | $\stackrel{2}{2}$ | 4 | 83 | 54 | 69 | 14 | 83 | 40,400 |  | 14,558 |
| Maryland $a_{\text {. }}^{\text {a }}$......... | 5 | 28 | 1,090 | 837 | 957 | 138 | 1,095 | 835,000 | 23,977 | 74,650 |
| District of Columbia- | 1 | 8 | 220 | 94 | 220 | 0 | 290 | 250, 000 | 2,000 | 29, 000 |
| Virginia .-..........-- | 1 | 4 | $15 \%$ | 157 | 157 | 0 | $35^{4} 7$ | 12,500 | 0 | 13,204 |
| Weest Virginia | $\frac{1}{1}$ |  | 124 | 46 |  | 0 | 124 | 25,000 |  | 38,000 |
| South Central Division.. | 5 | 11 | 423 | 0 | 506 | 180 | 686 | 245, C00 | 0 | 36,801 |
| Kentucky | 2 | 8 |  |  | - 0 | 180 | 180 |  |  |  |
| Tennessee(no report) Louisiana | 1 | 1 | 333 | 0 | 883 | 0 | 833 | 200, 000 |  | 8,801 |
| Texas.... | 1 | 2 | 90 |  | 173 | 0 | 173 | 45,000 | 0 | 28,000 |
| North Central Division.- | 30 | 165 | 7,213 | 4,881 | 8,785 | 2,246 | 7,881 | 5,34ĩ, 17\% | 278,658 | 1,015,8i5 |
| Ohio | 3 | 33 | 1,457 | 417 | 1,009 | 448 | 1,457 | 1,219,552 |  |  |
| Indiana | 2 | 17 | 1,691 | 418 | 1,495 | 281 | . 776 | 375, 000 | 11, 413 | 98, 587 |
| Illinois $\}$ | , | 15 | 1,21\% | 1,172 | 1,3\%2 | 96 | 1,468 | 876, 000 | 119, 466 | 180, 729 |
| Michigan | , | 21 | 907 | 282 | 699 | 608 | 1,307 | 800, 155 | 7,000 | 120, 867 |
| Wisconsin | 3 | 22 | 847 | 39 | 587 | 288 | 855 | 414, 777 | 10,500 | 104, 655 |
| Minnesota | 3 | 16 | 491 | 187 | 455 | 47 | 502 | 575, 538 | 22, 674 | 92,554 |
| Iowa... | 2 | 18 | 588 | 588 | 444 | 144 | 588 | 323, 150 | 10,000 | 81,637 |
| Missouri | 3 | 12 | 515 | 858 | 384 | 144 | 588 | 375, 000 | 49,800 | 63, 282 |
| South Dakot | 1 | 3 | 90 | 99 | 78 | 21 | 90 | 75, 000 |  | 16. 000 |
| Nebraska $a$ | 2 | 2 | 75 | 67 | 0 | 75 | 75 | 55, 000 |  | 16,595 |
| Kansas | 2 | 6 | 328 | 94 | 232 | 04 | 326 | 355,000 |  | 58,720 |
| Westera Division | 6 | 18 | 916 | 694 | 970 | 113 | 1,083 | 665, 200 | 12, 20\% | 228,488 |
| Montana .............. | 1 | 2 | 60 | 27 |  |  |  | 55,000 |  |  |
| Colorado -.............- | 1 | 3 | 109 | 80 | 109 | 0 | 109 | 50, 000 | 3,200 | $30,100$ |
| Utah (no report) ....- | 1 | 3 | 135 | 87 | 104 | 31 | 135 | 78,000 | 4.000 | 18,000 |
| Oregon (no report). | 1 | $\ldots$ |  |  |  |  |  |  |  |  |
| Calffornia ....... | 2 | 10 | 162 | 800 | 040 | 06 | - 340 | 482,269 | 5,054 | 162,893 |

Summary of statistics of reform schools, 1895-96.

| State and division. | 'squezsissy jo - गəqumn | Race. |  | Nativity. |  | Illiteracy. |  | During year. |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\begin{aligned} & \dot{\oplus} \\ & \stackrel{0}{0} \\ & \hline \end{aligned}$ |  |  |  |  |  |  |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| United States | 1,810 | 15,823 | 2,658 | 6,912 | 4,561 | 3,254 | 2,110 | 10,057 | 8,670 |
| North Atlantic Division .- | 784 | 7,298 | 779 | 1,876 | 2,825 | 1,648 | 1,101 | 4, 282 | 3,574 |
| South Atlantic Division .. | 89 | 1,076 | 589 | 1,187 | 155 | 704 | 341 | 763 | 648 |
| South Central Division...- | 29 | . 381 | 305 | , 171 | 22 | 19 | 11 | 308 | 252 |
| North Central Division.... | 565 | 6, 035 | 935 | 3,136 | 1,425 | 762 | 832 | 8,944 | 3,893 |
| Western Division.-....- | 143 | 1,083 | 50 | 542 | 1,334 | 181 | 25 | 460 | 303 |
| North Atlantic Division: <br> Maine | 6 | 346 | 2 |  |  |  |  | 57 | 46 |
| New Hamppshire-....... | 10 | 138 | 1 |  |  | 100 | 25 |  |  |
| Vermont-.-.-.----...-- | 16 | 107 | 2 | 00 | 49 | 90 | 19 | 42 | 38 |
| Massachusetts $a$ | 119 | 651 | 23 | 98 | 223 | 61 | 40 | 470 | 127 |
| Rhode Island | 38 | 242 | 23 | 88 | 98 | 227 | 43 | 221 | 175 |
| Connecticut | 81 | ${ }_{3}^{622}$ | 91 | 259 | 175 | 213 | 81 | - 244 | 2339 |
| New York b | 870 | 3,047 | 238 | 869 | 1,673 | 831 | 581 | 2,226 | 2,059 |
| New Jersey -- | 74 | ,677 | 88 |  |  | 213 | 54 | 251 | 185 |
| Pennsylvania | 170 | 1,468 | 811 | 522 | $40 \%$ | 113 | 308. | 1,071 | 625 |
| South Atlantic Division: Delaware | 11 | 39 | 30 | 10 | 4 | 4 | 0 | 24 | 4 |
| Maryland a --..--... | 59 | 672 | 423 | 935 | 146 | 640 | 244 | 539 | 514 |
| District of Columbia -- |  | 100 | 120 |  |  |  |  | 112 | 92 |
| Virginia --.....-......- | ${ }^{9}$ | 157 | 0 | 152 | 5 | $60^{\circ}$ | 97 | 88 | 88 |
| West Virginia <br> Georgia (no report) | 10 | 108 | 16 |  |  |  |  |  |  |
| South Central Division: <br> Kentucky $a$ | 22 | 180 | 0 | 10 | 10 |  |  | 16 | 6 |
| Tennessee (no report) |  |  |  |  |  |  |  |  |  |
| Louisiana ---..........-- | 6 | 116 | 217 |  |  |  |  | 248 | 246 |
| Texas --....-.....- | 1 | 85 | 88 | 161 | 12 | 19 | 11 | 44 |  |
| North Central Division: Ohio | 75 | 552 | 145 | 980 | 257 | 97 | 110 | 903 | 901 |
| Indiana | 56 | 695 | 81 | 245 | 25 | 472 | 61 | 154 | 341 |
| Illinois | 37 | 1,164 | 308 | 835 | 422 | 100 | 106 | 1,077 | 850 |
| Michigan .-.-........... | 69 | 1,243 | 64 | 275 | 184 | 27 | 83 | 428 | 377 |
| Wisconsin . | 121 | 834 | 28 | 42 | 14 |  |  | 498 | 658 |
| Minnesota a | 67 | 477 | 25 | 153 | 349 | 24 | 31 | 240 | 151 |
| Iowa ...................... | 36 | 380 | 54 | 204 |  |  | 205 | 123 | 96 |
| Missouri | 88 | 244 | 84 | 285 | 143 | 15 | 10 | $27 \%$ | 292 |
| South Dakota........--- | 11 | 93 | ${ }^{6}$ |  |  |  | 10 | 28 | 32 |
| Nebraska a | 11 | 65 | 10 | 56 | 18 |  | 3 | 31 | 32 |
| Kansas -................. | 44 | 278 | 137 | 81 | 18 | 17 | 13 | 187 | 183 |
| W estern Division: <br> Montana | 12 | 92 | 1 |  |  | 2 | 7 | 28 | 5 |
| W yoming .... |  |  |  |  |  |  |  |  |  |
| Colorado | 20 | 98 | 18 | 68 | 41 | 108 | 6 | 64 | 21 |
| Utah (no report) - |  |  |  |  |  |  |  |  |  |
| Washington <br> Orearon (no report | 12 | 134 | 1 | 123 | 12 | 14 | 7 | 157 | 183 |
| California... | 98 | $71{ }^{-1}$ | $3{ }^{5}$ | 351 | 281 | 12 | 5 | 211 | 94 |

a One school not reporting.
$b$ Three schools not reporting.

