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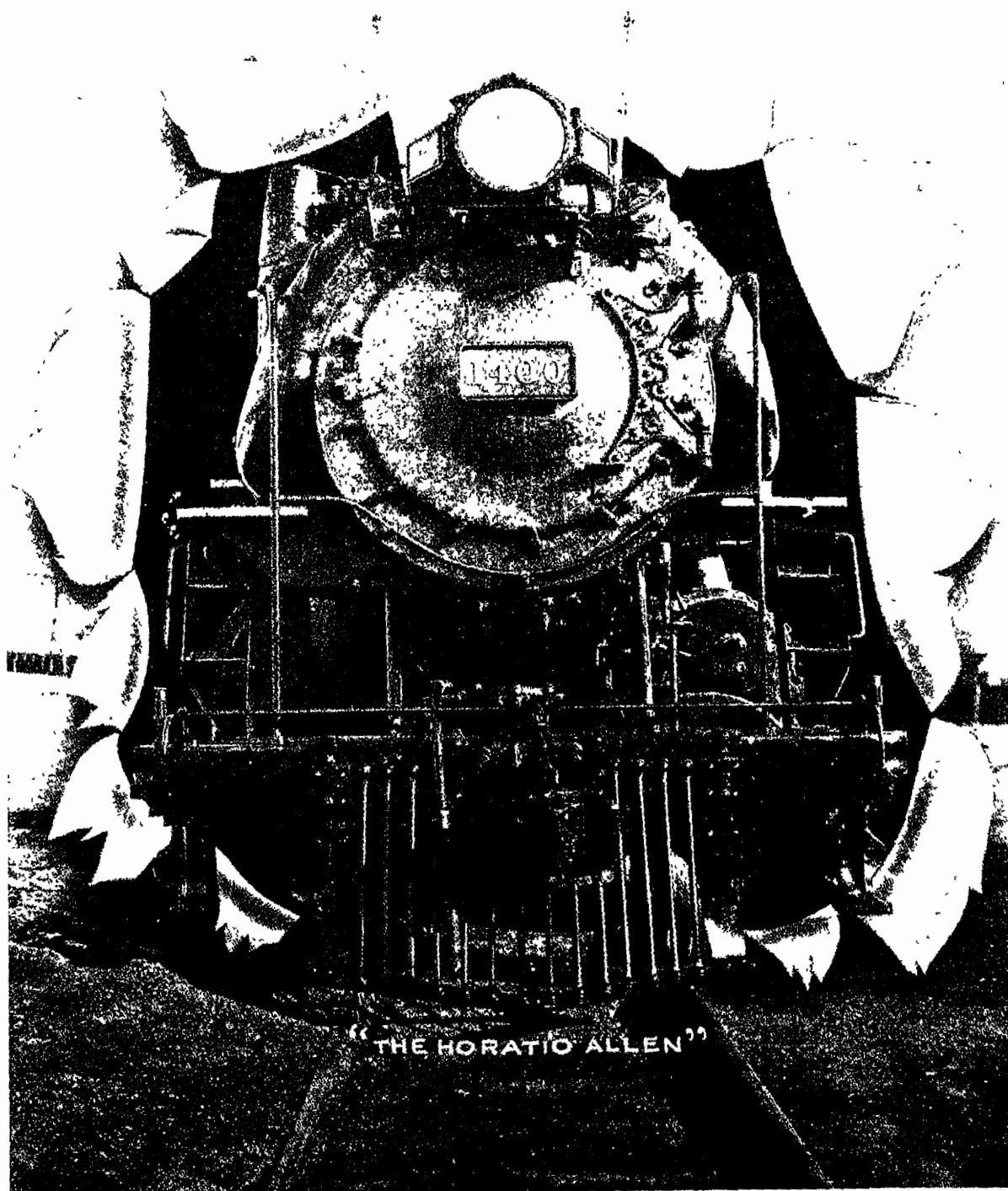
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No. 2

Some Economic Aspects of Transportation

By J. H. Parmelee, *Director*, Bureau of Railway Economics

ONE of the most important problems which today confront the American people is the question of the co-ordination of our transportation activities. All who work in the field of transportation, whether as railway managers, as managers of other form of transportation, as general students of the question, or as librarians and others whose function it is to keep step with current economic matters, must consider this problem in its several bearings.

By co-ordination of transportation I mean the extent to which the various transportation agencies shall be brought into relationship with, and adapted to, each other. In discussing this subject, a brief historical survey may not be out of place.

In its broadest sense, the first form of transportation in the United States was by water. Water routes brought the discoverers and explorers, and also the early settlers. The decades immediately preceding the establishment of the steam railway were marked by projects and plans for the development of canals and other inland waterways.

When the steam railway came into being, a century ago, it almost immediately supplanted the waterway as the primary means of transportation. From that date to the early nineties, the railway network grew rapidly throughout the country, contributed to the opening up and development of the vast western territory, and performed its most vital function in creating and maintaining the unity of the American people as a single nation.

During the earlier decades of railway development, little competition from other forms of transportation was experienced. The railway soon proved its superiority to the waterway, both as to promptness and ade-

quacy of service, ability to supply year-around service without traffic interruption, and even as to the relative cheapness with which the service was performed.

But with the early nineties came a new element into the field of transportation in the United States. This was the electric railway, which began largely as a local street railway, but rapidly developed into the field of interurban service. Even this development, although it affected the passenger traffic of certain railways doing a large local business between nearby cities, did not cut seriously into the passenger traffic of the steam railways as a whole. In fact, there was one aspect in which the development of the electric interurban actually benefited the steam railway, in that the electric lines served as feeders to the steam lines. They brought them many passengers who utilized the railways for long distance journeys, and who might not have planned those journeys had not the interurbans been at their very doors.

During the past quarter-century a new competitor has entered the transportation field, one which has developed from nothing to a vast industry, and threatens to bring about a readjustment of our transportation system. This competitor, it need hardly be said, is the motor car, which is drawing from both steam and electric railways, a part of their passenger business, and is also competing with them for some of their local freight. While much of the passenger travel now carried in motor busses and private automobiles would not accrue to the railways if the motor car did not exist, yet some of that large and growing travel is undoubtedly taken away from the steam and electric carriers. The same is true, to a large degree, of the haulage of freight by motor truck.

This is not the place, nor is there space, to describe in detail the development of the motor industry. That industry has grown in twenty-five years to gigantic proportions. Collateral to its growth has been the development of a national system of highways, the improvement of streets in large cities, and the establishment of freight and passenger service corporations, operating with fleets of motor busses carrying passengers, and motor trucks handling freight, within and between large cities.

Other Forms of Transportation

The development of collateral forms of transportation, while it has shown rapid growth within recent years, is only at its beginning, and no one can predict the progress which may be made within the next generation. In fact, all sorts of conjectures have been made as to the future development of our several means of transportation in their relation to each other. All these conjectures are highly speculative and imaginative. It is suggested, for example, that our street railways will disappear, that the tracks will be torn out of our streets, and that the service now rendered by electric railways will be supplied by fleets of motor busses. It has been suggested, again, that a large part, if not all, of the local freight business of the steam railways, including delivery of freight within city limits, and the carriage of freight between nearby cities and between large cities and their suburban centers, will be relegated to the motor truck. Going still further into the realm of conjecture, it has even been suggested that in the more distant future a large proportion of the long distance passenger service will be supplied by giant airplanes or by commercially operated dirigibles.

It is perhaps a waste of mental energy to pursue these conjectures further at present. Time only will prove their accuracy or otherwise. The only thing that may perhaps be affirmed with a show of certainty is that we are on the threshold of adjustments in the transportation field. Many readjustments must, therefore, be effected as between the several agencies of transportation.

One further statement can be made with some assurance. Regardless of changes in local methods of conducting transportation service, it seems unquestionable that for many years to come, and certainly in connection with the long-distance transportation of

freight and passengers, the steam railway will continue to stand out as the one big factor in transportation. The changes that may take place in our methods and agencies of transportation will have to be more revolutionary than any now in the minds of men, if the steam railway is to be dislodged from its present position as the greatest transportation-service agency.

But the problem of adapting the steam railway and all other forms of transportation to the changing conditions, and co-ordinating the several facilities and agencies, confronts the people of the United States, and must be studied from every angle, with the greatest public interest as the ultimate goal.

The steam railways have recognized the problem, and many are already adjusting themselves to it. Some have installed rail motor cars on lines of lesser traffic. Others are operating motor trucks and busses as supplementary to their own activities. All are studying the problem of co-ordination—rail and highway and water—in a spirit of accommodation and with the sole desire of advancing the interest of the public. The electric railways, too, are adapting themselves as rapidly as possible to the changing conditions.

Above all, the railways have recognized their duty to supply adequate and efficient transportation service to the American people. Emerging from the war with an impaired machine, and with the morale of their employees shaken, it took some time for the railway companies to reestablish that efficiency of operation which they displayed before the war. It took time, because a severe industrial depression occurred in 1921, and because the railway shopmen and the coal miners staged nation-wide strikes in 1922. But at the beginning of 1923 the railway systems laid down a voluntary program of capital improvement and increased efficiency of operation, which was carried out in large measure during 1923 and 1924. The result was that in 1923 the American railways handled the largest freight traffic on record without congestion, and in 1924 supplied the American people with the most efficient transportation service in their history. The outlook for 1925 is that this improvement in railway performance will continue, even though the freight traffic this year proves to be record-breaking, as some predict that it will be.

At the same time, freight rates have been reduced more than one-eighth since the rate increase of 1920 went into effect. Railway

operations are being conducted in that spirit of honest, efficient, and economical management which is advocated by the Transportation Act.

The moral of this story, if there be one, is this: Co-ordination of our transportation activities will be effected, by a process of mutual accommodation and adjustment, if the several agencies of transportation are left free to work out their joint problems without undue hampering of law or regulations. The spirit of the present age is voluntary co-opera-

tion. New conditions are stimulating a broader vision, and an earnest desire to seek the public good, even at the cost of some readjustment

The steam railways will endure as the vital factor in transportation. Other factors will fit into the general scheme. If guided by an enlightened public opinion, and unhampered by the petty and restrictive regulations of the past, the several agencies of transportation may be trusted to work out this vital problem of co-ordination.

Educational Problem of the Railways

By Roy V. Wright, *Managing Editor, Railway Age*

IT should be understood that the writer approaches the educational problem of the railways not as one having a technical understanding of educational processes, but rather as an observer who is keenly interested in improvement in the efficiency of railway operation and in the welfare of railway employees. The problem is so large and has so many ramifications that it is difficult to know how best to approach it, particularly since its consideration must be encompassed within the limits of a single discussion of reasonable length.

The railways of the United States employ almost two million workers. These employees—men and women—represent a great variety of vocations and professions; moreover, many of them are more or less isolated or function in small groups and are not under close supervision. The problem of educating these employees and of inspiring them to put forth their best efforts is, therefore, difficult and complicated. It must not be neglected, however, because the continued development and prosperity of the various communities and of the nation as a whole, is largely dependent upon cheap and efficient transportation, and this in turn depends upon intelligent effort of the employees, rightly directed.

Not only must the workers be thoroughly trained in the details of their vocations and professions, but more than one type of education is necessary to induce the greatest degree of intelligent effort and co-operation. The employees, because they may be isolated, or because the great size of the railway system does not permit intimate contact with the officers, are liable to lose interest in, or lack

keen enthusiasm for their work. In some cases they may even work against the best interests of the railroad because of a misunderstanding of the real facts about the road and its policies.

General Educational Measures

One of the greatest—and gravest—problems confronting railroad managements today, therefore, is to inform the employees fully as to the facts about the railroad, its operation, and its policies. The workers must also be led to see the vital relationship between efficient transportation and the prosperity of the nation, as well as the simple principles of economics underlying transportation and production. This will help to demonstrate to them that the interests of the railroad, its employees and the public which it serves, are mutual, and that the interests of all can best be conserved and furthered by intelligent and hearty co-operation. This all sounds simple enough, but even after the problem is recognized, the solution requires a rare degree of tact and understanding, backed up by tedious and painstaking effort. Not one, but a great variety of means must be used, depending upon the special conditions and the types of personalities involved.

