

# Electric Railway Journal

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NEW YORK—OCTOBER 14, 1910.—ATLANTIC CITY

### PROGRAM FOR TO-DAY

- 9.30 a.m. Greek Temple, Convention Pier, Meeting of Engineering  
Association.  
2.00 p.m. Greek Temple, Convention Pier, Meeting of Engineering  
Association.  
9.00 p.m. Exchange, Marlborough-Blenheim, Concert by Marlborough-  
Blenheim Quartet.

### Training of Transportation Employees

The session of the Transportation & Traffic Association yesterday was devoted to the committee reports on the training and assignment of the men in electric railway operation. Both subjects are fundamentally connected with the maintenance of satisfactory service. The relations of a company and its employees, so far as time is concerned, can be divided broadly into three periods. In the first the future employees are selected from the list of applicants. In the second they receive their training in the work which they are to perform, and are finally accepted. The third period covers their relations with the company as regular employees.

The period which the committee this year discussed is the second, and in some respects the most important of all. This is the time when men who have no real aptitude for the work but have passed the preliminary physical and mental ex-

aminations can best be weeded out, and during this period a foundation is being laid for the employee's future record. As the committee well says, too much emphasis cannot be placed upon the importance of getting men started right. From the standpoint of the men also, the period is a critical one, and many a man who is capable of future good work, but is unfamiliar with railway service and is slow at grasping its principles and those of the electrical machinery, is apt to become discouraged. On the other hand, there is equal danger, with a different kind of man, that the prospective employee will be too self-confident and will assume that the superficial knowledge which most men acquire during the first few days of their training is sufficient to qualify him to operate a car without further instruction.

The man of the former class should be encouraged to ask questions, and if necessary to prolong his period of instruction until he has satisfied both himself and his instructor that he is capable of rendering good service. The employee of the latter type, if retained, should be so thoroughly examined before being put in charge of a car that any lack of preparation will be apparent to the instructor and to himself. Above all, the men should be taught that esprit de corps which makes them proud of the uniform they wear and of the service in which they are engaged. This spirit, if properly felt, is not only the greatest inspiration to the performance of good service by each man, but it makes each man discountenance poor service in other employees.

### Mr. Weston's Proposed Franchise

The ideal urban electric railway franchise, according to Mr. Weston, is one which provides simply the maximum rate of dividend which a public service corporation shall pay, or else the profit which it can earn on the amount of money which it has actually invested in its enterprise. Such a franchise would specify that the rate of fare to be charged would be either raised or lowered by the city at definite periods, according to the returns from operation. The rate could then be either a flat rate, like the straight 5-cent fare, or could be based on the length of ride, a plan which Mr. Weston thinks more equitable to the company and the public on certain kinds of urban properties. The franchise would grant the company a monopoly of the transportation facilities in the territory which it serves, and the right, under certain conditions, where the traffic is insufficient to make the line otherwise profitable, of being financially assisted by subsidies raised by local assessments on the land benefited.

Mr. Weston clearly characterizes the usual methods of granting franchises as very "haphazard" and as resulting in conditions that are detrimental both to the companies and the communities in which they operate, and he presents a strong array of arguments in favor of his plan. It should certainly encourage investment in legitimate railway enterprises. The ordinary business risks of a railway company can be fairly well calculated in advance, but it is difficult to secure

the engagement of capital in undertakings where the profits and even the integrity of the investment depend so largely as they do now upon the whims of municipal or State authorities. We believe also that many, if not most, railway properties would be in very much better financial condition at present if their franchises had been drawn along the lines suggested by Mr. Weston. At the times of their organization the risks involved seemed large and liberal rates of return would undoubtedly have been allowed. Some railway companies ultimately become prosperous and others do not, but the public, forgetting the failures, usually considers that those which are successful should not be allowed to pay more than a very low percentage on the capital invested in them.

We are not sure that all will agree with Mr. Weston that the surplus to go to the public with successful companies should be in the form of fare reductions. There are many who believe that the community as a whole is entitled to any such proportion rather than the users of the line. This, however, is a comparatively small detail, and a plan which would prove attractive to the authorities of one city might appeal differently to those of another. In the same way, to increase the compensation which a company now receives for the transportation of passengers, many people believe that a reduction of taxation would be better than to increase fares. Altogether, Mr. Weston's proposed substitute for the present chaotic conditions will undoubtedly have many partisans.

