


1-1-1915

## Special Libraries, January 1915

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### Recommended Citation

Special Libraries Association, "Special Libraries, January 1915" (1915). *Special Libraries, 1915*. Book 1.  
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# Special Libraries

Vol. 6

JANUARY, 1915

No. 1

## PUBLISHED BY THE SPECIAL LIBRARIES ASSOCIATION

Monthly except July and August.

Editorial and Publication Office, Indiana Bureau  
of Legislative Information, Indianapolis, Ind.

Subscriptions, 93 Broad street, Boston, Mass.

Entered at the Postoffice at Indianapolis, Ind.,  
as second-class matter.

Subscription.....\$2.00 a year (10 numbers)

Single copies .....25 cents

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D. C.

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## Railroad Libraries\*

The sketches of libraries which follow are intended to illustrate the interest in railway literature and the interests of railways in literature. No attempt has been made to include all even of the important railway collections. Such bibliographies as the Index to the Library of the American Society of Civil Engineers, Part I; Railroads, N. Y. 1881; Catalogue of the Hopkins railway library, Palo Alto, California, 1895; and

the Collective catalogue of books in fourteen American libraries relating to railway economics, prepared by the Bureau of railway economics, Chicago 1912; furnish a guide to the particular items relating to railroads. The sketches, prepared for the most part by those closely associated with the libraries, will furnish a guide to the general characteristics of the collections and their leading features.

### THE LIBRARY OF THE BUREAU OF RAILWAY ECONOMICS AT WASHINGTON.

It was a noteworthy and statesmanlike thing for the railways to establish an organization "for the scientific study of transportation problems." Such study involves patient and, for the railway interests, long uncompensated pursuit of the fundamentals underlying the reciprocal rights and obligations between the public and the railways. It demands an acquaintance not only with the conditions surrounding the transportation industry reflected in the regulations enacted by state and federal bodies, the statistics prepared by the companies themselves or by the regulating bodies, the sentiments of business men, statesmen, financiers, and railwaymen, but also an acquaintance with what is past and done

that has produced the present conditions. In short, it involves the organization and maintenance of a library. Established on August 1st, 1910, this library now contains approximately 40,000 items—books, pamphlets, magazine excerpts and maps.

The first function of the library being the acquisition of current printed material, approximately 200 daily, weekly and monthly publications are examined not only for the articles therein contained, which are duly indexed, but also for notes of current material such as speeches on railway topics, documents and hearings in the state and federal congresses, briefs and decisions in the more important cases in state and federal courts, and the appearance of railway

\*This number of "Special Libraries" was prepared by the Bureau of Railway Economics, Washington, D. C.

company reports and reports of the railroad and public service commissions of the various states.

In addition the general American periodical literature, as well as practically all of the foreign periodical literature, must be watched and the official railway publications of foreign governments procured.

The next function of the library is in providing material for statistical and historical comparison. This involves the completion of sets of railroad company reports, railway commission reports, government official reports, the standard railway periodicals. It involves also the acquisition of official sources of information on taxation, on labor, and on general statistics as well as the maintenance of sets of financial year books and periodicals.

A most important function of the library lies in its "readiness to serve." It possesses, for example, what is in all probability the most extensive collection of books and articles relating to government ownership of railways to be found in any single library. It is also endeavoring, in connection with the federal valuation of railways, to acquire printed material bearing on its historical phases, inasmuch as so much of the original source material has been swept out of existence by fire and flood. It is therefore acquiring reports on location, reports of engineers on construction, charters, agreements of consolidation and corporate histories of companies in addition to those books and articles and documents appearing on the various problems of valuation.

The library of the Bureau has succeeded in solving, in part at least, a problem of great importance to libraries. It acts as a medium of exchange in railway duplicates between them. A few libraries, such as that of the London school of economics and Yale university, send to the Bureau each and every duplicate of railway books, pamphlets or periodical numbers, though the majority of them do not have the organization necessary to do this. Their extra possessions, however, are open to the Bureau of railway economics library and there have been selected from these duplicate collections such large numbers that a larger number of items have been handled than are contained in the Bureau library itself. A large number of these items become part of the Bureau collection, forming an important source of accession, but the other items have been placed in libraries where they were needed.

The co-operative work outlined above would not be possible but for the maintenance by the Bureau for its own information and use as well as for the use of inquirers of a catalog of the railway contents of an increasing number of libraries. This work was begun by the publication of the Collective catalogue in 1912. In the preparation of this catalog, the library of the Bureau received cordial assistance from those in

charge of the other thirteen libraries included in the work, and the Bureau has since added, or is in course of adding to the catalog in its card-form, notation of railway items in upwards of fifty other important collections. Cards in this catalog are filed in the Bureau under both a classed subject arrangement and under author, the author cards bearing the symbols signifying the various libraries where the items may be found. Under the subjects, periodical articles and analyticals are entered. The catalog, therefore, is expanding into a bibliography.

The Bureau library, by arrangement with the Library of Congress, furnishes cataloging copy on titles of books in the possession of the Bureau, but not in the Library of Congress. This copy is printed on galleys and on cards and, being widely distributed and bearing the legend "Title furnished by the Bureau of railway economics," advises all libraries of this class of our accessions.

Still another form of co-operative work, of service to railway students and libraries, is to be found in the bibliographies, printed and typewritten, which are prepared by the Bureau library. Among those printed may be mentioned: Commerce court, Full crew laws, Government ownership, Use of Railroads in war.

A general survey of the library will disclose that it includes the standard textbooks on all economic phases of railway activity and on account of the broadening scope of the inquiries addressed to the Bureau a large number of important technical treatises.

The library also includes a fair representation of the railroad associations, among them the publications of the Central freight, Joint traffic and Trunk line associations. It also possesses a few parts of the proceedings of the old Southern railway and steamship association; the proceedings of the American railway association, those of the American railway master mechanics association from 1900 and of the Master car builders association from 1903.

The stockholders reports, except as to the older companies, are well represented, those of the Pennsylvania railroad and some of its subsidiaries being complete and those of the Baltimore and Ohio approximately so. Railroad mortgages, charters, reorganizations are now being added as opportunity offers.

The Bureau possesses a set of the Railway age, the Railroad gazette, and the current publication, the Railway age gazette, complete except for a few numbers in the earlier volumes. A set of the Railway review is complete from 1890 to date. A set of the Railway world is complete except for a gap between 1882 and 1889. Of the rare American railroad journal the library has succeeded in acquiring by odd volumes, and even by numbers, a set which with the as-

sistance of a loan from James Hillhouse, Esq., of New Haven, is practically complete from the first number, 1832 to 1876. The publications of the railroad clubs are fairly well represented. The publications of the various railway orders and those of the railway companies themselves are also represented but except in a few cases cannot be said to be complete.

The documents relating to railroads contained in the federal numbered series have been acquired in rather notable number from as early a date as 1828 and important hearings before the committees of Congress in which railway matters were treated and which are not in the numbered series are, we believe, fairly represented.

A beginning has been made as to state documents and the library now has those of the state of New York in very large numbers from 1864 down, including on loan from James Hillhouse, Esq., a set of the scarce, though much referred to, Hepburn committee hearings of 1879. Virginia, New Hampshire, Vermont, Connecticut and Pennsylvania railway documents are fairly represented by a number of the important items in each, though the collections are not large. The library has also practically complete sets of the railroad commissions and public utility boards reports of the various states.

The Bureau has, of course, a full set of the reports and decisions of the Interstate commerce commission, and quite a number of briefs in important railroad cases before the Commission, the Commerce court, and the various district courts, and the more recent decisions in the Supreme court in railway cases.

The sets of Poor's manual of railways, including the 1860 volume, Moody's manual (of railways), Moody's analyses are complete and thanks to the courtesy of Mr. H. T. Newcomb our set of the Census reports is complete from the 10th down with the abstracts from 1840. Through the courtesy of John B. Daish, Esq., the library has a complete set of the Globe and Record except for seven volumes.

For general financial information the library has secured a set of the Commercial and financial chronicle with its forerunner, Hunt's merchants' magazine, which while lacking several important volumes we still hope to render complete because of its importance in reference work.

Foreign railways are represented by a selected number of general treatises, histories of individual roads, and in the case of the English companies, by stockholders' reports for periods ranging from 5 to 25 years. Of the official reports of the various foreign governments the Bureau possesses complete or approximately complete sets, in the case of Great Britain, from the late 70's, France from 1877, Prussia from 1878, Italy from 1905, the Netherlands from 1891, Belgium from 1886, Switzerland from 1885, and the

recent years of the British colonial possessions, those of India, however, going back to 1884.

The library has for general information regarding the foreign roads a full set of the *Revue générale des chemins de fer*, a set of the *Archiv für Eisenbahnwesen* which lacks only the first 2 years, a set of the Proceedings of the International railway congress except for the 1st and 2nd sessions, and of the Bulletin in the English edition from 1896 to date, except for 6 numbers. We have been receiving the *Railway news* since 1910 and are making an effort to carry it back and also to secure the earlier numbers of Herapath's journal.

Other general periodicals such as the *Traffic world*, *Public service regulation*, and *Trade and transportation* are present in fairly good sets.

A vast amount of important information is contained in the ten thousand numbered folders. These articles are taken from such general periodicals as the *North American review* (from which the library has a very considerable number of the railroad articles which have appeared), *Fortnightly review*, *Forum*, *Nineteenth century*, *American review of reviews*, *The Revue économique internationale* (from which we also have a considerable number of railroad articles), *Revue des deux mondes*, *Economiste française*, *Scientific American*, *Scientific American supplement*, *American law register*, *American law review*, *Banker's magazine* (London), *Engineering magazine*, *Engineering news*, *Harper's magazine*, *Nation*, *Cosmopolitan*, *McClure's magazine*, *Gunton's magazine*.

There is a very slight representation of books on railway law.

While the dominant purpose of the library is to provide current books, articles, documents so that information provided by the Bureau shall be the latest available, it must not be forgotten that today has its roots in yesterday and that the yesterdays were the todays of the past. The questions of prime interest to railway people have an historical setting and no sound economic progress can be made without the precise knowledge of the tendencies growing out of the past. The same service which is rendered by the library of today in collecting the pamphlets, periodical articles and books which reflect the thought on railway questions of today was performed by the library which in 1887 collected the similar literature without which the Act to regulate commerce lacks adequate explanation.