A great forward step will be made, for instance, if the employees can be made to feel frank to talk over their needs and perplexities with their superiors, and particularly so if they may be encouraged to go a step further and seek advice and help with their more pressing personal problems. It is clearly up to the management to develop the avenues

for such approaches. Various means have been utilized for bringing this about, some organizations or departments even going so far as to adopt a form of employee representation.

Training of Supervisors

Naturally, however, this attitude can only be developed when the officers and supervisors have a proper conception of the importance of the human element. Here is where the railroads, as well as other industries, have fallen down. The foreman or supervisor who comes in direct contact with the men in the ranks has in most cases been promoted to that position because he was a master craftsman and seemed to possess leadership qualities. He may have spent years in learning his trade or vocation, and then with little or no coaching or special training, is placed in a position where he must direct the energies of the most sensitive and complicated mechanism in the world—the human being.

Railroads and other industries are slowly awakening to this situation, and many of them are adopting emergency measures to overcome the deficiency. Intensive foreman training courses, foremen's clubs, lectures and open forum discussions are all being used. Technical magazines have naturally done their part in drawing attention to this situation and are performing a real service in trying to supply much needed information and inspiration. Some few good books have been published, but there is need of many more, particularly of the type that will appeal to the average foreman or supervisor in the terms and language which he understands. Something more, however, is needed than temporary measures. A permanent, stable arrangement must be provided for training prospective foremen and officers, before they are actually promoted and put in charge of men.

Going back for a moment to the question of inspiring confidence in the employees. Some few railroad executives have been more than ordinarily successful in this respect. Space will not permit describing their methods or practices. In general, however, they have shown a friendly spirit, and while firm in their discipline, have been just, and have demonstrated in a practical way a spirit of real brotherhood and understanding—have, indeed, gone far beyond the spirit of a square deal and have indicated a real interest in the success and welfare of their co-workers (railway officers and men are all employees).

Intensive Educational Measures

With such a spirit of co-operation as a basis, there is an intensive form of group education which has given excellent results. This is to establish goals or objectives for local, division, departmental or system accomplishments and to inspire friendly co-operation between the different units. Notable examples of such campaigns have included safety first, fuel economy, prevention of loss and damage to freight, speeding up and loading freight cars to capacity, etc. The success of such campaigns depends upon the right sort of promotion and of the dissemination in various ways of educational matter concerned with the best practices and methods, and as to how to avoid waste and lost motion. The great difficulty is to maintain systematic interest in such campaigns over an indefinite period. This requires leadership of a rare type and frequent change in the methods of approach.

Vocational Training

Leaving these general educational measures it may be of interest to see just what is being done in the way of vocational training. Trainmen must, of course, become proficient in a knowledge of the train operating rules and are examined on them by their superiors. Engineers and firemen are required to pass progressive examinations in locomotive and train operation. Special instruction is provided on the operation of some of the more complicated devices, such as the air brake. Traveling engineers and firemen instruct the enginemen in actual operating details on the road and certain transportation officers are expected to do likewise in the case of the trainmen.

Very little has been done for the great army of clerical workers in the various departments. Occasionally a progressive officer will promote educational activities of some sort, usually in the way of special classes or lectures. The Railroad Y.M.C.A. has also been helpful in certain respects. Some of the more ambitious employees have taken correspondence school courses; frequently the managements have encouraged them in doing this. The English railroads have gone far beyond those in the United States in providing special courses for clerical workers, often in conjunction with a neighboring school or college, which has provided trained educators, working in close conjunction with the railway officers. There are apparently great possibilities in increased efficiency

through the more thorough training of the clerical forces, and this problem will undoubtedly have to be faced squarely in the near future.

The general impression is that the greatest educational work on the railroads has been done in the mechanical department, by means of apprentice training in the shop crafts. It must be admitted, however, that many of the railroads have been somewhat lax in this respect. It is true that they have had apprentices in the various trades, but in many cases the boys have been left to the mercies of overworked foremen or to mechanics, many of whom do not take very seriously their responsibilities in informing and training the apprentices. A few roads have gone into the problem thoroughly and scientifically. In such cases the training in the various shop crafts is carefully scheduled over a four-year period. Technical instruction is provided in a school room for at least four hours a week, and the work in the shop is carefully directed by shop instructors. The school room work is closely co-ordinated with that in the shop. It is only fair to say that more attention has been given to improving apprenticeship methods during the past two or three years.

Use of College Trained Men

The contribution which is being made to railway education by the higher educational institutions should not be overlooked. This varies all the way from co-operative engineering education on the one hand, to special transportation courses of a more general nature at several of the universities. For years the question as to the value of college men for railroad work has always been sure to start a lively discussion. On the one hand, the colleges feel that the railroads do not make the same effort to obtain or show the same appreciation for college trained men as do many of the more progressive industries. On the other hand, the railroads in many cases feel that the college man, except for the professions, has not been properly trained to fill their needs, and in some cases they are even critical of the sort of training that is given to the technical men—or rather, the attitude with which these men frequently approach their work. Better understandings are gradually being developed, however, and there is little doubt but what more and more college trained men will be utilized in all departments of the railway organization in the future.

Summing up, it may be said that this whole question of education and training of railway employees has got to be squarely faced. Its importance is being more and more recognized as the railroads realize the necessity of giving greater attention to employee relations or personnel administration. There is little question but what it is coming to occupy a large place among the problems of railway management. This is as it should be.

Travel Plans to Seattle

The American Library Association will hold its 1925 conference at Seattle July 6 to 11. The Travel Committee, with the approval of President Meyer, will plan a special-train party to Seattle via Glacier National Park. The two-day trip through this wonderful park, by automobile and launch, will be taken, stopping the first night at Glacier Park Hotel, going next day, via St. Mary Chalets, to Many-Glacier Hotel for the second night; thence by automobile and launch to Going-to-the-Sun Chalet, and back to Glacier Park Hotel for evening dinner. This gives in two days a good idea of this wonderful park, but of course does not allow for the pony trips that are available for those staying longer.

With this two-days stop-over it will be planned to have the party arrive in Seattle on the evening of Sunday, July 5.

A post-conference trip is planned for southeastern Alaska with stops at the principal towns. This particular trip gives the comfort of steamer travel in sheltered-waters with a constant panorama of mountains on either side. It is light in July almost all night. There are snow-capped mountains and live glaciers, and stop-overs at the interesting points en route, also an opportunity, for a slight extra expense, to go from Skagway over the White Pass & Yukon Railway to the International Boundary between the United States and Canada.

The return trip, either before or after the Alaska trip, may be made via Canadian Pacific Railway through the Canadian Rockies, by Yellowstone Park, or via San Francisco, and eastward either via Colorado or via the Grand Canyon of Arizona; also direct return via the Chicago, Milwaukee and St. Paul line, or via the Canadian National Railways. Full details concerning these various trips may be obtained from Mr. F. W. Faxon, 83 Francis Street, Boston, Mass., chairman of Travel Committee.

Source Material on Railroad History

By Elizabeth Cullen, *Reference Librarian*, Bureau of Railway Economics

PUBLIC interest in railroad history will be increasingly attracted by the proposed celebration of the centennial of American railroads in 1930. This June the English people mark the end of their first century of railroads. Committees of the American Railway Association and other organizations interested were appointed last year to concern themselves with details of our own celebration in 1930.

Meanwhile inquiries into various phases of railroad history stimulated by these events, and others like exhibitions of the DeWitt Clinton train, the recent christening of a Delaware & Hudson Company's locomotive with the name of the long-ago engineer who caused the first locomotives to be imported to this country in 1829, the exercises at York, Penna., in commemoration of Phineas Davis who solved the traction problems of the Baltimore & Ohio in the 1830s, and a more general recognition that railroad transportation really welded this continent into a political and economic whole, have reached proportions sufficient to warrant an investigation of source material and its location.

It is, therefore, the purpose of this article to outline four of the less well-known, but none the less important types of sources. Annual reports, Poor's Manuals, engineer's reports, and those of and to the Interstate Commerce Commission including corporate histories filed in response to Valuation Order No. 20, and state railroad and public service commissions are already well-known and utilized. An appendix to this article lists existing histories of railroad companies. The history of American railroads that interprets not only what has gone into the physical and financial development of the lines, but also their interrelation with other factors in our political growth and concentration, has yet to be written.

Government Documents

On pages 104 and 105 of the Gallatin report of 1808 on Internal Improvements is the first mention of railroads in American literature. There were none, then, and the writer of that part of the report thought that their ultimate practicability was distinctly limited.

Forty-five years later appeared the first information about railroads issued by the Fed-

eral Government. This was the Andrews' report of 1853, tho the fact would never be suspected from reading all of the eighty-seven-word title-page unless it is remembered that until the late 1850s railroads were discussed in connection with internal improvements in general. Remembering this, the "Notices of Internal Improvements in Each State," toward the end of the title indicates where material on railroads is to be found in the report.

After the Civil War, the desirability of records of internal commerce of the country resulted in the establishment of the Bureau of Statistics of the Treasury Department in 1876, with Mr. Joseph Nimmo, a widely-known economist and statistician as chief. Largely to his interest and efforts can be ascribed the scope and value of the material on railroads collected and published in the bureau's annual reports. Economic principles, the Albert Fink formula for cost of transportation, histories of railroads in the several states, are a slight indication of the potential interest to railroad historians, of these volumes. The volume for 1886 contains data on railroads in the southern states, both pre-Civil-War and post-Civil-War, that is obtainable elsewhere only with great difficulty.

That the reports of the United States Commissioner of Railroads, issued from 1878 to 1902, are concerned with Pacific railroads, and their relations, financial and otherwise to the government, is not apparent from the title-pages, and they are consequently sometimes overlooked by persons tracing the details of this phase of our railroad history.

The reports of the Interstate Commerce Commission, made to Congress since 1887, and accompanied by the statistical volume nicknamed the "Blue-Book" have been mentioned as well-known source material, particularly on regulation and statistics. What becomes noticeable in perusing a number of volumes, is the high degree of co-operation on matters of common interest evidenced between the commission, the American Railway Association, and what are now known as the National Association of Railway and Utilities Commissioners, and the Railway Accounting Officers Association.

State documents constitute source material of greatest value, but, for the most part, some-

what difficult to locate and utilize. The Hasse Indexes are keys to the documents of seven states, and so is the Swern Bibliography of Virginia, but—there are forty other states each with considerable railroad history, to whose documents there are no such keys!

It is earnestly suggested that the production of such indexes, and bibliographical aids for railroad, and other material is a task for librarians that should receive most thoughtful consideration and co-operative effort—in other words, map the literature of the country as the Geological Survey maps mineral and water supplies, thereby making distinct and unusual contributions to knowledge and enhancing the standing of the library profession.

Of all state documents, those that contain some of the most interesting data, and the most baffling to locate, are journals of legislatures and court records. In consulting them for the earlier periods, the term "internal improvements" must always be kept in mind, for, in the indexes discussions of "Railroads" are frequently lumped under the general term, even when a railroad had a name. Another point must also be remembered in locating data in these journals. Legislators, then as now, bolted the subject up for formal discussion for one in which they happened to be more interested—hence we find Pacific railroad projects being debated when the bill on the floor of Congress was one for relief of the indigent insane and similar situations.

Other valuable state documents may not be so intriguing to use. State engineers' reports contain construction data. Canal commissioners' reports furnish details of those days when railroads were mere parts of a planned system of internal improvements, and were available to the public like roads. State auditors' reports set forth the condition of the state's investment in railroads, investments which some states still have, while tax commissioners' reports yield other financial information. In recorders' offices are filed the manuscript mortgages of early roads, when it was not customary to have them printed—a fact which has cost New York financial houses much effort and money in having copies made for their respective files.

"Non-Railroad" Publications

Railroad historians have, therefore, many more documents to consult than the comparatively recent railroad and public service commission reports. In this search, however, an-

other type of "non-railroad" material assists greatly in indicating the way—the writings of economists, historians, and others not connected with railroad companies or in state offices.

