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Bulletin 109 - Practical Arts at the Eastern Illinois State Teachers College

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Eastern Illinois University

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PRACTICAL ARTS
at the
EASTERN ILLINOIS STATE
TEACHERS COLLEGE

By L. F. ASHLEY

THE TEACHERS COLLEGE BULLETIN

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No. 109

CHARLESTON, ILLINOIS

July 1, 1930

Practical Arts at the Eastern Illinois State Teachers College at Charleston

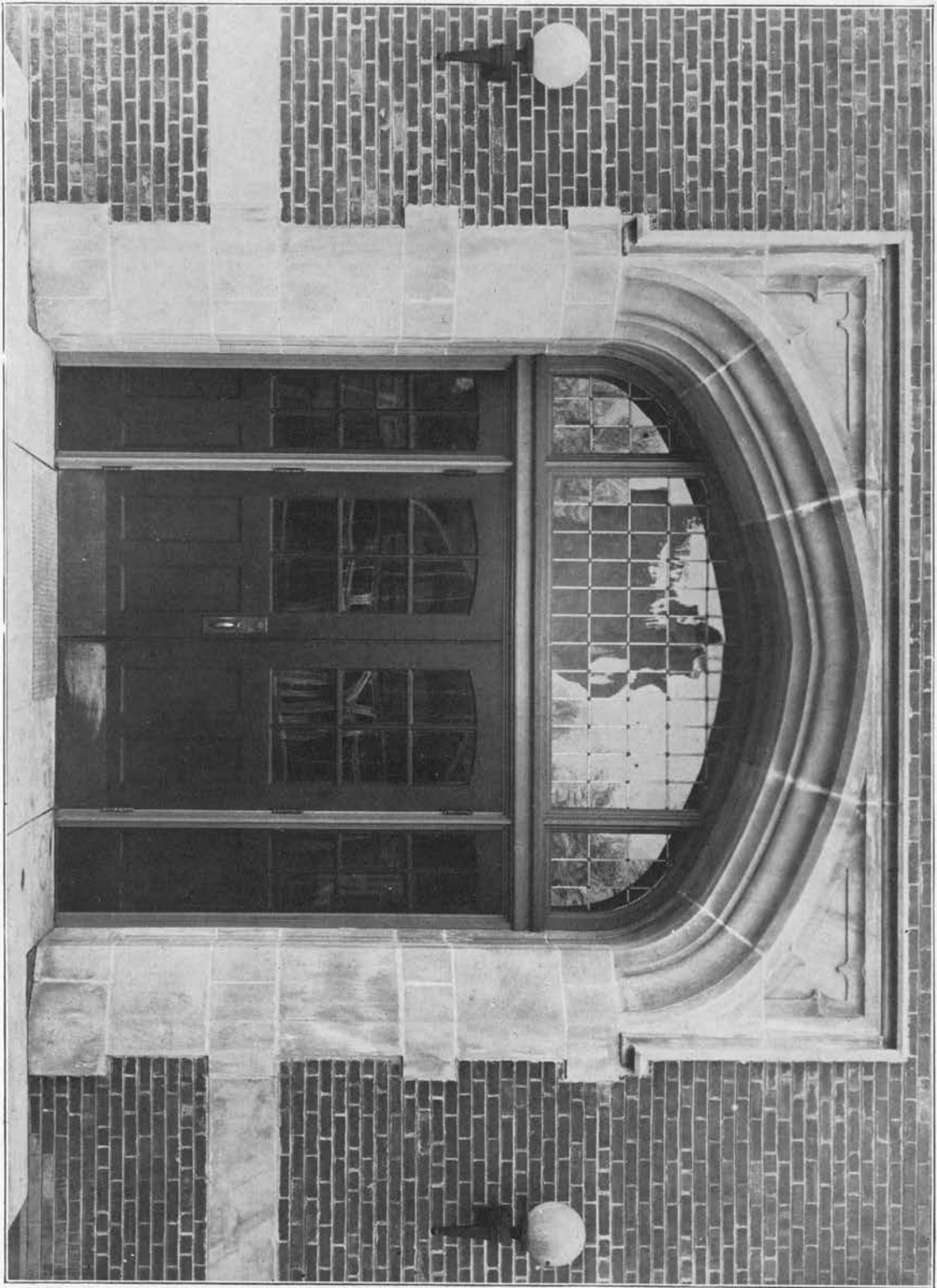
By

L. F. ASHLEY, Chairman
of the Practical Arts Committee and
Director of the Department of Manual and Industrial Arts

The Eastern Illinois State Teachers College is a TEACHERS COLLEGE, Class A, in the American Association of Teachers Colleges, and a College, First List, in the North Central Association of Colleges and Secondary Schools.

EASTERN ILLINOIS STATE TEACHERS COLLEGE AT CHARLESTON

(Printed by authority of the State of Illinois)



The Main Entrance

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Practical Arts Courses at the Eastern Illinois State Teachers College

Three curriculums are offered in the Practical Arts Department: Manual Arts, Industrial Arts, and Home Economics. The first, Manual Arts, is a two-year curriculum to prepare teachers for the traditional courses in woodwork and mechanical drawing that are taught in most of our high schools. It is rapidly being superseded in our college by the Industrial Arts curriculum, which is a four-year curriculum and which includes the work given in the two-year curriculum. The demand for teachers with a more extensive preparation will probably soon cause the two-year curriculum to be discontinued. The Home Economics curriculum is four years in extent. The two-year curriculum in this work was dropped because the demand for teachers narrowed down to those who could meet the requirements of the Smith-Hughes Law. Our efforts in the Home Economics work are now confined to preparing teachers for Smith-Hughes positions.

The reasons for the demand for Smith-Hughes trained teachers are largely economic. If the teacher does not meet the requirements of the State Board for Vocational Education, the local community must pay all of her salary. If she does meet the requirements, half of her cost may be met by the state and nation. Therefore a teacher with the degree in Smith-Hughes Home Economics will cost the local community less than one with but two years of professional preparation.

In the book-making and in graphic and mechanic arts we offer the required professional training for positions in Smith-Hughes work. The law requires the candidate to have trade experience outside of his professional training. In some states this is interpreted to mean from two to five years beyond the apprenticeship period. Some of our graduates, who have had the trade experience, have taken Smith-Hughes positions in the mechanic arts. The Smith-Hughes training for this field is relatively unimportant, due to the few positions which are open. In most of the states the work is entirely optional. As the emphasis in the manual training classes which comply with the law must be on production, and as this emphasis is of minor value to the boy in the public school, who is not employed as a wage-earner in industry, school boards prefer to have little to do with Smith-Hughes manual training work. They prefer a man trained to teach manual training primarily for its cultural and prevocational values and to impart such skills as are recognized by modern industry.

The above statement should not be construed to belittle the value of Smith-Hughes Mechanic Arts. It is merely an explanation of the situation as it exists in Illinois and other states where the work is not compulsory. The value of such work is really very great to boys in employment and to communities having children of seventh grade education or thereabouts in industry; it ought to be encouraged. It is the most feasible manner of insuring a satisfactory future for these children, and assuring to the state and nation better citizens. The methods in all Smith-Hughes courses are sufficiently emphasized at Charleston to thoroughly acquaint all practical arts students with them.

Dept. of Vocational Education
E. S. M.



The Practical Arts Building of the Eastern Illinois State Teachers College at Charleston

The Home Economics work may be placed under two major heads, courses in foods and nutrition and courses in sewing. Under the former are given courses to prepare teachers in the principles underlying the preparation of foods, and in the selection of foods for the proper nutrition of individuals. Facts and practice in the simple and attractive serving of meals are given their proper place. The courses in the annual school catalogue are listed under the head, Domestic Science.

Courses 30, 31, 32 run throughout the year and give 8 semester hours in methods in food preparation. This is based on meal preparation for the family, composition of foods, principles of cookery, and the study of recipes.

Course 34, "Dietetics," $2\frac{2}{3}$ semester hours, is a study of the principles of normal human nutrition, application of feeding problems of the individual, and the calculation and preparation of dietaries.

Course 33, $2\frac{2}{3}$ semester hours, considers different and better methods of cookery, factors affecting standard food products, buying, and analysis of standard products.

Course 35, $2\frac{2}{3}$ semester hours, is a study of the planning and preparation of meals for the family, including a study of the needs of children. The aesthetic elements and social opportunities relating to meals are emphasized.

Course 43, $2\frac{2}{3}$ semester hours, is a study of modern household equipment, factors which determine the selection of equipment, and the study of household physics.

Course 44 is house planning and furnishing. Course 45 is household management. This includes budgets and finances, appreciation of pictures, and home libraries. Each $2\frac{2}{3}$ semester hours.

Course 46, $2\frac{2}{3}$ semester hours, is home nursing and child care and training.

Sewing is listed in the catalogue under the head, Domestic Art. Sixteen semester hours of this work are offered under the topics as follows: Textiles $2\frac{2}{3}$, Clothing $5\frac{1}{3}$, Garment Making $2\frac{2}{3}$, Costume Design $2\frac{2}{3}$, Advanced Dressmaking and Millinery $2\frac{2}{3}$.

Each student in Smith-Hughes Home Economics takes three quarters of practice teaching, 8 semester hours, one quarter in methods, one, in industrial history, five, in education, one, in hygiene, six, in chemistry, two, in history, two, in botany, four, in art and design, and four, in English. The student may elect some work in other departments in addition to the above list of subjects. It is evident that a young woman who has completed with good grades this programme of study has excellent mental equipment and physical skill to teach or to supervise the teaching of home economics in our public schools.

The student desiring to complete the two-year curriculum in manual arts is required to take in the special field, three quarters in practice teaching and one, in the methods of teaching the manual arts, three, in bench woodwork, including toy-making, the care, construction, and use of wood-working tools, and joinery; one quarter in band steel construction, including the making of ornamental household articles; two quarters in machine woodwork, including the use, installation, and care of machinery, a study of furniture structures and styles, and the making of a fine piece of furniture of the student's own design under the guidance of his instructor; one quarter of household mechanics, which has to do with general household equipment and repair; three quarters of mechanical drawing, covering the general practice in orthographic, isometric, and oblique projection, sheet metal development, and lettering; one quarter in free-hand drawing. Each quarter's



Reception Room and Teachers Offices in the Home Economics Department



Director's Office Opposite Main Entrance

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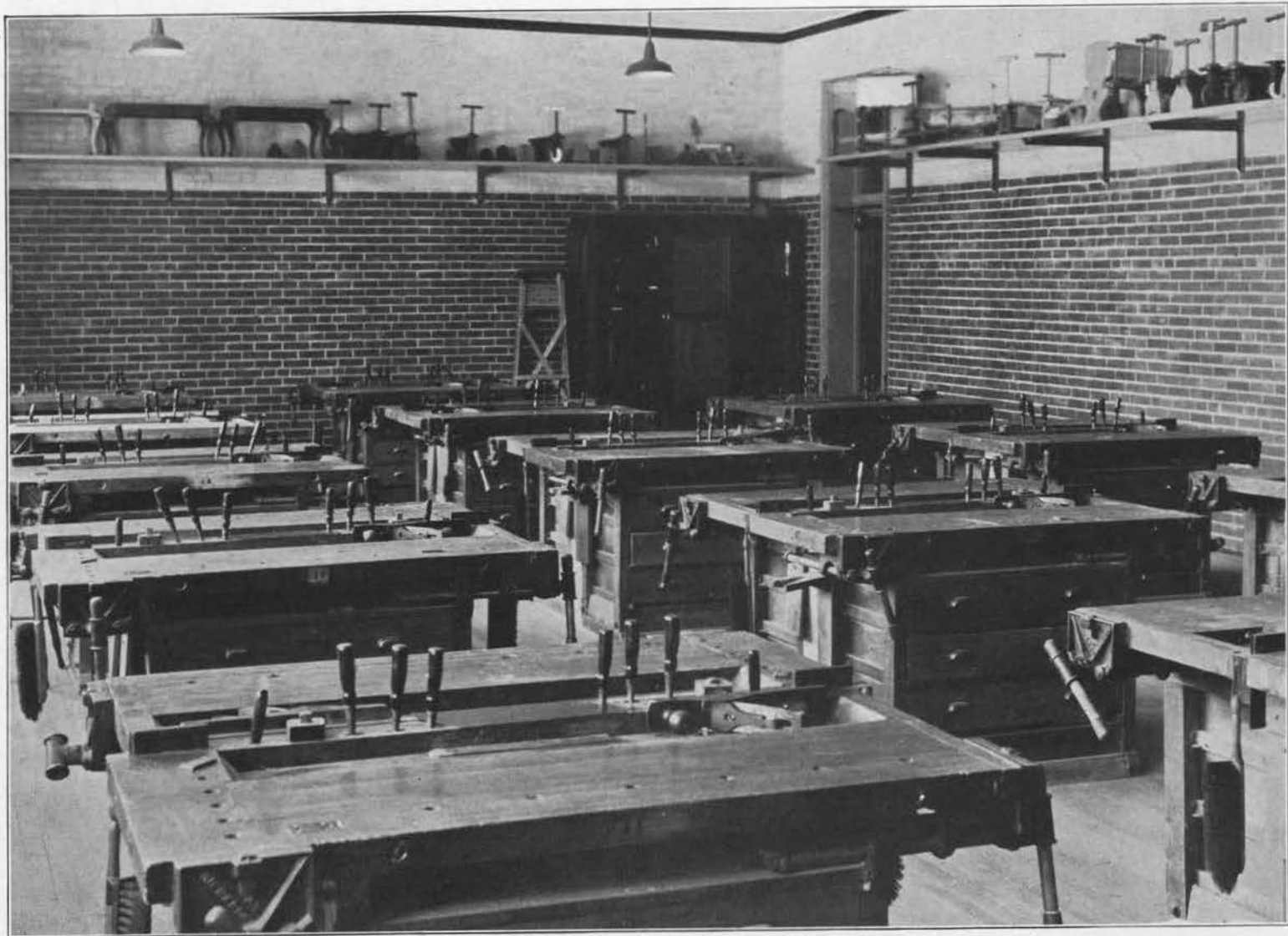
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work gives two and two-thirds semester hours of credit with the exception of the mechanical drawing and beginning woodwork which give one and one-third semester hours of credit for each quarter's work.