The library of the Bureau, therefore, welcomes the addition of old time-tables, train rules, maps, engineers' reports, as by means of them not only the comparisons made necessary by present-day questions can be answered, but also such special questions can be met as those listed below, which are

taken at random from those addressed to the Bureau:

The prices of rails, ties, and other material for railway construction during the last twenty or thirty years.

History of the Camden and Amboy railroad.

Profile of an abandoned part of a well-known railroad's right of way.

Rates of pay of locomotive engineers and firemen, train conductors and brakemen "as far back as possible."

Time consumed and rates of fare between New York and Washington in 1860.

Early development of the Union Pacific railroad with special reference to the government aid received.

List of writings of all the Interstate commerce commissioners.

Query regarding the Alexandria, Loudoun & Hampshire railroad.

An account of railroad land grants.

Early financing of the railroads of the United States.

Manner and date of construction of certain roads now merged with other systems. List presented by United States Senator.

Books relating to railways published prior to 1830.

Maps of the railroads of the United States by decades.

In short the Bureau has had inquiries for physical and traffic statistics by decades not only for the railroads of the United States but for those of the entire world. Such inquiries are, of course, welcome, but they cannot be met unless we are able to secure through our friends material which for the most part is stored in attics or buried in cellars.

#### SPECIAL RAILROAD COLLECTIONS IN GENERAL LIBRARIES.

##### A: Collection of Railroad Books in the Library of Congress.

The Library of Congress ranks high among general libraries for the extent and variety of its books on the railroad and it should not be overlooked that the value of the books to an investigator is much enhanced by the fact that they form part of the largest collection of books in the western hemisphere. When the investigation is broader and includes railroads only as a part, perhaps no library affords such facilities as the Library of Congress.

The books have not been kept together as a distinct collection but, conforming to the general plan, they are parts of the sections on engineering, on economics, and on law. On railroad engineering the volumes and pamphlets represent a practically complete collection of the material copyrighted in America and in American periodicals and the transactions of societies is correspondingly rich. In foreign languages, however, only the most important publications will be found.

The number of books and pamphlets on railroad economics is not by any means indicated by the number shelved in the class "HE." In a general library if a book treats of railroads incidentally, however vitally, it is likely to be classed where its main interest lies, but nevertheless such books must be included in the reckoning. The Library of Congress serving as the reference library of the national legislature, every effort has been made, to have this section complete for all such questions as the relations between the railroads and the state, federal control, government ownership, rate regulation, etc., the relations between the railroads and labor, and the relations between railroads and the general

public. The collection of federal documents is complete and the Library of Congress probably contains more state documents than any other single institution. During the last few years special efforts have been made to complete the sets of statistical publications of all governments. The late John Russell Young made a well rewarded effort to secure some of the non-copyrighted material relating to American railways, such as the annual reports of companies, their legal and economic histories, and the reports of railway engineers. The Library of Congress has a complete set of the American railroad journal, of which only three full sets are known, and one of the two sets of the folio volumes of the Railroad gazette.

The same incentives which operate for completeness in the economic section hold good in the law section. The collection of English and American railroad law is practically complete and the reports of the federal and state courts are also without gaps. In foreign law all the important works have been acquired.

The Library of Congress has published the following lists representing their railroad collections:

Federal control. Select list of references on federal control of commerce and corporation. 1903.

Second issue, with additions, 1904.

List of more recent works on federal control of commerce. 1907.

Third issue, with additions, 1913.

Special aspects and applications. 1914.

Government ownership. Select list of references on government ownership of railroads. 1903.

Railroads. A list of books (with references to periodicals) on railroads in their relation to the government and

the public, with appendix containing list of references on the Northern securities case. 1904.

Second issue, 1907.

Select list of references on the valuation and capitalization of railroads. 1909.

Select list of books on railroads in foreign countries. Governmental regulation. 1905.

**B: The Hopkins Railroad Library at Stanford University.**

Early in 1892 Mr. Timothy Hopkins, of San Francisco, ex-treasurer of the Southern Pacific company, gave to the Leland Stanford jr. university library his personal collection of books relating to railroads. A deep interest in the questions which affect the relationship of railroads to those whom they serve led to the gradual formation, by Mr. Hopkins, of a library embracing the most important works on railroad economics and management in the United States, which received a valuable addition in 1883 by the acquisition of the works relating mainly to the railroads of Great Britain, collected by Mr. F. Broughton, who had occupied high positions not only on lines in Great Britain, but in Canada and the United States. The great need of having the problem of transportation adequately represented at some seat of investigation as a university led Mr. Hopkins to transfer his valuable collection to the Stanford university, and to make provision for its permanent maintenance and extension.

The initial problem relating to railroads, both in general and in particular, is that of "location," the condition of the road, and the country over which it is to run. Strange to say, the literature of this important branch of the subject, which seems an inviting field for theorizing, is very meager. The establishment of railroads, among other changes, introduced many new factors into the statute books of the countries interested. Laws were required to harmonize the conflicting elements introduced by this addition to civilization. From the first, moreover, governments have reserved the right to grant or withhold permission for the building of all lines. In the course of time "decisions" have been given under these laws in the courts, and have been duly reported in many volumes. And many treatises have been written with a view to reconciling the decisions with the law and with each other. It was found, too, that the ordinary processes of law failed to meet all the exigencies of the new state of affairs. Duties of an unexpected character remained to be undertaken by the government. How these duties of inspection, of direction and of ownership have been treated in various countries forms the illustrative side of the great economic problem usually termed the "railroad question," a question which has been written of from

every standpoint, and with every degree of warmth, that ignorance, experience and learning make possible.

Of much greater value and importance than these theoretical products are the reports of the governmental officials of railroading. In Great Britain, at first each new question or difficulty which claimed legislative consideration was referred to a select committee of either House of Parliament. Soon this continual readjustment of committees resulted in the establishment of more permanent commissions, which in turn developed into the Railway department of the Board of trade. This department has acquired great power, and has exercised it mainly in collecting returns on various subjects from the companies. The result is evident in the voluminous series of reports on "accidents," "signal arrangements," "brakes," as well as many special reports on matters of particular interest. In this respect the British colonies have followed the example of the mother country, and from India, Canada, Cape of Good Hope, Natal, the divisions of Australia, and from New Zealand come annually the reports of commissioners and commissions.

Many of our own states found it necessary, at a comparatively early date, to make measures for the protection of the public interest and safety. And here again the legislative committees developed into railroad commissioners, with more or less power and varying duties. The passing years have left behind them an ever increasing number of annual reports from the representatives of almost every state in the Union, reports which contain most valuable material for a consideration of the railroad development of this country. The interest of the general government is manifested in the establishment of the Interstate commerce commission which is not only an investigating and reporting body but a court.

On the other hand, the activities of the individual railroads are represented by a large and varied literature. The numerous treatises which deal with the special knowledge required in laying out and constructing a railroad, are a necessary addition to a railroad library. England, France, Germany and Italy have each added their quota of general works to this division of the subject. Not only so, but it would seem that every item connected with roadbed and track must have its bevy of writers. Scarcely less extensive is the literature of railroad locomotion. The history of the origin and growth of the locomotive engine seems a favorite topic, and receives extensive support from catechisms and other practical treatises intended for instruction in the running and management of engines on the road.

For the use of technical students the Hopkins library has endeavored to gather together, in addition to such works as are

mentioned above, the trade lists and specifications of the leading manufacturers of locomotives, cars, and the special items connected with the fitting out of the road, such as signal arrangements. Requests to the publishers of these lists and catalogs have uniformly been responded to most generously. This is also true of railroad companies to whom application has been made for their annual reports and other literature illustrative of railroad management and finance. Although the Hopkins library has a large number of the reports of European and other systems, a systematic effort has been made, as yet only in the case of American lines, to render the collection representatively large. It is hoped that in time the prospect of having their company permanently represented in such a collection as this will lead railroad officials to send their annual reports year by year of their own initiative.

The collection, consisting of approximately 10,000 volumes and pamphlets, is shelved by itself in one of the seminary rooms. A subject catalog of the collection was made by Mr. F. J. Teggert and published in 1895. That is still the best index to the subject matter of the whole. The general card catalog is a better guide for individual works, because it gives shelf location and includes the works added since 1895; but the preparation of cards is still in progress, hence the student should consult both the printed and the card catalog in order to discover all of the material that is here.

With the University library's splendid collection of the British Sessional papers, complete except for a short gap between 1880 and 1901, which is being rapidly filled, the Hopkins railroad library is supplemented by some of the most important historical railroad material.

**C: The J. J. Hill Library at the University of Wisconsin.**

The J. J. Hill collection on railroads at the University of Wisconsin was established by endowment from Mr. Hill in 1905, which endowment has been increased by subsequent gifts. Over 9,000 books, pamphlets and periodicals are contained in this collection, the material relating principally to the history and development of the railroad systems of Europe, besides a remarkable collection of reports and documents relating to the railways of this country. When Professor B. H. Meyer, now Interstate commerce commissioner, was preparing his monograph on the Northern securities case an especial effort was made to secure every paper that would furnish material on this subject.

**D: The John Crerar Library at Chicago.**

A committee was appointed at the November, 1894, meeting of the Western railway

club to co-operate with the engineering societies of Chicago in presenting to the trustees of the John Crerar library a request that the trustees take up the Department of science rather than Americana. Mr. Crerar laid the foundation of his fortune in the railroad supply business and he was a personal friend of many of Chicago's railroad officers. Accordingly one of the exceptions made by the John Crerar library to its rule not to devote especial attention to any one of the subjects within its scope, is the subject of railroads. In addition to the current literature published since 1895, the year of its establishment, it possesses a very considerable collection of older material, including some of the very earliest. Two notable collections have been purchased, one made by the Museum book store of London and consisting largely of early English pamphlets; the other some 1,600 reports of and documents about American railways from their beginning.

The results of all these efforts is a collection of some 5,600 volumes and 1,000 pamphlets. To cover these there have been printed some 3,400 titles which furnish nearly 6,000 entries for the classed catalog. The books and pamphlets are arranged by the Dewey decimal classification in their classes, according as their principal interest is social and economic, engineering, or administrative. Of the first there are some 850 volumes and 200 pamphlets, of the second 1,750 volumes and 250 pamphlets, of the third, 3,000 volumes and 500 pamphlets. It should be noted that the number of pamphlets recorded is comparatively small because of the large proportion of railway reports which are bound permanently or temporarily in volumes containing usually about ten years.