As long ago as 1812, Col. John Stevens of Hoboken wrote a pamphlet urging the construction of a railroad across New York State instead of the Erie Canal. Forty years later, the pamphlet was reprinted with a preface pointing out what a far-sighted man the Colonel was, as railroads were being projected and constructed in all the eastern states at this later time. His contemporaries regarded him at least visionary, if not hopelessly mad.

In 1829 Tanner published his "Memoir on the Recent Surveys, Observations and Internal Improvements," that described the few lines built or projected at that time under the heading "internal improvements." In 1840, he promoted the railroads to the title-page of his "Description of the Canals and Railroads of the United States," altho the two-volume contemporary work of the Belgian, Count de Gerstner, who traveled all over the country in the 40s, in its title, "Die Innern Communicationen der Vereinigten Staaten von Nordamerika," obscures to us of our day its content of valuable railroad material.

In 1860 Henry Varnum Poor published Volume I, of what he intended to be a three-volume history of railroads by states, the volume covering New England and Middle Atlantic states to and including Maryland. Outbreak of war ended the history at Volume I. In 1868-69, Mr. Poor began publication of the Poor's Manuals which have continued ever since, and constitute a valuable, and fairly widely-distributed source of economic, historical, and statistical data, including tables of merged roads, and general discussions of railroad progress.

Publications of Associations

Since the late 1860s there has accumulated an increasingly valuable, but apparently unappreciated wealth of material in the proceedings of the associations of railroad men. The Master Car Builders were the first to organize in 1867. The master mechanics (American Railway Master Mechanics Association), the painters, and other groups with common problems followed with organizations, and publication of proceedings and reports.

In 1886, the American Railway Association was formed to continue the co-operative effort

evidenced in the time-conventions that resolved fifty-six different time systems into "standard time."

Following Federal control in 1920, many of the older associations were amalgamated with the American Railway Association, which issued an historical statement the next year, summarizing the achievements of the older associations. This statement is a convenient guide to the purposes and accomplishments of these organizations, the details of which can and must be traced through the proceedings for proper understanding of how the men engaged in transportation met and solved their respective difficulties through co-operative effort and study.

Railroad Periodicals

While public appreciation of the quiet, continuous work of these associations has not been what it might be, the railroad world has been afforded the opportunity to benefit by it, even tho only a few individuals can participate in conventions and committee work, by abstracts or reprints of reports and important papers in the pages of the *Railway Age*, the *Railway Review*, the *Railway Mechanical Engineer*, *Railway and Locomotive Engineering*, and the other railroad "trade" periodicals.

The separate histories of these periodicals is a study of itself. The Library of the Bureau of Railway Economics compiled a check-list of those in its files, noting their changes of names, volumes, and so on, by means of which an outline of their histories is made available. An outline of their potentialities as sources of data on railroad history is impossible in an article of reasonable length.

The first was the *Railroad Advocate* published from July 4, 1831, to June 14, 1832. "Conducted by an Association of Gentlemen" of Rogersville, Tenn., its purpose was to present conveniently and attractively to the general public the advantages of railroads as the most practicable form of internal improvement. Of the two complete files that survived the years one is in the Virginia State Library at Richmond, and the other in the Library of the Bureau of Railway Economics.

Its last issue contained a tribute to the *American Railroad Journal*, which began with 1832, and for which advertisements had appeared in the *Advocate*. Under various titles and mergers, this periodical has been continued to the present, now being known as the *Railway Mechanical Engineer*, Volume 99. The

historical value of so-long-continued a periodical exceeds the wildest dreams of the *Advocate* editor of 1832 who commended the journal so highly.

Others with long sequences of publication are the *Railway Age*, which is traced back to the *Western Railroad Gazette* that began publication in 1857, and the *Railway Review*, which began in 1868 as the *Railway and Engineering Review*. The *Review* is sometimes confused with the *American Railway Review*, published by the American Railway Bureau, 1859-1862, although they have no connection except the same word in both names.

Within recent years the *Railway Age* and *Railway Review* have published as their first issues in each year, annual statistical numbers that concentrate into a comparatively few numbers a great deal of data of importance to historians, not only on railroads of this country but also those abroad.

Railroad Employees' Magazines

To persons interested primarily in the history of a particular railroad, the employees magazine, published by the various railroad companies, are sources that seem to have been more overlooked than utilized. Yet in them are reproduced old prints, old photographs, and other memorials of the lesser days of railroads in possession of the company or of employees, that can scarcely be obtained otherwise unless by personal visit to the present location. Besides, histories of companies that are now part of a given system, reminiscences of veteran officials and employees that afford personal angles without which written narratives are apt to be "dry" and unstimulating, biographical sketches of men and women, who have seen, for example, bare prairies turned into towns that boast about their park system because the railroad connected them with the rest of the world—this material is featured in the company magazines. In them, too, are accounts of affairs on the lines today, not to mention the extra-railroad activities of employees.

Railroad Brotherhoods' Magazines

As the activities of employees on their respective lines may be gauged as to extent and integration in the railroads' employees magazines, so the activities of these belonging to the railroad brotherhoods can be traced through the brotherhood magazines.

Volume I, of the *Brotherhood of Locomotive Engineers' Journal* began in 1867, the *Brotherhood of Locomotive Firemen and En-*

ginemen's Magazine began publication as the *Locomotive Firemen's Magazine* in December, 1876. Others with thirty and more volumes include the *Railroad Trainman*, published by the Brotherhood of Railroad Trainmen, in its 42d volume, the *Railway Conductor*, of the Order of Railway Conductors, also in its 42d volume, and the *Railway Carmen's Journal*, issued by the Brotherhood of Railway Carmen of America, in its 30th volume.

The United States Railroad Labor Board in its bound volumes of decisions, and the cumulative index-digest in its decisions, lists the railroad labor organizations parties to disputes before the board in the appendices to the publications, thus providing a long-needed and valuable guide to the labor organizations of railroad employees. Perhaps the most complete collection of trade-union material is that in the Department of Economics of Johns Hopkins University. In the absence of histories in book form of these organizations, except

the study of the Order of Railway Conductors by E. C. Robbins, these periodicals, and especially their anniversary numbers, constitute almost the only source of material on their activities.

The habit of anniversary numbers is, to the great rejoicing of all research workers, becoming more general in the three types of railroad periodicals mentioned—the "trade," the magazines published by companies for their employees, and those issued by railroad labor organizations.

Remembering the importance of establishing sequences in history, and filling in gaps, and remembering also that these processes must return from semi-oblivion, the names of those whose vision, efforts, and sacrifice, accomplished in ninety-five years the extension of our railroads over the American nation, it becomes the privilege of librarians to locate and utilize all potential source material on railroad history.

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Spearman, F. H.: *The Atchison*. *In his Strategy of Great Railroads*, Chapter 8. Scribner's. New York. 1908.

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Reizenstein, M.: *The Economic History of the Baltimore and Ohio Railroad 1827-1853*. Johns Hopkins Press. Baltimore. 1897. 88p.

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BOSTON, REVERE BEACH & LYNN NARROW GAUGE RAILROAD.

Bradlee, F. B. C.: *The Boston, Revere Beach and Lynn Narrow Gauge Railroad*. Salem, Mass. 1921. 8p.

CHICAGO & ALTON RY.

Spearman, F. H.: *The Rebuilding of an American Railroad*. *In his Strategy of Great Railroads*, Chapter 10.

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- CHICAGO, ROCK ISLAND & PACIFIC RAILROAD.
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- EASTERN RAILROAD (Mass)
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Minor, G. H.: The Erie System . . . 1911. [Wilbert Garrison Co. New York. 1912.] 576p.
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Mott, E. H.: Between the Ocean and the Lakes; the Story of Erie. J. S. Collins. New York. 1899. 668p.
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- NORTHERN PACIFIC RAILWAY.
Moody, John: Penetrating the Pacific Northwest. *In his Railroad Builders*, Chapter 7.
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Moody, John: The Great Pennsylvania System. *In his Strategy of Great Railroads*, [Chapter 2].
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Source Material on Waterways

By S. A. Thompson, *Secretary*, National Rivers and Harbors Congress

THE continental United States has a coast line of 21,862 miles. The figures of different authorities as to the aggregate length of its navigable rivers vary from twenty-eight to thirty-two thousand miles. The Federal Government has complete and exclusive control over all navigable waterways and the improvement and maintenance of rivers and harbors, therefore, is a governmental function which is exercised by the War Department through the Corps of Engineers, United States Army, composed of the "honor men" of West Point.

The first appropriation for the improvement of a river was made April 6, 1802 and the policy of improving rivers and harbors became established about 1824. During practically the entire time from then to the present day this work has been done by the army engineers. Naturally, therefore, the greatest store of information regarding the waterways and harbors of the country is to be found in the publications issued by them.

The Annual Report of the Chief of Engineers, United States Army, is published in December, coincident with the opening of Congress. In recent years this report has appeared in two volumes. From the latest issue we find that in the fiscal year ending June 30, 1924, there were under improvement two hundred harbors, two hundred and ninety-one rivers and fifty-three canals and other waterways. The amount expended during the year was \$62,024,798.62 and the commerce reported amounted in the aggregate to 442,097,328 tons, valued at \$19,171,940,841, besides the transportation of 334,483,522 passengers. The grand total of all appropriations for the improvement and maintenance of rivers and harbors, up to the close of the fiscal year 1924, was \$1,255,392,527.53, not including \$39,258,410.42 for the Wilson Dam at Muscle Shoals.

In addition to general statements and summaries, the first volume contains a detailed report on each of the five hundred and forty-four projects under improvement under the following heads: Location and description; Original condition; Previous projects; Existing project; Recommended modifications of project; Local co-operation; Terminal facilities; Effect of improvement; Operations and results during fiscal year; Condition at end

of fiscal year; Proposed operations; Commercial statistics; and Financial summary.

Volume II is devoted entirely to statistics of water-borne commerce giving, for each river and harbor, a detailed statement for the calendar year 1923 and a condensed statement covering a series of years, and also many summaries showing commerce handled by Atlantic, Gulf, Pacific and Lake harbors, rivers, canals and other waterways, imports, exports, total foreign trade, intercoastal and other domestic trade and traffic by geographical divisions, commodities and classes.

An index, in three volumes, covering the annual reports of the Chief of Engineers from 1866 to 1917 and the reports of the Isthmian Canal Commission from 1899 to 1917, makes it easy to locate any particular fact or figure desired when a file of these reports is available. For subsequent years recourse must be had to the indices contained in the annual reports of the Chief of Engineers and the Governor of the Panama Canal Zone respectively.

House Document 1491, 62d Congress, 3d Session, contains in three volumes all the laws of the United States relating to the improvement of rivers and harbors from August 11, 1790 to March 4, 1913. An item in the pending Rivers and Harbors Bill provides for an additional volume to bring the compilation down to date.

Another volume which, by a coincidence, is designated House Document 1491, 63d Congress, 3d Session, contains a list of all reports of preliminary surveys and examinations and lists of appropriations, both by acts and localities, up to March 4, 1915 and a list of all river and harbor projects in force on that date.

"Water Terminal and Transfer Facilities," in harbors and on waterways under improvement or being maintained by the United States, is the title of a volume of more than twenty-four hundred pages which is further designated as House Document 652, 66th Congress, 2d Session. To supplement and complete the information contained in this volume, the Board of Engineers for Rivers and Harbors, in co-operation with the Shipping Board, is engaged in the preparation of a series of

special reports which will cover seventy or more of the principal ports of the United States.

Some progress has been made on sixty-two of these reports. On twenty-eight of them the work has been entirely completed and their publication in the near future is expected, viz: Galveston, Houston, and Texas City, Tex.; Seattle, Tacoma, Everett, Bellingham and Grays Harbor, Wash.; Savannah and Brunswick, Ga.; Jacksonville, Fernandina, Miami, Key West, Tampa, and South Boca Grande, Fla.; Portland and Astoria, Oreg and Vancouver, Wash.; Los Angeles, San Diego and San Luis Obispo, Calif.; Port Arthur, Sabine, Beaumont and Orange, Tex.; and Pascagoula and Gulfport, Miss. Five have already been published and copies distributed, viz.: Portland, Me.; Boston, Mass.; Mobile, Ala.; and Pensacola, Fla., Philadelphia, Pa., including Chester, Pa., Camden, N. J., and Wilmington, Del., and New Orleans, La.