In addition to the work required in the special field, the two-year manual arts student takes three quarters in English; five, in education and psychology; one, in economics; two, in physics, selected for manual arts students; one, in botany (dendrology); one, in library use; and six, in physical education. The library use and the physical education are required of all junior college students in every curriculum.

The four-year student in industrial arts takes the same work as the two-year student for the first two years and is eligible for the two-year diploma if he wishes it. In his third and fourth years, he has one quarter in the history of industrial education; one, in oral English; one, in the psychology of high school subjects; two, in history; one, in hygiene. In the special field he has one quarter in sheet metal work; one, in electrical construction; one, in forging and oxy-acetylene welding; one, in wood pattern making; two, in carpentry; two, in metal machine shop work; two, in automobile mechanics; three, in printing, including linotype work; two, in architectural drawing; two, in advanced engineering drawing. Senior college students have a chance to elect five quarters of work in other fields if they choose. This gives them an opportunity to acquire enough work for a minor subject in science, history, or English.

Students who made even a fair showing in their work in manual and industrial arts are meeting with excellent success, in various parts of the state and nation, in teaching and in commercial work.



Thirty-five Students Can Work in This Bench Room at One Time. Samples of Beginning Bench Work May Be Seen on the Shelf

Explanation of Terminology

Professor Charles A. Bennett, in his book, "The Manual Arts," scientifically groups the various phases of hand activity in the public schools under five main heads:

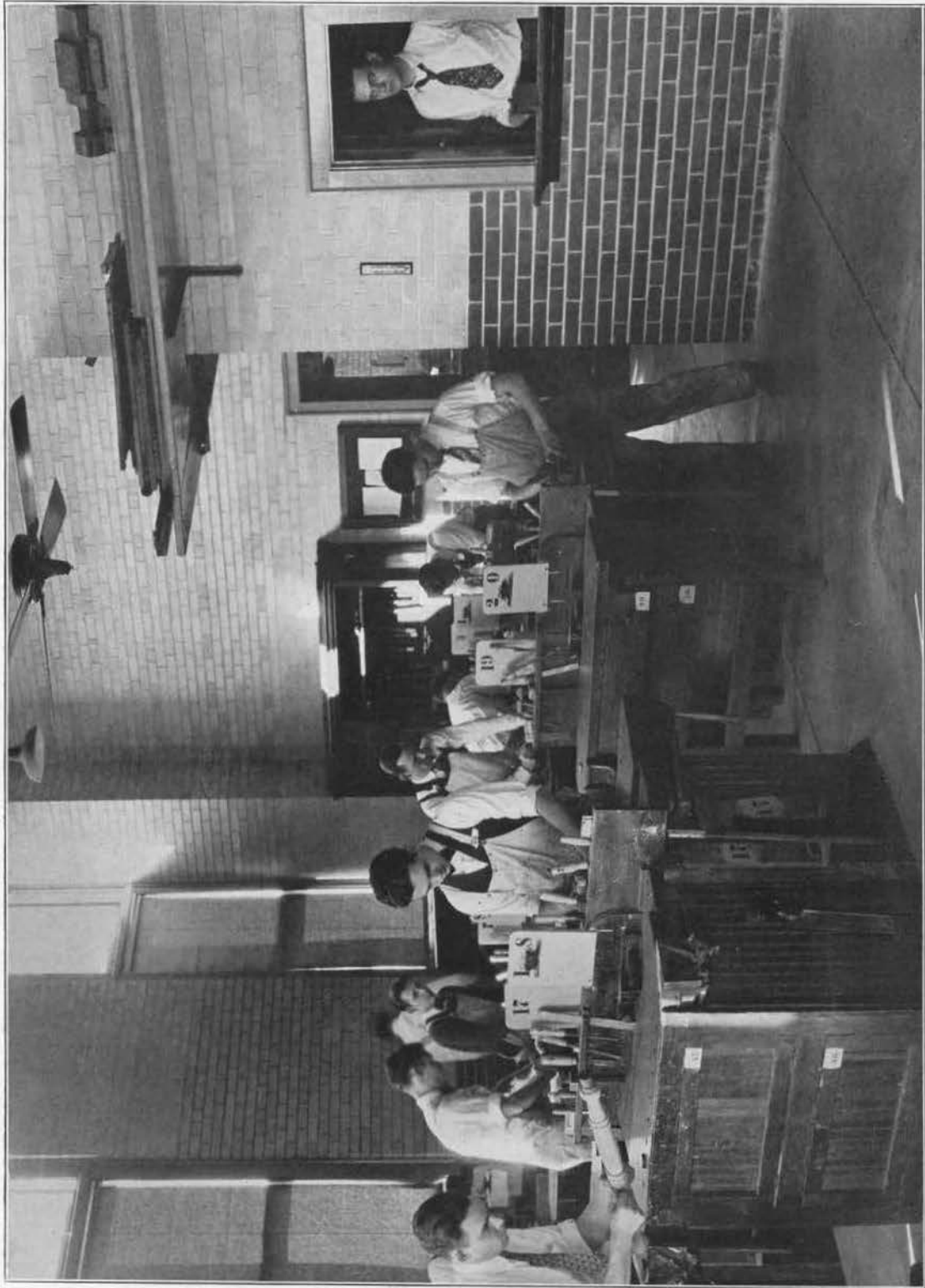
- (a) The graphic arts or all phases of drawing.
- (b) The mechanic arts or construction in wood and metal.
- (c) The plastic arts or construction of brick, tile, pottery, terra cotta, and concrete work.
- (d) The textile arts, which include all of the processes involved in the making of fabrics.
- (e) The book-making arts, which include printing, engraving, lettering, leather tooling, book-binding, and construction work with paper, cardboard, and paste.
- (f) The culinary arts, if cooking is more art than science.

The word, manual, is derived from the Latin, *manus*, meaning hand or pertaining to the hand, or being done by the hand. Therefore, Mr. Bennett's use of the term, "The Manual Arts," to denote all of the handwork done in school is scientifically proper.

The general public does not care to be scientific and neither do school people, consequently we find a good many confusing terms used to designate the various activities listed above. Some school men speak of the mechanic arts in woodwork as simply "manual." This is not so bad if they would realize that the work in the sewing classes is also "manual." Many men speak of woodwork as manual training and of mechanical drawing, free-hand drawing, textile work, and all the other forms of handwork as subjects not having anything in common with manual training. Petty jealousies among representatives of the different types of manual arts have caused their advocates to forget or ignore the scientific basis for their work and to refer to it as though it belonged to a different and more important field. The term, "industrial arts," is used by many school men and others who mean simply woodwork. Scientifically, this term refers to any of the manual arts which are taught according to the methods used in industry. They may be any of the manual arts as listed by Mr. Bennett if the major emphasis is production.

Some superintendents speak of the "vocational work" they are doing, when they mean some woodwork and drawing. Scientifically, any subject in the curriculum may be vocational if it is direct preparation for a means of earning a livelihood. The term, "prevocational work," is used by many who have no very definite notion of just what they mean, but who believe that woodwork and drawing are "prevocational." Any of the manual arts may be prevocational, if they are presented in short unit or try-out courses, with the specific purpose of discovering native aptitudes, which in turn will indicate the most suitable vocational training to be later pursued by the individuals in the prevocational classes.

Perhaps the terminology most easily understood by the general public as covering the manual arts in school work is "practical arts." These words, though vague and indefinite, hold for most people the idea of a variety of activities which are to have a more real value in the lives of the children than will arithmetic or English—untrue as that may be. The words, "practical arts," seem to

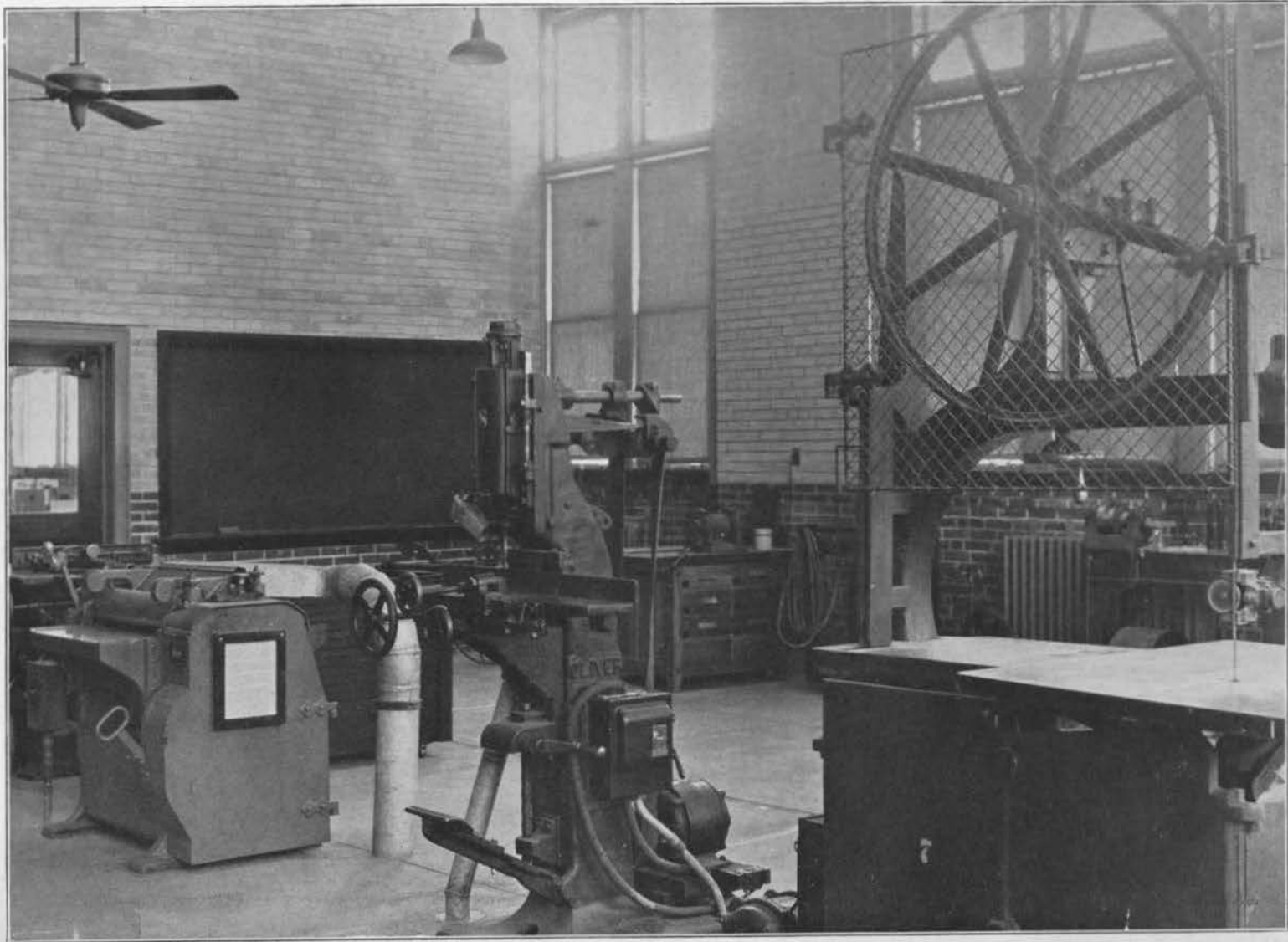


The Special Bench Room for Mill Room Students Helps in Organization

connote doing things with the hands, yet we know that any subject in the curriculum may be exceedingly practical for someone. Home economics, domestic science, and household arts are terms which really need defining for the average individual, yet he will be satisfied with them as "practical arts."