The above figures do not include the literature relating to street railroads which has been collected on similar lines and is by no means inconsiderable.

**E: Boston Public Library.**

The Boston public library possesses the annual reports of nearly every railroad company in the United States, as well as of the principal foreign companies, and is especially rich in the reports of the early companies and in the history of railroads in America. The importance of the collection with regard to the financial history of American railroads may be emphasized with equal reference to all sections of the country. The subject of railroad management in general is well covered; the same is true of railroad accounting, employes, supplies, workshops and rapid transit; while the economic relations of railroads form a considerable part of the library and include railroad land grants, securities, statistics, taxation and mail service. The subjects of accidents, grade crossings, rebates and free passes are represented, and there are very

many works on railroad law, government regulation and state ownership.

Of the classes already mentioned, the greater part may be found in the Statistical department. Volumes relating to railroad construction are numerous in the technical collections in the Arts department. There are many general treatises on railroad construction, and also works on specialties such as brakes, signals, cars, ties, curves, switches and turntables. In the Catalogue of books relating to architecture, etc., in the Library, 2d edition, published in 1914, several pages are devoted to railroad stations, railroad gardening, terminals, subways and tunnels.

Finally, the Library contains many railroad periodicals, bibliographies, directories, timetables, and dictionaries of terms in various languages. Of current interest are a few works on railroads in war.

The foregoing characterization applies only to books. The articles contained in periodicals, encyclopaedias and public documents relating to railway subjects are estimated as of equal extent.

**F: The Interstate Commerce Commission Library at Washington.**

The Interstate commerce commission was established in 1887 and almost at once special collections began to accumulate in the offices of the five commissioners and the secretary.

The first systematic attempt of the Commission to establish a transportation library was made in 1894 and grew out of the necessity for taking care of the books, pamphlets, and documents thus acquired in the performance of its duties. In 1898 more comprehensive plans in this regard were adopted and the scope of the effort somewhat enlarged. Since that time accessions to the library have largely increased until at present the collection comprises, in round numbers; 16,000 volumes and 10,000 pamphlets, and 125 maps. This collection embraces the official reports and documents of the several state railroad commissions, as well as congressional and legislative documents bearing upon railroad and transportation matters. It also includes general and special treatises on the various phases of railroad affairs in this and other countries, foreign official reports and documents, the reports of railroad companies, proceedings of the railway technical and other organizations, files of railway periodicals, American

and foreign, proceedings and papers of commercial bodies dealing with internal commerce and transportation, and a variety of books and pamphlets relating in one way or another to railroad operations in earlier as well as in more recent years.

The collection is strong in railroad law and possesses special collection of bills, reports and documents relating to interstate commerce, 1885 to date. It is a circulating library for officials and employes of the Commission, and for officials of other departments, and is open to the public for reference.

\* \* \*

The New York public library has an especially strong collection in the earlier financial papers of American railroads and has been more successful than most of the larger libraries in securing complete files of their annual reports to stockholders. Supplemented with the economic material in the state and federal documents the collection is most useful to the student of the history of railroads in this country and their regulation. A list of their material on railroad rates and government control was printed in their bulletin, volume 10: pages 134-209.

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The Western Reserve historical society collection on railroads consists of about 140 bound volumes and 750 unbound volumes and pamphlets and over half of these are on Ohio railroads. The Society is endeavoring to make the collection as complete as possible, as far as pertains to all roads in or crossing the State of Ohio. It is especially strong on the earlier reports of these, having many back to the beginning.

\* \* \*

A collection of books, pamphlets and scrap-books relating to railway engineering came to the Purdue university from the Western railway club at Chicago. The collection formerly belonged to David L. Barnes, an engineer, who was formerly editor of the Railroad gazette, and it was given to the Club in 1897. The collection is probably the prime source of information on the development of locomotive and car designing in the important period between 1880 and 1890 as it contains in addition to the bound volumes of engineering and railway periodicals and proceedings of technical societies a large number of drawings, blue-prints and photographs.

**RAILROAD LIBRARIES.**

**A: Baltimore and Ohio Railroad Library.**

Long before the State of New York had inaugurated the traveling library some of our American railroad companies were circulating books to the employes along their lines. Such a library, in some of its features both original and unique, is found in

the Baltimore and Ohio employes' free circulating library. This library, after having been moved several times, is now at home in the Mount Royal Station, Baltimore, Md.

The library is largely, if not entirely, due to the late Dr. W. T. Barnard, who was Assistant to President of the Baltimore and



Ohio corporation, and was actively interested in the Baltimore and Ohio relief association (now the Relief department), through which knowledge was acquired of the "sad lack of educational facilities along the main stem and branches of the Baltimore and Ohio railroad." He, therefore, undertook the establishment of a free circulating library "exclusively for the use of the employes and families of employes of this service." A circular, dated December 1, 1884, outlined his plan as follows:

"The establishment of a Free circulating library for the employes of the company is undertaken in the belief that such an institution will be welcomed by all classes as a popular and desirable measure, and that, through its agency and development, much-needed opportunity will be afforded employes to qualify themselves for promotion and advancement in life, while at the same time their children, wherever located, will have at hand facilities for study and instructive reading matter seldom obtainable outside large cities. This will be done without cost to employes and in such a manner that the books furnished can be utilized not only at reading-rooms (not always convenient of access), but also amid the comforts and society of their homes.

"The plan, in brief, is, by means of contributions of money and books, to establish a compact general and technical library, selected with special reference to the wants and tastes of employes and their families, to print inexpensive but carefully prepared catalogs and cards on which to make requisitions for books, and to so distribute them that every member can receive and return literature, without delay, through the company's train service.

"This library is therefore to be exclusively for the use of all employes, their wives, and more particularly, their children. Its mission will be to exert an elevating and educating influence on those it reaches. It will supply current periodicals, standard works on the sciences, general literature, poetry, historical, text and other books of practical utility to engineers, mechanics, firemen and other railroad employes, and those especially adapted to educating and forming the character of the young. Whatever is immoral in tendency will be rigidly excluded from its shelves, and its management will do all it can to discourage the use of literature from which unhealthy and unreal ideas of life might be drawn.

"It has been created and will be sustained by voluntary contributions of money and literature from the officers and employes of the Baltimore and Ohio railroad company and outside friends interested in their welfare.

"Its headquarters will be at Baltimore; but it will undertake to distribute books, etc., to any point on the Baltimore and Ohio railroad lines."

This plan was authorized by the company March 2, 1885, through an order of the president, the late Robert Garrett. The management of the library was entrusted to a committee to be composed of two directors of the Technological school, two members of the committee of management of the Relief association, and a representative of the Baltimore and Ohio appointed by the president. The principal instructor of the Technological school and the secretary of the Relief association were to be members of the library committee ex-officio. The Technological school was abandoned some years ago, and since then its representation on the committee has been dropped. When the Relief association was changed to the Relief department the corresponding officials of the latter became members of the library committee. The library year begins December 1, and the members of the committee are appointed annually. The president of the company appoints the librarian.

This committee organized the work at once. Appeals for aid were made to those only who were financially interested in the company. They collected \$5,391 and received about 1,500 well selected books as donations. The nucleus of the collection was a donation of 600 volumes to the employes at Mt. Clare by the late John W. Garrett in September, 1869.

This library was publicly opened by the late librarian, Mr. A. M. Irving, on October 26, 1885, with 4,500 volumes on its shelves, 3,000 of which had been purchased. The first year 16,120 volumes were circulated, 4,850 at Mt. Clare and the remainder at different stations on the lines of the Baltimore and Ohio. Although the circulation of the library of later years has been more or less restricted owing to the establishment in Baltimore of the Enoch Pratt library—the Carnegie and other general circulating libraries at various points over the Baltimore and Ohio lines and situated more conveniently to the users, nevertheless since 1885 many hundreds of thousand volumes have been drawn out by the employes.

These books travel as far westward as the Mississippi River, through eight great states, and over a railway system approximating 4,500 miles. They are delivered to borrowers through local agents, and the average time, from the placing of an order for a book in the hands of an agent until the book called for is in his hands, is now less than 24 hours for the entire system. The library uses 674 agencies, each agency serving as a delivery station for the employes of the community or department.

Along with the increase in the number of books used there has been a decrease in

the percentage of fiction. The first year 64 per cent of the circulation was fiction; the percentage of fiction is now less than 53 per cent. A book may be retained two weeks, and may be renewed for a like period, or oftener, if no application for it is on file. There is a fine of one cent per day on books kept over time, but a margin of three days is allowed to cover the time consumed in transit. On leaving the service of the company all books must be returned before pay vouchers are cashed; otherwise the value of the book will be deducted from the wages of the employe.

The whole system of sending out and returning a book is similar to that of the registry department of the post office. Every person who handles a package receipts for it, so that it is possible to trace anything that may be lost. The company is responsible for all books in transit, and it exacts the same care in the handling of library property that is required for all other property.

The system of ordering and charging books for circulation is very simple. The borrower fills out a requisition blank, that is, by writing the name and call numbers of the books he wants, which he selects from printed catalogs, and by signing his name and address and the department in which he is employed. The requisition is then countersigned by the agent through whom he wishes to get the book, and it is sent to the librarian at Mount Royal Station, Baltimore, Md. The librarian takes the first book on the list (using his discretion, however, in case of fiction to select for the reader), and then makes out a record-card for the transaction. On this card is entered the date, the requisition, book, agency and package number, and the name of the borrower. The card is filed in the order of the book number. Another entry is made on a card under the agency number. This entry shows how many and what books are at any agency at any time. When a book is returned its number is marked off on the agency card, and the charge on the card filed under the book number is canceled. A new series of requisition numbers begins every year on the first of December, and the requisition number is always the total circulation of the fiscal year to date.

After all entries have been duly made and the requisitions have been stamped and dated, the books are wrapped in packages. These packages are then stamped and labeled for delivery through the baggage department to the agents along the lines. Several agencies take such a number of books that satchels are used in carrying them back and forth.

An interesting feature is the use of the leather from worn car seats, which is gotten from the passenger car repair shops, for binding and repairing books.