Once in ten years the Census Bureau publishes a special report on Transportation by Water, the latest issue being for the year 1916. The schedule used at the census of 1916 contained inquiries concerning the character of ownership, the class of the craft operated, the gross and net tonnage, character of materials from which constructed, motive power, waters in which operated, terminal points of regular routes, commercial value of the craft, gross income for the year, persons employed and amount paid in salaries and wages, number of passengers carried, and the quantity of different varieties of freight shipped from and delivered at the principal United States ports, and at foreign ports as a whole.

A large amount of valuable information along many different lines is contained in the annual reports of the Commissioner of Navigation, which is under the Department of Commerce. Among other things will be found statements showing the amount of registered, enrolled and licensed sailing and steam tonnage constituting the total merchant marine of the United States from 1789 forward; tonnage of American and foreign vessels entered and cleared in the foreign trade of the United States for the fiscal years from 1821 on; imports, exports and total foreign carrying trade of the United States from 1821 forward; number, tonnage, material and motive power of vessels built in the United States and the world, etc., etc.

A bulky volume entitled "Commerce and Navigation of the United States," issued an-

nually by the Department of Commerce, gives a mass of detailed information regarding the subjects named in the title.

Reports issued annually by the Treasury Department give the tonnage of vessels entered and cleared at ports of the United States with the value of imports and exports and amount of customs duties collected.

Facts regarding the large lines operated by the Government on the Mississippi and Warrior Rivers are given in the annual reports of Brig Gen. T. Q. Ashburn, chairman and executive, Inland Waterways Corporation, all the stock of which corporation is held for the Government by the Secretary of War.

The United States Shipping Board publishes an annual report dealing with our national merchant marine and related questions and also issued from time to time press releases relating to the activities of the board, tonnage handled at United States ports, etc.

Copies of all the documents thus far named, so far as they are available, may be obtained either through a Senator or a Representative in Congress, by direct application to the departments or bureaus mentioned, or by purchase from the Superintendent of Documents, Washington, D.C.

The Interstate Commerce Commission has no authority whatever over water traffic which both originates and ends at waterways points but whenever a boat line unites with a railroad in making a through route and joint rate arrangement, that portion of the water traffic which is carried thereunder becomes as completely under the authority of the Interstate Commerce Commission as is that carried by rail. The Interstate Commerce Act in its present form contains many provisions designed to protect water transportation from unfair competition and to promote co-operation between rail lines and water lines. Many of these provisions, especially those contained in the Transportation Act of 1920, were prepared and presented to Congress by a Special Committee on Transportation Legislation organized by the National Rivers and Harbors Congress.

The most fundamental provision is the one contained in the first paragraph of Section 500, which reads:

"It is hereby declared to be the policy of Congress to promote, encourage, and develop water transportation service and facilities in connection with the commerce of the United States, and to preserve in

full vigor both rail and water transportation."

All decisions made by the commission in cases involving relations between railways and waterways must be interpreted in the light of that declaration so long as it remains a part of the law.

The Government Barge Line on the Mississippi River already has through-route and joint-rate arrangements with one hundred and sixty-five railroads covering a territory which, roughly speaking, extends from Pittsburgh to Omaha and from the Canadian line to the southern boundary of Arkansas. Some three or four years ago the War Department, on behalf of the Mississippi-Warrior Service, applied to the Interstate Commerce Commission for a wide extension of this through-route, joint-rate arrangement, the number of the case being 11893. The first decision, laying down certain general principles governing the division of joint rates between rail and water lines, will be found in Vol. 77, I.C.C., page 317. Supplementary decisions regarding rates on particular commodities and in particular territories will be found in 83 I.C.C., page 742 and 92 I.C.C., page 528.

Under the act in its present form, rates made by railways in competition with waterways must be "reasonably compensatory for the service performed." A discussion of what constitutes reasonably compensatory rates will be found in the decision of the commission in the Transcontinental Cases of 1922, 74 I.C.C., page 68.

Two matters which are being vigorously discussed at the present time are the proposed St Lawrence River Ship Channel and the diversion of water through the Saunary Canal at Chicago. Material favoring the St. Lawrence River project may be obtained from the Great Lakes-St. Lawrence Tidewater Assn, Sellwood Bldg, Duluth, Minn; material in opposition thereto from Senator W. H. Gibbs, Buffalo, N. Y., chairman of the New York State Commission Opposed to the St Lawrence Ship Canal. Arguments in favor of the diversion of water from Lake Michigan to the Illinois and Mississippi Rivers may be had from the Sanitary District of Chicago, Chicago, Ill; and in opposition thereto from Mr. Wm. George Bruce, president Great Lakes Harbor Association, Montgomery Bldg, Milwaukee, Wis.

Street Railway Transportation

By Frederick W. Doolittle, *Vice-President*, The North American Company. *Author of Studies in the Cost of Urban Transportation Service*

THE search for reliable and timely data concerning any industry requires for its greatest success not only a knowledge of sources but a general understanding of the history of that industry. The problems most important and most widely discussed vary with changing conditions, and in turn, the street railway industry has been especially interested in the type of power, the style of cars, the varying emphasis on franchises and state commissions as regulators of service and charges, competition, standards of service, financing and a long list of other technical matters. Back of the whole array of special problems however lies the essential general problem of securing a reasonable return on the value of the property devoted to public service. Long since, the electric railway industry in common with many others learned that its standing in the community, that is to say its public relations, must be good if it is to receive the measure of fair dealing which is essential to its continued functioning as a

public servant, and it is becoming better and better understood that the only permanent foundation for good public relations is an understanding by the public of the problem as it is. Such an understanding can only be achieved and maintained when based upon reliable information. While conclusions of partisans will always tend to differ, a sufficient body of reliable data will enable the industry's patrons, its regulators, its operatives and its owners to see alike an increasing proportion of the whole field and to co-operate in solving the common problem of securing a continuing supply of that essential service, street railway transportation.

Coincident with the growth of cities to a size which made walking too great a consumer of time and effort to be consistent with the other demands upon the energies of the citizens, street transportation came into being. Vehicles using the street surface and drawn by horses were succeeded by vehicles similarly propelled but running on rails. A

little later animal power was superseded by the cable and very quickly thereafter the electric motor began to supersede cable installations. In fact certain companies never completed cable installations having adopted the electric motor while cable construction was still in process.

Electric railway transportation dates from about 1885 and until about ten years ago its growth was rapid. Since that time the development of the motor vehicle has retarded the growth of the electric railway business but in 1923 in spite of the increased use of automobiles, the electric railways carried a larger number of passengers than ever before in their history. During the period of rapid development certain lines were built which were not justified by present or prospective traffic. These lines have largely ceased operation or have been and are being carried by other lines having a greater density of traffic.

The continued growth of cities with the practical difficulties inherent in a proportionate increase in street space is giving rise to such a degree of congestion that common welfare requires the most economical use of street space possible. To the extent that this will limit future increase in use of motor vehicles we may expect to see a more rapid increase in the use of street railways than for some years past, and probably the future will see a co-ordination of the several forms of street transportation in which each will perform that service for which it is best fitted. At the present time a great many, perhaps the majority of street railway companies, are adding motor vehicles to their equipment and rendering supplementary service both in cities and in suburban territories. It is to be hoped that under regulation the cities of this country will be saved the expensive and annoying results that have in the past come from the granting of competitive franchises to paralleling electric railway lines, to telephone companies furnishing duplicate service, and to other businesses where competition has been succeeded by regulation.

Whatever may be the ultimate future of electric railway transportation the problems which must continue to be currently solved may be grouped roughly as follows:—Engineering problems, transportation problems, problems of personnel relations, problems growing out of the exercise of regulatory functions by the state or its agent, problems of finance.

The technical problems which involve the construction and maintenance of physical plant together with the production of power are similar to the problems of electric utilities, railroads, manufacturing establishments and other industries based on engineering applications. The best sources of information concerning these matters are the technical journals and the proceedings of the technical societies.

A problem peculiar to the electric railway business is the fitting of service to traffic. Its solution requires technical study of the flow of traffic and a large experience in the scheduling of cars and the assignment of men to runs. As in the case of the engineering problems the best current information on modern practice in traffic matters is to be found in the publications addressed primarily to the street railway industry and in the reports of the American Electric Railway Association.

The problem of personnel relations, which consists essentially in so arranging conditions under which men work that they may obtain therefrom the maximum pleasure and profit consistent with continued excellence of service, has at times been given far too little consideration but the recognition of the community of interest between the public, the employee, and the owner has in recent years resulted in substantial progress. The publications devoted to the industry and the reports of the American Electric Railway Association are constantly adding to the excellent literature on this subject.

A decade ago the conflict between regulation by franchise and regulation by the state was at its height and was presenting a wide array of confusing aspects. At the present time many of the points at issue have been adjudicated and while there are still questions particularly in the field of valuation and proper rate of return the field here as well seems to be gradually narrowing. This problem is one of basic economics. In order to provide for continuing service it is essential that capital invested in the public utility business receive compensation commensurate with that which it could receive elsewhere, but the charges to the users of the service must not be greater than its value, that is to say no more than the users are able and willing to pay.

The phenomenal rise in price levels and their lack of stability from 1916 to 1922 made unsatisfactory certain rules of thumb which had come to be used as criteria in dealing with

this economic problem. As a result court and commission decisions during the period of economic upheaval have been full of statements as to what earlier leading cases meant when interpreted in the light of conditions unknown and unsuspected by those who rendered them. The relative stability of prices during the past three years has provided a breathing space and it is to be expected that greater uniformity and charity will be found in the conclusions of regulatory bodies in the future. From time to time the periodicals serving the electric railway industry discuss the more important court and commission decisions, but their interpretation is largely beyond the scope of the layman and excerpts from the more interesting if not more important cases should generally be viewed as entertaining only. "Public Utility Reports Annotated" is the most convenient source of reference to court and commission decisions dealing with the regulatory function.

There is, of course, the relationship of the electric railway to the state, to individuals and to other companies resulting in a very wide range of legal problems similar in general to those of all other corporations and individuals but to which it is out of place to give more extended reference at this time.

The change in the status of the electric railway industry from regulation by franchise to regulation by the state, the increasing cost of service resulting from longer rides for a single fare and the use of more expensive equipment as well as from an unprecedented increase in price levels with a lagging change in rates of fare, and the convenient nature of the industry as a political issue have resulted in obscuring in the investor's mind the essential nature of the service rendered and hence of its fundamental soundness. As a result of these and other factors financing of street railways has been extremely difficult during the past several years although during 1924 a substantial improvement in street railway credit was accomplished and it appears that new capital can now be obtained on a much more satisfactory basis. The problems of financing have been met in various ways during this critical period. Like the legal problems referred to above the financial problems are essentially those of all industry and only the peculiar situations existing with the street railways have been mentioned here.

The street railway industry since the beginning of electrification, that is over a period of about forty years, has developed a most

extended literature. It has its own periodicals and the reports of its own associations and the Department of the Census, financial manuals, financial publications and innumerable special studies are available for those who care to study the history of the various phases of the business.

Apparently there is today a steady improvement in the position of the electric railway both financially and in its relations to its employees and its patrons. Whether this progress will be slow or rapid no one can foresee but the industry is a live, functioning, going concern and the news of today is history tomorrow. The searcher for information, therefore, cannot confine his investigations to any period of the past but must have the latest information to have the present truth. No one source of public data is sufficient although many excellent sources are available. Therefore, it seems not inappropriate to suggest that no study of any special problem be considered complete without reference to some person actively engaged in the industry whose knowledge of current practise will outrun the printed record.