Representatives of manual arts activities are willing to have their work grouped under the term, "practical arts," while some of them do not care to have their work referred to as the manual arts, feeling that the mechanic arts get the major emphasis. This feeling is due primarily to the lack of knowledge on the part of the representatives of the work in school, the teachers as well as the school officers being unfamiliar with the basis of the terminology they use.

The term, "practical arts," as used by the Eastern Illinois State Teachers College at Charleston, is for the most part sound, as describing the work carried on in this department, for the work is given to directly prepare the students taking it for the vocation of teaching the manual arts in the public schools. It consists of the most practical work the department has been able to devise, having well in mind the place of the manual arts in education, and the needs of the public schools. We recognize that the terminology describing our work here cannot apply to the work given in the public schools, as it does to colleges, universities, and trade schools.



A Few of the Machines in the Mill Room. Dust and Shavings Are Exhausted through the Floor to Incinerator Below

Growth of the Practical Arts at the Eastern Illinois State Teachers College

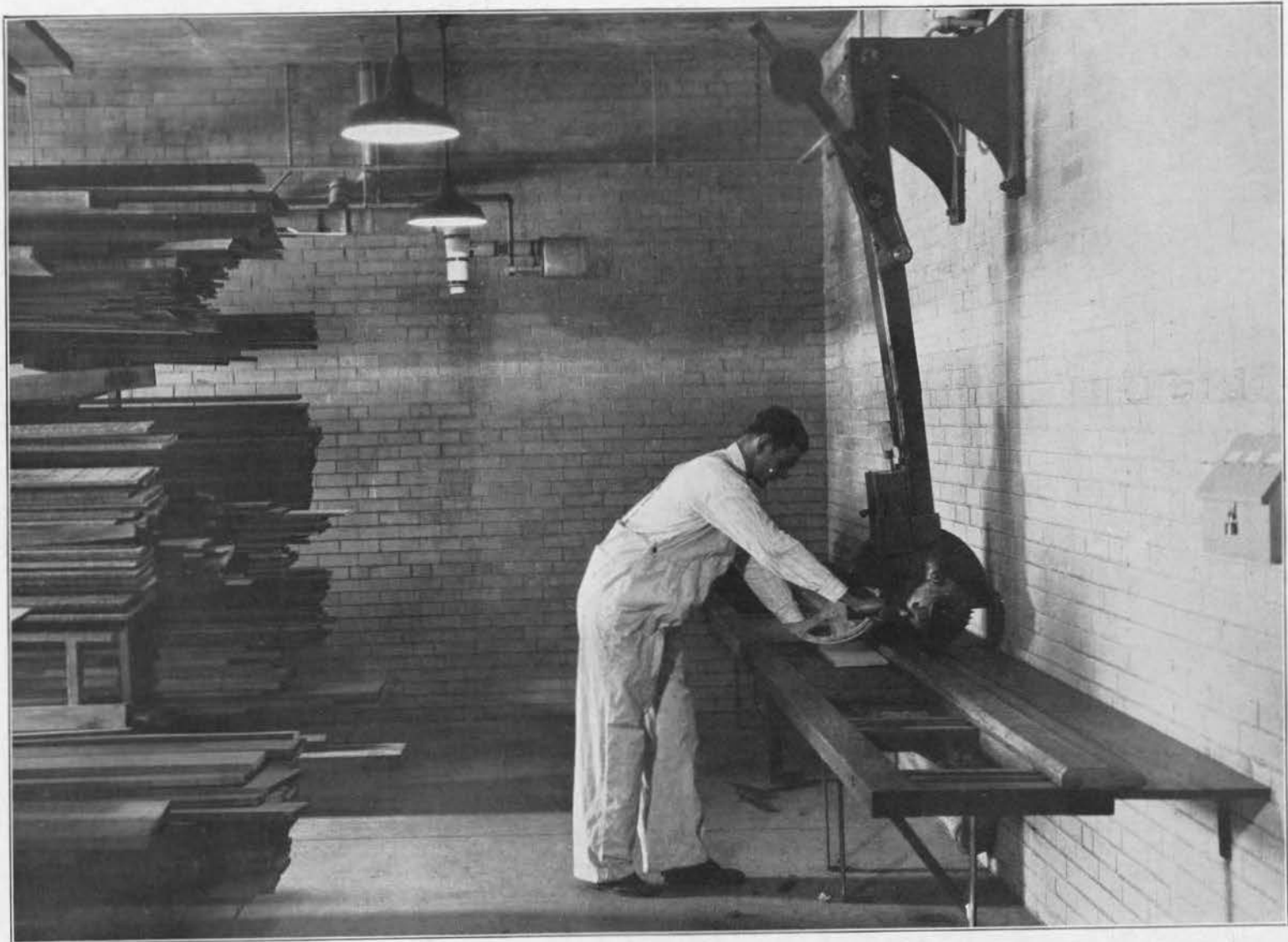
The present extent of the courses in the practical arts and the plant for administering them is due to a steadily increasing demand for teachers from the department, who have had adequate opportunity to know the field, and to the valuable work done by the graduates in various parts of the state and nation.

The Teachers College at Charleston has always endeavored to stand for the best in instructors and in facilities for teaching. The photographs of the practical arts department show that great care has been taken to provide adequate laboratories and equipment in order that the prospective teacher in this field need not be disappointed in any part of his training, nor in the opportunities for practical experience which he has a right to expect. The word, elaborate, should not apply to laboratory equipment. Care has been taken that the word, adequate, be descriptive of the plant at Charleston and that no more than is proper in the way of equipment be planned or bought. It is with considerable satisfaction to the college that the state high school visitor on his recent visit so favorably judged what he found here.

From a very modest beginning in handwork courses for the primary and intermediate grades these courses increased in usefulness and in the last ten years were found to have enrolled about twenty-five hundred students. Among these were some who wanted much more experience in kindred work, and courses in woodwork and drawing became popular. Young men began to find teaching positions at good salaries in this field. Soon it appeared advisable and necessary to provide larger quarters for the numbers entering the courses in manual arts. The home economics work in the school was barely functioning, in fact, it was steadily declining, due to the Smith-Hughes law with which it was unable to cope. It was decided that a new plant should house the home economics and mechanic arts together for two reasons. It was deemed easier to get under way one large building than two smaller ones, and the work being a branch of the manual arts, scientifically speaking, could properly be in the same building. An adequate plant would enable it to function also.

A great deal of time was taken in planning the building and the equipment. After some two years of study the matter was put before the state legislature in 1921. The appropriation was not allowed. Two more years of study and cramped quarters caused a bill to be introduced at the next session of the legislature in 1923. Again the bill was voted down. After another two years of planning, a bill was again introduced in 1925. This time a building with equipment was allowed. Ground was not broken for the building until the spring of 1927. Most of the appropriation was allowed to lapse and another session of the legislature, that of 1927, reappropriated the amount which had lapsed. The construction of the building was very slow and it was not until in the spring of 1929 that the practical arts department came into its own. It was really not until the fall of 1929 that everything was in place and in smooth running order.

The arrangement of the rooms and equipment is shown on the floor plans.



The Swing Saw in the Lumber Storage Room Is a Convenience in Getting Proper Lengths of Material for the Mill Room

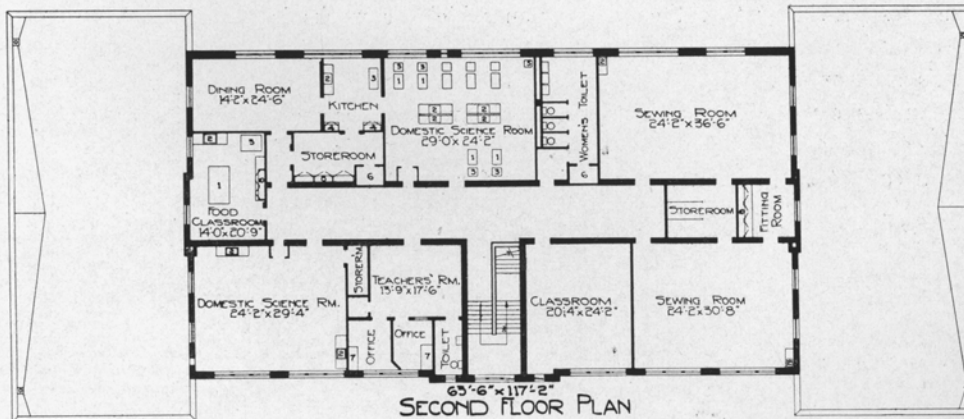
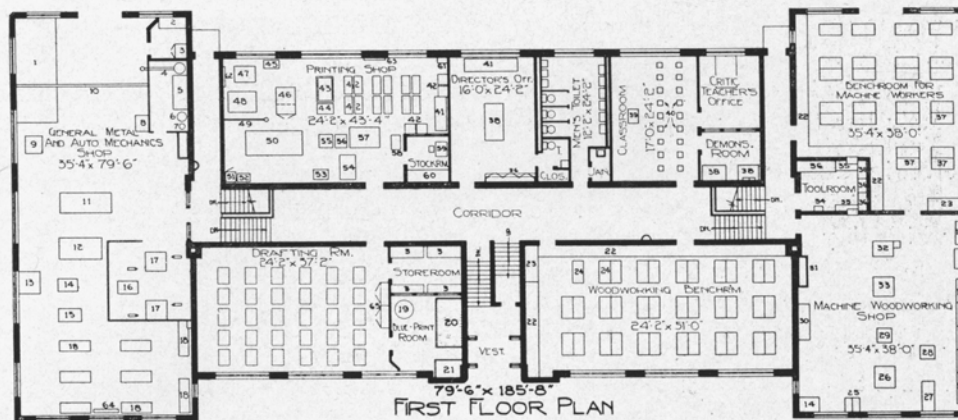
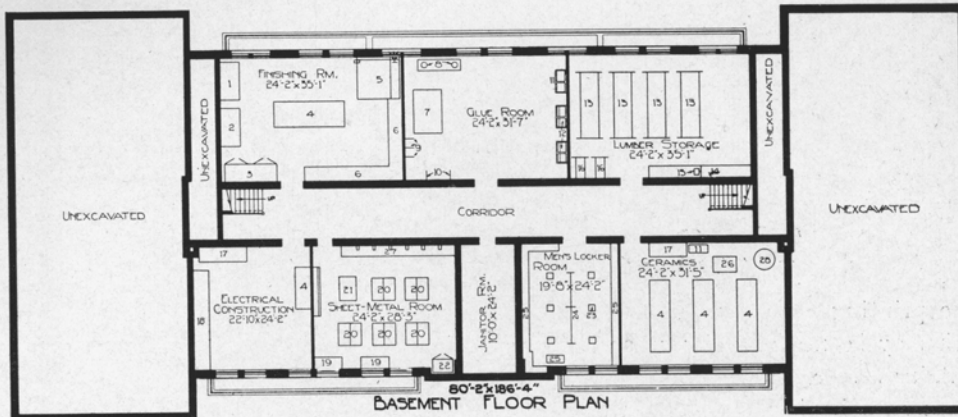
The Cost of the Practical Arts

In the printing, drawing, and mechanic arts courses, in order to have on hand certain supplies which may be needed daily so as to cause no interruption of the student's class period, the state maintains a store at the building from which such supplies are issued as needs arise. The cost of these supplies is returned to the state from time to time during the school year. For some of the supplies such as nails, screws, sandpaper, drawing paper, blueprint paper, coping saw blades, primary and intermediate grade handwork supplies, a blanket charge of one dollar is made for each half credit earned in the course. By reasonably careful distribution of these supplies the charge of one dollar is sufficient. Lumber is sold to the students who care to purchase from the school supplies. From one to two cents per square foot is added to the cost of lumber when it is sold to students to cover waste and freight. The amount varies according to the cost of the wood. The selling price will exceed the cost about ten per cent. This is also found to be adequate to offset its cost. The student's supplies cost him slightly more than wholesale and are considerably less than in many technical courses elsewhere.

In the sewing courses, there is a very small laboratory charge of thirty-five cents a quarter, which covers certain supplies furnished by the state to the department. Students bring the textiles upon which they work. In domestic science courses many of the supplies are perishable and must therefore be bought at retail from local grocers. This necessitates an expenditure on the part of the student of from three to four dollars a quarter.

It may be seen from this that practical arts instruction may be self-supporting. The initial cost for equipment is greater than for arithmetic or reading, but with reasonable care such equipment will last as long as the school building. No community is justified in not offering practical arts work on the grounds of comparative expense to the taxpayers. The returns from such investments usually prove to be less remote or more tangible than from some of the courses which tradition has established permanently in schools.