#### Schedules and Timetables

It is remarkable that the topic of schedules and timetables should not previously have been made the subject of a report at an annual convention. In a sense it is the basis of the entire service. The simplest method of railway operation is to maintain the same headway and running time of the cars throughout the day. This would make the distribution of the men and the arrangement of their hours of labor a very easy matter. Unfortunately the volume of traffic does not follow this simple law. Economy requires the headway between cars to be increased when the traffic falls off and policy dictates that it be decreased as the traffic rises. This necessitates the use of trippers and complicates the arrangement of straight and swing runs.

Theoretically the number of seats furnished by a railway company should bear a direct ratio to the number of passengers carried, but as the volume of traffic presenting itself for transportation cannot be known in advance and is affected by the weather and other causes, the best that a company can do is to provide timetables to suit the different prospective conditions, and vary them at short notice if necessary. We notice from the report that 36 companies of the 64 reporting on running time maintain the same running time throughout the entire day, and that 39 companies out of the 57 reporting on schedules maintain their regular schedules during stormy weather, but the committee evidently does not consider this practice advisable, as it recommends that the companies avoid, as far as possible, the use of inflexible timetables.

The committee makes in all nine recommendations. Of these one contains certain definitions; four, those upon passenger counts, adjustment of running times and service and the construction of timetables, relate purely to the company; two, those in regard to lay-over time and the assignment of tripper service, relate both to the company and the men; and two, or those in regard to the selection of runs and to trading runs, principally concern the men, although they also have a bearing on efficient operation.

The advisability of the adjustment of service to traffic requirements on city roads, which are the only ones considered

in this report, will commend itself to every one, and to do this properly there should be records of the passenger traffic and a competent constructor of timetables to utilize this information. Nor can we see any objection to the rulings of the committee in regard to the assignment of runs or the reduction of lay-over time. The latter sometimes cannot be entirely eliminated, as a short lay-over time is necessary with certain lengths of run and headway between cars, and if there is a logical method, like seniority, by which the men can indicate their preference for runs, there is no reason why they should want to trade runs permanently among themselves. As for trading single runs, it is practically always possible for a man to get relief from a single run, if he notifies his division superintendent in advance. His run then properly belongs to the first man on the extra list, so that any unauthorized trading simply creates confusion and dissatisfaction.

#### Advertising for Traffic in the Central States

The advertising methods of electric railways in the Central States offer an interesting subject for study because of the great variety of mediums used for soliciting traffic. The publicity matter of each road reflects in a way the local situation. That is, a road which has a terminal in a large city and offers service to park or lake resorts can afford and usually does undertake to distribute more expensive and thus more attractive publicity matter than does a smaller road serving a community of people living on farms and in villages and towns. The road in the latter situation and the service which it has to offer are more a part of the every-day life of the community than is the property reaching the metropolitan districts. Thus the population knows what the road has to offer and, with the exception of special excursions and interline business, extensive advertising would not be profitable.

The increase in interline travel on interurban railways in Ohio and Indiana experienced during the past year is due both to improved service and to publicity. The publicity has been obtained largely in two ways. Practically all of the interline roads include in their advertising programs announcements of the through connections that are offered. The second and more indirect method of presenting the possibilities of through electric railway travel to the general public has been by the operation of special cars on trips of from 300 to 400 miles to and from the meetings of the Central Electric Railway Association, which are held every two months at some important traffic center in Ohio or Indiana. At the time of these meetings the daily papers have given considerable space to describing the long trips of the special interurban cars. This publicity, followed by regular announcements made by the railways offering the sale of through tickets to any point on the connected lines represented by the Central Electric Railway Association, has been a profitable means of promoting long-distance travel. The use of advertising methods for soliciting freight traffic is being more widely accepted than ever before and the anticipated results are being obtained. As with passenger advertising, those interurban roads which are in position to handle freight to the greatest number of towns and offer the best service in comparison with competitive steam lines spend most for advertising.