| " Post-office. | Name. | Executive officer. |  |
| :---: | :---: | :---: | :---: |
| 1 | 2 | 3 | 4 |
| Waterman, | Preston School | E. Carl Bank | 35 |
| Whittier, Cal | Whittier State School | John E. Coffin | 64 |
| Golden, Co | State Industrial School | Robert G. Smith ....- | 0 |
| Meriden, Conn | Connecticut School for Boys .-........ | Rev. Geo. L. Coburn - | 49 |
| Middletown, Con | ConnecticutIndustrial School for Girls* | W. G. Fairbank.-.... | 32 |
| Marshallton, Del | Ferris Industrial School .-..-.-.-.-. | H. E. Haines .......... | 9 |
| Wilmington, Del .....- | Delaware Industrial School for Girls.- | Mrs. L. E. Brown...- | 2 |
| W ashington, D. C....- | Reform School of the District of Columbia. | George A. Shallenberger. |  |
| Chicago | Erring Woman's Reftuge for Reform. | Mrs. Helen M. Wonds | 7 |
| Gido.- | House of Correction -.......-.-.-.-....- | No report |  |
| Glenwood, Ill .......... | Illinois School of Agriculture and Manual Training. | Mrs. N. L. Harrison. | 30 |
| Pontiac, 111. | Ilinois State Reformatory - | R. W. McClaughry -. |  |
| South Evanston, Ill | Illinois Industrial School for Girls | No report. |  |
| Indianapolis, Ind...... | Reform School for Girls and Woman's Prison. | Miss Sarah F. Keely. | 16 |
| Plainfield, In | Indiana Reform School for Boy | T. J. Charlt | 40 |
| Eldora, Iowa | Iowa Industrial School, Boys' Depart- | B. J. Miller | 36 |
| Mitchellville, Io | Industrial School, Girls' Department |  |  |
| Beloit, Kans---7.-. | Industrial School for Girls | Mrs. S. V. Lee | 12 |
| North Topeka, Kans. | The State Reform School | W. H. Howell | 32 |
| Louisville, Ky | Industrial School of Reform | No report |  |
| Newport, Ky | Convent of the Good Shepherd | Mother M. of St. | 22 |
| New Orleans, La. Hallowell, Me | Boys' House of Refuge Maine Industrial school for Girls | W. C. Staunton...... E. Rowell | 6 |
| Portland, M | State Reform School .-..................... | J. R. Farri |  |
| Baltimore, M | House of Refuge | R. J. Kirkwoo | 21 |
| do | Female House of Refu | No report |  |
| Baltimore (Station D), Md. | St. Mary's Industrial School for Boys.- | Brother Dom | 16 |
| Cheltenham, Md.-.... | House of Reformation | John W. Horn | 18 |
| Melvale, M | The Industrial Home for Colored Girls. | Mrs. Hannah T. | 6 |
| Rainsford Island, Bos- | House of Reformation | Lorenzo D. Perkins. | 10 |
| Lancaster, Mass | State Industrial School for Gir | Mrs.L. L. Brackett.- | 18 |
| Lawrence, Mass.-....- | Essex County Truant School | Henry E. Swan -..... | 7 |
| North Chelmsford, Mass. | Middlesex County Truant School....... | M. A. Warren. |  |
| Oakdale, Mass. | County Truant School ----................ | No report.-.......... |  |
| Salem, Mass ........... | Plummer Farm School.-.--- | Charles A. Johnson.- | $\frac{4}{8}$ |
| Springfield Mass....- | Hampden County Truant School--.... | F.H. King | 8 |
| Walpole, Mass........ | Norfolk, Bristol, and Plymouth Union Truant School. | Geo. H. Mason - .-.... | 8 |
| Westboro, Mass ...... | Lyman School for Boys. | Theodore F. Chapin | 48 |
| West Roxbury, Mass. | Parental School | Moses J, Perkins...-- | 10 |
| Adrian, Mjch......-- | State Industrial Home for Girls | Lucy M. Sickels..... | 28 |
| Detroit, Mich......... | House of the Good Shepherd | Mother St.Stanislaus | 29 |
| Ionia, Mich ............- | State House of Correction and Reformaatory School. | J. L. Fuller | 12 |
| Lansing, Mich. | Industrial School for Boys. | J. E. St. John. |  |
| Red Wing, Minn | Minnesota State Training School.-...-- | J. W. Brown........ | 38 |
| St. Cloud Minn. | Minnesota State Reformatory ........... | W. H. Houlton....... | 29 |
| Boonvilie, Mo | MissouriState Reform School for Boys | L. D. Drake |  |
| Chillicothe, M | State Industrial Home for Girls. | Emma M. Gillbert...- | 7 |
| St. Louis, Mo | St. Louis House of Refuge | Isaac S. Bristo | 30 |
| Geneva, Nebr........... | Montana State Reform School ${ }^{\text {Girls'....... }}$ | A. J. Hylton.......... | 12 |
| Geneva, rebr.......... | Girlis Industrial school for Juvenile | J. W. Seabrook....-- | 11 |
| Kearney, Nels | State Industrial School for Jurenile Delinquents. | Noreport. |  |

${ }^{4}$ From 1894.95.
schools, 1895-96.