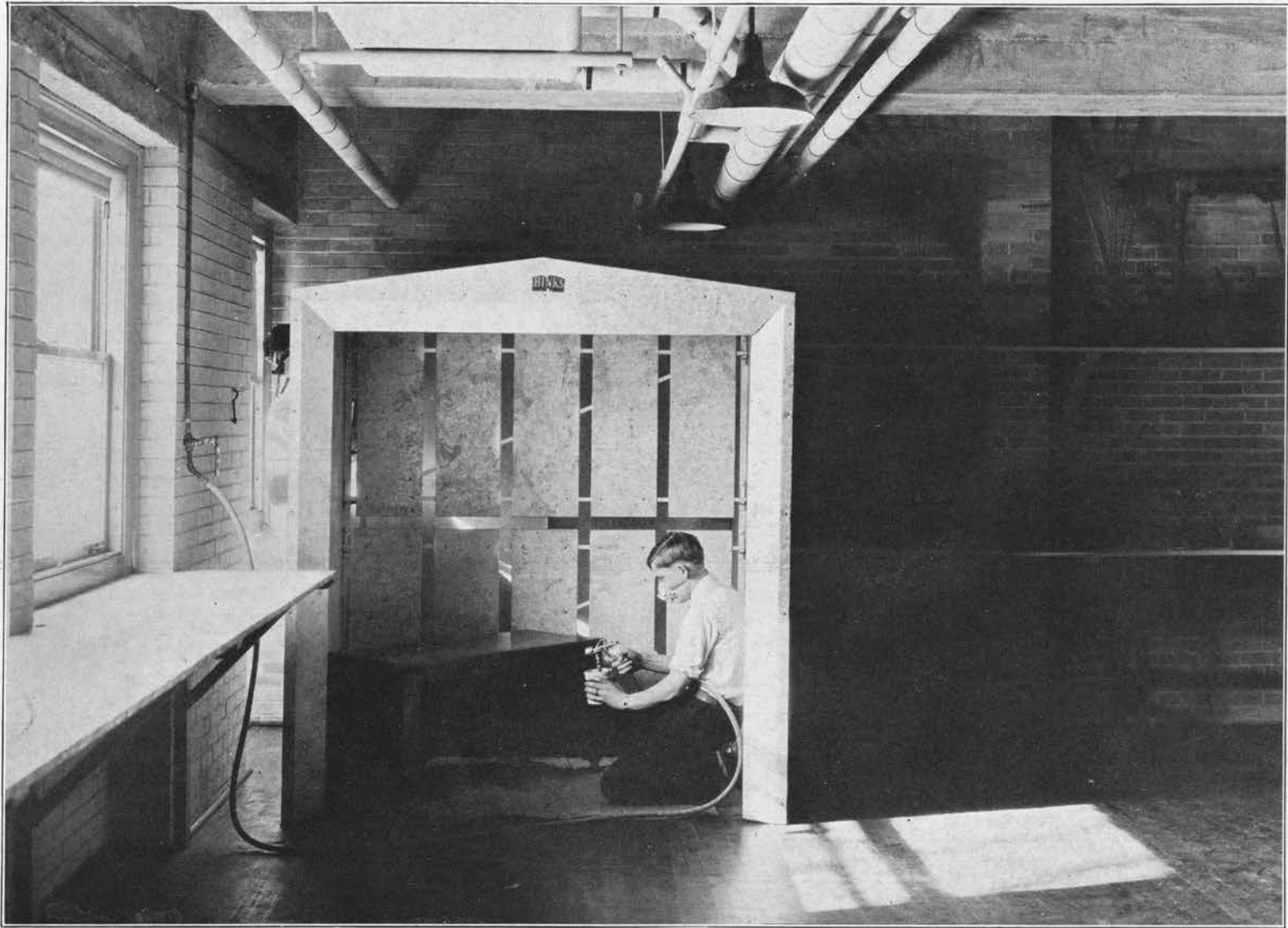
To the student in many of the mechanic arts may be given the privilege of not paying for the supplies he uses providing that the problem on which he works is made well enough to be sold for the cost of the material. Such an offer on the part of the instructor to the student removes the student's antipathy for undertaking the problem if he feels unable to pay for it and puts him at his ease in the class. The student almost always develops such an interest in the problem and such a desire to possess the fruits of his own efforts that he is willing to pay for the materials in it. He often cannot be induced to part with it for profit.



KEY TO FLOOR PLANS OF THE PRACTICAL ARTS BUILDING

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Table for Containers 2. Varnish and Stain Cabinets 3. Paint and Lacquer Containers 4. Table 5. Spray Booth 6 x 6 6. Shelves 7. Glue Horse 8. Glue Pots 9. Hand Screws 10. Bar Clamps 11. Sink 12. Laundry Tubs 13. Lumber Racks 14. Cut-Off Table 15. Swing Saw 16. Short Lumber 17. Case 18. Bench 19. Stake Tables 20. Tables on which are mounted small machines for sheet metal work. The drawers contain the small tools which are shown on the directory near the entrance 21. Cornice Brake 22. Small Stock Cabinet 23. Tool Case 24. Coat Rack 25. Steel Lockers 26. Instructor's Desk 27. Soldering Table and Furnaces 28. Pottery Kiln 29. Mortise Machine 30. 12 Inch Jointer 31. Sink 32. Saw Bench 33. Surface Planer 34. Dust Collector Control 35. Shelf 36. Supplies 37. Work Benches 38. Table 39. Bench 40. Arm Chairs 41. Desk 42. Type Cabinet 43. Imposing Table 44. Galley Cabinets 45. Make-Ready Table 46. Press Room Cabinet 47. Platen Press 8 by 12 48. Platen Press 12 by 18 49. Guard Rail 50. Lee Cylinder Press | <ol style="list-style-type: none"> 51. Roller Cabinet 52. Rack for Chases 53. Punch Perforator 54. Paper Cutter 55. Table 56. Wire Stitcher 57. Bindery Table 58. Proof Press 59. Desk 60. Stock Shelves 61. Lavatory 62. Tool Panel 63. Imposing Table 64. Lathe Dog Rack 65. Drawing Boards and Instruments
<ol style="list-style-type: none"> 1. Auto Engines and Chassis 2. Desk 3. Cabinet 4. Compressor and Tank 5. Welding Table 6. Acetylene Generator 7. Oxygen Tank 8. Arbor Press 9. Portable Crane 10. Track for Hoist 11. Radial Drill 12. Shaper 13. Milling Machine 14. Grinder 15. Drill Press 16. Power Hammer 17. Forge 18. Lathes 19. Blue Print Machine 20. Drying Rack 21. Print Washer 22. Storage Shelf 23. Tool Case 24. Work Benches 25. Saw Filers 26. Band Saw 27. Sander 28. Trimmer
<ol style="list-style-type: none"> 1. Tables 2. Sinks 3. Stoves 4. Cases 5. Incinerator 6. Display Case 7. Desk 8. Cupboards |
|--|--|

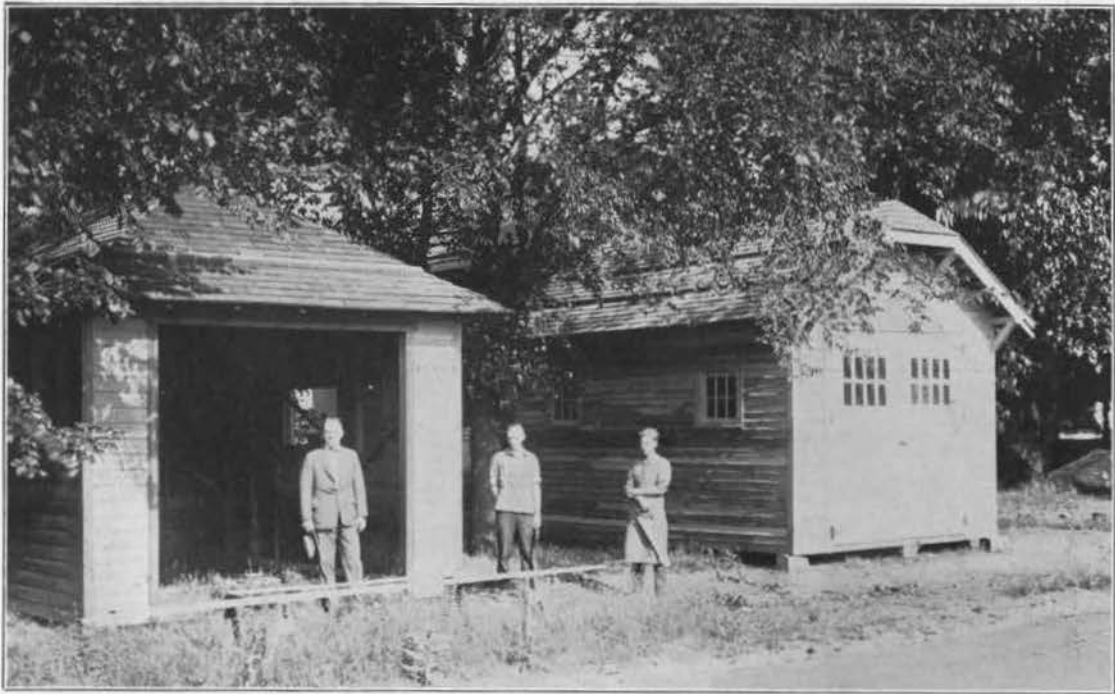
Linotype added in 1930



Spraying Paints and Lacquers Is Safe and Efficient in Our Metal Spray Booth with Motor Exhaust



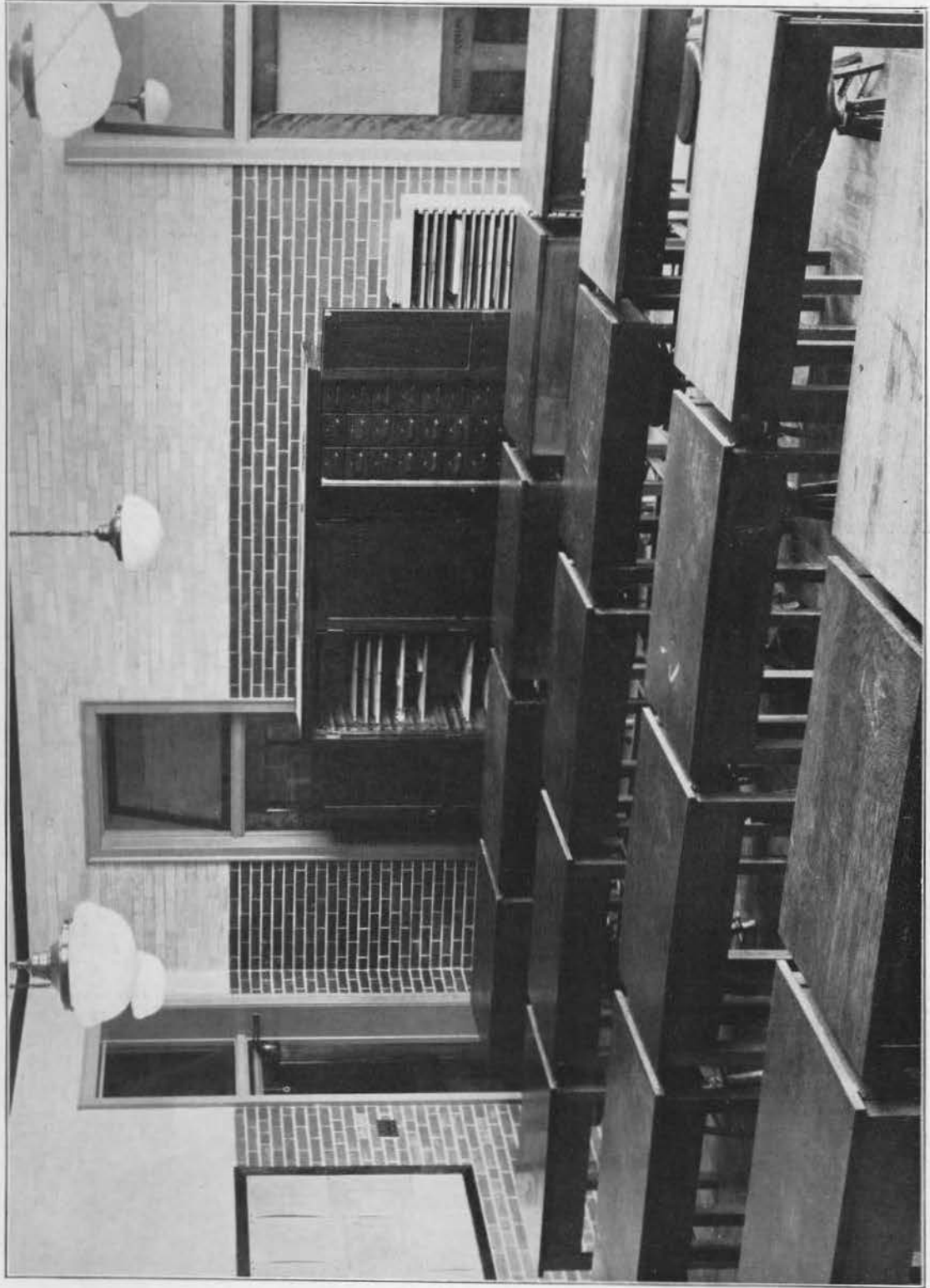
Student, Plastering Upper Part of Garage Which He Built. At Left May Be Seen the Finished Building