The features which are most widely advertised in addition to those of regular passenger and freight traffic, both local and interline, are excursions and amusement resorts. The advertising matter soliciting such traffic is published irregularly and takes many forms. Nearly every company has adopted some form of advertising emblem.

## Conventionalities

Au revoir until 1911.

Anyhow, the weather has been fine.

Whose face did you wash this morning?

And you may yet see one game of the world's series.

Have you had your railroad ticket validated, so that you can get home without pounding the ties?

Smiling "Freddy" Dell who is assisting Secretary Keegan of the Manufacturers' Association, is with us again this year. Ask him how the baby is.

W. G. Gove, superintendent of equipment, Brooklyn Rapid Transit System, is rumored to have standardized a bathing suit good for all seasons of the year.

Bert Berry and Ross Hayes are beginning to show the effects of the strain. Being chairman of the finance committee or the entertainment committee is not a bed of roses.

William V. Dee, of the G. Drouve Company, enjoyed himself immensely Saturday and Sunday. He was sad the rest of the week. After Sunday Anti-Pluvius was conspicuous on the Boardwalk.

Wylie Brown, general sales agent of the Bridgeport Brass Company, is at the convention in the interests of Phono-Electric trolley wire. He is an attentive listener to the discussions of the Engineering Association.

James Anderson, general manager, Canadian lines, Detroit United Railway, is the great organizer of the convention. He has formed the "Cocktail Club," the emblem of which is a feather of the shape and color of a cocktail worn in the hats of members.

"Nick" Trist, V. S. Yarnell and W. E. Berry, of the Carnegie Steel Company, are very fond of riding in the "sea-going hacks." The other night they tried to induce proprietors of a chair stable to equip the chairs with solid steel wheels. It's not the altitude, but the salt air.

Shuffleboard at the Chalfonte is an exciting game especially at 4 o'clock in the morning, at least it seems so to Parker and Keys, of the Detroit United contingent. If their fingernails had held out they would be at it yet; as it was, a manicure had to be consulted.

The total registration up to 5 p. m. Thursday was about 2,600. The registration of the five associations was 1,019 delegates and affiliated associates. The men guests numbered 87, making a total of 1,106. The Manufacturers' Association had registered 1,127 members, and nearly 400 ladies' badges had been issued.

John N. Nind, Jr., has resigned as assistant to the advertising manager of The J. G. Brill Company, Philadelphia. For several years previous to his connection with the Brill Company, Mr. Nind occupied positions as assistant business manager and assistant editor of the *ELECTRIC RAILWAY REVIEW* and the "Railway Age."

E. J. Burdick, superintendent of power, Detroit United Railways, is at the convention for business, not for a good time. The latest improvement in equipment, the fine points of operation, the important and salient features of all the papers and discussions will be thoroughly assimilated for his work on the Detroit United Railways.

Duncan McDonald, general manager Montreal Street Railway and president of the Pay-As-You-Enter Car Corporation, arrived at the convention Wednesday morning. Fresh from the boulevards of Paris he sports French apparel from top to toe, insists on ordering his "dejeuner" "à la Parisienne" and talks with a pronounced French accent. This is natural, as he is a direct descendant from McDonald, the famous marshal of Napoleon.

The convention being almost over, the State authorities have decided to put a tighter lid on Atlantic City. At a meeting of the Grand Jury at May's Landing Oct. 11 Justice Trenchard said that it had been brought to his attention that liquor was being sold after hours in Atlantic City and enjoined the jury to indict those who violated the law.

The name seems a little strange at first, but appears to fit the conditions better than American Street & Interurban Railway Association and is certainly much easier to say. Anyone visiting the Pier and seeing so much electric railway apparatus in evidence would have no difficulty in identifying this convention as that of an electric railway association.

Philander Betts, chief engineer of the Board of Public Service Commissioners of New Jersey, spent Wednesday in Atlantic City. He returned yesterday to Trenton to be present at a hearing to establish a standard classification of telephone accounts. Under the New Jersey law the telephone companies are included among the other public utility corporations which are under the jurisdiction of the commission.