| Pupils. |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Expenditures. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Se |  | Race. |  | Nativity. |  | Illiteracy. |  | During year. |  | School. |  |  |  |  | $\dot{\circ}$ |  |  |
|  | $\begin{aligned} & \dot{\Phi} \\ & \text { 馬 } \\ & \text { 咂 } \\ & \text { \|n } \end{aligned}$ |  | $\begin{aligned} & \text { ت̇ं } \\ & \text { D } \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |  | $\begin{gathered} \text { Foreign-born par. } \\ \text { ents. } \end{gathered}$ | Could only read. |  | $\begin{aligned} & \text { rid } \\ & \text { ※ } \\ & \text { H } \\ & \text { gig } \\ & 0 \end{aligned}$ |  |  | Number of pupils. |  |  |  |  |  |  |
| 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 52 | 21 |  |
| 211 | 0 | 204 | 7 | 97 | 98 | 12 | 5 | 59 | 13 | 3 | 206 | 32 | 125 | \$183, 082 | \$5,054 | 849,800 |  |
| 469 | 68 | 507 | 28 | 254 | 183 |  |  | 182 | 81 | 7 | 408 | 8 | 875 | 289,187 |  | 112,884 |  |
| 109 | 0 | 96 | 13 | 08 | 41 | 108 | 6 | 84 | 21 | 3 | 109 | 34 | 80 | 50,000 | 3,200 | 30,000 |  |
| 469 | 0 | 417 | 52 | 78 | 112 | 0 | 0 | 190 | 231 | 8 | 468 | 3 | 45 | 500,000 | 5,545 | 72,301 |  |
| 0 | 244 | 205 | 30 | 181 | 63 | 213 | 81 | 54 | 108 | 7 | 244 | 4 | 244 | 200,000 |  | 40,648 |  |
| 69 | 0 | 89 | 30 |  |  |  |  | 17 |  | 1 | 69 |  | 40 | 40, 400 |  | 12,758 |  |
| 0 280 | 14 |  |  | 10 | 4 | 4 | 0 | 112 | 92 | 8 | 14 220 | $4{ }_{4}^{4}$ | 14 <br> 94 |  | 2,000 | 29,000 |  |
| 22 | 0 |  | 120 |  |  |  |  |  |  | 8 |  |  |  |  |  |  |  |
| 8 | 96 | 99 | 0 |  |  |  |  | 101 | 102 | 2 | 82 | 4 | 82 | 85,000 |  | 15 |  |
| 255 | 0 | 245 | 10 | 100 | 155 | 100 | 50 | 238 | 238 | 4 | 255 | 4 | 255 | 200,000 | 13, | 1,182 | 11 |
| 114 | 0 | 820 | 293 | 735 | 267 |  | 56 | 740 | 515 | 9 | 880 | 2-5 | 835 | 591,49\% | 106, 468 | 135, 832 | 12 |
| $\theta$ | 281 | 270 | 11 | 245 | 25 | 2 | 36 | 20 | 14 | 3 | 196 | 34 | 196 | 175,000 | 7,484 | , 516 | 14 |
| 485 | 0 | 425 | 70 |  |  | 470 | 25 | 134 | 227 | 14 | 485 444 | 4-8 | 2174 | 200,600 850,000 | 3,029 20,000 | $\begin{aligned} & 56,071 \\ & 42,000 \end{aligned}$ | 15 |
| 444 | 0 | 390 | 54 | 240 | 204 |  | 205 | 123 | 96 | 12 | 444 | 4 | $444{ }^{\circ}$ | 250, 000 | 20,000 | $42,000$ |  |
| 0 | 144 |  |  |  |  |  |  |  |  | 6 | 144 | 34 | 144 |  |  |  | 17 |
| - 238 | 94 | $\begin{array}{r} 88 \\ 174 \end{array}$ | $\begin{aligned} & \text { 11. } \\ & \frac{11}{3} . \end{aligned}$ | 81 | 13 | 15 | 11 | 37 150 | $\begin{array}{r} 38 \\ 135 \end{array}$ | 4 | 194 | 4 | 9 | $\begin{array}{r} 80,000 \\ 175,000 \end{array}$ |  | $\begin{aligned} & 25,000 \\ & 31,720 \end{aligned}$ | 18 |
| 0 |  |  |  |  |  |  |  | 18 | 6 | 8 |  | 6 |  |  |  |  | 21 |
|  |  |  |  |  |  |  |  | 24 | 246 |  |  |  |  |  |  | 801 | 2 |
| 303 | 70 | 110 | 17 |  |  |  |  |  | 240 | 2 | 30 |  | 70 | 35,000 |  | 10,187 | 2 |
| 151 | 0 | 149 | 2 |  |  |  |  | 57 | 46 | 4 | 151 | 4 | 24 | 100,000 |  | 30,452 | 24 |
| 197 |  | 197 | 0 | 138 | 70 | 60 | 39 | 141 | 140 | 7 | 187 | , | 147 | 250,000 | 5,000 | 34,000 |  |
| $47{ }^{-1}$ | 0 | 475 | 0 | 379 | 78 | 457 | 18 | 181 | 167 | 0 | 470 | 3) | 33 | 0,000 | ,478 | 13,197 | \% |
| 285 | 138 | 138 | 285 | 138 | 0 | 110 | 159 28 | 178 44 | $\begin{array}{r} 165 \\ \hline 42 \end{array}$ | 6 | 285 138 | $\frac{44}{5}$ | 283 75 | 200,000 $35,000$. | 12,708 4,798 | 19,457 7,996 | 28 |
| 112 | 0 | 110 | 2 | 27 | 85 | 11 | 8 | 100 |  | 2 | 112 | 4 | 76 | 65, 000 |  |  | 30 |
|  | 114 | 98 | 15 | 44 | 70 |  | 11 | 58 | ${ }^{6}$ | 5 | 114 | 3 | 114 | 07, 490 |  | 20, | 31 |
| 40 | 0 | 37 | 3 | 4 | \% | 28 | 4 | 24 | 16 |  | 40 | 4 | 40 | 19,476 |  | 10, 013 | 32 |
| 80 | 0 | 79 | 1 | 17 | 63 | 16 | 4 | 67 | 24 | 2 | 80 | 4 |  | 80,000 | 10,076 | 9,358 |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ${ }^{35}$ |
| $\begin{aligned} & -29 \\ & 30 \end{aligned}$ | 0 | 29 30 | 0 | 10 | 5 |  | $\begin{aligned} & 0 \\ & 13 \end{aligned}$ | 13 | $\begin{aligned} & 15 \\ & 17 \end{aligned}$ | 1 | $\begin{aligned} & 29 \\ & 30 \end{aligned}$ |  | 12 | 120,000 | $\begin{aligned} & 300 \\ & 5 \pi \% \end{aligned}$ | 5, 5 500 | 35 |
| 74 | 2 | 76 | 0 |  |  |  |  | 37 |  | 1 | 42 |  | 0 | 20.000 |  | 8,093 | 37 |
| 366 | 0 |  |  |  |  |  |  |  |  | 12 |  | $4 \frac{1}{2}$ | 350 | 146, 050 | 10,000 | 57,238 | 38 |
| 190 | 3 | 191 | 2 |  |  | 0 | 0 | 188 | 48 | 1 | 193 | 5 | 0 | 140,000 |  | 50,000 | 49 |
| , | 308 | 293 | 15 |  |  |  | 36 | 84 | 56 | 7 | 308 | 5 | 308 | 190,757 50,000 |  | 35, 31.50 | 41 |
| 0 | 200 | 300 | 0 | 60 | 60 | 20 | 30 |  |  | 3 | 60 |  | 300 | 50,000 333,343 | 1,000 | 18,000 |  |
| 160 | 0 | 146 | 14 | 75 | 25 | 7 | 14 |  |  |  |  | - |  | 333,343 |  | 18,000 | 4. |
| 539 | 0 | 504 | 25 | 140 | 89 |  | 3 | 342 | 221 | 11 | 539 | 4 | 324 | 226, 055 | 6,000 | 56,000 | 43 |
| 324 | 46 | 356 | 14 | 92 | 278 | 10 | 22 | 138 | 137. | 8 | 370 | 4 | 137 | 321,014 | 2,500 | 45,687 48,874 | 44 |
| 131 | 1 | 121 | 11 | 61 | 71 | 14 | 9 | 104 | 14. | 8 | 121 | 2 |  | 254, 524 | 20,174 | 46,87\% | 40 |
|  |  | 155 | 30 | 139 | 46 | 15 | 10 | 101 | 96 | 4 | 185 | 0 | 140 | 75,000 | 10,800 | 12,500 | 47 |
| 0 | 18 | 74 | 4 | 56 | 2 |  |  |  |  | 2 | 78 | 4 | 68 | 100,000 | 80,000 | 8,182 | 48 |
| 199 | 08 | 215 | 50 | 170 | 95 |  |  | 176 | 198 | - | 252 | 5 | 128 | 200,000 |  | 42,600 | 48 |
| 7 | 18 | 88 | 10 | 5 | 18 | 2 | 7 3 | ${ }_{31}^{28}$ | 8 | 2 | \% 70 | 4 | 27, | 50,000 55,000 | 15,000 | 20,000 | 51 |