#### B: Seaboard Air Line Railway Library.

For more than a decade past a system of free traveling libraries has been maintained under the auspices of the Seaboard air line railway, along its lines extending through six Southern States. The late E. St. John, Vice-President and General Manager of the road, was the originator of the system, and Andrew Carnegie has contributed to its support. Mrs. Eugene B. Heard, of Rose Hill, Middleton, Ga., is the general superintendent.

This system of free traveling libraries was the first established in the south, and has been a potent factor in bringing about library legislation in the six southern states coming under its influence. Hundreds of small towns and hundreds of schools have established permanent libraries due to the interest created by the use of the community and school libraries of the Seaboard air line free traveling library system. The work has a place all its own as one of the important educational movements for the rural South.

From the first Mr. St. John and Mrs. Heard laid special stress upon school betterment, and required that each community undertake some work of internal improvement, as guarantee that they deserve the use of a library.

Many letters from principals, pupils, and parents, to the following purport, are on file at Rose Hill: "We are putting glass in the schoolhouse windows ourselves; we are cleaning the yard of the schoolhouses; we have collected money to paint the schoolhouse." Accompanying this report of improved conditions is always the request, "Will you not send us a school library? We will take good care of the books and not soil them more than we can help." In the year 1913, 60,000 children had the advantage of the Seaboard libraries, and the number is constantly increasing.

In addition to the 250 school libraries now in circulation along the Seaboard air line, there are some 35 "community libraries," which are the result of Mrs. Heard's personal visits to the dreary flag stations, to the out-of-the-way places where the families of employes were shut off almost entirely from intercourse with the outer world.

One of the most important features of the work is that with magazines and periodicals, which are shipped to the various stations in sacks twice a month, and come as gifts fresh from the publishers.

In a single year, 1913, 40,000 magazines and periodicals were sent to the families of section foremen, while 5,000 copies were sent to the negro settlements. Numbers of reading tables for these publications have been established in rural communities, and their use not only creates a taste for reading but paves the way to a demand for the libraries.

(Report of the Commissioner of education for 1911, p. 218-19, with figures for 1913 furnished by the Seaboard air line railway.)

**C: Atchison, Topeka & Santa Fe Railway Reading Rooms.**

The present method of operating reading rooms on the Santa Fe was begun on November 1, 1898. It sprang out of a telegram from President Ripley to Mr. S. E. Busser, at Emporia, Kan., asking him to leave for Chicago for a conference. Out of that conference came forth his appointment as superintendent of reading rooms for the Santa Fe system, also a bulletin authorizing the establishing of the work. Prior to this there had been some correspondence with officials of the road, and some investigations had been made as to the feasibility of the project and the results to be accomplished, but its conception dates from that interview, and its origin sprang from Mr. Ripley's intense interest in the higher morale of the employes and their prosperity and happiness. In fact everything accomplished in this department is traceable to the big heart and large brain of a man who realized the responsibilities of his position and recognized the importance of high ideals of character in the most humble labor.

On the Santa Fe system there are now twelve reading-rooms and club houses, and twelve reading-rooms. The former have sleeping rooms and all facilities of a first-class hotel. The latter are rooms arranged for pool and billiards and other means of amusement but no sleeping rooms. All have first class libraries. Thus these twenty-four buildings are devoted to the upbuilding and comfort of the employes. On the pay-roll of the reading-room department there are sixty-two employes whose average salary per day is \$2.25, or a monthly salary expense of \$4,000 on the system. The total expense of operating all these reading-rooms, including purchase of books and periodicals, except cost of renewals on buildings, is \$50,000 per year. The yearly cost of papers is \$2,500 and about the same amount is spent for books. The expense of putting on entertainments for the season of four months runs from eight to ten thousand dollars. The Santa Fe has now, including the cost of buildings and equipment, the sum of \$385,000 invested in reading-rooms.

In the libraries of the reading-rooms there are now 18,500 volumes, 40 per cent fiction, 20 per cent history, 15 per cent biography, 15 per cent technical, and the rest general. On the tabulated reports of the librarians there are over 450 books used each day, and over 8,000 employes avail themselves of the privileges on the system.

During the last season over 500 entertainments were given, consisting of lectures, concerts, the drama, and laboratory work. The result of this work, as has been found

by personal intercourse with the employes, is that the men are more courteous, more loyal to the best interests of the corporation, more intelligent in the performance of their duties, more solicitous about the prosperity and financial success of the reading-rooms. The wives and daughters of the employes are also welcomed into the reading-rooms and many of them become expert bowlers and billiardists. The presence of the woman has a refining effect and the men dress better, act better, and use better language because she is there.

Among the more recently inaugurated reading-rooms on the Santa Fe system is the one which was opened at Bolen, N. M., on May 14, 1912, and which was erected at a cost of \$15,000. It is not one of the largest buildings of the kind that have been placed at the disposal of Santa Fe employes, but it is very conveniently equipped for their accommodation, having sleeping facilities for forty and a comfortably arranged rest and reading room. This, together with the well equipped billiard-room, may be thrown into one auditorium capable of seating over five hundred people. First-class bathing facilities also have been provided.

Another reading-room recently erected is at Slaton, Tex., which cost \$38,000.

**D: The Law Library at Chicago.**

The library in the Atchison, Topeka and Santa Fe railway company's Law department at Chicago contains about 3,500 volumes selected with a view to interstate railroad matters as well as local questions which arise in the 12 states traversed by the Santa Fe system lines. It consists of the state reports of these states together with the reports of the principal eastern courts such as New York, Massachusetts, New Jersey, etc., down to the National reporter system, which, of course, contains the reported decisions of the principal courts of all the states rendered since its inception. In addition to this it has the Federal and United States reports and the Reports of the Interstate commerce commission, as well as the English reports from the date the present system of reporting in England was inaugurated and has also subscribed to the full reprint of the English Law reports prior to that time, which is now being published.

The above with digests and about 500 text books covering subjects such as Carriers, Contracts, Negligence, Corporations, Railroads, Mortgages and Bonds, Interstate Commerce, etc., together with the federal statutes and the statutes of the various states in which the road is operated, is usually sufficient for the investigation of any question which arises, and when there is occasion to use any book not found in our library it may be readily obtained from the library of the Chicago law institute. In addition to the library maintained at Chicago

each of the eight state solicitors is provided with a complete working library for the use of himself and his assistants.

A catalog of the library was issued in 1905.

**E: The Boston and Albany Railroad Library.**

The Boston and Albany railroad library was opened in Boston in February, 1869. On January 1, 1873, it contained 1,437 volumes, all but 136 of which were in the circulating department. About 1880 it was moved to Springfield and located in the Boston and Albany general office building on Main Street. The aim of the organization was "to have within the reach of officers and employes the best books on the railway system and the industrial arts, and also as many on the sciences and in general literature as shall be obtainable." It was under the control of a library committee of five, consisting of two members of the board of directors, the clerk of the Boston and Albany railroad company, the assistant superintendent, and the master mechanic. The library was for the use of all officers and employes of the road. It was open Wednesdays, 9:30 to 10:30 a. m. and 5:30 to 7 00 p. m. Springfield employes called at the library for their books. Those outside the city obtained them through station agents, books being sent to the different stations on Thursdays of each week. Borrowers returning books were required to pack them in strong paper and write plainly the name of the person and the station from which they came. Books were charged for two weeks with privilege of renewal and, "owing to the large circulation," borrowers were urged to "keep cards well filled with undrawn numbers." Printed catalogs could be bought for fifteen cents.

The library's financial support came from the Twichell fund, a trust held by Hon. G. Twichell, a small annual appropriation by the railroad, and individual gifts.

In 1908, when it was turned over to the Railroad Y. M. C. A. at West Springfield, Mass., the collection contained 3,651 volumes.

The following catalogs of the library were issued:

Catalogue of the Circulating and Consulting departments of the B. & A. R. R. library, 1868. 45(1) p

Appendix to the catalogue of the B. & A. R. R. library, 1869. 8 p.

B. & A. R. R. Library. Appendix No. 2, 1869. 4 p.

New revised catalogue of all the books in the Circulating department of the B & A. R. R. library, 1873. 16-6-4-12-7 p.

New revised catalogue of all the books in the Circulating and Consulting departments of the Boston and Albany R. R. Library, 1884. 48 p.

Revised catalogue of the books in the Circulating and Consulting departments of

the Boston and Albany R. R. library, at Springfield, Mass., 1889. 59 p.

Circular dated Jan. 12, 1869, announcing the opening of the Library on the first Wednesday in February next.

**F: Altoona Mechanics' Library.**

The Altoona mechanics' library, Altoona, Pa., was established in the year 1858 by the employes of the Pennsylvania railroad company, and from its inception to the present time has been a ward of the Pennsylvania, through whose generosity it has been enabled to attain its wonderful growth and usefulness.

It was started by the employes of the road with a petition to the city authorities in February, 1860, with a nucleus of a few newspapers and books which were located in a room above the ticket office. In 1885 this small beginning had outgrown its first home and it was removed to the Logan home, which in time became too small, and the present location—which was the First presbyterian church—was chosen in 1900, as a place that would provide for future expansion.

The Pennsylvania railroad company owns this building and also owns 750 shares of the library stock, on which they pay the tax of \$2.00 per share annually. The library memberships, which these shares of stock entitles them to, are given by them to the employes who have become pensioners, i e., having reached the age limit, 70 years. In addition to this they also give 225 free memberships into the public schools, for the use of the teachers and pupils, 125 are selected each year by the generosity of the Pennsylvania railroad company and to those who pass the honor examinations, is extended the freedom of the library.

One of the finest and most complete collections of bound technical periodicals and proceedings of scientific bodies, to be found anywhere is seen here, especially works pertaining to construction, equipment and operation of railways, the significance of which will be understood when it is known that about one-third of the expenditures is chargeable to works of that character.

The library was fortunate in having for chairman of its committee, Dr C. B. Dudley, Chief chemist of the Pennsylvania railroad company, a man of broad culture, who gave unsparingly of his time and thought to the upbuilding of the library, with the result that many valuable books and sets were added to the library during the twenty-two years of free ungrudging service, from 1857 to 1909.

Life members pay \$35.00 once for all, and have all privileges for life. Stockholders pay \$5.00 for the first year; \$2.00 for each subsequent year they use the Library. For six months' use of the Library the charge is \$1.25. Non-payment of dues does not forfeit stock, but prevents use of Library. Con-

tributing members pay \$3.00 per year and have all privileges; six months' use of the Library \$1.75. Juniors or any wage earners under 21 years of age, pay \$1.00 per year, six months' use of the Library costs 60 cents. Certificates from employer must be furnished.