It's Hay here and Hay there among the exhibits these days, for between them the two Hay brothers of Easton, Pa., are well nigh ubiquitous. They are accompanied by eight other live representatives of the Hay properties, which are the Northampton Traction Company, Easton & Washington Traction Company and the Montgomery Traction Company. W. O. Hay, Jr., the crown prince of the Hay dynasty, is also present to enjoy the technical and social features of his second Atlantic City convention.

The paper by E. F. Schneider, general manager of the Cleveland, Southwestern & Columbus Railway, on the subject of "Criminal Negligence," read at the meeting of the Claim Agents' Association Wednesday, attracted a great deal of attention. It was thought at first that Mr. Schneider would not be able to come to the convention and present the paper in person, as he was indisposed last week, but fortunately he was able to do so. He is feeling much better on account of his trip to Atlantic City.

After an absence of seven years in Paris, Fred L. Merritt has returned to the United States and is attending the convention this week. Mr. Merritt recently met Nelson E. Weeks, vice-president and general manager of the Rand Avery Supply Company, Boston, and accepted a position with that company to further its interests in the transportation field. Before going to Paris to work for the North German Lloyd Steamship Company, Mr. Merritt was for many years in the electric railway supply business in this country. His return to the field will be welcomed by a large circle of friends.

E. H. Baker and Scott H. Blewett, the two new members of the Manufacturers' Executive Committee, are both decided acquisitions, as both have had extended experience in convention work. Mr. Baker has been for years conspicuous in the work of the Master Car Builders' and the Master Mechanics' Association. He has served previously on the committee to which he has just been elected, and was treasurer of the organization four years ago. Mr. Blewett has been a member of the supplymen's organization at the steam railway convention, and served one term as chairman thereof.

The electric railway business includes many men who have graduated into it from the steam railroad business, but there are comparatively few men who have abandoned the delights of electric railroading to engage in the steam railroad business. One of these, however, is Eugene Chamberlain, who has spent considerable time at the Pier this week. Mr. Chamberlain is chairman of equipment of the clearing house of the New York Central lines and was formerly connected with the Brooklyn Rapid Transit Company. He was originally a New York Central man and later returned to that company, but has always kept his interest in electric railroading and nearly every year finds him at the electric railway convention.

## MEETING OF THE TRANSPORTATION & TRAFFIC ASSOCIATION

The final meeting of the Transportation & Traffic Association was held yesterday morning at the Greek Temple. President Todd called the meeting to order at 10 o'clock and announced that the first subject on the program was the presentation of the paper on "The Use of Metal Tickets," by George L. Radcliffe, superintendent Cleveland Railway. This paper is found elsewhere in this issue. In the absence of Mr. Radcliffe, the reading of the paper was dispensed with and on motion it was entered on the record as prepared.

### TRAINING OF TRANSPORTATION EMPLOYEES

The report of the committee on training of transportation employees was then presented. It is published in another portion of this issue.

C. D. Emmons, Fort Wayne, Ind., stated that during the past month he had been present at four investigations, at which the primary thought in the minds of the investigators seemed to have been whether or not sufficient care had been taken in the hiring and training of men. Fortunately, his company had adopted very largely the standards proposed by the committee whose report had just been read and its records were in splendid shape. He thought that it was a matter of great importance to keep records in this way.

D. H. Lovell, Pennsylvania Railroad, said that one of the most important points mentioned in the report, according to his steam railroad experience, was the written examination of men, graded by percentages. He thought that after the men had been accepted they should be given this written examination. The Pennsylvania for 35 or 40 years had paid special attention to training men for its service, and all of the prominent officials, as well as every other man in the company, had been so trained. Thus, the president of the company was an engineer. The result is that if the company should be so unfortunate as to lose one of its staff officers his place could be filled with a man from the company's own ranks. Another important point in connection with the training of the men was to induce the men after they had been trained to remain with the company. Every one knew that it was a difficult matter to get any man away from the Pennsylvania Railroad. The reason was that the company looked after the interests of the men. While its discipline was uniformly general, it was not unduly severe, and if a man was discharged he really discharged himself. He thought the difficulties which arise are usually the outcome of some trifling thing which should have been corrected when the question arose.