|  | Post-office. | Name. | Executive officer. |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1 | 2 | 3 | 4 |
| 53 | Manchester, N. H..... | State Industrial School | T. C. Ray..... | 10 44 |
|  | Trenton, N. J. | State Induents. ${ }^{\text {liastrial Schoo }}$ | Mrs.M.A.McFadden | 20 |
| 6 | Verona, N. T- | Newark City Home | C. M. Harrison.......- | 20 |
| 58 | Brooklyn, N. Y........ | Brooklyn Truant School The Berkshire Industrial Farm | No report ${ }^{\text {David M }}$ Jones | 18 |
|  | Canaan Four Corners, N. Y. |  |  | 18 |
|  | Elmira, N. Y | New York State Reformatory Female Reformatory | Z. R. Brockway -..... |  |
| 61 | New York (station | New York Juvenile Asylum... | Aaron P.Garrabrant | $73^{7}$ |
| 62 | Now, Y York (Station | New York House of Refuge | E. M. Carpenter | 2 |
|  | L), N. Y. | Sow Yor House of Refugo | . M. Carpenter |  |
| 3 | Rochester, N. Y.-..... | State Industrial School | Franklin H. Briggs... | 124 |
| 64 | Westchester, ${ }^{\text {U }}$. Y ..... | St. Vincent Industrial School............ | Bro. Julian...........- |  |
| 66 | Cincinnati, Ohio....... | Cincinnati House of Refuge.. | James Allison | 3 |
| 67 | Delaware, Ohio | Girls' Industrial Home. | A. W. Stiles | 32 |
| 68 | Lancaster, Ohio | Boys' Industrial School | David M. Barrett |  |
| ${ }_{70}^{69}$ | Salem, Oreg- |  |  |  |
| 70 | Glen Mills, Pa - | Philadelphia House of Refuge (Boys' Department).* | F. H. Nibecker | 1 |
| 71 | Huntington, Pa | Pennsylvania Industrial Reformatory.- | T. B. Patton | 90 |
| 72 | Morganza, Pa | Morganza Reforin Sch | J. A. Quay .......-- | ${ }^{67}$ |
| 74 | Philadelphia, | The House of Refuge | Mars A. Campbelic.- |  |
| 74 | Howard, R. I | Sockanosset School for Boys | James H. Eastman .- | 35 |
| 76 | Plankinton, S. Dak. | State Reform School of South Dakota. | C.W.Ainsworth | 11 |
| 77 | Nashville, Tenn | Industrial school. | No report |  |
| 78 | Galesburg, Tex | House of Correction and Reformatory. | J.F. McGuir | 1 |
| 89 | Ogden, Utah | Reform School --- | No report |  |
| 80 81 | Vergennes, V t | Vermont Industrial school | S.A.Andrews | 16 |
| 88 | Chehalis, Wash. | The Washington State Reform School | Thos. P. Westendorif. | 12 |
| 83 | Pruntytown, W.Va... | The West Virginia Reform School | D. W. Shaw | 10 |
| 84 | Sparta, Wis .-......... | Stato Public School for Dependent and | S. S. Landt .-..... | 50 |
| 85 | Milwaukee, Wis | Wisconsin Industrial School for Girls. | S. E. Pierce | 24 |
| 86 | Waukesha, Wis . | Wisconsin Industrial School for Boys.. | J. | 47 |

[^103]schools，1895－96－Continued．

| Pupils． |  |  |  |  |  |  |  |  |  |  |  |  |  |  | Expenditures． |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Se |  | Race． |  | Nativ－ ity． |  | Illiter－ acy． |  | During year． |  | School． |  |  |  |  | ¢ |  |  |
| $\begin{aligned} & \text { ®. } \\ & \text { డ゙ } \end{aligned}$ | $\begin{aligned} & \text { 送 } \\ & \text { 免 } \\ & \text { © } \end{aligned}$ | $\begin{aligned} & \dot{B} \\ & \frac{3}{y} \\ & \frac{1}{8} \end{aligned}$ | $\begin{aligned} & \text { 寅 } \\ & 0 \\ & 0 \\ & \hline 8 \end{aligned}$ |  | $\begin{aligned} & \text { Foreign born par- } \\ & \text { onts. } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 | 6 | \％ | 8 | － | 10 | 11 | 1.3 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 115 876 | 24 | 138 821 | 55 |  |  | 100 | 25 | 117 | 161 | 8 | 876 | 84 | 130 | 840,000 180,000 | \％ $\mathbf{8}, 000$ 5,287 | \＄9，000 76,681 | 58 64 |
| 220 | 123 44 | 988 | 25 |  |  | 218 | 68 | 184 | 01 | 4 | 123 | 8 | 52 | $\begin{array}{r} 87,277 \\ 188,595 \end{array}$ | 7，540 | $\begin{aligned} & 15,728 \\ & 82,889 \end{aligned}$ | 55 56 |
| 44 | 0 | $43^{-1}$ | $1-$ | $2 \overline{27}$ | 17 | 88 | 3 | 29 | 20 | 1 | $4{ }^{-7}$ | 8 | $4{ }^{4}$ | －－ 85,000 | 8，000 | 16，000 | 58 |
| 1884 | 0 | 1815 | 69 | 539 | 845 | 567 | 249 | 539 | 454 | 32 | 1384 | 2 | 1334 | 1，488，554 | 4，418 | 177， 049 | 59 |
| －756 | 185 | 887 | 77 |  |  | 16 | 131 | －541 | 688 | 20 | $941^{-}$ | 5 | 525 | $1,000,000$ |  | 120,651 | 61 |
| 640 | 83 | 636 | 87 | 108 | 615 |  | 198 | 577 | 499 | 19 | 728 | $4 \frac{1}{4}$ | 305 | 535，000 | 24， 104 | 161， 619 | 62 |
| 670 | 124 |  |  | 195 | 196 | 10 |  | 475 | 404 | 28 | 784 | 4t | 789 | 529，308 | 61， 679 | 176， 105 | 63 |
| 190 | 0 | 186 | 4 |  |  |  |  | 65 | 40 | 5 | 190 | 5 | 168 | 65， 000 | 4， 821 | 21，881 | 64 |
| 249 | 108 | 270 | －85 | 247 | 210 | 97 | 110 | －75\％ |  | 8 | $8 \overline{5}^{\circ}$ |  | $199^{\circ}$ | 4000，000 | 6，293 | 63，707 | 68 |
| 0 | 342 | 282 | 60 |  |  |  |  |  |  | 9 | 842 | 5 |  | 419，552 | 6，539 | 88，318 | 67 |
| 760 | 0 |  |  | 713 | 47 |  |  | 448 | 390 | 16 | 760 | 4 | 220 | 400，000 | 34，773 | 92，227 | 68 |
| 656 | 0 | 516 | 140 | 430 | 228 | 107 | 160 | 280 | 255 | 11 | $60^{-7}$ | 4 |  | 750，000 |  | 137，000 | 70 |
| 547 | 0 | 270 | 38 |  |  | 6 | 53 | 308 | 102 | 6 | 547 | 1 | 400 | 1，000，000 | 18，305 | 120，008 | 71 |
| 502 | 161 | 578 | 85 | 190 | 147 |  | 95 | 337 | 347 | 10 | 683 | 5 | 362 | 1，607， 641 | 10，645 | 95， 213 | 72 |
| 0 | 158 | 104 | 48 | 73 | 34 |  |  | 7 | 65 | 4 | 152 | 4 | 152 | 200,000 | 6，220 | 26，081 | 73 |
| 0 | 87 |  |  |  |  | 8 | 2 | 25 | 178 | 8 | 87 | 8 |  | 200，000 | 294 | 7， 626 | 74 |
| 265 | 0 | 242 | 23 | 68 | 98 | 224 | 41 | 188 | 173 | 5 | 285 | 4 | 108 | 200，000 |  | 51， 532 | 75 |
| 78 | 21 | 98 | 6 |  |  |  | 10 | 28 | 32 | 8 | 98 | 4 | 99 | 75， 100 |  | 16，000 | 76 |
| －173 | 0 | 85 | 88 | 161 | 12 | $19^{-}$ | 11 | 44 |  | 2 | $90^{-}$ | 8 |  | 45，000 | 0 | 28，000 | 78 |
|  | 18 | 107 | 2 | －00 | 49 | 90 | －18－ | 42 | 38 | 3 | $110^{-}$ | $4 \frac{1}{2}$ | 30 | 10，000 | 1，000 | 6，000 | 80 |
| 157 | 0 | 157 | 0 | 152 | 5 | 60 | 87 | 88 | 38 | 4 | 157 | 4 | 157 | 12， 500 | 10 | 13，264 | 81 |
| 104 | 81 | 184 | 1 | 128 | 12 | 14 | 7 | 157 | 188 | 3 | 135 | 3 | 87 | 78，000 | 4，000 | 19，000 | 82 |
| 124 | 0 | 108 | 16 |  |  |  |  |  |  | 4 | 124 | $3{ }_{3}^{4}$ | 48 | 25，000 |  | 36，000 | 83 |
| 181 | 58 | 229 | 13 |  |  |  |  | 190 | 250 | 6 | 237 | 8 |  | 107， 697 | 10，700 | 41， 652 | 84 |
| 228 | 232 | 247 358 | 7 | 42 | 144 |  |  | 128 | 198 210 | 7 | $\begin{aligned} & 254 \\ & 356 \end{aligned}$ | $4_{4}^{4}$ | 30 | 68,380 238,700 |  |  | 85 |
| 364 |  |  |  |  |  |  |  |  |  |  |  |  | 00 | 203， 0 |  | 68，000 | 86 |

Statistics of elementary edu

cation in foreign countries.