**G: The Pennsylvania Railroad Libraries at Pittsburgh and Philadelphia.**

The General office library of the Pennsylvania lines west of Pittsburgh is rapidly advancing towards its goal of providing a complete reference library of railway information and statistics and information of value to railway men, for the use of the officers and employes of the company.

It has been built up by combining in one library all the books of general information which were formerly collected by each officer or department to suit its own needs, many of them being several times duplicated under the old arrangement. It has not been the aim to bring into this library the books on individual subjects, such for instance as civil or mechanical engineering, which are left in those departments where they are exclusively used, nor the books which are currently in use by the various officers; but all books of general statistics and reference, the technical and railway magazines, annual reports of railways, government and state reports, the reports of the Interstate Commerce Commission, etc., are filed in the General office library.

To these have been added the best encyclopaedias, dictionaries, etc., so that when any officer or department is in need of information of a general character, it can be found in one library. Tables are provided for those consulting or working in the library, and it affords a place for quiet, undisturbed research work.

Neither has it been the aim to collect old documents or books merely as relics, or simply on account of their age. Filing space is not available for anything that is not actually useful. As it is, case room has now been provided for something like 4,000 bound volumes and thousands of pamphlets, and the number is growing rapidly, as the usefulness of the library has been demonstrated so thoroughly that all departments are co-operating in building it up by depositing there everything which they feel will be of general use or interest. The cases are of the sectional type, which best lends itself to indefinite and irregular expansion without expending at any one time more than the needs of the day require.

The railway and technical magazines are inexpensively bound, and many of them are complete from the first day of publication. Poor's and Moody's manuals are complete from No 1 to date. Files of annual reports of all the larger railways of the country have been completed as far as the roads have been able to supply them, many of

them from their beginning to date. Proceedings of railway associations, railway clubs, etc., are received and filed regularly.

The arrangement not only offers a very useful source of information to the officers and employes of the company, but has resulted in a considerable saving in the aggregate annual expenditure, by avoiding the cost of binding duplicate sets of magazines and reports, providing cases for filing duplicate books, magazines, etc., in the various departments, and the buying of duplicate books where one can as well be used by all departments.

The Pennsylvania railroad company has at Philadelphia an office library consisting of the railroad reports, financial documents relating both to the Railroad company and to the lines west, as well as a collection of reference books dealing with the industries of the state of Pennsylvania, the laws of the states through which the company passes and the enactments of the Philadelphia city government and files of the general railway periodicals. The library, however, is not organized and use of it is restricted to the interested officers of the company.

**H: The Wells Fargo Atlantic Library.**

It is not size that makes the Wells Fargo Atlantic library unique. You could find scarcely six thousand volumes of reading matter on its shelves. Moreover, its membership is not large—less than seven hundred, in fact. But in the character of its literary clientele this library for expressmen stands apart. And no small interest lies in the methods of book distribution, which it must of necessity employ to satisfy the demands of its widely scattered readers.

The Atlantic library was organized nearly twenty years ago—1897 to be exact—in the Jersey City terminus of Wells Fargo and company express. Jersey City is the gateway into and out of New York as far as Wells Fargo men are concerned, for through that city must flow the great package and parcel tide to and from the west. It was quite natural, then, inasmuch as Jersey City was the center of interest to Wells Fargo's thousands of express messengers, parcel handlers and officials, that a library should be established in that particular place.

Now, the organization of an express company is no local affair. If a library is to be a useful institution among the employes of a company which operates over many thousand miles of railroad lines, it must solve many problems. Agents in small country towns, without the advantages of public libraries, must be supplied with books. The dues must be small and yet must be sufficient to maintain the expenses of a librarian and provide for gradual literary additions to the shelves. Lines of reading must be suggested to the members, some little consoling done and general interest in the reading of wholesome books stimulated.

At first the Atlantic library (so called because it operated in the Atlantic division of Wells Fargo and company) contained only five hundred volumes of fiction. It had at that time only two hundred members. The dues were 25 cents per month. Members could draw a couple of books at any time but were not allowed to keep them out longer than a month. Certain "special" books were to be kept only a fortnight.

The growth of the library was rapid. Express agents in towns scattered from New York to Chicago sent in regularly for books and received them promptly by express. During the few years that elapsed between the start of the institution and 1904 the number of members increased to double and the number of volumes was quadrupled. The dues were then lowered to the nominal sum of 10 cents per month, which resulted in the addition of a large number of members.

The library at the present time is in charge of Miss Irone A. Kennedy, upon whose judgment is placed the responsibility of selecting what Mr. Wells Fargo Man and Miss Wells Fargo Girl will read in the line of fiction. The library now presents a fine collection of the latest and most popular books, which are replenished each month. Catalogs and supplements are printed and distributed among the members to guide them in their selection of books. These include volumes devoted to history, fiction, literature, poetry and drama, travel and adventure, sociology, political economy, natural science, architecture and painting, photography, amusements, useful arts and domestic economy.

Express messengers on the run between cities, lonely country agents in little out-of-the-way towns, freight-handlers in big city traffic depots and Wells Fargo clerks in New York enjoy the benefit of the Wells Fargo Atlantic library and its distribution via express.

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In February, 1867, the Cleveland and Pittsburgh railroad company established at Wellsville, Ohio, a Reading room association and library, for the use of the employes of that company. Membership fees were \$1 a year and honorary members outside of the employes of the company could be elected by a two-thirds vote of members present at any meeting. There were 2,091 volumes in the library at the close of the year 1891, at which time Mr. L. F. Loree was president of the Board of directors of the Library. The number of members that year was 146, although in 1889 the membership had been 286. This Association continued until April, 1914, when after ten years of consolidation with the Railroad rest house at Wellsville, Ohio, the work was discontinued.

\* \* \*

The American railway association has a library consisting of over 1,600 volumes.

The collection began in 1872, but grew in connection with editorial work for the Official guide, a publication of the National railways publication company, to which a large number of these volumes still belong. In connection with the work of the committees of the American railway association a number of other books have been added from time to time, but as these have been associated with the various projects before the Association the collection can scarcely be termed a systematic one.

\* \* \*

The Railway age gazette possesses a library in New York City numbering 850 volumes. This library maintains a quite complete file of the annual reports of both American and English railways, from the year 1897. It has also a file of Poor's manual back to 1872 and all of the current manuals of statistics, the publications of the engineering societies, and bound volumes of general scientific magazines.

\* \* \*

The Illinois central railroad law library at Chicago includes the session laws, codes and reports of the various states along the system, the National reporter system, and the various collections of annotated cases, besides a library of general text books, with a file of the records and briefs of all Illinois central railroad cases.

\* \* \*

The law library of the New York central and Hudson River railroad at the Grand central terminal in New York City possesses sets of the United States supreme court reports, Federal reporter, federal cases and federal statutes and digests; the reports, session laws, statutes and digests of the states through which the lines pass: New York, New Jersey, Pennsylvania, Vermont, Ohio, Indiana, Illinois and Michigan. It also includes such general reference books as the American and English encyclopaedia of law, American and English railroad cases, and recent works with especial reference to corporations, railroads and negligence; the various reporter systems and legal periodicals.

\* \* \*

The Nashville, Chattanooga and St. Louis maintains at Nashville, Tenn., a library of over 7,500 volumes for the use of its employes. These volumes include fiction, history and technical subjects, as well as bound volumes of many magazines. Any employe may take out a book and keep it for two weeks, at the expiration of which the period may be renewed for an equal length of time. Employes stationed at points other than Nashville, of course, have the books sent to them. The library is very popular and a large number of employes take advantage of it.

(Railway master mechanic, v. 38: 472; Oct. 1914.)

## The Railroad Y. M. C. A.

Seventy years ago the Young men's Christian association was founded under the shadow of St. Paul's Cathedral in London by a clerk in a large warehouse.

Gradually the Association felt it had a responsibility to soldiers, sailors, students, industrial and railroad men. The United States and Canada have taken precedence over all other countries in work amongst railwaymen, and so thoroughly has the work been handled by the Young men's Christian association that universal tribute is paid by the railway management from San Francisco to New York and from Montreal to New Orleans.

The first railroad to inaugurate the Y. M. C. A. work along its lines was the Grand Trunk system, when the general manager, Mr. C. M. Hays, secured consent of the London directors to the establishment of branches from Chicago to the eastern terminals of the roads. It was in pursuance of this plan that the opening of a first-class branch in front of the Polk Street depot in Chicago was authorized soon afterward.

In the United States the Y. M. C. A. began its work among railway men in Cleveland in 1872, through the agency of an employe who had been discharged for drunkenness but who had reformed and had succeeded in forming a branch of the Y. M. C. A. which was housed in the Union Depot.

The general officers of the Santa Fe railway asked the International committee to make a thorough investigation of the points on their system where branches should be established. This road had already provided an excellent system of reading-rooms and clubs for its men. [For a description of these see this issue, page 10.]

In 1914 the Railroad Y. M. C. A. added the following buildings, erected or enlarged: Kirk Yards, Ind. (\$20,000); Rossville, Ill. (\$40,000); Lenox, Ill. (\$20,000); Marshalltown, Iowa (\$75,000); Silver Bay, N. Y. (\$4,000); Grand Central Terminal, N. Y. (\$475,000); Dickerson Run, Pa. (\$60,000); Scranton, Pa. (improvement \$10,000); Tyrone, Pa. (\$50,000); Derry, Pa. (\$3,000); Monroe, Pa. (addition \$8,000); Silver Grove, Ky. (\$20,000); Grand Island, Neb. (\$75,000).

One of the first elaborate homes that was given to the railroad department of the Y. M. C. A. was the really excellent club-house which was built in Madison Avenue, New York, by the Vanderbilts a quarter of a century or more ago for the benefit of the railroads who were operating in and out of the Grand central station. When the old Grand central was torn down it was found necessary to utilize the Madison Avenue club-house plot to find room for the ramifi-

cations of the new, a building was immediately planned to replace the old structure with a newer and far finer one, as a part of the elaborate general improvement round about the new Grand central terminal. The new building is of a very pleasing type of architecture and rises seven stories from its site in Park Avenue, just north of the new station. It was built of cream-colored pressed brick, trimmed with Indiana limestone and its facades have been fashioned to conform with those of the station and other buildings of the terminal group, giving an architectural harmony.