W. H. Collins, Fonda, N. Y., was interested in the best methods of breaking in men for the high-speed service, and he was specially glad to note that the committee recommended giving the candidate for a position more shop training or technical training than had been customary in the past. He believed that a little more knowledge of technical matters on the part of motormen would often save a great deal of delay in operation, as well as damage to the equipment. For some years all new men employed by his company had been given a written examination and if the candidate did not pass a certain percentage he was not accepted. Another valuable point of the written examination is that it supplies a permanent record of the fact that each man has been given instructions and has been examined in the different subjects covered by the examination. The written examination also makes the candidate realize that the company places great stress on his being instructed and informed on the different subjects treated. His company has recently compiled a handbook of electrical equipment with diagram charts for the use of inspectors, starters and motormen, to give them an idea of the mechanical working of the machinery of the car. It had also compiled a book of questions covering all the rules, which motormen will have to learn before they are permanently appointed.

W. R. W. Griffin, East Liverpool, Ohio, said that he had also

made it a point to impress the men with the fact that their work was a dignified one. The wages paid motormen and conductors compare very favorably with those paid bank clerks, for instance, and they should be made to feel that it is worth their while to engage in the work as their life work.

Mr. Lovell, Pennsylvania Railroad, said that when his company installed electric power between Atlantic City and Philadelphia the men had rather looked down upon the new motive power, but he had secured their interest in it by appealing to their loyalty. Recently, in talking to a motorman on the line who had been a locomotive engineer, and all of the motormen on the line had formerly been locomotive engineers, he said: "Mr. Lovell, the only trouble with this thing is that it did not start early enough. If it had started twenty years ago, I should have lived twenty years longer." That illustrated the changed opinion of the men in respect to electric operation.

L. H. Palmer, New York, said that the Metropolitan Street Railway Company had been using graphic methods for educating the men, with excellent results. It had recently found that some men did not know how to use the telephone. Every man must now pass an examination on how to use the telephone. He understood that the Chicago City Railway had prepared a very simple diagram showing how a man should handle an air brake. In Boston a letter of advice is issued to new motormen and conductors; it was so good that it has been adopted almost verbatim in New York. He thought that in some large cities it might not be practicable to conduct written examinations. Instead, in New York, the men are obliged to attend meetings once a month, in which all the rules are carefully reviewed. He had found that the best way of making the employees able to understand and appreciate the rules. It was also important that the men should realize that the position of motorman was a very responsible and important one and that they should be interested in and proud of their work.

Upon motion of Mr. Shannahan, Baltimore, the report was then accepted and the committee was continued for another year.

### SCHEDULES AND TIMETABLES

The report of the committee on the construction of schedules and timetables was then presented. It was read by the secretary and is published elsewhere in this issue.

Prof. A. R. Richey, Worcester, said in opening the discussion on schedules and timetables that he had recently been engaged in standardizing the timetables of a large city and suburban system in the eastern part of Massachusetts. The methods followed were largely those outlined in the committee's report. He had found that the definitions for "straight" and "swing" runs and one or two other expressions in common use varied widely on different roads. He hoped that the committee would continue the work of preparing definitions and thought that the terms "tripper" and "extra" should also be defined. He had a pretty good idea in his own mind as to where the line should be drawn between a "tripper" and an "extra," as he supposed all had, but thought that if these distinctions should be brought together, they would vary almost as widely as the distinctions between "straight" and "swing" runs. He would also like to have some specific term to indicate the difference between two different methods of determining schedule speed. One is to include the lay-over time; that is, to divide the total number of miles run by the total number of car hours per day. The other is to divide the number of miles run per trip by the time used to make the trip excluding the lay-over time. He thought that possibly the expression "schedule speed per trip" was as good as any which he knew at present to describe the speed when the lay-over time was excluded. Another important matter was to determine the best kind of timetable for suburban service. The timetables of city roads usually gave the evening time at each terminal of the road. But, as those lines where the headway is frequent were usually double track, there was no question about designating meeting points. With single track

suburban line, however, there may be some variation in meeting points.