Statistics of elementary education


[^104]$d$ Includes private and noniubeidined schools. eExcludes FMnland. $f$ In ambulatory schools.
in foreign contries-Continued.

$h^{T}$ The corresponding expenditure for 1894 was $\$ 735,191$. Total expenditure for 1895-96, $\mathbf{1 1 , 7 0 7 , 8 2 5 ;}$ for 1894-95, 81,626,288. Wales College and Normal School.
Includes Prince of Wales College and Normal School.
$j$ Also 01,997 in model schonls and academies; for some jears not separated from elementary.

Statistics of elementary education

|  | Countries. |  | Enrollment in elementary schools. |  |  |  | Average attendance. |  | Number of teachers. |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Boys | Girls. | Total. |  | Total. |  | Men. | Womeni. | Total. |
|  | 1 | 2 | 3 | 4 | 5 | - 6 | 7 | 8 | 9 | 10 | 11 |
| 67 | Bermuda | 1885 |  |  | 1,195 | 7.56 | 776 | 64.93 |  |  |  |
| 68 | Jamaica .---.-.....-- | 1895-96 |  |  | 100,352 | 14.91 | 59,617 | 59.40 |  |  | c 932 |
| 69 | Trinidad | 1894 |  |  | 20,621 | 9.36 | 13,297 | 64. 48 |  |  |  |
| $\begin{aligned} & 70 \\ & 71 \end{aligned}$ | Cuba $\qquad$ Costa Rica | $\begin{gathered} 1889-90 \\ 1895 \end{gathered}$ |  |  | $\begin{aligned} & 30,994 \\ & 18,768 \end{aligned}$ | 2.02 7.71 |  |  |  |  | 718 |
| 72 | Guatemala | 1893 |  |  | 43,789 | 2.99 |  |  | 907 | 613 | 1,829 |
| 73 | Nicaragua...-......- | 1894 |  |  | 20,000 | 5.26 |  |  |  |  |  |
| 74 | Salvador | 1883 | 16,663 | 12,764 | 29,427 | 3.77 |  |  | 453 | 340 | 703 |
| 75 | Argentina | 1894 | 128,034 | 120,121 | 248, 155 | 5.59 |  |  | 2,591 | 4,928 | 7,510 |
| 76 | Bolivia | 1894 |  |  | 25,000 | 1.23 |  |  |  |  | 710 |
| 77 | Brazil -.-.........--- | 1889 |  |  | 300,000 | 2.13 |  |  |  |  |  |
| 78 | Chile | 1895 | 56,395 | 58,170 | 114,565 | 3.86 | 71,901 | 62.07 |  |  |  |
| 79 | Colombia | 1894 |  |  | 89,000 | 2.29 |  |  |  |  |  |
| 80 | Ecuador | 1890 |  |  | 52,830 | 4.07 |  |  | -... |  | 1,137 |
| 81 | Paxaguay | 1891 |  |  | 18,944 | 3.94 |  |  |  |  | 448 |
| 82 83 | Perru $\qquad$ <br> Urugusy | $\begin{gathered} 1889-90 \\ 1895 \end{gathered}$ | 024 | 988 | $\begin{aligned} & 53,276 \\ & 50,012 \end{aligned}$ | 2.03 8.45 |  |  | 552 258 | 258 755 | $\begin{array}{r} 810 \\ 1,013 \end{array}$ |
| 81 | Venezuels | 1890 |  |  | 100,026 | 4.39 |  |  |  |  |  |
| 85 | Hawaii | 1896 |  |  | 12,616 | 4.65 |  |  | 177 | 246 | 423 |
| 86 | Mauritius | 1895 |  |  | 18,279 | 4.91 | 5,777 | 31.60 |  |  |  |
| 87 | New South Wrales.- | 1885 |  |  | 216,898 | 17.11 | 137, 798 | 63.63 |  | - | 4,477 |
| 88 | Queensland .......- | 1895 |  |  | 74,542 | 16.90 | 48,270 | 64.75 | 729 | 778 | 1,528 |
| 89 | South Australia | 1895 |  |  | 59,003 | 16.97 | 39,324 | 66.64 | 414 | 782 | 1,196 |
| 90 | Victoria | 1895 |  |  | 204, 850 | 17.38 |  |  | 1,751 | 2,782 | 4,483 |
| 91 | West Australia | 1895 |  |  | 8,744 | 10.65 | 6,393 | 73.11 |  |  |  |
| 82 | New Zealand | 1895 | 67,300 | 62,547 | 129,8561 | 18.92 | 107,222 | 82.56 |  |  | 3,576 |
| 83 | Tasmania | 1894 |  |  | 19,907 | 13.55 | 10,655 | 33.52 |  |  |  |

a Also pupil teachers; number not given.
in foreign countries-Continued.


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[^0]:    ${ }^{1}$ Prepared by Miss Frances Graham French, specialist in the school systems of northern and castern Europe.
    ${ }^{2}$ A pamphlet entitled "Steriges Undervisningsväsen: Redogörelse för sjünde Nordiska Skolmotet i Stockholm 1895," which was prepared for the Scandinavian Teachers' Association reeeting in Stockholm in the summer of 1895, has just been received at this otice. A resume of the same will be given at a later date.

[^1]:    ${ }^{1}$ Berättelse om folkskolorna i Riket; Das höhere Schulwesen Schwedens, von H. Klinghardt; Rapport de Mlle, Matrat sur les Ecoles Scandinaves.

[^2]:    ${ }^{1}$ The instruction in secondary schools is nearly free, amounting to only about $\$ 8$ or $\$ 10$ for each pupil. (Thesis of Dr. N. G. W. Lagerstedt presented at International Congress of Education in Chicago, 1893.)
    ${ }^{2}$ Digest of Report from the Swedish Ladies' Committee to the World's Columbian Exposition.

[^3]:    ${ }^{1}$ A short elementary summary of Christian religious doctrine, in the form of questions and answers.
    ${ }^{2}$ A Swedish crown is equiralent to 27 conts, computed at 26.8 .
    ${ }^{8}$ In the same year the expenses of the parishes for ecclesiastical purposes amounted to 15.6 per cont and for the poor to 15.7 per cent of the whole sum.

[^4]:    ${ }^{1}$ The term training colloge is used for normal school throughout this artivle:

[^5]:    In Germany it began in 1890. Cooking schools will be mentioned farther on. In 1890 in Stockholm, and a year later in Göteborg, warm and cold baths were arranged for the pupils of the national schools, and these baths hare exercised a salutary influence both morally and physically.

[^6]:    ${ }^{1}$ Résumé of article on Training Colleges for National School Teachers in "Reports from the Swedish Ladies' Committee to the World's Columbian Exposition at Uhicago, 1893," pp. 25-30.

[^7]:    ${ }^{1}$ Reports from the Swedish Ladies' Committee to the World's Columbian Exposition, 1893, pp. 31-35.

[^8]:    ${ }^{1}$ The Palmgren Practical Work School aims to train both scxes in those studies which lead to practical life. There is no special limit as to the elementary or secondary character of the school, nor as to the age of applicants for admission. (Sce pp. 433-434 of the Report of the Commissioner of Education fur 1891-92; also Palmgrenska Samskolan: Stockholm.)
    ${ }^{2}$ This subject was so fully treated on pp. 434-436 of the Report of the Commissioner of Education for 1891-92 that a mere résumé is here given.
    ${ }^{3}$ Information obtained from the Swedish Ladies' Committeo and thesis by Dr. N. G. W. Lageratedt.

[^9]:    ${ }^{1}$ Résumé of article in Roports of Swedish Ladies Committee; also information from Madamo HiertaRetzius.
    ${ }^{2}$ In Stockhclm, cooking is taught in two of the girls' higher schools: Dr. Schwartz's and the Athenæum for girls.

[^10]:    ${ }^{1}$ For description of the investigation of hygienic conditions by the school commission appointed for such purpose, see Report of the Commissioner of Education for 1888-89, pp. 220-221.

[^11]:    ${ }^{1}$ Prepared by Miss Frances Graham French, specialist in the school systoms of northern and eastern Europe.

[^12]:    ${ }^{1}$ Résumé of article in Encyclopedia Britannica, $\nabla$, XII.
    ${ }^{2}$ A territorial snbdivision which, in Anglo-Saxon, is between a shire and a hundred.