Year by year this work has grown in the confidence of railway investors, officials and employes until the Y. M. C. A., which at its inception did not look beyond a small group of men in a single city, has enlarged its borders, and has received the following commendation, in the words of James McCrae, late President of the Pennsylvania Railway, "it is now rightly recognized as an important factor in the general railway work." Mr. W. C. Brown, the former President of the Great New York central lines, a few years ago sent to the International committee a remarkable testimony: "I say without hesitation that in my own opinion investments of a like amount by the New York central lines have never paid, nor never can pay, so large a return as the expenditure of \$700,000 in establishing, and approximately \$40,000 each year for the maintenance and support of these Railroad departments of Young men's Christian associations."

Not only are these Associations proving themselves in every way helpful and worthy from the viewpoint of the railway management, but it is very gratifying to know that the men themselves highly appreciate these facilities for their comfort and convenience, and are heartily co-operating with the Company in making these Associations a success. The proof of this is shown by some figures giving the averages in some of the different departments of the Associations fostered by the Norfolk and western. There are ten Associations on the system, located as follows: Lambert's Point, Crewe, Shenandoah and Roanoke, in Virginia; Hagerstown, Md.; Williamson, Bluefield and Wilcoe, in West Virginia; and Clare and Portsmouth, in Ohio, besides one at Columbus, operated jointly with other railroads.

The prospect for buildings to be opened during 1915, is not quite as promising as was the outlook a year ago, but despite present unfavorable business conditions the year opens with the following impressive list of buildings assured or under construc-

tion, and this list will be greatly enlarged as soon as normal industrial conditions return: St. Thomas, Ont. (\$65,000); West Springfield, Mass. (\$62,000); Lo Grande, Ore. (\$41,000); Harmon, N. Y. (\$10,000); Logan, W. Va. (\$10,000); Bellwood, Pa. (\$7,900). A striking advance was made in what is termed "internal" development. Not in many years has there been so fine an increase in efforts and results along educational and religious lines. While 2,067 lectures and practical talks were reported during 1913, the number increased to 2,618 during 1914, thus showing an increase of 334, or over 30 per cent. Moreover, there were 3,387 enrolled in educational classes as against 2,477 the year before. There were 380 bible classes as against 325 the previous year, with an enrollment of 10,801 as against 6,376 two years ago.

As one phase of its educational work, the Railroad Young men's Christian association has placed large emphasis upon the building up and use of carefully selected libraries; 156 of the 258 existing associations are already equipped with libraries varying from 500 volumes to many thousands. During the year 1914, 198,976 books were taken for reference or for use in the home.

Many of these Association libraries have developed a use far beyond the particular place in which they are located. For example, one large library sends books to other Railroad associations up and down the road on which it is established. Another Association makes it a point of sending books to station agents and section men at isolated points. In all cases such as these, the railroad company carries the books without charge, being permitted to do so by the Interstate commerce commission.

The New York Railroad Y. M. C. A. library was organized in 1887. Mr. Cornelius Vanderbilt donated \$400 a year for the purchase of books, and since his death, Mr. Alfred Gwynne Vanderbilt has increased this gift to \$1,200 a year. It now has over 20,000 volumes, its recent catalog requiring 369 pages to list the collection by author and subject, this being the largest library in the Railroad department of the Young men's Christian association.

While it aims to have books on all subjects, including fiction, railroad literature receives special attention and all the books that are published on this subject, either for circulation or reference, with the exception of state railroad reports and the less important periodicals are secured.

A special feature of the work is the circulation of books to employes at the small stations on the lines of the New York central and the New York, New Haven and Hartford systems. These men take out what is known as a special library membership for one dollar a year. They receive catalogs and bulletins of the library as they are issued from time to time. Books are sent

and returned by express, the companies furnishing free transportation. This is considered a very important feature of the work as it enables the men at the smallest stations to enjoy the privileges of a large town library.

Several of the larger libraries, as for example, New York, West Philadelphia and St. Louis, employ librarians, but the smaller libraries are operated by the secretarial staff, and as most of these Association buildings are open at all hours, the libraries are available both day and night. It is possible that the Railroad Young men's Christian association conducts the only extensive twenty-four-hour-a-day library.

The following are a few of the catalogs issued by the libraries of Railroad associations:

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- East St. Louis, Illinois: Catalogue of the Railway Y M C. A. Library. 1885. 14 p. 24°
- Fort Wayne, Indiana: Railroad department of the Young men's Christian association. Library catalog 33, 5 p. 24°
- Hornelsville, New York: Catalogue of the Circulating library of the R. R. Y. M. C. A. July 1885. Folder. 16°
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The railroad train has come to be a favorite postage stamp subject. The locomotive was shown on the 3-cent blue stamp as early as 1869, the 8-cent stamp of the Trans-Mississippi issue of 1898 showed a squad of troops guarding a mail train, and the 2-cent Pan-American issue of 1901, a picture familiar to nearly everybody, showed the famous Twentieth Century Limited, and was the latest issue of the United States postage stamp showing a train of cars.

A dozen other countries have pictured the mail train on their stamps and the Honduras specimen was issued in 1898. Mexico issued a train stamp in 1895, and continued this through several years, with variations in the color, paper, etc.

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## Railroads and Education

As early as 1887 a proposition was put forth by Mr. Walter G. Berg for the establishment of a railroad college for the education of railroad employes. Prior to this an experiment had been conducted by the Baltimore and Ohio railroad with the apprentices on their system and so great was the success in the first two years that the Board of directors made an appropriation of \$20,000 annually for the support of a school of railway technology. Unfortunately the whole scheme was indefinitely postponed on the departure of President Garrett for Europe, but the work started at Mount Clare in 1895 though not elaborated as the report by Dr. W. T. Barnard had recommended is still being carried on.

A similar work is being conducted at Altoona by the Pennsylvania railroad and at Cincinnati the railroads and the University of Cincinnati co-operate to the extent that practical work in the shops is credited on the apprentices' academic work, the com-

panies contributing to the support of the University. A somewhat similar relation exists between the railways centering in Chicago and the University of Illinois at Urbana.

The Railway educational bureau, organized in 1909 by the Union Pacific railroad and later extended to other of the Harriman lines, was established to assist men in realizing their ambition. In many cases it has been the means of helping men to decide what their ambition should be. It has helped to prepare many men for greater responsibility in their chosen lines of work—it has helped many to promotion. It has proved that study clears the road to progress.

It is only within the last ten years that changing conditions indicated the necessity for the railroads to provide a means whereby men in the service could educate themselves. The late Mr. E. H. Harriman, who was a keen student of all railroad con-

ditions, was among the first to realize the necessity of educational work. Nearly ten years ago he directed that the officers of his lines interest themselves in this problem, so that young men would continue to be attracted to railroading as a profession, and on entering the service would be given an opportunity to learn the business so as to fit themselves to assume greater responsibility, and thus win promotion.

It was Mr. Harriman's interest in his men and in this problem that led to the establishment of the Educational bureau. Its object was to provide a means whereby every employe in the service no matter what his location or position might be could obtain information along the line of his work and the work next ahead of him, so that he could fit himself for promotion to vacancies which might occur. Instructional matter on practically every branch of railroading was prepared and study courses offered by means of the correspondence method, so that all would have equal opportunity to take up these lessons and thus increase their knowledge of practical railroad work, and of those more theoretical or technical problems which they needed to know in order to become of greater value in their department. Students were not restricted to the study of matters pertaining to their own work, but were allowed to take up courses of reading and study to make them better all around railroad men.

The results of the establishment of this educational work were at once apparent. The opportunity offered put hope in the hearts of many men who had felt the lack of opportunity. The ambitious studied everything furnished. Many employes who needed but little of the theoretical or technical side of their work to enable them to be fitted for promotion were aided in this respect.

The plan seemed to fill a long-felt want. Large numbers of employes of all classes and many officials took advantage of the opportunity offered. It seemed unfair to restrict this work to the employes of but one or two railroads, therefore, arrangements were made to extend the scope of the work so that any railroad employe in the country could take advantage of the opportunities offered.

In the meantime the Bureau had also been operating on the Illinois central and Central of Georgia railroads and carrying on correspondence courses for the employes as well as conducting the educational features of the shop apprentice system.

On July 1, 1913, the Bureau was reorganized as a separate institution on a permanent and self-sustaining basis. It was decided that the success of the Bureau justified its continuance, but that reduced earnings required the cancellation of all expense that could be done away with by the roads. It was felt that the companies interested had done their full part in establish-

ing the Bureau, and that if the employes appreciated the work they would support it on the basis of a reasonable charge. The Bureau was therefore reorganized on July 1, as the Railway educational bureau, with headquarters at Omaha, Neb., under the charge of D. C. Buell as director. Mr. Buell had been Chief of the Educational bureau from its establishment.

That the new plan is a good move, approved by a large percentage of the railroad men who have become acquainted with the bureau methods, is plainly indicated by the support which has been given the Railway educational bureau during the past year and a half.

Railroad executives have shown their interest in the work by a willing co-operation with the Bureau as is shown by the fact that the following railroads are co-operating under contract or special agreement with the Bureau: Union Pacific; Illinois central, Yazoo and Mississippi valley; Central of Georgia; Wadley southern; Wrightsville and Tennille; Oregon short line; Oregon-Washington R. R. and navigation; St. Joseph and Grand Island; San Pedro, Los Angeles and Salt Lake; Atlanta and West Point; Western railway of Alabama; Atlanta, Birmingham and Atlantic; Georgia, Georgia, Florida and Alabama; Georgia and Florida; Ann Arbor; Manistique and Lake Superior; Arizona eastern; Southern Pacific lines of Mexico; Southern Pacific; Suncoast-central lines; Morgan's Louisiana and Texas R. R. and S. S. Co.; Louisiana western; Sumpter valley; Spokane international; Chicago great western; Chicago, Indianapolis and Louisville; St. Louis and San Francisco.