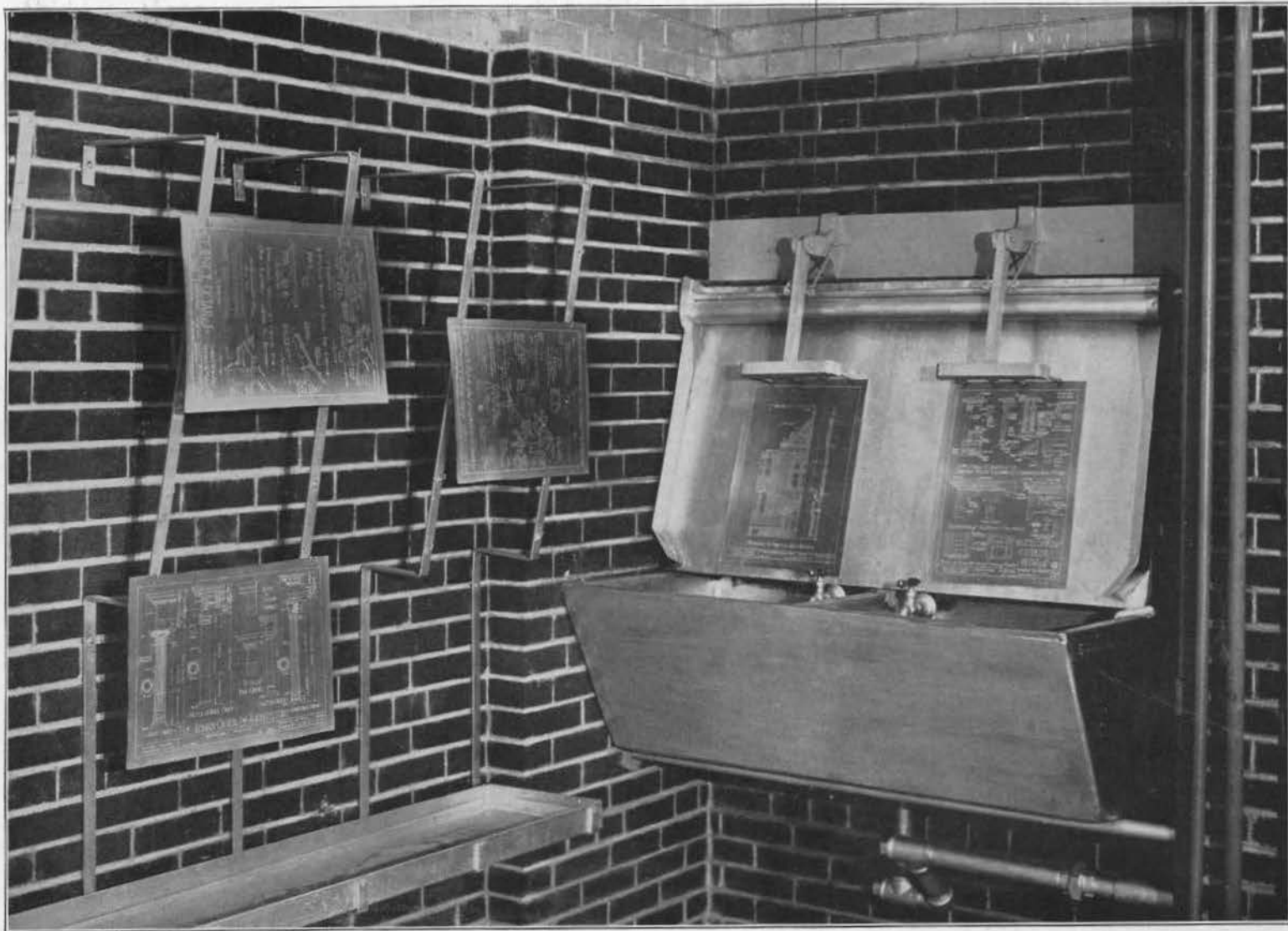
Other Types of Garages Built by Students in Carpentry Classes



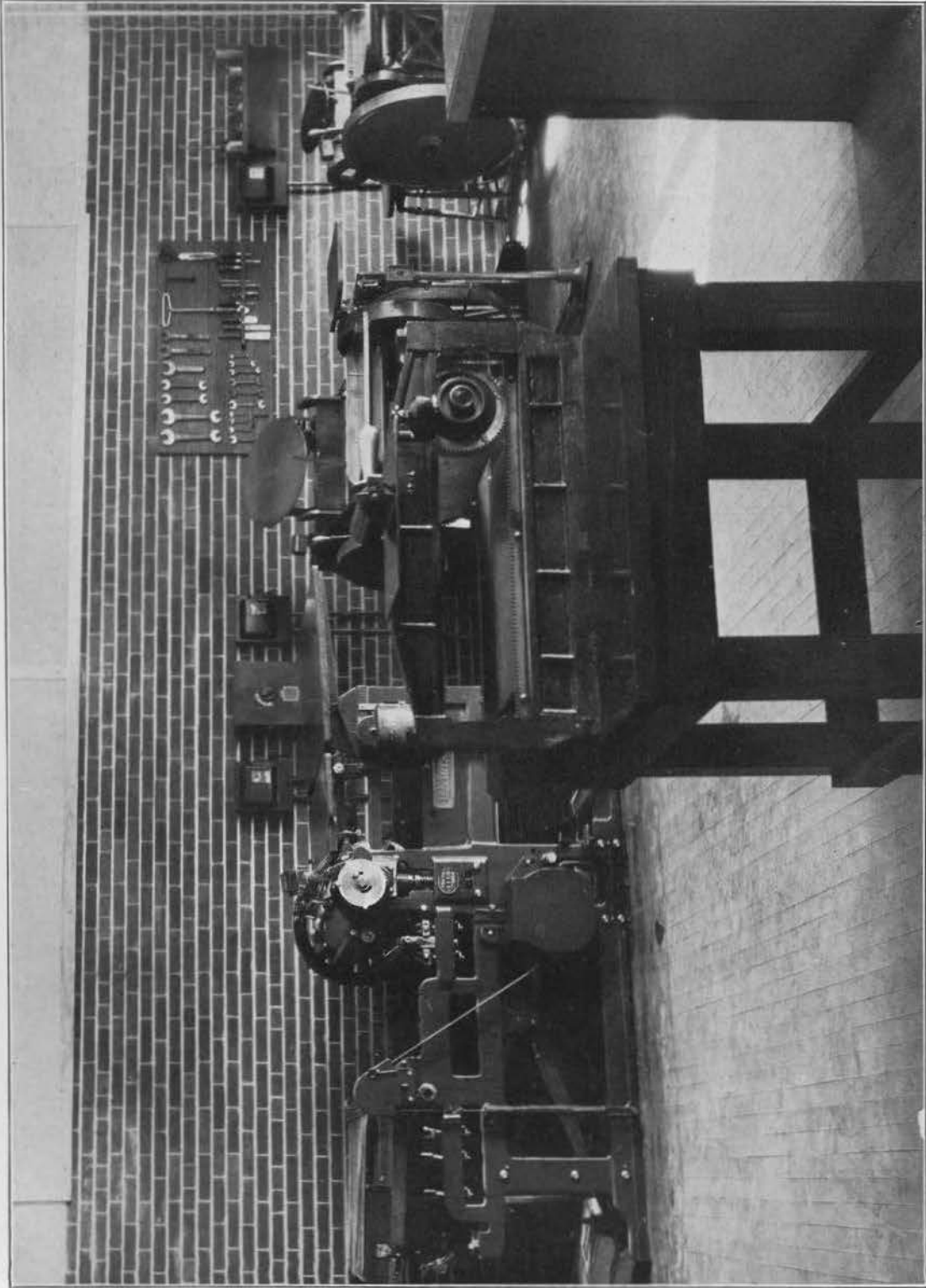
A Corner of the Wood Finishing Room, Showing Supply Cases and Mixing Table with Carrying Agents and Water Seal Containers