[^13]:    ${ }^{1}$ The freeholder of former times held his lands from the Crown free from feudal servitude to a subject superior.
    ${ }^{2}$ Encyclopedia Britannica, Vol. XII.

[^14]:    ${ }^{1}$ Buisson: Dictionnaire de pédagogie et d'instruction primaire, V. 2, Pt. 1.

[^15]:    ${ }^{1}$ Revue Internationale de l'Enseignement, 15 Août, 1895.

[^16]:    The report of this Office for 1893-94 contained a series of tables ${ }^{2}$ showing, as fully as possible, the extent of the introduction of hand training in institutions of all grades in the United States, the intention being to include all organized instruction having in view preparation for industrial purstits requiring training of the hand. This chapter is intended to supplement those tables by showing the purposes and character of the instruction-matters which are not susceptible of statistical presentation.

    It is impossible to represent every institution in such a compilation, but it has been intended to set forth as far as possible the aims and methods of typical institutions in sufficient numbers to show all the phases of industrial education in this country in institutions below the collegiate grade.

    In seeking the data required, a circular letter was addressed to all institutions concerned, in which information was asked upon the following points:
    (1) The central idea in such instruction: Whether it is educational only, pre paratory to higher technical study, or with a direct view to actual work or a trade; extent to which manual (or industrial) training is obligatory.
    (2) Organization: Connection with public schools or other institutions; means of support; amount charged for tuition.

[^17]:    Compiled and edited by James C. Boykin.
    ${ }^{2}$ Pages 2093 to 2169, inclusive.

[^18]:    1 With the approval of the principal, shopwork may be substituted for this work.
    ${ }^{2}$ Three for the first four months. One of the five periods is for unprepared work.
    ${ }^{3}$ French may be sulbstituted for mathematics in the third jear.

[^19]:    ${ }^{1}$ A letter from Mr. E. P. Seaver, tho city superintendent, dated May 25, 1898, states that "the course of wood \#yorking in the grammar schools is still under consideration and has not beon rednoed to definite form."

[^20]:    ${ }^{1}$ Two of these lathes are of iron made for the school by the class of 1888 , and one by a momber of the class of 1889.

[^21]:    ${ }^{1}$ Two of these lathes were made for the sebool hy the class of 1887 .
    ${ }_{2}$ The gas forge is furnished with an air jet from a tank kept filled hy an oscillating cylinder air pump inade ly certain members of the class of 1888. A new air pump is in the course of construction by members of the class of 1896.

[^22]:    ${ }^{1}$ Translated from his official reports as delegates to the Columbian Exposition, Chicago, 1893, represeating the Yinistry of Public Instruction, France.

[^23]:    ${ }^{1}$ Enactment of J anuary 18, 1897, artıcle 19.

[^24]:    Wuirtemberg is one of the twenty-six states of the German Empire.
    [Dots indicate cities and villages in which industrial schools are located. The radiating lines show distances and directions whence pupils are drawn.]
    the latter class of schools. The cost of such education would be, per annum, about 50 cents per inhabitant additional to the present school tax, and in the shops of these schools less than $\$ 100$ per student, and for total costs of higher education

[^25]:    1 See page 1215 of this annual report.

[^26]:    ${ }^{1}$ By Mr. Wellford Addis, specialist in the Bureau for obtaining and collating information relating to colleges for the beneft of agriculture and the mechanic arts.

[^27]:    ${ }^{1}$ Zur Erklärung und Abhalfe der heutigen Creditnoth des Grandbesitzes. page 138. Prof. Thorold Rogers remarks: "Nor were these yeomen (freeholders of his native village in Hampshire, England), umprosperous when they wero active, temperate, and thrifty. The greatest peril they ran was in purchasing land with their savings, mortgaging it to obtain prossession, and, up to this having committed no serious error, cultivating the land with insufficient capitai. I hare known sereral yeomen who, haring fallen into this mistake, hare lired a life of extrime labor and thrift, and, haring enlarged their estate, were poorer at their death than they were when they began their career. And in this day I beliore that agricultural distress is, and has been for some years past, due to the double cause of enlarged domestic expenditure and insuffi cient rapital for the extent of land occupied." (Six Centuries of Work and Wage $\div$, p. je. 1 But comparo his dictum, page 62 , that population kerps pace with the amount of customary food of the people, and wages never fall below the amount necessary for the laborer and his family to subsist on.

[^28]:    ${ }^{1}$ The matter of this section is taken principally from an article by M. Paul Rousiers, published in La Science Sociale as a review of the work entitled Le Crédit Agricole en France et a létranger, by Louis Durand, doctor in law and advocate before the court of appeals of Lyons, France. M. Ronsiers, author of the well-known work on American Life, acknowledges his indebtedness to the "judicial work" of M. Durand, and the same ncknowledgment is made by the writer of this chapter.

[^29]:    ${ }^{1}$ There were in Austria during 1805994 Raiffeisen societies, with 60,000 members (estimated), and in Wurtemberg there were 1,223 such societies, with perhaps 100,000 members. In Bavaria the Raiffeisen societlies had grown in 1883 to 713 from 245 in 1885 , with a membership of 62,000 as against 24,400 in 1885. The Swiss Government offered a bonus for each Raiffeisen society formed, but the Swiss enjoy such exceptionally good opportunities for obtaining money that the societies do not multiply fast. In 1894 the Belgium Legislature passed an act favoring the creation of the Raiffeisen societies. The number of such societies in Germany in 1894 was 1,098; in Italy in 1890250 societies, with a membership of 15,000 . In 1885 France had 281 of these societies. -Michael G. Mulhall, in sppendix of report of recess committee on the establishment of a department of agriculture and industries for Ireland, second edition.

[^30]:    ${ }^{1}$ Raiffeisen established a central bank as the general clearing house of his system. In remarking the nnion of "the psycholngy of the crowd" with business principles the imagination is warmed by the completeness of Raiffeisen's work. He has created a special banking system which is now dependent on capital, but which is a politico-financial body only equaled in its solidarity by the state. The lalor unions of England and Americn are not to be compared to it, either in view of self-help or independence of parpmse. There were in Germany in 1890 abnat 2,000 societies for agricultural credit, with $20,000,000$ francs in loans.

[^31]:    ${ }^{1}$ Le Credit Agricole, Louis Durand, doctor of law and advocate in the court of appeals of Lyons, France, page 236. M. Durand is now president of the Federation des Caisses Rurales et Ouvrières de France.

[^32]:    ${ }^{2}$ Following Dr. L. Lïll, royal Bavarian councilor, in Dio băuerlichen DarlehenskassenVereine. is ed., Wurzburg, 1850.

[^33]:    1 By Mr. Wellford Addis, specialist in the Bureau for obtaining and collating information relating to colleges of agriculture and the mechanic arts.

    EExcluding $\$ 7,710$ withheld by the State of Kentucky for the college for white students at Lexington, and about $\$ 1,800$ not received by the University of Nevads. The latter deficit is not Included in the $\$ 817,506$.

[^34]:    ${ }^{1}$ In the case of New York, Nevada, Minnesota, and Florida the fund, it appears, has been invested in Government and State bonds paying "less than 5 per cent."

[^35]:    ${ }^{1}$ The basis of this section, except the historical part, is the information collected by Prof. John A. Woodward, of the Pennsylvania Experiment Station. The Bureau is indebted to Mr. Oliver D. Schock, chief clerk of the department of agriculture of Pennsylvania, for the documents contrining an account of the institute work of that department.
    ${ }^{2}$ Address before Association of American Agricultural Colleges and Experiment Stations, November 11, 1895.
    ${ }^{2}$ Hisidea was expressed by the King of Prassia, William III, when this school was subsequently made a part of the University of Berlin, as follows: There must be connected with the university, as an essentinl part an institute organized for the purpose of illustration (ein musterhaft eingerichtetes institut), which would exhibit the relation of theory and practice, upon which relation the instructor could base his instruction and in which institute the student might leara. The ase of the word institute here will be familiar to those acquainted with the "pathological sind chemical institutes" of the German universities, being our "Americar laboratories fitted out with a director and a full faculty of instructors."

[^36]:    - Those interested in these matters may consult "A preliminary list of American learned and educational societies," prepared by Dr. Stephen B. Weeks and published by this Bureau in its 1883-94 report.