Highway Engineering Library of Distinction

Highway Engineering and Highway Transport, under the leadership of Professor Arthur H. Blanchard, is an important department at the University of Michigan. The Davis Library of Highway Engineering and Highway Transport, in charge of Miss Harriet E. Lambert, is said to be the most complete collection of literature on these allied subjects in the world. All the most recent books have been purchased and in addition many old volumes, which are of interest from a historic point of view, have been secured. Town, municipal, county, park, state and government reports and specifications, many monographs and complete files of trade publications also form an important part of this library. All technical periodicals which contain articles relative to highway engineering and highway transport are on file, hence the latest literature on the science and art of these subjects is available. The library is equipped with eleven comprehensive indexes covering its books, reports, specifications, pamphlets, catalogs of materials and machinery, literature on highway engineering, and literature on highway transport.

Motor Vehicles and Their Relation to Transportation

By W. L. Powlison, *Librarian*, National Automobile Chamber of Commerce

ABOUT the time our country was unsettled over the question of slavery, the men were born, who were destined to be the fathers of the automotive industry. The outstanding pioneers include Charles E. Duryea (1861), Henry Ford (1863), Elwood Haynes (1857), Alexander Winton (1860) and many others whose contributions to the industry were instrumental in the making of the present day car.

In a recent conversation the writer had with Mr. Duryea, the following points in his life, which were typical also of the other pioneers, were brought out.

Duryea in the course of events found it necessary to find means of locomotion in order that he might get from place to place in less time. The outcome of this was a home-made bicycle, which pleased his father to such an extent that the elder Duryea purchased for him a manufactured bicycle which of course served the purpose to a better advantage.

As the years rolled on and more of an education had been acquired, a graduation thesis became necessary, and in 1882 under the title of "The Bicycle" modes of transportation (other than on rails) were treated with a great deal of foresight. The motor vehicle and lighter than air machines were discussed as a coming means of transporting people and merchandise from source to consumer, although at that time they were still an unknown quantity.

With the bicycle not quite filling the perfect idea of locomotion, Duryea started in August, 1891, to work on what turned out in September, 1892 to be his first gasoline vehicle. Thirteen months' time for one man to build one machine; just a little rapid calculation will give you an idea of progress as compared with the present rate of one man can build one car in thirty days.

The early horseless carriage had their trials and tribulations, and many suggestions such as "get a horse" were listened to with chagrin when some part of the vehicle failed to do its duty. In those days the "one lugger" had no spare brothers with which to limp home or to a garage, so 100 per cent performance was necessary. Then another big obstacle was pub-

lic opinion, plus adverse legislation which caused the motorist of the early day many discomforts. Preceding one's vehicle by one quarter of a mile, with a man carrying a red flag by day or a red lantern by night, necessarily would limit miles per hour to a very conservative rate.

However, when these obstacles were all overcome, the natural conditions in this country were much in favor of the motor vehicle. These conditions can be divided into three divisions. First, inherited from the Puritan forefathers the will to work. Second, the vast expanse of our country and the great distances to be covered, and third, the almost natural light fuel for internal combustion engines that was plentiful. The combination of these three conditions made the development very rapid, and each year has seen a substantial increase over the last until January 1, 1925 a conservative figure of over seventeen and a half million motor vehicles in the United States of America. This is 87 per cent of the World's production and brings us to realize how great a means of transportation this figure represents.

The pleasure car of the early day soon lost its identity and became the passenger car of today with its numerous types of bodies to suit the demand of the different owners. The commercial car has still retained its original name, but its added uses are becoming more numerous as time goes on.

The passenger car of today as a vehicle of travel is used by many people and in many different ways. Business is carried on in a more expeditious manner, and vacations are enjoyed with more freedom; the tourist being able to visit the famous beauty spots and places of historical interest that were seldom visited in the past, and are now becoming better known.

The great out-of-doors with which we are greatly blessed is being enjoyed by more and to a greater advantage by the coming of the motor car. Let us say that the average car carries four persons and as there are fifteen million two hundred thousand passenger cars in this country, over sixty million people could be moved at one time and in a national emer-

gency this would no doubt prove a very valuable asset. Traffic under these conditions would not be as heavy as imagined, as there are nearly three million miles of highways or about three cars to the mile for passenger carrying vehicles.

The motor truck came into its own by gradual steps and today it is performing with great regularity the many duties imposed upon it. Commercial bodies adapted to the needs of the numerous industries have facilitated the handling of goods so that one truck handles the same work usually taken care of by three horse drawn vehicles. These facilities can again be increased in view of the fact that the motor truck can operate twenty-four hours a day, the operators running regular shifts. One hundred and seventy-four railroads use motor vehicles on their short lines. These in many cases serve a double purpose of passenger and freight service. There are also thirty-three railroads using motor trucks as part of their services. Besides this the vast number of other commercial vehicles act as feeders to our great railroad systems.

The rural motor express lines have opened up a great field and a service that has helped develop the farm and brought the farm products and the farmer nearer to the city. By bringing the farmer nearer the city his time is saved in taking the products to their shipping point and his needs are also supplied by the return trip bringing his wants to him.

The motor bus is one of the infants of the automotive industry, being unique in that it is a passenger carrying vehicle which can operate independently or in conjunction with other vehicles. No rails to keep repaired and no power house with its extensive feed lines to maintain. In a recent trolley strike in New Jersey the bus was used in this emergency and proved to be such an able substitute that many of the trolley lines were abandoned and the bus put on to take their place. The suburban districts that are rapidly growing as civilization gradually spreads from the large cities, are being benefited by the bus lines operated to care for their needs. Also the rural communities benefit by the inter-city lines that cover in a great many cases upwards of fifty miles of country roads on these runs. Then again the sight-seeing bus formerly operated in the larger cities now cover our National Parks, extensive plains and hills, our various scenes of grandeur and many other points of interest.

The rapid growth of the motor bus has made accurate figures almost impossible. The conservative figure of ten thousand buses produced will no doubt show an increase of a few thousand on a check up in a short time. There are over thirteen thousand consolidated schools using bus transportation for the pupils. In this case one bus covers several schools. Also one hundred and sixty-eight street railway companies are using our twenty-five hundred buses in extending and replacing these lines.

This year the Twenty-Fifth Silver Jubilee is being celebrated in the automotive business and one can hardly realize that in twenty-five years that the motor car has become a necessity as a means of transporting merchandise and could be classed as one of the articles that every household should have, as a means of conveyance and convenience in order to hold its place in this day of progress.

Special Library Correspondence Courses

Margaret Reynolds, librarian of the First Wisconsin National Bank of Milwaukee, Wis., announces a course in Special Libraries which she is to offer for the American Correspondence School of Librarianship. Dr. Azariah Root, librarian of Oberlin College, is the director of the school, and, at his request, it is stated, the course was prepared.

It is announced that this is the first time that there has been any correspondence course given on this subject. The American Correspondence School of Librarianship is conducted by the director and a corps of instructors, all of whom are actively engaged in library work. It is financed by Gaylord Bros., in whose building at Syracuse, N.Y. the business offices are located. The following is the outline of the course prepared and conducted by Miss Reynolds:

The Special Library *Organization-Administration-Methods*. 1. The librarian. 2. The special library. 3. Quarters and equipment. 4-5. Organization and methods. 6-7. Classification and cataloging. 8-9. Books. 10. Periodicals and newspapers. 11-12. Pamphlets and clippings. 13. Services. 14-15. Maps—photographs—slides—films—trade catalogues. 16. Graphs and charts. 17. Publicity. 18. Business correspondence. 19. Relations with others: Individuals—libraries—library organizations. 20. Prominent special libraries; their executives.

Transportation Units in Struggle for Supremacy

By Dorsey W. Hyde, Jr., formerly with the Packard Motor Car Co.

THE modern shipper's position is somewhat similar to that of the country boy besieged by hawkers on his first trip to market. "Ship by truck" shouts the motor transportation agent: "Railroad rates are lower" cries the traffic manager. "Don't forget the waterways" pleads the marine shipping agent.

How shall the shipper choose? Frankly, he can't choose intelligently. He must try this means and that, compare rates, time consumed in transportation, loss and breakage in handling, terminal charges, and resort to a hundred other devices and expedients. In the long run—if his business warrants it—he is apt to hire an expensive traffic expert and tell him to do the best he can.

How this condition arose is a long story. We must remember that the flow of commerce is subject to violent fluctuation. In early Colonial days traffic was mostly with Europe—commercially we faced toward the East—and we developed the fastest clippers in the world. But our growing industrial life caused us to turn our backs to the East to meet the challenge of a growing industrial life and the unconquered West. We lost our admiration for the graceful contours of the clippers because they took so long to round the Horn. For a time we played about with canal boats with some vague dream of digging artificial rivers through mountain clefts to the Mississippi plains, but soon we placed our main dependence upon the Conestoga wagon—the predecessors of the freight car in the middle west.

Off with the old, on with the new! Let the clippers rot; let foreign enterprise develop our new invention, the Fulton steamboat; why bother with these slow canals! Railroads are all the rage. Let's get behind this thing and put it over right.

We did. Our twenty-three miles of railroad in 1830 had grown to over thirty thousand at the time of the Civil War. Twenty years later we had tripled this figure and in 1910 we had over two hundred and forty thousand miles of railway lines. A wonderful accomplishment. Europe gasped. And our western states were developed at a rate unheard of since the dawn of civilization. In fifty years virgin land went through the development stages of six thousand years.

He who builds fast wastes cement. The man who builds his summer home on a cloud will soon find the airplane an expensive medium for the transport of building materials. We put the thing over all right, but we found that we hadn't used the cheapest methods, and it cost a lot to live in our new world.

There were a few lone voices—doubtless cranks for the most part—who kept cramping our style by reminding us that the railroad wasn't the ultimate means of transportation—that it couldn't pass everybody's doorway—and that we ought to give more attention to our waterways and roads. And what'll we do when the time comes to export goods. You've let the clippers rot, neglected the iron boat and you'll have to pay a pretty penny for foreign bottoms. Some people are born kill-joys!

Then came a youthful group from Detroit and points west. Rah for the sli-ver! Down with the railroads. We'll do the thing right if Congress will only build enough good roads. And these clanking trolley cars: what chance have they with our stream-line buses. Let's run them all out of business and make this the automobile age.

A merry scrap—zest of competition—hurrah for the winner—the devil take the hindmost.

It took a war to teach the lesson. Despite the fact that most of us try to play fair, even in football we must have rules. There were some attempts at governmental regulation but the boys were all good sports at heart and they soon realized that they must get together. As a result we have had conferences and conventions without number, and associations of railroads, of waterway users, of electric railways and of motor vehicle manufacturers are working out their problems in a co-operative spirit to meet the needs and exigencies of the new era in transportation.

National transportation planning. An impressive and awe-inspiring phrase but of constructive import. What does it imply? An impartial aspect toward transportation mediums, study of the proper sphere and function of each, development of a national policy and the articulation of such policy into a program framework devised to meet the needs

of different sections with an equitably constructed rate structure based upon accurately and uniformly determined operating costs.

The problem is a big one but not unsolvable. It is now being tackled energetically and conferences and committees are getting together to study every angle of the problem from standardization of screw-threads to rate equalization, from road building to airplane landing fields, and from store-door-delivery to accident prevention.

Co-operative effort has been realized. Studies are being made. Facts are now being made available. But we need a nationwide policy expressed in terms of a planned program. Our studies must be carried further; we must have more facts, and the promise of continued co-operation before we will come in sight of our goal.

At this time every research worker, statistician and librarian is in a position of strategic importance. He is close to the facts or to the sources from whence they are obtained. He can render important assistance in the development of our national transportation program.

The great need today of those who are responsible for the development of a national transportation policy is for accurate fact information. These facts are rapidly accumulating as the result of intensive investigations and surveys made by expert bodies. But because there has been so little attempt at interpretation and correlation we are in danger of being swamped under this deluge of helpful transportation data.

There are gaps in our body of transport information which might be bridged over or filled in if their existence were clearly realized. There are facts developed in one field which are needed by workers in another field. There is duplication of effort in research and investigation.

Evils such as these can be met only by intensified effort by research workers in general. They must survey and analyze the data already obtained to learn whether the whole field has been properly investigated. This point determined they must classify and index the existing body of information in such fashion that every fact is made promptly available. We must be able to "draw off" statistical and other information of a hundred different forms and kinds to meet the changing needs of different times and conditions.