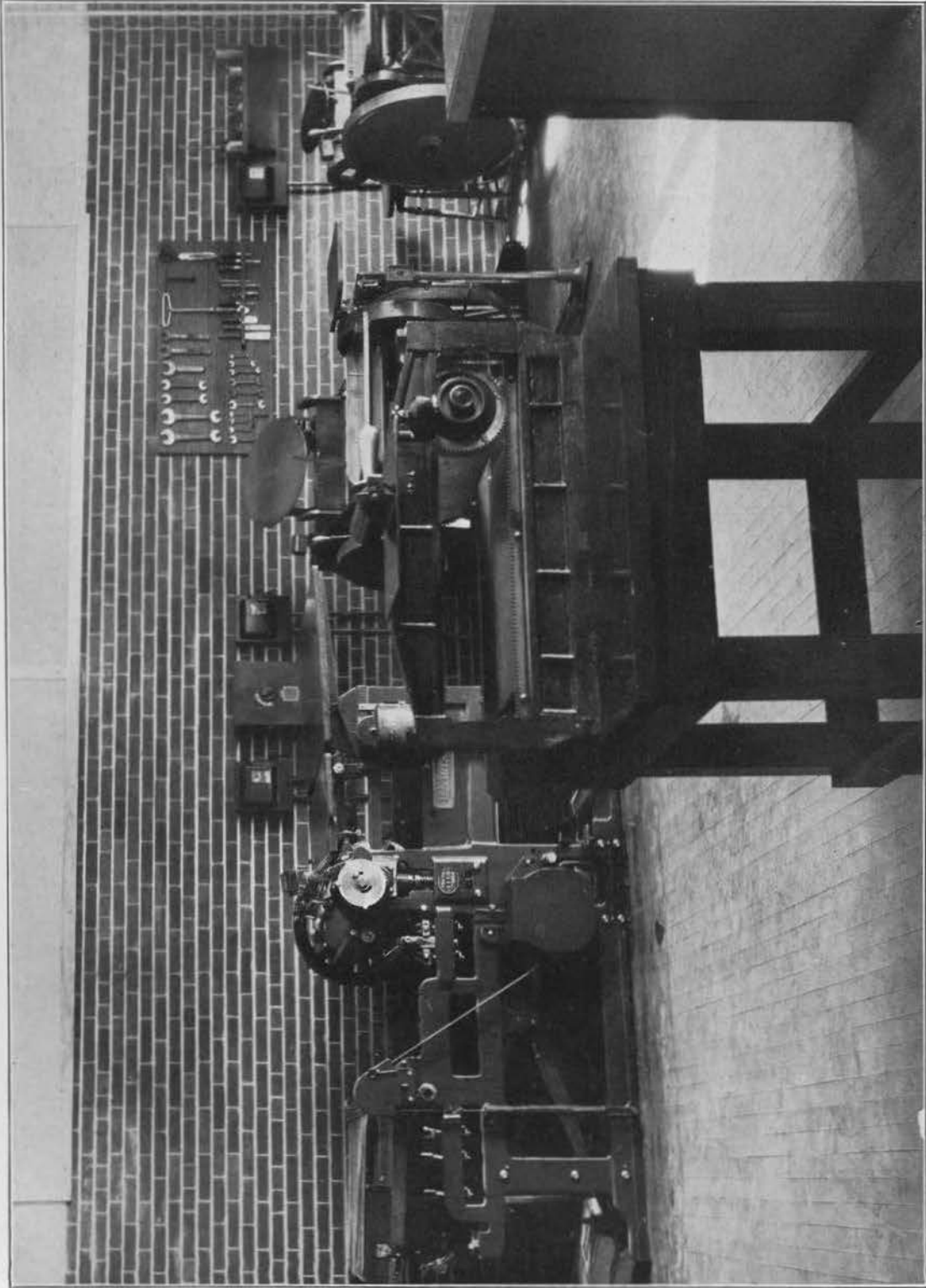
The West End of the Drafting Room



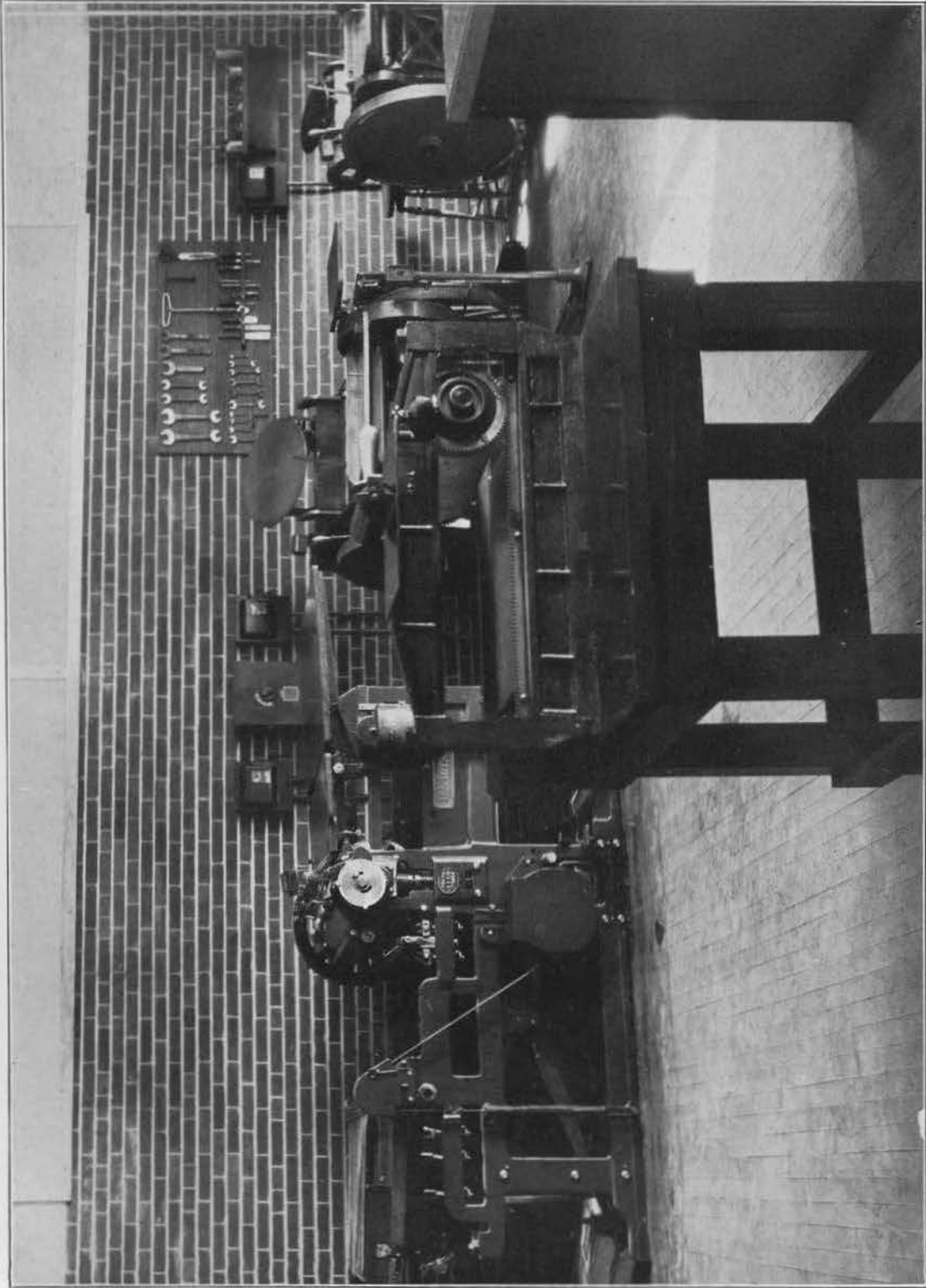
Blue Print Washing and Drying Apparatus in a Corner of the Blue Print Room. A Dietzgen Vertical Printing Machine Is in Another Corner



A View of the Presses in the Printing Department



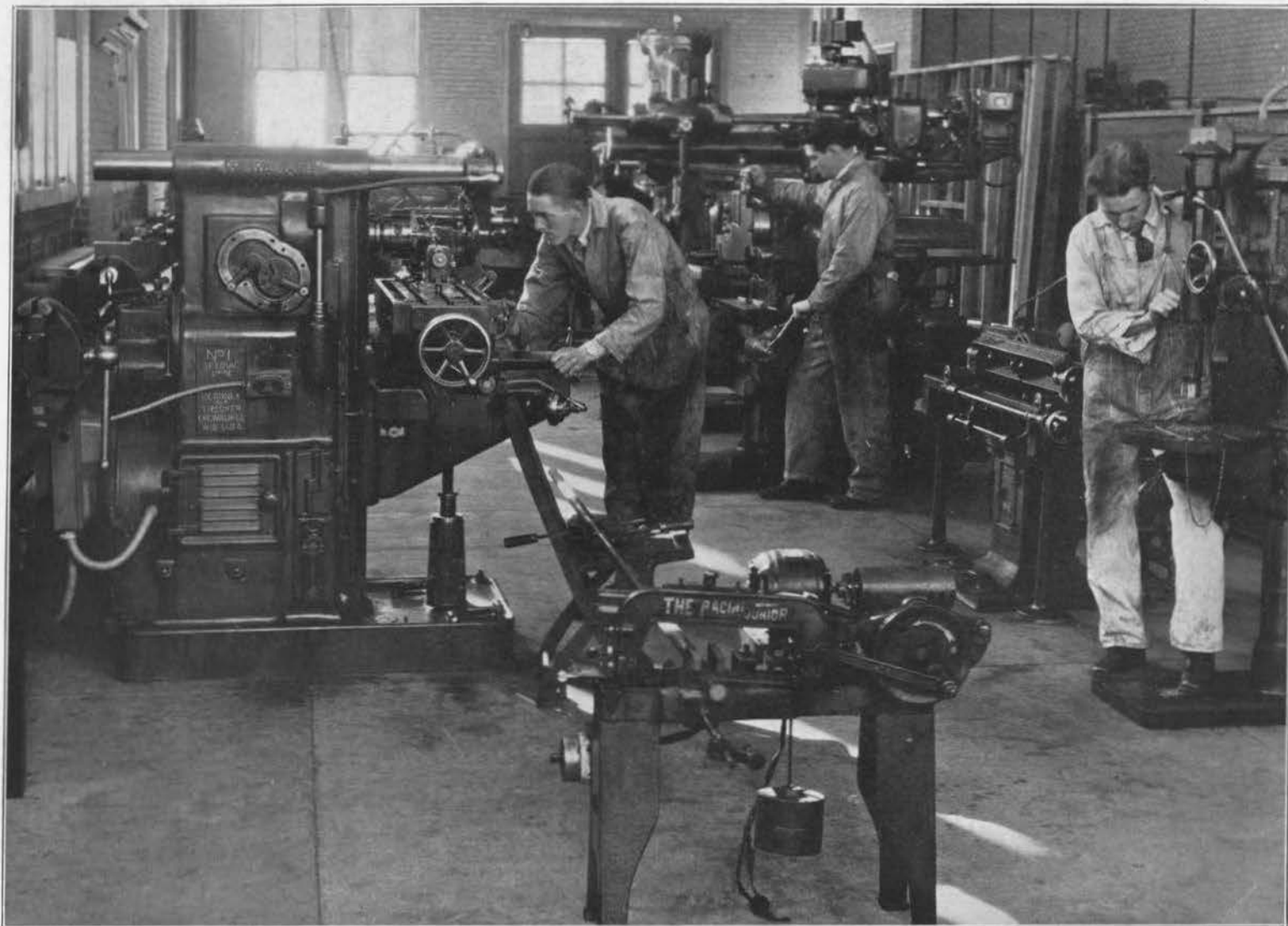
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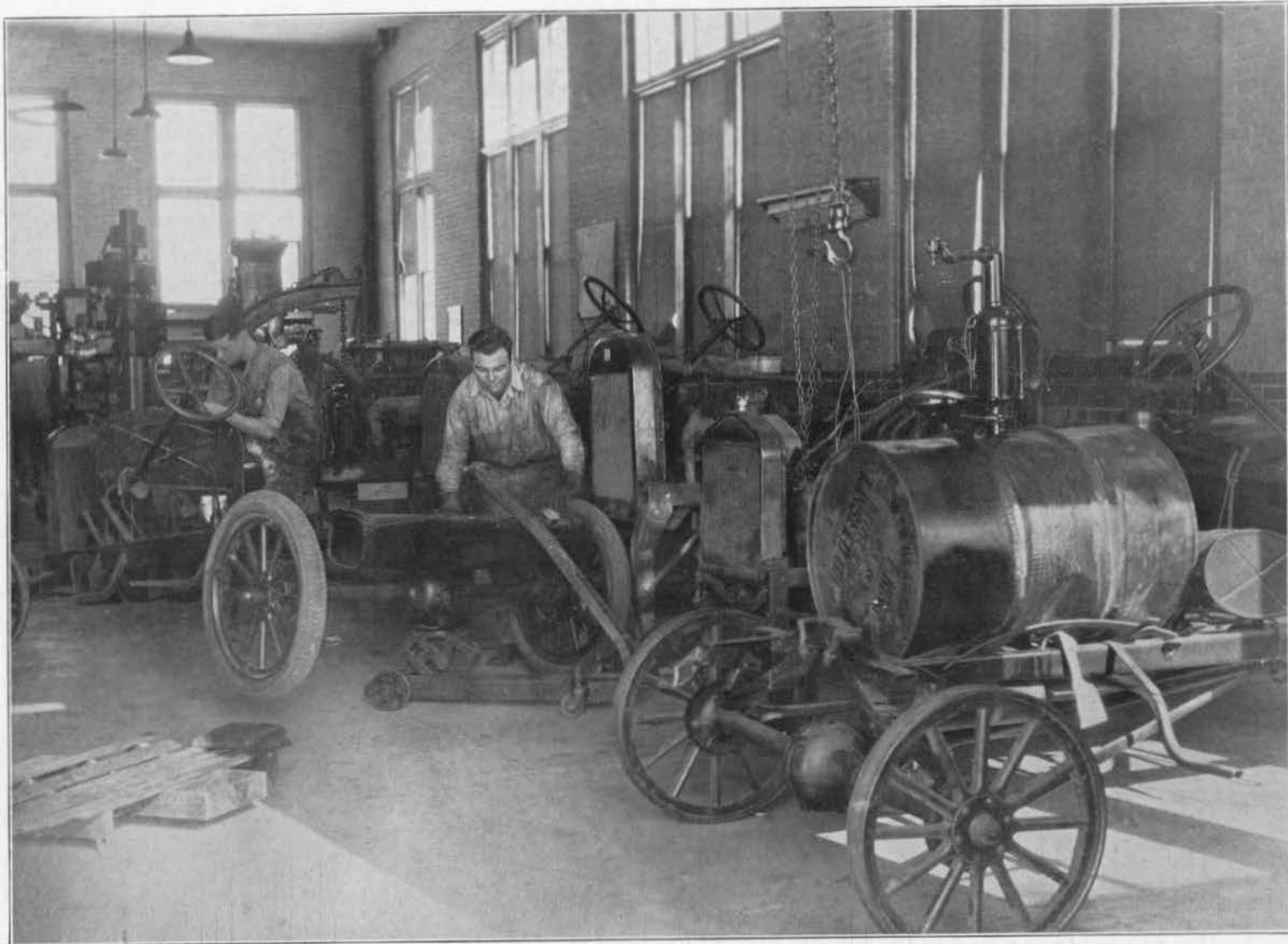
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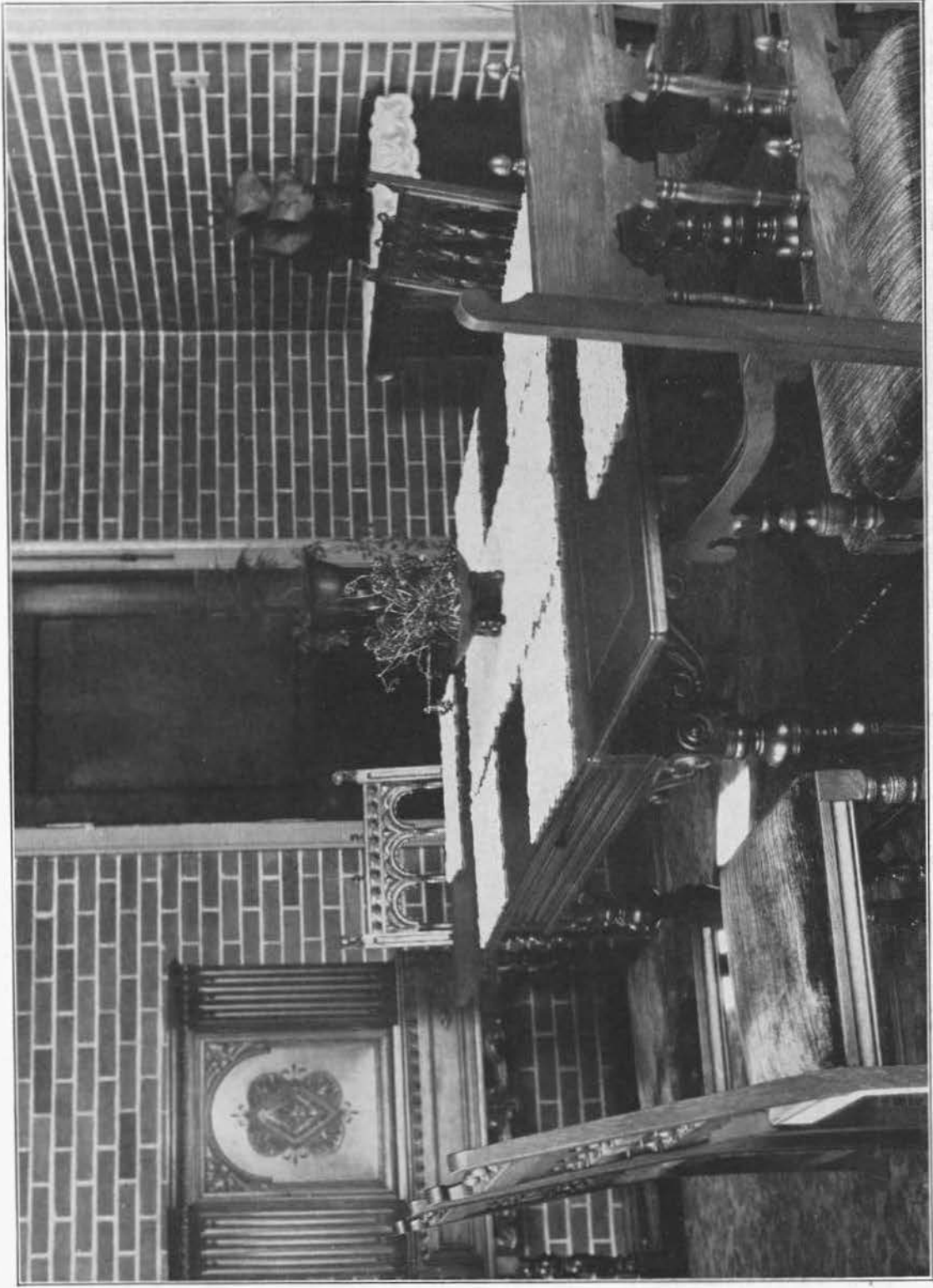
A Battery of Fully Equipped Individual Motor Drive South Bend Lathes Occupy a Portion of the Large General Metal Shop