[^37]:    ${ }^{1} \mathrm{Nec}$ manus nuda, nee intellectus sibi permissus multum valet; instrumentis et auxiliis res perflcitur. Novum Organum, Aph. II. (Neither the naked hand nor the intellect thrown back apon itself amounts to much. Investigation requires instruments and aids.)

[^38]:    ${ }^{1}$ In the Gorgins or What is Rhetoric, for instance.

[^39]:    ${ }^{3}$ The college at Grignon is talcen to illustrate this feature of the French system. M. Philippar is director of this college, and M. Deherain, the author of the well-known Cours de Chémie Agricole, is professor of chemistry.

[^40]:    ${ }^{1}$ The terre franche is the perfect soll. It is permeable, thanks to its sand. The clay restrains evaporation and anchors the sand, while the lime actes advantageonsly upon the clay, or, in the old couplet, "Clay on anad manures the land; sand on clay is thrown away;" in other words, heavy clay needs lime or drainage.

[^41]:    ${ }^{1}$ Report on the Improvement of Indian Agriculture, by John A. Foolcker, Ph. D., etc., Consulting Chemist to the Royal Agricultural Society of England. Dr. Foelcker was sent by the British Government as a commissioner to ezamine and report upon the fmprovement of agriculture in India.

[^42]:    ${ }^{1}$ Ten years consul of the French Government and atudent of the Ingtitut National Agronomique de Versailles, seventh edition.

[^43]:    ${ }^{1}$ Says Tcheng Ki Tong, of the Chinese embassy at Paris, in the Revue des Deux Mondes (first June number, 1884, page 601, also page 898 of the second June number), "To give the fact, the two classes which are esteemed and honored in China aro the highly fnstruct d class (the literary publicexamined class), and the agriculturists. These two classes constitute the aristocracy of mind and of work. Our gentlemen are only able to incribe in their coat of arms either a pen (or rather pencil) or a plow. The one class has heaven for its horizon [sic], the other the earth-the infinite and manual labor." (La Chine et les Ohinoise.)
    after a personal investigation conducted with every precantion to prevent superficial judgmenta; lor, as M. Dreyfus Brissac remarks, "it is as difficult to understand the manners and customs of a foreign country as to try to see in the dark."
    ${ }^{2}$ Mr. Gill was a member and an agout of the recess commlttee for Ireland. See further on.

[^44]:    ${ }^{4}$ Late President of the Swiss Reppublic, in Essais économiques.
    ${ }^{2}$ A self-appointed, nonpartisan committee of members of Parliament and other representative Irishmen to consider the industrinl situation. Report dated August 1, 1896, and addressed to the chief secretary of the lord Heutenant of Ireland, by Hon. Horace Plunkett, M. P., chairman; the Earl of Mayo, Lord Monteagle, the Right Hon. Lord Mayor of Dublin, the Right Hon. The O'Conor Don, the Pight Rev, Monsignor Malloy, ete.

[^45]:    13I. E. Tisserand is the permanent chief of the agricultare depantment of France, over which presides a cabinet minister to whom he is subordinate. The letter is addressed to Mr. Gill, a member and an agent of the "reons committee" for Ireland.

[^46]:    ${ }^{1}$ Two bills are now before Congress in regard to the creation of such institutions in the United States.
    ${ }^{2}$ Translated from the programme of the Eonigliche Technischo Hochschule an Berlin.

[^47]:    ${ }^{1}$ The following letter shows the character of the projected institution:
    "Dear Sir: The authorities of Purdue University are considering plans for the organization of a series of lecture courses which shall be especially adapted to the needs of mechanics. The plan which séems most likely to succeed involves some features which are new, and members of the faculty who are endeavoring to perfect its details feel the need of help and advice from those who have had experience in dealing with such men. Therefore, if convenient for you to do so, will you kindly look over the outline which follows, and send to the undersigned any comment or suggestion which may occur to you.
    "The movement is an effort to extend the influence of the university to a class of men who have not yet directly profited from its work. It is believed that if these men, who are so closely identified with the material prosperity of the community, could be led to read more widely and to think more deeply, their effciency as workmen would be increased and their usefulnèss as citizens more thoroughly assured. As a means which may in some measure contribute to this end, it is proposed to organize what may be known as the Purdue Mechanics' Institute. Through this organization lecturers, who will present scientific and technical subjects to audiences composed chiefly or wholly of mechanics, will be sent to the various industrial centers in the vicinity of the university:
    "It is proposed to make the lectures valuable from a purely technical point of view, and at the same time, by abundant illustration, to render them sufficiently popular to interest all who may attend:- It is proposed at first to devote special attention to operatives connected with the larger railroad shops, and to extend the work to other establishments as rapidly as the plan can be matured. It is possible that under suitable conditions this plan could be extended into substantial courses in drawing, mechanics, ête., given in night classes, though at present it is proposed to organize for lectures only.
    "In further development of the plan, it has been thought that it would be wise, if practicable, to have these lectures given in the shops, and not in a public hall. Sittings upon the benches and improvised seats could be arranged, and by not being obliged to go to a public hall the men would perhaps feel that the affair was particularly their own.
    "It is probable that it would be well, also, to make a small charge; as, for example, za cents for a series of five lectures, though the university is perfectly willing to carry on the work without cost to those receiving beneft, if such an arrangement appears to promise best results.
    "That the value of the proposed work may be better judged, the following lecture subjects are given from which selections might be made: (1) The great bridges of the world and how they were constructed. (2) Steam: What it is and what it does. (3) A history of the steam engine. (4) The development of the locomótive. (5) Locomotive testing. (8) A modern transatlantic liner. (7) The building of a dynamo. (8) Fuels and their use in the industries. (9) Steel buildings. (10) The training of an engineer, (11) The transmission of power. (12) The sunbeam and its effect on human industry. (18) Lessons from the lives of George and Robert Stephenson. (14) Self education, or how a mechanic may educate himself.
    "Respectfully,

[^48]:    ${ }^{1}$ Probably this will be more generally understood if called enrollment.

[^49]:    a Thirty-eight men and 3 women under "monresident" instruction in arriculture.

[^50]:    $a$ Not including outdoor paupers for any year except perhaps in 1870, just before which date the State board of charities of Massachusetts recommended that that State ought not to establish any more almshouses, but should eke out private and municipal charities.

[^51]:    ${ }^{1}$ This is quoted from M. Bertillon's proface to bis book publisheā in America as The Bertillon Srstum of Identification, the Worner Company, edited by Maj. R. W. McClaughry.
    $=$ Majnr McClanghry's translation is used in these quotations. This translation is exhaustive, and is riclly illustrated, mostly by photograrures, with the view of defining terms used in describing the genetic peculiarities of the human face and head.

[^52]:    ${ }^{1}$ Respectively by Maj. R. W. McClaughry, late general superintendent of police, Chicago, and by Dr. Paul R. Brown, major and surgeon United States Army. From both of these gentlemen this Burean has received the most courteous and valuable assistance in preparing matter for the honorable the Secretary of State, to be transmitted to the British Government. Major McClaughry has favored us with his translation, which has been used.

[^53]:    ${ }^{1}$ Presidential address, delivered before the National Educational Association, at Denver, Colo., July $9,1895$. Reprinted from the Educational Review, September, 1895.
    ${ }^{2}$ The Destiny of Man (Boston, 1893), page 12.

[^54]:    ${ }^{1}$ Presidential address, British Association for the Advancement of Science, Southport, 1883.

[^55]:    ${ }^{1}$ Phases of Thought and Criticism (New York, 1892), pages 57, 58.
    ${ }^{2}$ Preface to Literature and Dogma (New York, 1889), page xi.
    ${ }^{3}$ Pater, The Renaissance (Now York, 1888), page 34.

[^56]:    ${ }^{1}$ Froude, Life and Letters of Erasmus (New York, 1894), page 186.
    ${ }^{2}$ Education of Man (tr. by W. N. Hailmann, New York, 1888), page 154.

[^57]:    ${ }^{1}$ Short Studies on Great Subjects (New York, 18~2), II, $25 \pi$.
    ${ }^{2}$ Presidential address, British Association for the Advancement of Science, Belfast, 1874.

[^58]:    ${ }^{1}$ Papers read before the Second Annual Conference on Manual Training, Teachers' College, New York City, May 16, 1896.