It is not probable that any general library can hope to keep track of the great body of

literature dealing with transportation development and theory. There are outstanding examples of specialized libraries in this field but our resources are not yet sufficient to cope adequately with this varied volume of material. We now have an institute for transportation research and we may expect much from its investigations. In the newspapers recently we read of a project for a \$5,000,000 national museum of engineering and industry—a splendid undertaking.

But how can we hope to solve our problem without some adequately financed effort to collect, organize, classify and make available the great mass of transportation material now being developed? Maybe the time has not yet come for such a project. The need, however, is apparent and we can look forward with confidence to its fulfilment at some later date. In the meantime it is up to us as research workers and librarians to do all in our power to make the best showing—to render maximum service—with the facilities at our command.

Militant Spirit in Librarianship

Mr. J. H. Friedel, former editor of *SPECIAL LIBRARIES* and past president of the Special Libraries Association of Boston, in a recent communication to that Association presented such a valuable contribution to the subject of special libraries that we have taken the liberty of reproducing in part his letter. After commenting upon the formation of the Boston Association, Mr. Friedel states: "Perhaps I do not put in too strongly when I say that in this organization meeting there was evident, as in so many of the early meetings of the National Special Libraries Association, a tinge of the crusader's spirit, a certain sense of assurance born either of youth or knowledge that special libraries had something real to offer the business community. It was a militant spirit that sometimes extended beyond the mere aim of furthering the cause of special librarianship. That crusading spirit and gesture is still to be encountered in special library meetings, and while many may regret its existence, all admit that it has had a value in that it has helped to keep the library movement awake. Activity has thus been the second outstanding characteristic of the special libraries movement and I believe, on the whole, that activity in the Boston Association has been constructive in character and purposeful in aim."

Southern Pacific Library

The Southern Pacific General Office Library is one of the oldest business libraries in San Francisco, having been established in 1908 as a recreational feature of the company's personnel system. Since June 1, 1911 all library service work has been under the direction of Miss Julia Evans.

At the present time, however, the circulating fiction collection forms only a minor phase of the library's activities. The development of a reference service, planned to contain information and source material of a general nature, as well as a highly specialized transportation library has been the aim of the present librarian. As a result of this policy the library now contains fourteen hundred volumes of fiction, two thousand and eighty-four volumes of non-fiction, and nine hundred and twenty annual reports of railroads and other public utilities.

Besides the research information furnished in the regular routine of a technical library, fiction and forty-three current magazines are circulated to some five hundred employees regularly enrolled as library borrowers.

The librarian also has the direction of the extension service in the eleven railway clubs situated at various division points on the Pacific System.

In September the addition of a number of new book stacks and the installation of new equipment and lighting fixtures entailed the entire reorganization and rearrangement of the library. For the six weeks consumed in this work the librarian has had the valuable assistance of Mrs. Gladys F. Wittet, who has had extensive experience in organizing and directing business libraries in New York and other cities throughout the United States. Mrs. Wittet came to the Southern Pacific Company from Los Angeles where she was assistant librarian of the Southern California Edison Company Library.

As the technical collection was transferred to the new shelves an inventory was made and the collection of annual reports of various bodies was partially reclassified. The annual reports of all railway companies form an especially important part of this library and a system is imperative whereby all reports may be carefully preserved and still be immediately available. A shelf-list record is kept of the reports as well as of the cata-

logued non-fiction material, while the fiction is catalogued by author and title.

Several hundred miscellaneous pamphlets were fully indexed and incorporated with existing pamphlet material, the completed collection being transferred to vertical filing cabinets.

The filing of unbound magazines, always a difficult problem in libraries with limited shelf space, was solved by the expedient of using large size transfer cases placed on the lower wall shelves made vacant by the removal of the main collection to the floor stacks. The magazines are thus effectively protected from dust and may be consulted with a minimum of handling.

A union card catalog has been prepared covering all bound material kept in various departments throughout the organization, with the exception of the law and geological libraries. This catalog is kept in the library and makes available to the librarian a mass of source material not contained in the main library collection.

Library School Courses

The Library School of New York Public Library recently issued a list of advanced courses to be given from February to June, 1925. The lecturers include Miss Linda H. Morley, librarian, Business Branch, Free Public Library, Newark, N.J.; Mr. William F. Jacob, librarian, Main Library, General Electric Co., Schenectady, N.Y.; Mr. W. B. Gamble, chief of Science and Technology Division, N.Y.P.L.; Miss Marguerite Burnett, librarian, Federal Reserve Bank of New York; Miss Alice Wilde, chief, Art Department, Free Public Library, Newark, N.J. and Miss Rebecca B. Rankin, librarian, New York Municipal Reference Library.

Registration for these courses may be made with Miss Alice G. Higgins, Supervisor of Advanced Courses, 476 Fifth Ave., New York.

New York State Library School at Albany gave a special library course the first semester to its senior students. A number of special librarians gave lectures in this course.

Pratt Institute Library School is including some lectures on special libraries in its course this quarter.

Traveling Library of Seaboard Air Line

Established in 1898 by the late Mrs. Eugene B. Heard, of Rose Hill Plantation, Middleton, Ga., in memory of her son, the library circulation was at first limited to those in the immediate neighborhood of Rose Hill. The work attracted the attention of the late Mr. E. St. John, then vice-president and general manager of the Seaboard Air Line, who offered the facilities of the railroad for transportation of books, which enabled the library to send books to employees as far as Florida. At his death, Mr. St. John left his fine personal library to the Seaboard Traveling Library. After the death of the founder it became necessary to reorganize and start afresh.

A valuable contribution from the A.L.A. of the books that were distributed after the Great War to the various libraries of the country, placed this library in the front ranks of traveling libraries and has given it an unusually well rounded collection of books.

Primarily for the benefit of employees of the Seaboard and their families, a great many others enjoy its benefits. Books are loaned to individual employees and to schools and clubs which can claim the "Seaboard ingredient"; that is, if there are children of employees attending the school, or members of employees' families belonging to the club—a guarantee from the agent of this fact will enable club or school to borrow books.

There are at the present time, seven branch libraries, permanent collections, ranging in size from four hundred to nearly seven thousand volumes. These branches have been established where there are shops and, therefore, the books are available to large numbers of employees. All of the collections are used by the general public as well. They are situated at the following points:

Abbeville, S.C., Americus, Ga., Atlanta, Ga., Hamlet, N.C., Jacksonville, Fla., Savannah, Ga., Tampa, Fla.

The branch at Hamlet which is the oldest and largest, is in the railroad's Y.M.C.A. and serves as a public library for the town. It is conducted by the wife of the General Secretary and is open daily. That at Atlanta is also in the Railroad "Y" and is open to employees of all roads who are members of the "Y." It is used almost entirely as a reading room, few books being loaned.

The branches at Abbeville, Americus and Savannah are small collections, conducted by

volunteer librarians who are willing to add this duty to their many others, for the sake of the good which may come from it to others.

Those at Jacksonville and at Tampa are advantageously situated and are conducted by a trained assistant from the city public library who can give it undivided attention. These have been especially successful from the point of view of circulation statistics.

Books are shipped to individual employees in large bags, resembling mail pouches, and to schools and clubs, etc., in wooden cases which contain from fifty to seventy volumes. The individual is supposed to return his bag for exchange not later than one month after receiving it, but cases are loaned for from three to six months.

The number of bags and cases fluctuates necessarily but the high water mark was reached in February 1924, with 104 bags and 38 cases.

Recent figures show marked increases in circulation. In 1920 8,639 books were distributed; in the following year, 23,796. The railroad strike in 1922-23 caused a slight falling off, but in 1923-24 the circulation amounted to 26,435.

In the past year, over six thousand magazines were distributed and 825 volumes were added to the library. These are gifts of generous friends, mostly publishers.

There were 446 books discarded, 357 catalog cards made, 2,258 volumes mended, besides the usual library routine of overdue notices, etc. 866 books were sent to the branches and 515 were returned.

The work is growing steadily in practical usefulness and many employees have testified to the help which has been given them in their work.

Bureau of Business Research

The Bureau of Business Research of the College of Commerce and Business Administration of the University of Illinois has published a series of bulletins covering a wide range of subjects. The first three bulletins referred to Illinois taxes in 1921, Illinois state revenue, 1895-1920, the tax rates of Illinois cities in 1921. Bulletin No. 4 of the series is entitled "Books About Shoes." The publication discusses various shoe problems and notes trade publications on the subject.

Special Libraries

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Transportation

WE have assembled in this number articles from authorities in their several fields, the main trend in which is toward indicating sources of information. As special librarians we are too often ignorant of these sources in other fields while thoroughly alive to the resources in our own.

It is worth while, therefore, to note that the railways have long been interested in education and have sustained libraries of their own, and for the use of their employees.

The railway companies have also been thoroughly alive to the value of research and as our attention is at present being called to the preservation of our forests and timber resources it is important to remember that their experiments in timber preservation began in 1838 and continue to this day. The Master Car Builders Association began in 1867, and the Master Mechanics Association in 1868, and the results of their researches are in evidence in every train, and in every shop, railway or non-railway.

Not only have they sustained research on their own account, but by assisting such institutions as Purdue and the University of Illinois they have assisted all collateral interests, while the publications of such results by the University of Illinois as well as those of the Testing Laboratories of the Pennsylvania are sources of valuable information regarding experiments.

This is all quite true in other transportation industries. Material is either available—and it is the duty of the librarian to call attention to it in the bibliographies, memoranda and methodology of his calling—or it is in process of accumulation, thereby affording unusual opportunities to librarians particularly in the transportation industries.

The article by Dr. Parmelee calls attention to the great need of co-ordination of the various agencies of transportation, and underlying that need is the need of co-ordinating the sources of information and the results of researches of the various transportation interests. The disastrous failure of the National Transportation Institute is evidence that for this generation at least there is no need of a new research organization, and this, of course, lays on our special librarians the pressing duty of co-ordinating information regarding the work of those that now exist.

The bringing together in this number of the surveys by authorities in their several fields is, we believe, a contribution to this desirable end.

R. H. J.

Swampscott Conference

Plans are now under way for the Annual Meeting of Special Libraries Association to be held in Swampscott, Mass., in connection with the meeting of Eastern librarians. The session will cover three days, provision probably being made for two business sessions, one at the beginning and one at the

end of the conference. It is expected that there will be two general sessions and one dinner meeting. Committees of Boston Special Libraries Association will co-operate with the National Committee. It is unfortunate that the meeting comes so close in point of time to the meeting of the American Library Association in Seattle. Doubtless some of our Eastern members will go to Seattle and may not feel that they can make two trips so near together. The location, too, presents difficulties, the two conventions being held on opposite sides of the continent. Nevertheless, we look forward confidently to a highly successful Conference. The Program Committee consists of Mr. William Alcott, chairman; Miss Eleanor D. Cavanaugh; Miss Eleanor Kerr; Mrs. Ruth M. Lane; Mr. Clarence B. Lester and Miss Deborah Morris.

Errors

IN spite of vigilance, errors occasionally creep into the magazine. A typographical error on page 249 of the December issue omitted the word "Rochester" in the list of cities maintaining municipal reference departments and inserted the words "St. Louis" twice.

Our attention has also been called to two other errors which appeared in the December issue. The St. Louis Municipal Reference Library was established in 1911, and not in 1913 as stated.

We also received from Mr. Frederick Rex, Municipal Reference Librarian, City of Chicago, a statement concerning the Municipal Reference Library which is of interest. The Library was established in 1900 as the Municipal Library of Chicago. From 1901 to 1913 it was called the Bureau of Statistics and Municipal Reference Library, under the direction of city statistician as municipal librarian. From 1913 to 1918 it was under the supervision of the Chicago Public Library. From 1918 to 1924 it was re-affiliated with the Bureau of Statistics as Bureau of Statistics and Municipal Reference Library under the direction of Municipal Reference Librarian. On May 28, 1924, office of City Statistician was abolished, and the Bureau of Statistics merged with the Municipal Reference Library. We had assumed that the library was still maintained as a branch of the Chicago Public Library.