The American railway master mechanics association has four scholarships at the Stevens institute of technology which were established in 1891 by the gift of \$8,000 to the scholarship fund of the Institute by the Association. The expense for tuition at the Institute is taken care of by the fund the Association has there, but it does not include board or rooms. The requirements, as contained in the Constitution of the Association, are as follows:

"Acceptable candidates for the scholarship shall be, first, sons of deceased members of the Association. If there is not a sufficient number of such applicants for the June examination, then applications will be received from other railroad employes or the sons of other railroad employes for the fall examination. The Secretary shall issue a proper circular in this case as before. In extending the privilege outside of the families of members, preference shall be given to employes or the sons of employes, or the sons of deceased employes of the mechanical departments.

"Candidates for these scholarships shall apply to the Secretary of this Association, and if found eligible shall be

given a certificate to that effect for presentation to the school authorities. This will entitle the candidate to attend the preliminary examination. If more than one candidate passes the preliminary examination, the applicant passing the highest examination shall be entitled to the scholarship, the school authorities settling the question. The successful candidate shall be required to take the course of mechanical engineering."

In June, 1903, the American railway master mechanics association received an offer from the Joseph T. Ryerson and sons company of Chicago, a boiler-making concern which had generously endowed several scholarships for technical education, of a scholarship worth \$600 per annum to a candidate selected by the Association, which was placed at Purdue. The Association has now under consideration with this firm a rearrangement of their scholarship at Purdue by which it is expected that there will be two scholarships instead of one.

In 1910 the Armour institute of technology, in Chicago, gave to the managing editor of the Santa Fe employes magazine a scholarship to be conferred upon the apprentice who made the best record for combined classroom and shop work during his apprenticeship. Since that time one scholarship has been awarded each year.

The only condition imposed by the Armour institute is that the apprentice must be able to pass its regular entrance examination. The Santa Fe requires the apprentices to have served at least three years and six months of their apprenticeship, and no apprentice who is out of his time prior to May 1 is eligible to the scholarship the following September.

The successful candidate is entitled to four years free tuition and may select any course offered by the institute, viz., civil engineering, mechanical engineering, electrical engineering, chemical engineering, architecture, or fire protection engineering.

The terms of the Thomson scholarships trust of the Pennsylvania railroad and Pennsylvania lines west provide that eight scholarships shall be established for a period of four years each, which have been awarded.

These eight scholarships will be maintained in succeeding years, providing the income is sufficient therefor, the university, college, or technical school selected by the candidate to be subject to approval by the railroad company. To fill the vacancies due to the completion of the scholarships awarded in 1911, two scholarships will be awarded for the four years beginning with the year 1915-1916.

Competitive examinations, open to the sons of living and deceased employes of all the Pennsylvania lines east and west of Pittsburgh, including the Erie and Western

transportation company; Cumberland valley railroad; Long Island railroad; New York, Philadelphia and Norfolk railroad; Baltimore, Chesapeake and Atlantic railway; Maryland, Delaware and Virginia railway; Grand Rapids and Indiana railway; Vandalia railroad; Pennsylvania railroad; Cincinnati, Lebanon and northern railway; Wheeling terminal railway and Waynesburg and Washington railroad, will be held in June, 1915, for the two 1915-1916 scholarships. These examinations will embrace subjects corresponding, in general, to the entrance requirements of the scientific departments of the higher class universities, colleges and technical schools.

Particular attention is directed to the fact that while applicants already in college are not precluded from competing for the scholarships, the primal intention of the donors in establishing the trust fund for the maintenance of the Frank Thomson scholarships was to give to worthy sons of employes an opportunity to secure a technical education and better fit themselves for service with the Pennsylvania railroad company, which opportunity they would not otherwise have.

Applications from students already in college will be given the consideration they merit, keeping in mind the intention of the donors of the trust fund, and such applicants, to secure consideration, must obtain a mark of at least 50 per cent. in all the branches in which they are examined.

The successful candidates will receive an appropriate certificate from the company entitling them to payment by the trustee (the Fidelity trust company of Philadelphia) for each year during which they shall attend such university, college or technical school as may be chosen, of a sum not to exceed six hundred dollars (\$600) in equal quarterly payments.

The College entrance examination board of New York City will again act as the agent of the railroad company to conduct the examinations for the year 1915-1916. Information regarding rules, regulations and requirements will be furnished to candidates desiring to enter the competitive examination, upon application in writing to the College entrance examination board, Post office sub-station no. 84, New York City, N. Y. In the written request for circular of information, mention should be made of the Frank Thomson scholarships.

Frank Thomson, in whose memory the Thomson scholarships were endowed, was President of the Pennsylvania railroad from February 3, 1897, until his death on June 5, 1899. He entered the company's ranks at the age of 17 as apprentice in the shops at Altoona, Pa.

Among the educational efforts of the railroads none is more important than that which they conduct with the idea of increasing the productivity of farm lands. It is estimated that 20 per cent of the whole

freight revenue of the railroads results from carrying farm products. This is certainly a good reason why railroads should employ agricultural "agents" and "commissioners," whose duties are to visit farmers and make suggestions to them as well as to supervise or actually conduct a demonstration farm. Among the states in which railroads were conducting experimental or demonstration farms according to the report of Mr. Frank Andrews of the Department of agriculture, were Maine, New York, Delaware, Virginia, North Carolina, Montana and Texas. An interesting illustration of this work is furnished by the Southern railway company which, from its organization, has co-operated with the communities along its lines for the development of the territory which it serves.

For this purpose a Land and industrial department was created to work in co-operation with the people along the line of the road to secure the location of new industries and to attract farm settlers.

When, with the spread of the Mexican cotton boll weevil into the territory east of the Mississippi River, the farmers in the cotton belt along the lines of the road were brought face to face with new problems, the Southern railway company and the companies associated with it extended their co-operative work so as to embrace the improvement of agriculture along their lines. This was done by the employment of experts in every branch of agriculture, including the live stock and dairy industries.

The men assigned to the territory along the line of the advance of the boll weevil had all had experience with this insect west of the Mississippi River and their primary duty was that of advising farmers how they could grow cotton successfully and profitably in spite of the weevil.

The companies do not maintain any demonstration farms and do not content themselves by giving to the farmer information as to what has been done on demonstration farms and at agricultural experiment stations. The agricultural and live stock experts visit farmers on their farms, advising each farmer as to his individual problems and showing him how he can obtain the best results on his own land and with his own resources.

When this agricultural development work was begun it was in charge of separate organizations, but, on November 1, 1914, all of the development work of the Southern railway and the companies associated with it, was consolidated in a single Industrial and agricultural department so that the same organization which solicits the removal of a farmer to a location along the railroad now has charge of advising him how to farm successfully.

The Industrial and agricultural department is in direct charge of a Commissioner, and, in addition to the agents working for the location of industries and the solicitation

of immigration, it embraces an Agricultural agent having under his direction a Live stock and dairy agent, two Assistant agricultural agents, eighteen Agricultural field agents, and five Assistant live stock and dairy agents.

As profitable production depends very largely upon successful marketing, there have been employed four Market agents, working under the general direction of the Freight traffic departments of the companies. It is the duty of these men to bring producers on the lines of the railroads in touch with buyers. They neither buy or sell, neither do they guarantee qualities or prices. It is their business to know just where, at points on the lines of the railroads, specific agricultural or horticultural products are produced and to give this information to buyers, and, on the other hand, to know who is in the market for these various products and to give this information to the producer. They also advise as to the best methods of packing and shipping.

As a part of the work being done for better farming along the lines of the Southern railway system, scholarships for the full four-year course in agriculture have been provided in the State agricultural colleges in each southern state traversed by the lines of the system. These scholarships have been awarded to young men residing in counties traversed by the lines of the system who would otherwise have been financially unable to avail themselves of an agricultural college education.

These scholarships were instituted by the late President Finley, and, as a tribute to his interest in the agricultural development of the south, after his death, they were designated "Southern railway scholarships—William Wilson Finley foundation."

#### Railroads and Railways.

A railroad, according to the Century Dictionary, is "A road upon which are laid one or more lines of rails to guide and facilitate the movement of vehicles designed to transport passengers or freight, or both." A railway is exactly the same thing as a railroad, the two words being synonymous and of equal age. The difference between the two lies in use rather than in meaning, "railroad" being used more commonly and preferably in the United States and "railway" being universally used in England.

There is no difference in their meaning in this country even when the name of one road is changed from one to the other. That is, when a company operating a railroad undergoes financial reorganization its name is often changed from "railroad" company to "railway" company, or vice versa, and the two words are used without any essential change in the character of the company or the road which it operates.

## RAILROADS HAVING SAFETY ORGANIZATIONS.

Ann Arbor Railroad.....	42 Broadway, New York, N. Y.
Atchison, Topeka & Santa Fe Ry.....	80 E. Jackson Blvd., Chicago.
Baltimore & Ohio Railroad.....	Baltimore, Md.
Boston & Maine Railroad.....	Boston, Mass.
Buffalo, Rochester & Pittsburgh Ry.....	Rochester, N. Y.
Chesapeake & Ohio Railway.....	Richmond, Va.
Chicago & Alton Railroad.....	60 Wall Street, New York, N. Y.
Chicago & North-Western Railroad.....	226 W. Jackson Blvd., Chicago.
Chicago & Western Indiana Railroad.....	Dearborn Station, Chicago.
Chicago, Burlington & Quincy Railroad.....	547 W. Jackson Blvd., Chicago.
Chicago Great Western Railroad.....	122 S. Michigan Blvd., Chicago.
Chicago, Indianapolis & Louisville Ry.....	Transportation Bldg., Chicago.
Chicago, Milwaukee & St. Paul Ry.....	Chicago, Ill.
Chicago, Rock Island & Pacific Ry.....	14 Wall Street, New York, N. Y.
Chicago, St. Paul, Minneapolis & Omaha Ry.....	Omaha, Neb.
Cumberland Valley Railroad.....	Chambersburg, Pa.
Delaware, Lackawanna & Western R. R.....	90 West Street, New York, N. Y.
Denver & Rio Grande Railway.....	Denver, Colo.
Elgin, Joliet & Eastern Railway.....	Chicago, Ill.
El Paso & Southwestern System.....	El Paso, Texas.
Erie Railroad.....	50 Church Street, New York, N. Y.
Fort Smith & Western Railroad.....	Cleveland, Ohio.
Frisco Lines.....	71 Broadway, New York, N. Y.
Georgia Southern & Florida Ry.....	Washington, D. C.
Grand Trunk Railway System.....	Montreal, Quebec, Canada.
Illinois Central Railroad.....	Central Station, Chicago.
Kansas City, Clay County & St. Joseph Ry.....	13th and Walnut Sts., Kansas City, Mo.
Kansas City Southern Railroad.....	Shreveport, La.
Lehigh Valley Railroad.....	South Bethlehem, Pa.
Macon, Dublin & Savannah Railroad.....	Macon, Ga.
Missouri Pacific Railway.....	Wichita, Kansas.
Mobile & Ohio Railroad.....	Union Terminal Station, Mobile, Ala.
New York Central Lines.....	Grand Central Station, New York, N. Y.
New York, Chicago & St. Louis Railroad.....	Cleveland, Ohio.
New York, New Haven & Hartford R. R.....	New Haven, Conn.
Norfolk & Western Railway.....	Roanoke, Va.
Northern Pacific Railway.....	Fourth and Broadway, St. Paul, Minn.
Ohio Southwestern System.....	Carrel Street, Cincinnati.
Oregon Short Line Railroad.....	Salt Lake City, Utah.
Oregon-Washington Railroad.....	Portland, Ore.
Pennsylvania Railroad.....	Broad Street Station, Philadelphia, Pa.
Queen & Crescent Route.....	Cincinnati, Ohio.
St. Louis & San Francisco Railroad.....	Birmingham, Ala.
San Pedro, Los Angeles & Salt Lake R. R.....	Pacific Electric Bldg., Los Angeles, Cal.
Seaboard Air Line Railway.....	Royster Bldg, Norfolk, Va.
Southern Pacific.....	165 Broadway, New York, N. Y.
Sunset Central Lines.....	Houston, Texas.
Tidewater Southern Railway.....	Stockton, Cal.
Union Pacific Railroad.....	Fifteenth & Dodge Streets, Omaha, Neb.
Wabash Railroad.....	165 Broadway, New York, N. Y.
Western Maryland Railway.....	Baltimore, Md.
Wheeling & Lake Erie Railroad.....	Cleveland, Ohio.