[^59]:    ${ }^{1}$ Since the close of the first celebration at Athens of the Olympic games revived by the International Congress at Paris in 1894 it was decided to strike off a medal commemorative of this congress. Copies will be sold (Florentine bronze, 12 francs; old silver, 25 francs) strictly to persons who participated in the work of the congress or in its organization. The disposition of the medals will be made on some ceremonial occasion, the date of which will be ultimately fixed. The work is in charge of M. Maurice Borel, 32 Avenue Montaigne, Paris, France.

[^60]:    ${ }^{1}$ Minister of public instruction at the time these letters were written.

[^61]:    a About $\$ 4,000$ will be divided among the annuitants the first year.

[^62]:    ${ }^{1}$ Rep. Com. Ed., 1894-95, Chapter XXXV, pp. 1469-1482.
    ${ }^{2}$ New York School Law, ed. 1896, sec. 14 (19), p. 36.
    ${ }^{5}$ New Jersey School Law, 1895, p. 40. 43*

[^63]:    ${ }^{1}$ Sec Report on Art and Industry in the United States, by I. Edwards Clarke, Part II, pages 3-12.

[^64]:    ${ }^{1}$ Boston School Document No. 21, 1892, pages 32-34.
    ${ }^{2}$ Proceedings 1893, pages 138-140.
    ${ }^{3}$ Proceedings 1895, pages 18, 42-43.
    ${ }^{4}$ Report 1895, page 37.
    ${ }^{5}$ Report 1894, page 31.

[^65]:    ${ }^{1}$ Reprinted in Report on Art and Industry in the United States, by I. Edwards Clarke, Pt. II, pages 716-722,

[^66]:    ${ }^{1}$ Rearl before the American Institute of Instruction at Bethlehem, N. H., July 10, 1896.

[^67]:    ${ }^{1}$ Report written by Dr. Myles Standish, Bostor.

[^68]:    ${ }^{1}$ When we have once separated matter from thought, when we have called matter what is perceived, in opposition to thought or what perceives, we must not eat our own words or swallow our owa thoughts by saying that, for all we know, matter may think or mind may be touched and handled.
    From this point of view I call materialism no more than agrammatical blunder. It is the substitution of a nominative for an accusative, or of an active for a passive verb. At first we mean by matter what is perceived, not, indeed, by itself, but by its qualities; but in the end it is made to mean the very opposite, namely, what perceives, and is thus supposed to lay hold of and strangle itself. What causes the irritation of our senses is confounded with what receives these irritations; what is percoived with what perceives; what is conceived with what conceives; what is named with the namer. It is admitted on all sides that there never could be such a thing as an object, or as matter, except when it has been perceived by a subject or a mind. And yet we are asked by materialists to believe that the perceiving subject, or the mind, is really the result of a long-continued development of the object or of matter. This is a logical somersault which it seems almost impossible to perform, and yet it has been performed again and again in the history of philosophy.-F. Max yaller, The Science of Thought.
    While mind and matter may both be called substances, they are different kinds of existences. We know them by different organss the one by self-consciousness, the other by the senses. Again we know them as posseesing altogether different properties; the one as perceiving, reasoning, feeling, willing; the other as extended and exercising energy. The properties of the one can not be predicated of the other. Thinking and feeling have no place in that stome; nor have softness, hardness, or gravity in our sonls.-Dr. James McCosh, in Praface to Ribot's Cerman Psychology of To-Day.

[^69]:    ${ }^{1}$ This is mot a mere verbal distinction. Man's most valuable and lasting work in any direction is warlk not merely expressing or stating facts that he has become aware of, but actually creating new facts. The dramas of Shakespeare are not simply transcripts of things that the arathor knew to have actually happened to particular people. They are a new-created world, wherein human eharacter and human life show themselves even more clearly and moro truly than most of mankind ever see with their own unaided eyes in the thick of common happenings. The symphonies of Beethoven are not simply expressions of what the composer had heard from winds and birds and running water. They are the positive creations of a self-active soul grasping the

[^70]:    laws of harmony that are so faintly hinted at in nature, and embodying forth ideals of tone and rhythm that never had taken form without the composer's genius as a cause. The Parthenon with its scalptures was not simply a marble statement of the laws of gravity and of the religious and political opinions of the Athenian State-a material expression of existing facts. It was the bringing forth into visible and glorious existence of an entirely new creation: something that had not existed in the marble quarry, but only in the constructive artistic imagination of manimagination so strong, so clear, so high in its reach, that it could and did command matter to its obedient service.

[^71]:    ${ }^{1}$ I heartily believe in the introduction of various lines of nature study into the public schools. In city schools particularly, such studies are an indispensable help in bridging the chasm between the child and his natural environments, and giving him at least a suggestive glimpse into the marvels and beauties of the natural world. What I do object to is the extreme ground taken by some educators (an extreme precisely opposite to that of the old-fashioned word-for-word text-book memorizing) wherein it is fancied that the study of nature is educationally allsufficient; that language and number study can be sufficiently and successfully developed as mere incidentals to nature study, and that drawing, used as the handmaid of the natural sciences, can constitute art instruction. Against this miscanception of what art means, and what art study ought to be in a course of education, I believe a strong protest should be made.

[^72]:    Hon. W. T. Harris, LL. D.,
    Commissioner of Education, Washington, D. C.

[^73]:    "No statistics were rereired from 21 out of the 0,2 systems. and in the returns of a few others some of the items were not reporterl. In the preparation of this table such rleficiencies were sup. plied from the hest sources a vailable. In general, estimates lrased upon ratios developed in the differcities of the same State were used unless it appeared that tho conditions were essentially differnt in tho city for which the data wero lacking. For example, if 2 cities out of $2 \boldsymbol{i l}$ in a state did not report average attendance, and in the other 18 the attendance areraged $\% \mathrm{per}$ cent of the enrollment, that ratio was applied to the enrollment of the two remaining cities; tho number Whorentined way added to the sum of the attendance in the 18 to find the total for the sitate. mates wror madre for that stato wero eonsiderable in relative number or importance no est mates wror madre for that state, but in all cases such deflrienries were incignificant when the g'o. Wrathical divisions wre considered and satisfactory estimates wero casily nade.
    b With the exc-ption of one city the statistirs are for $1894-95$.

[^74]:    * Statistics of 1894-95.
    a See footnote on page 1490 for explanation of the method used in the proparation of this table.
    b With the exception of one city the statistics are for 1894-95.

[^75]:    * Statistics of 1894- 55.

[^76]:    * Statistics of 1894-95.

[^77]:    a tatistics of 1894-95.
    a The high school was in segsion 192 days.

[^78]:    - Statistics of 1894-95.

[^79]:    * Statistics of 1894-95. a Value of sites and buildings. $b$ Not including 269 rented rooms.

[^80]:    *Statistics of 1894-95.

[^81]:    * Statistics of 1891-95.

[^82]:    * Statistics of 1894-95.
    a Appropriation of United States Congres.s, ono-half dorived from local taxation and one-half from the Federal Treasury.

[^83]:    Statistics of 1894-95.

[^84]:    *Statistics of 1894-95.

[^85]:    *Statistice of 1891-95.

[^86]:    Statistice of 1894-95.

[^87]:    Statistics of 1894-35.

[^88]:    Statistics of 1894-95.

[^89]:    - Statistica of 1894-90.

[^90]:    *Statistics of 1891-95.

[^91]:    *Stalistice of 1894-85.

[^92]:    * Statistice of 1894-95.

[^93]:    * Has pedagogical department.

[^94]:    *Statistics of 104-95.
    a No report for past three years.

[^95]:    ＊Statistics of $1894-85$.

[^96]:    a Does not include 122 students reported by Randolph-Macon College as having attended the Randolph-Macon Woman's C'ollege, Lynchburg, Va.

[^97]:    IL6I

[^98]:    * Statistics of 1891-95.

[^99]:    * Statistics of 1801-95.

[^100]:    ＊Statistics of 1894－95．

[^101]:    - From 1894-95,

[^102]:    *Statistics of 1801-9-.

[^103]:    * From 1894-95.

[^104]:    a From State only.
    b Average enrollment.

[^105]:    College presidents, $959,956,900$.
    Library lepialation, $59,59,595,581,588-589$.
    Manual traling in, $1145-1146.5$