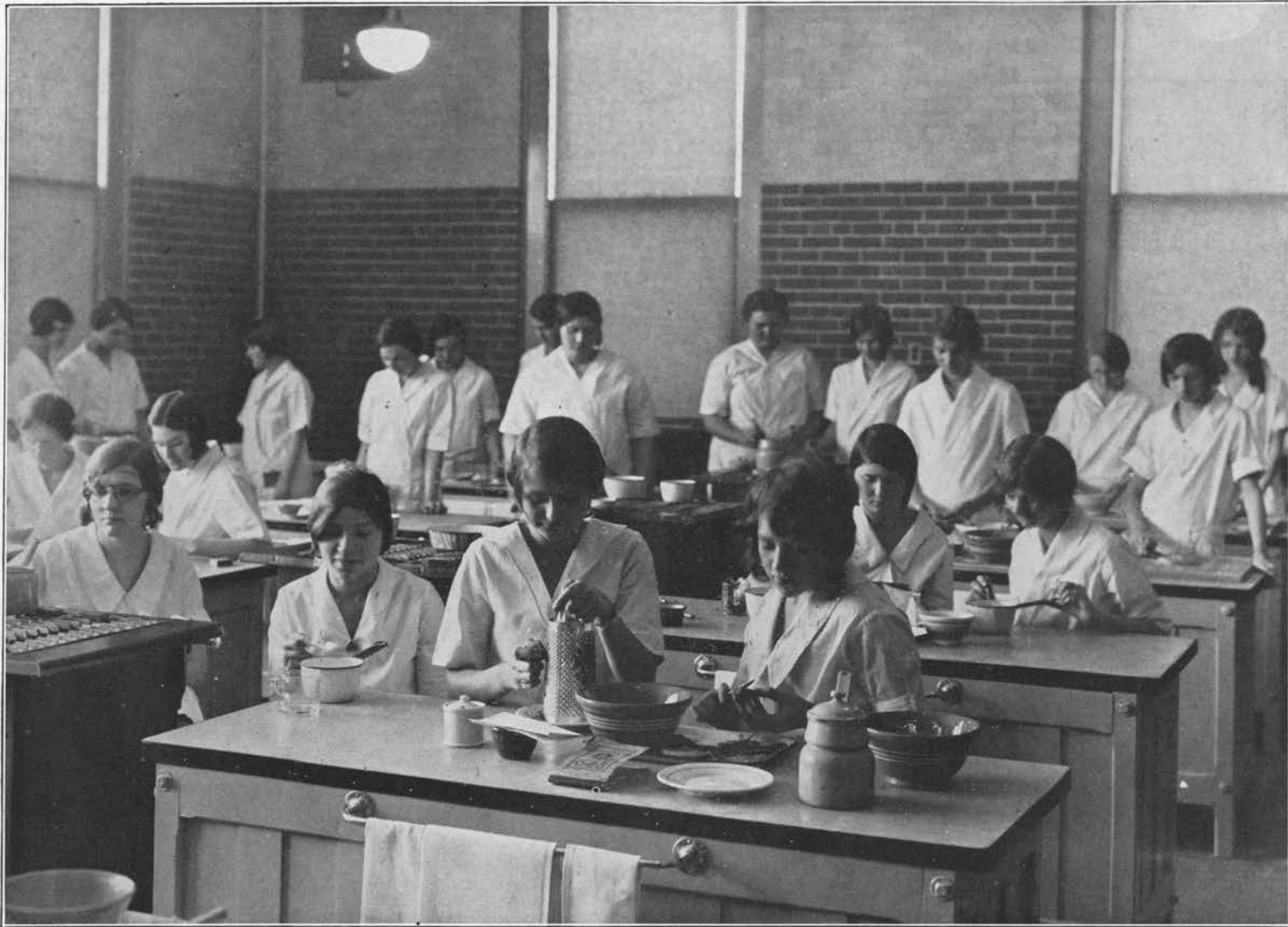
Individual Motor Drive Is the Rule in This Machine Shop. The Room Is Eighty Feet Long and Is Well Lighted



Plenty of Apparatus Makes It Possible for a Thorough Initiation into the Mysteries of the Automobile



The Dining Room Where Serving and Dining Room Etiquette Are Taught



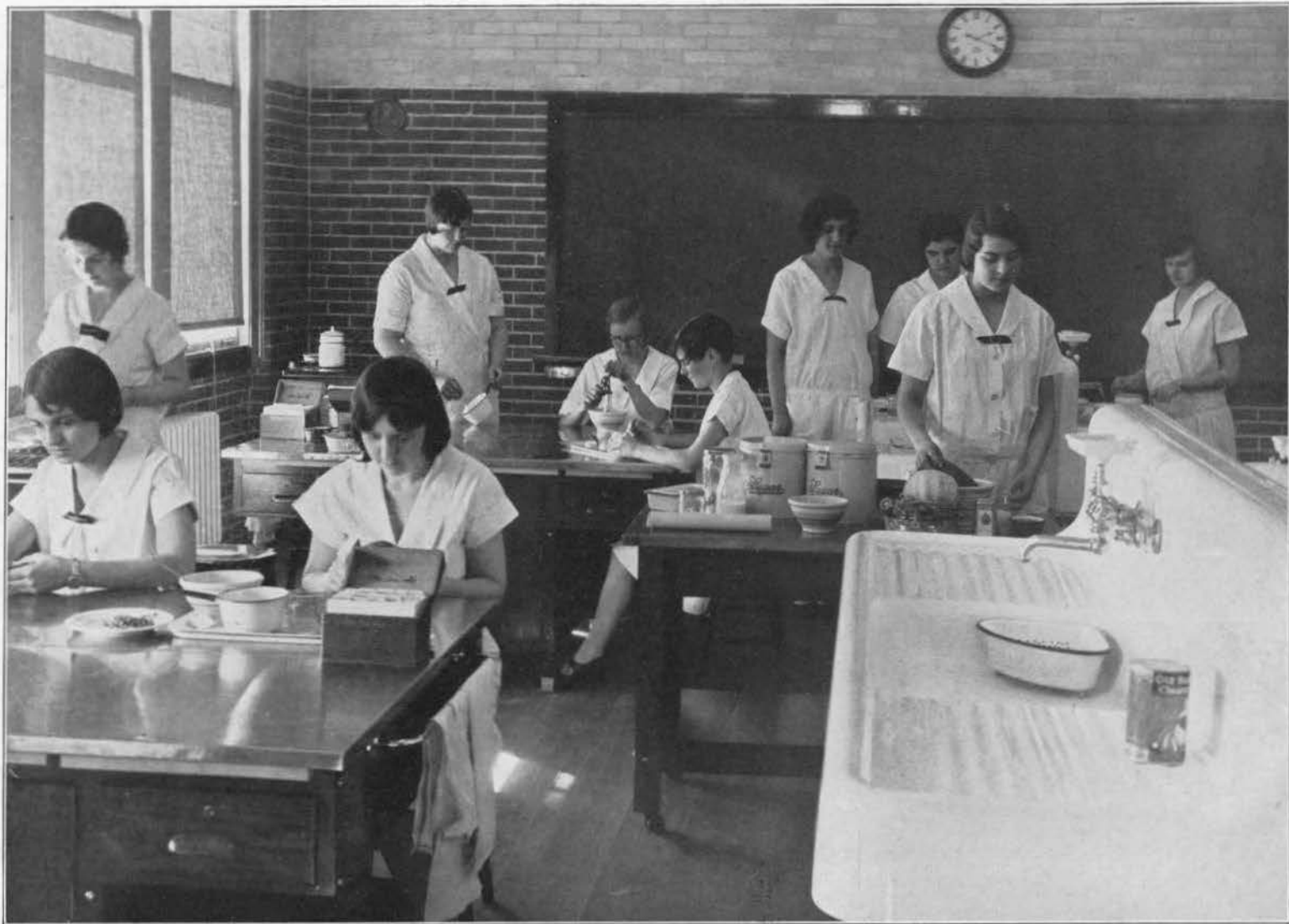
The Practice Room for Domestic Science, Showing a Large Class of High School Girls. Their Student Teacher Is in the Corner of Room



Another Corner of the College Class Room for Domestic Science



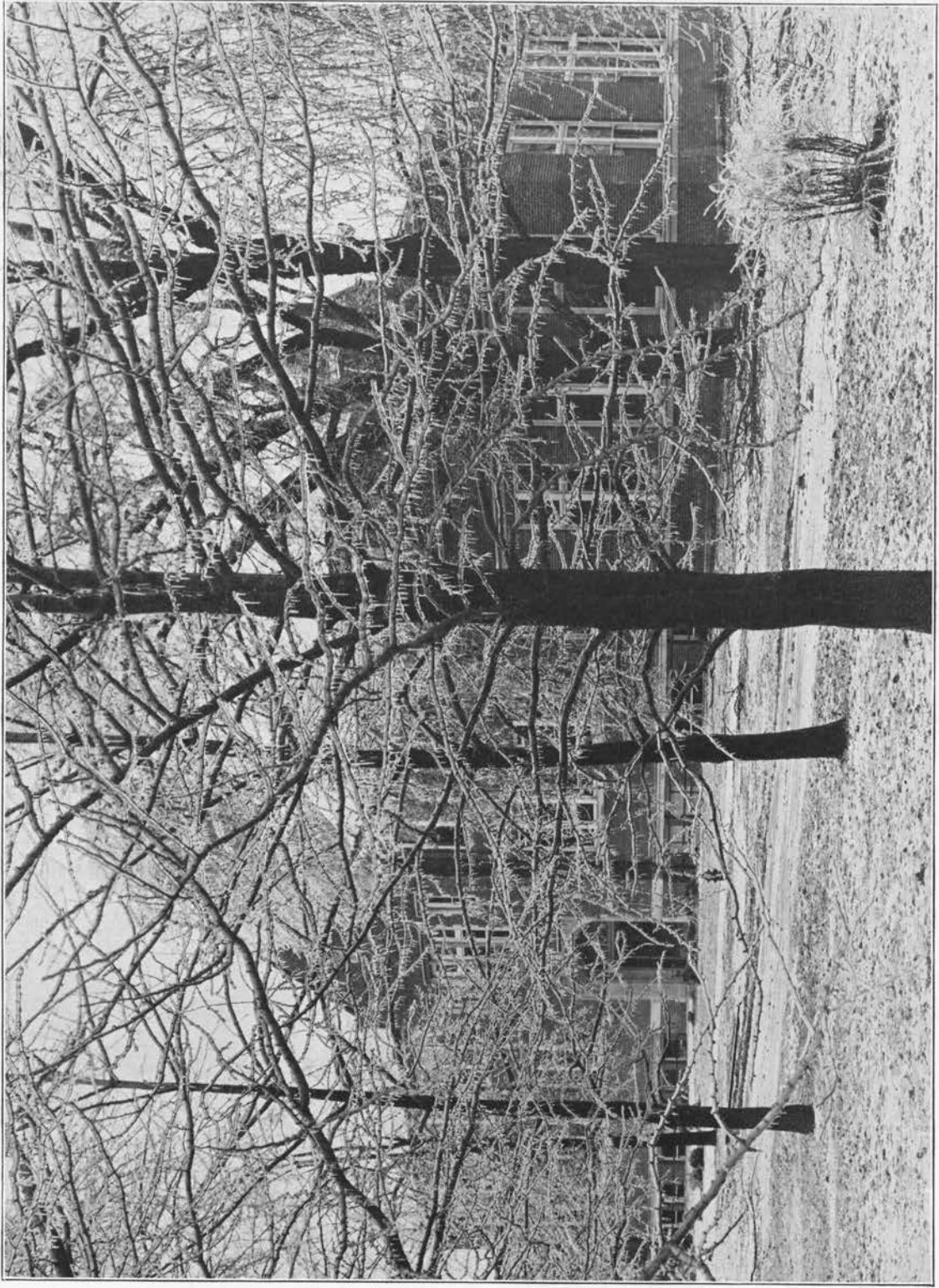
Excellent Sewing Tables with Individual Lockers Are Used by the College Classes in Dressmaking and Design