Lost Records

The editor is anxious to locate a missing volume of the 1920-22 records. It is a bound note book containing the Executive Board minutes and the proceedings at Swampscott and Detroit. Some member borrowed it for examination and did not return it.

Every effort should be made by the members to locate this copy and return it to the proper file.

Acknowledgments

Through an error in printing, proper credit was not given to the Paper and Pulp Magazine of Canada for the privilege of using the article which appeared in the January issue by Mr. O. P. H. Ogilvie, entitled "Libraries in Science and Industry."

We are indebted to Mr. William P. Cutter for the review on the "Catalog of Scientific Periodicals in Canadian Libraries" which appeared in the January issue. We herewith extend thanks to Mr. F. W. Leamy, Assistant to the President of the Delaware & Hudson Co., for the photograph which adorns our cover.

The World of Business Print

Miss Ethel Cleland, Department Editor

To summarize the best in the business literature of the past six months or so is a task beset with difficulties, not the least of which is that, in a busy business library, new books are in such demand that it is not easy to get hold of the volumes even for a brief survey.

Therefore, if, in the following list, books of timeliness and weight are inadequately treated and others of value grater than, or equal to that of those included are not even mentioned, indulgence is asked.

What such summaries may, however, accomplish for both reader and compiler is an appreciation of the number, excellence and variety of business books that are being published by our best publishers, and a realization that their authorship is being more and more evenly distributed between scholars and practical men of affairs and that their scope is not just the general discussion of basic principles but is often an intensive study of a single specific phase of a larger problem.

In economics, an English translation of the 23d edition of Gide's "Principles of Political Economy," Heath, is witness to its value as a comprehensive and standard work. The new issue has been completely revised to include the changes incidental to the war and the Russian revolution which, the author feels, have not bankrupted economic science but "have for the most part confirmed and completed, through experiment on the most colossal scale that has ever been known, the essential principles of political economy as they have hitherto been taught." "Plain Talks on Economics," by Fabian Franklin, Putnam, is an elementary textbook if a textbook can be imagined which starts with a refusal to define its subject. Many, not students, who are confused as to the basic principles of economics and doubly so about their application to modern conditions will enjoy this book. Prompted by the fact that New York City high schools require a half year's course in economics for graduation, Eugene B. Riley, of the Brooklyn High School, and Allyn B. Young, of Harvard University have collaborated in writing "Economics for Secondary Schools," Houghton. In the preface, however, Mr. Riley seems to assume responsibility for the book. Similar in aim to Lapp's "Economics and the Community" issued some years ago, this book

will give an insight into economic problems to the many whose education never gets beyond the high school.

Railroad books of recent date include one general discussion and two treatises on specific railroad questions. Eliot Jones, with several valuable books already to his credit on the trust problem, has written "The Principles of Railway Transportation," Macmillan, primarily for teachers of elementary courses in railroad economics but also for the general reader who wishes an unbiased understanding of our complicated railroad situation. Collateral reading is encouraged by references at the close of each chapter and two chapters discuss railway problems that have arisen since 1917. "Railway Rates and Cost of Service," by Owen Ely, Houghton, is a Hart, Schaffner and Marx Prize Essay for the year. A bit difficult to read from the complicated nature of its subject and from the slightly academic style in which it is written, it discusses, the artificial and haphazard conditions prevailing in the making of rates and advocates some revision in the method of establishing such tariffs. From a former railroad auditor, Charles E. Wermuth, comes "Railroad Accounts and Statistics," Prentice-Hall, a practical outline of railroad accounting in detail from the assembling of the facts to the final financial statement, with some general theory, some mathematics of statistics, many forms and tables and the Interstate Commerce Commission classification of operating revenues and expenses.

A first book in its field and one of interest alike to railroad men, investment bankers, corporation financiers, lawyers, trust company officers, and students of finance is "Equipment Obligations," by Kenneth Duncan, Appleton, a treatise prompted by "the importance of equipment obligations in railroad finance, the extraordinary widening of the investment market for equipment securities, the unusual forms of equipment contracts developed and the peculiar legislation bearing thereon."

How the investment banker serves industry by acting as a sort of clearing house for the accumulation and the safe, carefully investigated investment of accumulated funds made up largely of the savings of individuals, is the theme of "Investment Banking in Eng-

land," by B. D. Nash, Shaw. This book, largely from original sources and government analyses, received first prize offered last year by a Chicago trust company to encourage more complete analysis and research in trust and investment practice. On such a new topic, the brief bibliography is of particular value. The monograph awarded second prize in the same contest is "The Investment Trust," by Lawrence M. Speaker, Shaw, another and similar subject on which little has as yet been published. Here are traced the growth and development of this type of corporation, of British origin, whose business is the judicious investment of capital and here, too, is a bibliography of interest.

The papers presented at the 85th Annual Meeting of the American Statistical Association may be perused in a single volume, edited by Warren M. Persons and others, under the title "The Problem of Business Forecasting," Houghton. Even more interesting than its discussions of forecasting in general are those on forecasting in definite fields of conditions, production and commercial endeavor such as, railway traffic, factory production, automobile manufacture, building construction, mineral output, petroleum and coal production, agricultural, crop and weather conditions, prices, etc. Naturally tables and charts illustrate such a volume.

Investors and brokers will be among those who will read with interest Fowlkes's "School Bonds," Bruce, a book entirely devoted to bond issues as a method of building school buildings, with valuable statistics and data on school bonded indebtedness and analysis of school bonds—their issue, their marketing, their retirement. Forms, tables, sample bonds and an half dozen pages of bibliography are to be noted.

In "Bankers and Credit," by Hartley Withers, published in London by Nash, we have a broad general view from the pen of a well-known writer on financial subjects of "what happened to our [English] monetary system during and after the war" and some of the demands of present day critics and reformers. Mr. Withers feels that he is expressing the views of leading English bankers when he urges a return to the gold standard on the pre-war basis. A revised edition of the late A. Barton Hepburn's standard work, "A History of Currency in the United States," has been issued by Macmillan with the addition of several new chapters including ones on monetary and financial developments in this

country from 1919-22 and on the Federal Reserve System. Mr. Hepburn's life, it will be recalled, has been most interestingly related in a book by Joseph Bucklin Bishop which was issued by Macmillan last year.

The National Council of Research contributed financially to the preparation of a "Handbook of Mathematical Statistics," edited by H. L. Rietz and published by Houghton. It deals not with the collection of data and statistics nor with their interpretation but with the formal problems of mathematical analysis. Robert Riegel's "Elements of Business Statistics," Appleton, is a comprehensive volume for the worker in the modern statistical department, nowadays a feature of practically all larger business enterprises. Professor of Insurance and Statistics of the Wharton School of Finance and Commerce, and co-author of a well-known volume on insurance, Mr. Riegel has supplied a textbook in which the general theories of statistics are directly applied to business research. The pages, over five hundred of them, fairly bristle with illustrative charts, graphs and tables.

Two new books on foreign trade seem to complement each other. C. E. Griffin, of the faculty of the University of Michigan, has written a basic textbook for college students, "Principles of Foreign Trade," Macmillan, which is a book of scientific doctrine, international values and the technique of international training in general. On the other hand, Arnold W. Lahee, consultant in foreign trade and formerly head of the foreign trade department of a big New York bank, presents in his "Our Competitors and Markets," Holt, a series of specific studies of various foreign countries which are our competitors, our sources of raw material or our markets. He calls his volume "commercial geography reduced to perspective."

Following closely in style and treatment the engineering handbooks in which much information is made readily available in a comparatively small space, L. P. Alford's "Management's Handbook," Ronald, supplies the factory executive, the manager and the worker with classified knowledge and practice of management in manufacturing industries, with the various functions of management in detail, and with basic information such as economic organization, costs and budget, banking and insurance, market analysis, employment, all well supplemented with an excellent index, tables, charts, ratios, statistics, mathematics.

(Continued in March issue)

Book Shelf

The Training of Women for the Professions and Allied Occupations. By the Bureau of Vocational Information. XII, 724p. N.Y. 1924.

With the constant expansion of women's occupational interests has come the need for more complete and exact information in regard to the various occupations and the training required for them. For some years the Bureau of Vocational Information in New York, with Miss Emma Hirth at its head, has been striving to meet this need both by giving advice to the many who have come or written for it and by studies they have made in certain specialized fields—such surveys as those on Statistical Work, Women in Chemistry, Women in Law and Positions of Responsibility in Department Stores and other Retail Organizations. This Bureau is an educational and research organization established for the purpose of studying the opportunities and requirements of the "working world" and of making the conclusions of these studies and the facts governing the work of women in the various occupations available to women and to the schools and colleges which are training them. It has on its Advisory Council the presidents of many of the Women's Colleges and others who are interested in women and their work.

Recently the Bureau has made another contribution to this research in the publication of a book, "Training for the Professions and Allied Occupations." The publication of this book was made possible by a grant from the Laura Spelman Rockefeller Memorial. It has been prepared by the Bureau with the aid of experts in the various fields and with the hearty co-operation of many professional organizations. The book is divided into twenty-three sections each dealing with some main field of work for women. In cases where occupations seemed difficult to classify they have been grouped according to the training required. The whole emphasis of the book is on training and it is clearly brought out that if women are to compete with men in some of the less usual fields where they will meet with prejudice on many sides they must have the very best training possible. The value of a liberal arts training before specialization is often stressed.

Under each section is first given a summary of the occupation as a whole, considering such

points as the scope of the occupation and the variety of opportunities in it, the numerical importance and the supply and demand, the position of women and the future outlook. Then comes a statement of the training required, both the preliminary and the special professional and vocational training, followed by a directory of accredited schools and colleges giving such training. In listing these schools and colleges the Bureau has taken as far as possible bases already established. The general list used was that compiled by the American Council of Education. For the professional and vocational schools the ones recommended by the professional organizations concerned have been listed. In only a few cases was the Bureau forced, for lack of definite standards to devise wholly its own list. Committees of experts representing some of the professions met to discuss the sections dealing with their respective fields. All the sections have been read and criticised by the leading men and women of the profession concerned so that the information can be considered as exact and complete as possible.

As can be seen from this brief resumé this is a book which will be of great value to the girl starting out to choose her career, to the woman who feels she is a vocational misfit and wants to learn about other opportunities and to those who are giving vocational advice to girls and women. It is not a spectacular book, there are no accounts of the remarkable success that certain women have miraculously achieved, but the facts speak for themselves and the girl who really wants to choose her vocation thoughtfully and wisely can do no better than to consult it. It is a directory of the opportunities open to women and is likely to become the handbook of all those interested in this subject.

During the years of its existence calls for information have come to the Bureau from all over the country and on every type of subject. In publishing this book the Bureau has made the information it has been collecting available to an even larger number of women and has made an invaluable contribution to the occupational information for women.

Review by Miss Margaret Davidson, specialist in Vocational Training, Women's College, Brown University.

Events and Publications

Rebecca B. Rankin, Department Editor

United States Touring Information Bureau, Dubuque, Iowa is responsible for the publication of a "Camp Site Guide and Hi-way Map of the United States."

The *Municipal Reference Library Notes* of January 7, 1925 is devoted to an article and bibliography on municipal landing fields, prepared by R. E. Gossage, assistant librarian.

"Recent Development in Library Work with Immigrants," by Eleanor E. Ledbetter appears in the 1924 Proceedings of the Conference of Social Work.

The December issue of the *Bankers Magazine* contains an article on "How Financial Libraries Serve Banks" by Margaret Reynolds. Several photographs of financial libraries are used to illustrate the article.

The *Boston Sunday Herald*, December 14, 1924 carried a half-page descriptive article of its "Morgue" or reference library, under the librarianship of Paul P. Foster.

"The Organization of State Administration in Michigan" is a thorough study recently made by the Detroit Bureau of Governmental Research, appearing in *Public Business* for December 10, 1924.

Providence Magazine for December, 1924, the official organ of the Providence Chamber of Commerce, presents a list of authoritative books on real estate.