## BALTIMORE AND OHIO—1832 AND 1914.

Quaint is the historical record of railway operation in 1832, as revealed in the report of the Chief Engineer of the Baltimore and Ohio railroad for that year. In 1832 the road ran from City Block, Baltimore, to Point of Rocks on the Potomac River, a distance of 69 miles, which, with a lateral to the city of Frederick, made a total operating mileage of 72½ miles. A quainter flavor is

given this time-worn report when his statistics are compared with those of the Baltimore and Ohio railroad of today, older and stronger by nearly a century of growth. The Baltimore and Ohio railroad now runs from Baltimore to Chicago and to St. Louis, to dozens of smaller terminals besides, and operates 4,500 miles of line, as compared with the 72½ miles of 1832.

Passenger traffic out of the five cities which the road served in 1832 has grown to the huge proportions indicated below:

Passengers from—	1832	1914
Baltimore .....	45,443	921,561
Relay House .....	6,956	83,651
Ellicott's Mills .....	16,831	32,298
Frederick .....	18,426	49,136
Point of Rocks.....	1,366	Closed

Total ..... 89,022 1,086,646

Even more striking are the comparative revenue and expense accounts of the Baltimore and Ohio, as follows:

	1832	1914
Revenues .....	\$136,937	\$99,032,150
Expenses .....	75,674	74,560,847

Net Revenue .....\$ 61,263 \$24,471,303

Quintest of all is the Chief Engineer's proud announcement that the daily cost of running an engine to the Planes was approximately \$16 in 1832, which covered all the service in the transportation of passengers formerly accomplished with 42

horses and 12 men at a daily cost of \$33. The consequent saving he estimated at \$17 a day, or \$6,205 per annum.

Too close a comparison should not be drawn between engine cost in 1832 and 1914, for we do not know the comparative size of engines, or the amount of work they respectively performed in the shape of dally ton and passenger hauls, or the character of track they respectively traversed. For historical interest, however, the following comparison is of value:

	1832	1914
Engineer ... ..	\$ 2.00	\$ 5.00
Assistant .....	1.50	3.30
Coal .....	8.00	13.40
Oil .....	.50	.25
Repairs and renewals.....	2.50	13.05
Interest .....	.75	3.32
Contingencies .....	.75	.....

Total .....\$16.00 \$38.32

In every item but oil, the engine of today demands more each day than did its ancestor of 1832.

A LIST OF TECHNICAL AND ECONOMIC PUBLICATIONS WHICH HAVE BEEN TEMPORARILY DISCONTINUED ON ACCOUNT OF THE EUROPEAN WAR.

(Prepared by Messrs. G. E. Stechert & Co.)

	Last number published 1914	
Economic Review .....	October	Bulletin de la statistique generale de la France..... May
International Combustion Engineering .....	August	Bulletin trimestriel de l'Institute des Actuaire..... June
Annales de chimie .....	July	Ceramique .....
Annales de physique .....	July	Le Ciment .....
Annales de chimie analytique .....	August	Construction moderne .....
Annales de l'Institute Pasteur.....	August	Echo des Mines.....
Annales des Mines .....	July	L'Electricien .....
Annales des Mines Belgiques.....	June	Industrie Electrique .....
Annales des Ponts et Chaussees.....	July	L'Ingenieur .....
Annales des Posts, Telegraphs et Telephones .....	July	Journal du droit administratif... ..
Annales scientifiques de l'ecole normale superieure .....	July	Journal de l'eclairage au Gaz.....
Architecte .....	July	Journal des economistes .....
Bulletin de l'Association des Bibliothecaires francais .....	June	Journal du four electrique.....
Bulletin des Assurances sociales.....	May	Journal de petrole.....
Bulletin of International Railway Congress .....	July	Journal telegraphique .....
Bulletin mensuel de la Societe Belge des Electriciens .....	June	Journal des transports.....
Bulletin mensuel de la Societe de legislation comparee .....	September	Jurisprudence generale .....
Bulletin de la Societe centrale forestiere de Belgique.....	July	La Lumiere electrique.....
Bulletin de la Societe chimique de Belgique .....	July	Memoires et Compte Rendu de travaux de la Societe des Ingenieurs civils .....
Bulletin de la Societe chimique de France .....	September	Moniteur industriel .....
Bulletin de la Societe internationale des Electriciens .....	June	Moniteur scientifique .....
		Potofeuille economique des machines..
		Questions diplomatiques et colonials..
		Questions pratiques de droit international prive .....
		Recueil des brevets d'invention.....
		Revue critique de legislation et de jurisprudence .....
		Revue diplomatique .....
		Revue de droit international et de legislation comparee .. ..



Revue de droit international privé....	April
Revue de droit public et de la science politique .....	July
Revue économique internationale.....	June
Revue d'économie politique .....	August
Revue generale des chemins de fer.....	July
Revue generale chimie pure et appliqués .....	August
Revue generale de droit international public .....	July
Revue de l'ingenieur et Index technique .....	July
Revue internationale de droit maritime.....	July
Revue de Mécanique.....	June
Revue mensuelle de l'Industrie des Tramways et des Chemins de fer.....	July
*Revue politique et parlementaire.....	July
Revue de science et de legislation financiere .....	July
Revue des sciences politiques .....	June
Revue, universelle des Mines.....	June

\* Resumed publication with issue of Jan. 10, 1915.

An interesting experiment was that tried by the North Dakota library commission in introducing traveling libraries. An entire "farming special" train was sent out over the Northern Pacific railway from Fargo, terminating at Seattle. The Library commission divined this means as a special opportunity of acquainting the farmers with traveling libraries, and a mixed collection from an agricultural library was placed on the train with Prof. Max Batt, a member of the Library commission and also connected with the Agricultural college, in charge of it. For two weeks this train traveled more than 1,000 miles in North Dakota and stopped in three towns every day for a period of several hours. As it had been well advertised, large crowds greeted it at nearly every station.

The train was fitted up to illustrate and elucidate by object lessons the work of the Agricultural college, and lectures were given by the best authorities on the various subjects at every stop. Newspapermen, editors of agricultural papers, together with railway officials, accompanied the exhibit.

The traveling libraries came in for their share of approval and admiration and as most of the visitors had never heard of this system of distributing books it was a veritable wonder for them to learn that they could obtain the loan of boxes of books entirely free of charge. Two kinds of books especially seemed to be desired, juvenile and agricultural.

The Library commission is anticipating a great demand for traveling libraries during the winter, as a result of the experiment.

[Public Libraries, v. 15: 433; Dec. 1910.]

#### The Railroad Man—His Creed.

As a man among men, I have Rights to maintain, Privileges to possess, Duties to perform, Obligations to keep.

My Rights are those of my fellow-men—no more, no less.

My Privileges are to serve my fellow-men and to be served by them.

My Duties are to myself and to the world, my duty to myself being to fit myself for my duty to the world.

My Obligations require me to shape my conduct and to use my abilities in such ways that the world may be the better for my having lived.

Hence, holding fast to these Truths, and seeking to practice them as I live and work, I hereby profess my faith in these

#### Seven Virtues of My Vocation.

1. I believe in Safety. Just as "a good sailor takes no chances," making no short cuts among rocks and shoals, so the Railroad Man may never disregard his warnings and signals, nor court disaster by rash venturing.

2. I believe in Fidelity. I must faithfully perform my every task. Where but one in a thousand neglects his duty—be it naught but the rapping of a wheel, the setting of a bolt, the driving of a spike—there can be no safety.

3. I believe in Sobriety. The steady nerve, the sure hand, the cool head, the sound judgment, are things indispensable in my work. The least indulgence may impair them. And without these there can be no safety.

4. I believe in Courtesy. In showing good will I gain good will. Good service depends upon good will given and good will received.

5. I believe in Economy. Wastefulness is evil. Nothing that can be of any use may be wasted; not a pound of coal, not a gill of oil, not a scrap of paper. In the sum of savings lies much gain, surely in profiting them that save.

6. I believe in Organization. Civilization is built only by men holding together for common good. True organization considers all; the worker, the employer, the public at large—each for all and all for each.

7. I believe in Efficiency. In seeking large yields from economized effort, we lighten our labours and increase in proportion the returns from our work. To these ends shall we strive, shaping our course with intelligent action. Thereby we accordingly prosper, each and all.

[Sylvester Baxter in the M. K. & T. Magazine. This is copied from S. A. Railways and Harbours magazine, v. 8: 971; Nov. 1914.]