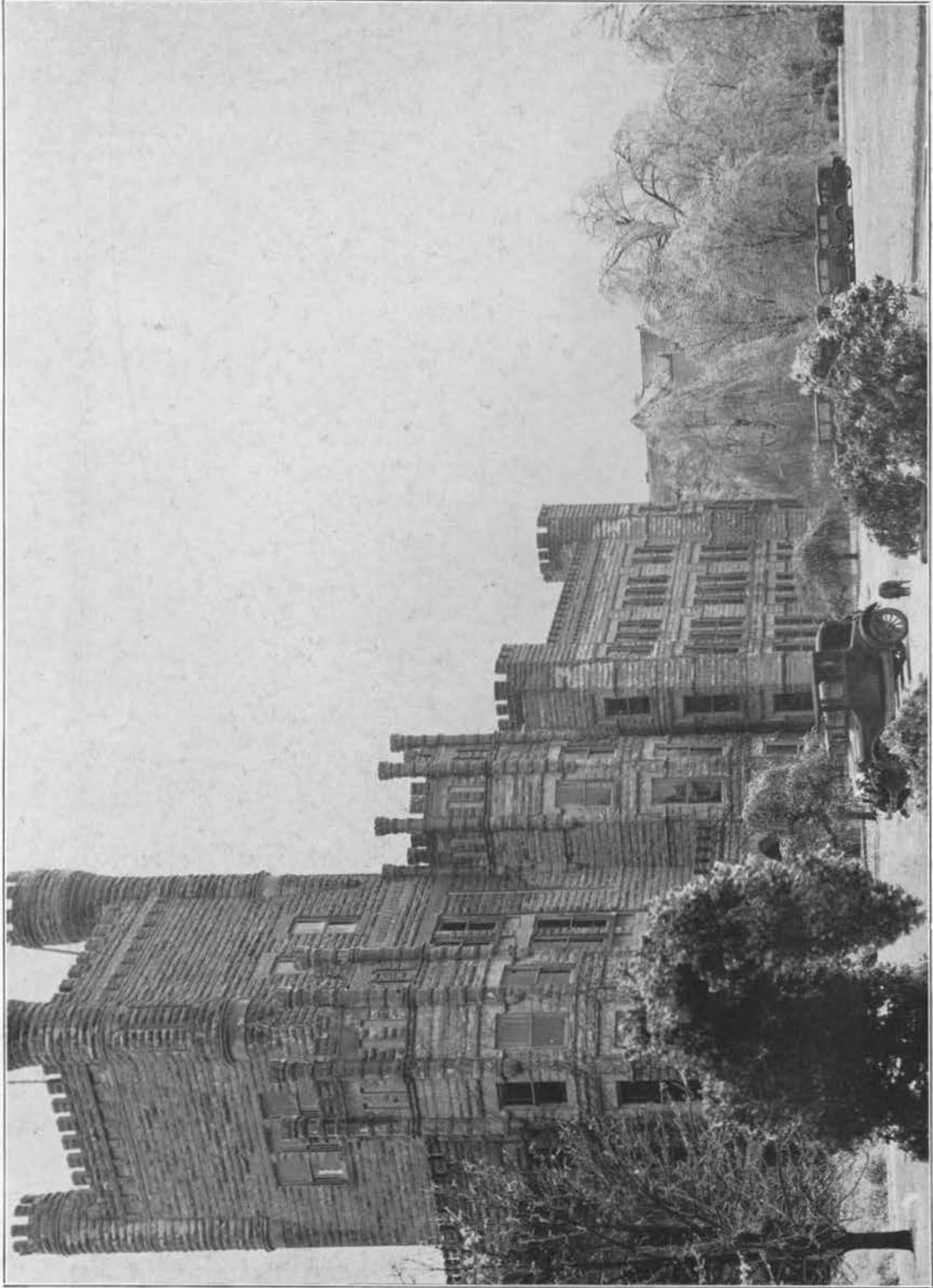
Domestic Science Is a Pleasure in This Well Lighted and Orderly Workshop



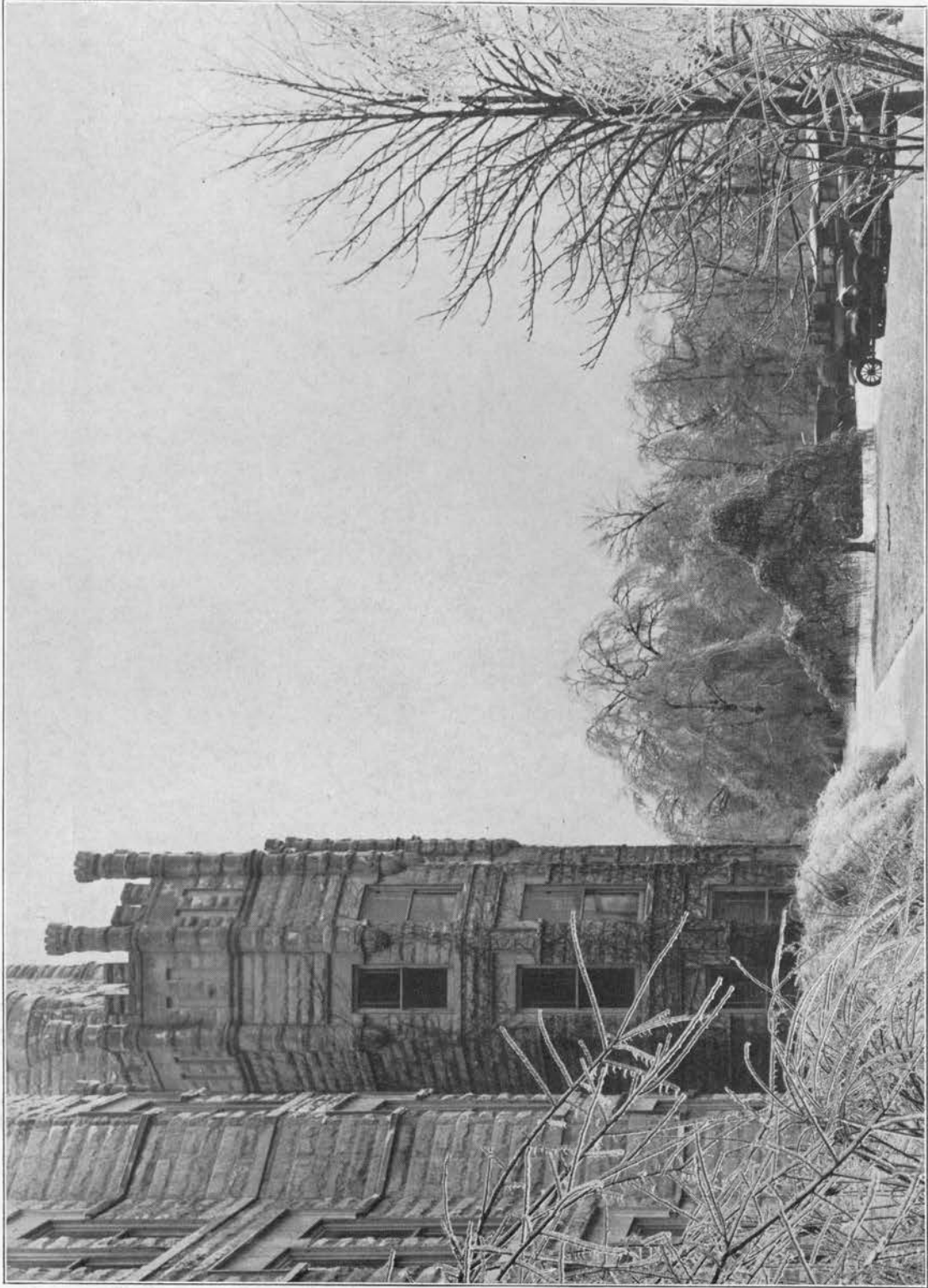
Student Teachers and Training Teacher with a Class of Grammar School Girls in Sewing



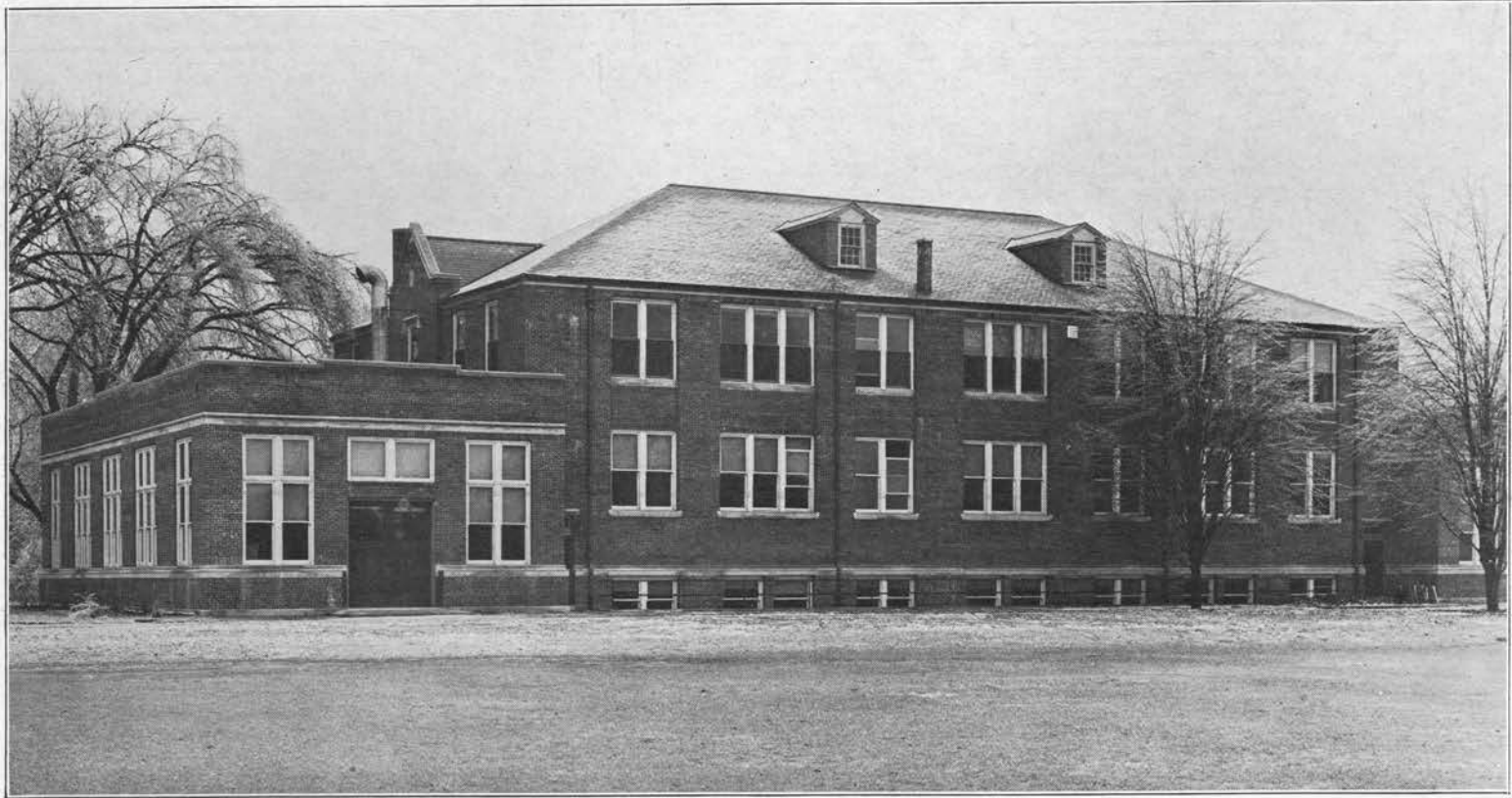
The Practical Arts Building through a Group of Ginkgo Trees after a Memorable Ice Storm



Another View of the North Campus. Pemberton Hall in the Background



The North Campus after the Ice Storm



Rear View of the Practical Arts Building As Seen from the South Campus