The Chamber of Commerce of the State of New York, 65 Liberty Street, has issued its January 1, 1925 edition of "List of Chambers of Commerce in the United States in All Cities of 5,000 Population and Over."

A new edition soon to be issued on "Subject Heading for the Vertical File," formerly included in the Modern American Library Economy Series is being prepared, as before, by the staff of the Newark Public Library.

The Political Research Bureau of the Republican County Committee has issued a study on "The Voting Machine," prepared by T. David Zukerman. It is a thorough-going piece of research on a subject scarcely ever touched before.

The Commercial and Financial Chronicle of January 10, 1925 carries a news item con-

cerning Miss Reynolds' correspondence course on special library methods to be given at the American Correspondence School of Librarianship at Syracuse

The Bureau of Railway Economics has recently issued a very convenient compilation for reference purposes of important statistics of railway operation based on official summaries of the Interstate Commerce Commission. It is entitled "Statistics of Railways of Class 1, United States, 1916-1923."

The issue of *Chemical and Metallurgical Engineering* for January 5, has an article on the library of the Edward C. Worden Laboratories at Milburn, N.J. The same magazine announces that the Ford Motor Co. at Dearborn is building a large engineering laboratory occupying approximately two city blocks, which will contain a comprehensive reference library.

"Bus Operating Practice" is a handbook of 250 pages which may be used for reference for engineering, legal and operating facts on the motor bus, distributed free by the International Motor Co., 25 Broadway, New York City.

"Highway Transportation Costs" by T. R. Agg and H. S. Carter, obtainable from Iowa State College, Ames, Iowa, is a pamphlet filled with statistics valuable to those firms using motor trucks, and to highway officials.

The Milwaukee Municipal Reference Library issues its bibliographies in an attractive and convenient mimeographed form. Bibliography No. 3 is an extensive one on "Public Utility-Service at Cost Contracts." No. 4 is devoted to "Excess Condemnation."

In *Landscape Architecture*, January, 1925 will be found an article, "A Practicable Photograph Filing System for Landscape Architects," by Malcolm H. Dill—suggestions here given are applicable to any special library keeping photographs.

The Carnegie Endowment for International Peace has recently issued a reading list on the Permanent Court of Arbitration at The Hague. The Endowment has also issued Supplement No. 1 to Select List of Reference on the League of Nations.

Associations and Groups

Reports from the Associations have new significance this month. In both Boston and New York joint meetings were held with the local library club, although in Massachusetts the state-wide library club can hardly be called "local."

Boston

The Massachusetts Library Club invited the Special Libraries Association to join them in their all day mid-winter meeting on January 29, 1925. The morning meeting was held in the Massachusetts State House. The program included addresses by Gov. Fuller, Admiral Sims and Mrs. Henry Howard. A round table on Problems of Cataloging for medium sized libraries followed, led by Mrs. Frances Coe, Mass. State Library.

The afternoon session was opened by an address on Relationship of Special to Public Libraries, by Mr. D. N. Handy, President S.L.A.; followed by a reading by Professor Copeland of Harvard. A supper was given at the 20th Century Club, followed by a reception and social at the Massachusetts State Library.

New York

January meeting of the New York Special Libraries Association was a social meeting, held jointly with the New York Library Club, at 8 P.M. Wednesday, January 14th, at the New York Chamber of Commerce.

Dr. Henry Seidel Canby, editor of *Saturday Review of Literature* spoke on The Criticism of Books and Miss L. Elsa Loeber, librarian of the New York Chamber of Commerce told about the work of the Chamber.

The Great Hall in which the meeting was held contains about two hundred portraits of the leaders of commerce and industry of the city and nation from 1768 to the present time.

Thirty new members have recently been added to the membership of the New York Special Libraries Association, making a total of over three hundred members.

Pittsburgh

The regular meeting of the Pittsburgh Special Libraries Association was held Thursday evening, January 15th, in the Allegheny County Law Library with fifteen members in attendance, and Mrs. Blanche K. S. Wappat, president, presiding. The topic for discussion

was the Indexing and Care of Pamphlet Material and was introduced by the reading of a paper prepared by Mr. Leo R. Eitzkorn, who has charge of the Clipping and Debate Material of the New York State Library at Albany. Mr. J. Oscar Emrich, librarian of the Allegheny County Law Library explained and demonstrated his method of filing and indexing the legislative bills of Pennsylvania. A general discussion of ways and means of handling all current material in the libraries represented by those present, followed.

The Pittsburgh Special Libraries Association has a Committee of Directory of Information which is working on a union periodical list.

Education Committee

The Education Committee of the Special Libraries Association of Boston, of which Mr. F. A. Mooney of the Dennison Manufacturing Company is chairman, has prepared a report, outlining its plans for the coming year. Under the auspices of the committee a course in charge of Mrs. Ruth McG. Lane of the Massachusetts Institute of Technology is already in progress.

The course consists of twelve meetings in which the history of special libraries, classification, cataloging, the handling of periodicals and vertical files, bibliography, the library profession are considered. Classification is assigned three lectures and cataloging, including practice work, four lessons.

The aim is to give a survey of the library profession as a whole, emphasizing its chief problems, its long-standing importance and its future among other professions. For collateral reading, a bibliography is given of each topic discussed, and the aim is to keep the class members in touch with current library literature and development.

With Mrs. Lane's collaboration, the committee expects to offer a brief course of lectures in classification and analytical cataloging along *special* lines as chemistry, industry, law, medicine, banking and journalism.

The committee also proposes a bibliographic service with the committee as a distributing agent for all bibliographies which are mailed to the chairman.

Other problems to be considered by the committee are: the promotion of educational

work; with the special study of educational methods employed in the libraries of Boston. Mr. Mooney, as chairman, is anxious to have the committee act as clearing house for ideas and facts, including new problems of library organization, equipment, technique and service.

Groups

The Advertising, Commercial and Industrial Group

The Advertising, Commercial and Industrial Group of the Special Libraries Association, is now formally organized, with Mr. F. A. Mooney of the Dennison Manufacturing Company as chairman, and Miss Ethel A. Shields of the Eastman Kodak Company as secretary. So far, twenty-eight members of the group have been enrolled.

The group has written the librarians of a large number of special libraries, with the aim of learning the nature of their work, so that it might be known whether they would properly belong to this or some other group. Many replies have been received. The information thus gained is valuable, both for classifying these libraries, and for the purpose of mapping out the future work of the committee.

Many ideas and practices are now confined to individual libraries which would be valuable to all. Many librarians are compiling bibliographies on various subjects which would be of great help to all members of the group. With but little added labor this valuable material may be made available to all.

The group plans to act as a clearing house for these ideas, suggestions, and general information, so that, through it as a distributing center, this valuable material may become common property. Thus each member will receive decided benefit, and all will be benefited in the proportion that each one contributes his assistance.

Regional Meeting

The Executive Board of the American Library Association, at a meeting in Chicago, granted the formal request of the State Library Associations of Minnesota, South Dakota, Nebraska, and Iowa to hold a joint meeting at Sioux City in October, 1925, which shall be an official regional meeting of the American Library Association, the officers of the Association to co-operate in preparation of the program.

Southern California

The Special Libraries Association of Southern California held their January meeting January 11th at the Southwest Museum, Los Angeles. Miss Cora Hatch, Librarian of the Munk collection of Arizoniana, now located in the Southwest Museum, was hostess.

After a short business meeting the Association was delightfully entertained with a lecture by Dr. Comstock, noted entomologist and director of the Southwest Museum. Dr. Comstock gave an account of a trip he made through the canyons and mesas of the Southwest, particularly through the ancient cliff ruins scattered throughout Arizona, Utah, Colorado and Nevada.

American Statistical Association

The Handbook of the American Statistical Association issued as a supplement to the *Journal of the American Statistical Association* for December, 1924, prints the list of members of the Association and also presents the publications of the Association since 1888. The membership list includes twenty-six honorary members from twelve different countries, six corporate members and a list of over one thousand fellows and regular members. Included in the membership are statisticians, government officials, labor officials, insurance actuaries, college professors, business executives, publishers, social service workers, financial experts, members of research organizations and health officials. Librarians are not as a rule identified with the Association, but H. L. Wheeler, of the Boston Public Library, is an officer with the title of librarian. The Board of Directors of the Association recently appointed Dr. Willford I. King, of the National Bureau of Economic Research, as the secretary.

The Association, organized in 1839, has had a fine record of achievement and the pages of the quarterly journal reflect the statistical development of the country.

Our Cover Design

The photograph on the cover has more than passing interest. The "Horatio Allen" represents the latest design in locomotive construction, and was named for the engineer who piloted the first locomotive upon a railroad track in the Western Hemisphere. On December 4, 1924 locomotive "1400" was duly christened the "Horatio Allen" with appropriate ceremonies led by President L. F. Loree of the Delaware and Hudson Company. A pamphlet issued by that company describes the ceremonies.

Personal Notes

Margaret Wells, Department Editor

Miss Ethel L. Baxter has been appointed assistant librarian at the American Bankers Association.

Miss Lucile Vernon has recently been appointed secretary-treasurer of the Association of Law Libraries.

Miss Henrietta Kornhauser has become assistant librarian of the Mellon Institute

Miss Jane White, formerly of the Indexers, Chicago, has joined the staff of H. M. Bylesby & Company Library

Miss Martha Frey, librarian of the American Bankers Association, New York City, is very ill. The Association sincerely hopes for her full recovery shortly.

Miss Margaret Reynolds, librarian of the First Wisconsin National Bank, Milwaukee, Wis., is compiler of her bank's recent publication, "Hick's Almanac and National Weather Book, 1925: Wisconsin Happenings in 1924."

Miss Alice O. Hudson, formerly of the staff of Wisconsin Library School, is now assistant in the Periodical Division, Department of Agriculture Library.

Prof. William Lee Corbin formerly professor of English and English Literature at Boston University, recently became librarian of the Smithsonian Institution succeeding Mr. Paul Brockett who resigned to give full time as Secretary of National Academy of Sciences.

Lieut. Col. Lawrence Martin (M.I.O.R.C.) formerly cartographer of the Department of State—a graduate of Cornell and Harvard is now chief of the Library of Congress, Division of Maps and Charts.

Miss Zane Miller has severed her connection with the New York office of the Library Bureau to become School Librarian at Chazy, New York.

Messrs. Louis J. Caldor and J. Rutson Rhinehart, who have recently opened "The Polytechnic and Commercial Book Center" at 17 West 42 Street, have introduced a new feature. In addition to a technical and business book store, they aim to provide a convenient center for information and research service. Some items are available for reference only,

and visitors are welcome until 7 p.m. including Saturdays.

Mr. and Mrs. Arthur P. Maher (formerly Theodora Abbott, librarian of the Bankers Trust Company, New York City) are receiving congratulations upon the arrival of a daughter

Miss Burroughs, librarian of the Chemical Research Department of the Union Oil Company of California visited some of the libraries of Pittsburgh with Miss Mary Spear, librarian of the Natural Gas Association of America as her cicerone.

Miss Dorothy Bemis, librarian of the Philadelphia Federal Reserve Bank, has resigned her position and will be associated with the Library Bureau as an organizer.

Miss Adeline Macrum, librarian of the Pittsburgh Tuberculosis League has resigned from the Association as a member of the Executive Committee because of the fact that she will not be in library work for several years to come.

A list of books on various subjects compiled by Martha L. Frey, librarian of the American Bankers Association, New York City, appeared in the *A.B.A. Journal* for December under the heading of "Books of a Bank Library."

Dr. Andrew Keogh, librarian of Yale University and a member of the A.L.A. Board of Education for Librarianship, visited Washington recently with other members of the A.L.A. Board. These members were entertained at a special meeting of the District of Columbia Library Association at which Mr. Keogh dwelt mainly upon graduate training for librarians. He emphasized the need for a plan for training which would meet the needs of special as well as public libraries.

The Engineers Book Shop, 126 East 41 Street is managed by Miss Elfreda Harder, formerly a special librarian. The service given is more than that of the ordinary bookstore; she carries on all the activities of a special library, as translating, researches, photostating and cataloging, done at the request of engineers, manufacturers or business men.

Pages 69-72 deleted, advertising.