J. K. Punderford, New Haven, brought up the question of the design of timetables, and said that he was partial to the graphical timetable, especially as his company had electrified steam lines and lines where electric cars moved under half hour or hour headway on the same road with steam trains with unequal headway. He asked whether the committee had made any investigation of that point.

N. W. Bolen, Newark, said that the committee had asked in its data sheet whether interurban companies preferred the construction of timetables by diagram or by the string method, but could not get any replies, so had confined the attention this year largely to city timetables. He thought that the committee next year should go more deeply into the subject of interurban timetables.

T. C. Cherry, Utica, said that as an aid to constructing timetables the transportation department on his road required the conductors to report on each trip the number of standing passengers as well as delays in suburban service of over five minutes and in city service of over two minutes. These reports are separate from the trip cards and are filed in the main office.

J. E. Duffy, Syracuse, thought the most satisfactory way of counting passengers was by special inspectors. Diagrams showing these counts are often of value when complaints are made as to the character of service in any particular locality and also in the construction of timetables. He agreed with the committee that the tripper service should be shown on the regular timetable as far as possible because it allowed the carhouse foreman to assign the same men to the same trippers every day. He realized, of course, that this was impossible under all conditions, because more tripper service was needed on some days than on others. But carhouse foremen were more particular in sending out extra service if it was regularly incorporated in the timetable. A very important point was that the construction of timetables and the duty of their periodic revision should be in the hands of one man. Possibly, only large roads can afford the expense of a special man for this work. But the smaller roads can assign the work to some man as a part of his duties.

E. L. Hibbard, Toronto, said that his company had a very heavy morning rush and heavier evening rush, with small normal traffic during the day, so that the transit problem was a difficult one to handle in Toronto. His company had constructed its timetables in such a way that the extra men required are reduced to a minimum. Each division superintendent and each inspector has blue-printed copies of the timetables so as to be familiar with the roads and the times that cars should pass certain points. The company also has roadmasters, to check up the travel and running time of the cars. They believed that a counting staff attached to the transportation department was a more reliable means of ascertaining the traffic on a line than conductors' reports, and they had such a staff. The records compiled by the counts thus secured were tabulated in chart form for the convenience of the company, and these charts had proved very valuable.

Mr. Bolen, Newark, speaking for the committee, then said that it had been impossible for the committee to include in its report all of the data compiled during its investigations, but that these data were on file in the secretary's office, and also a large diagram in which the principal data had been charted. This information was available to the member companies through the secretary.

H. C. Page, Worcester, thought that it was impossible to eliminate lay-over time entirely, unless a very large number of cars were run. If there was no lay-over time, it would be difficult to keep cars on schedule time, and this was a point which the public was demanding to a constantly increasing degree. He agreed with the recommendations of the committee in regard to methods of counting passengers. In

regard to conclusion 6 of the report, that is, on the method of selecting runs, a rather peculiar system was followed in Worcester. The men on each division had the right to bid for any particular run. These bids had to be in writing and placed in a box provided for that purpose. The older men were given the preference of runs in the method of selection.

Mr. Bolen, Newark, said that on the Public Service Railway the selection of runs was made by posting the timetables in the car barn and the men make their selection in the order of their seniority.

Mr. Palmer, New York, said that it was advisable for the larger companies to study the possibility of short service of cars operated between intermediate terminals. This could be done by studying the traffic load line. He believed in making passenger counts by a special force composed of men who do that work continually.

Upon motion of Mr. Cherry, the report of the committee was adopted.

#### MISCELLANEOUS BUSINESS AND ELECTION OF OFFICERS

President Todd then referred to the proposed change in the constitution and by-laws in regard to the change in the name of the association. Upon motion of Mr. Page, the change was approved.

President Todd then called for the report of the nominating committee.

Mr. Allen, Utica, in presenting the report, said that before doing so he would like to make a short explanation. He said that at the Denver convention four officers or members of the executive committee were retired. This year the committee recommended retiring five officers or members of the executive committee, leaving three in position, and these, the committee proposed, should be promoted. The committee had tried to recognize geographical distribution so far as it could in these selections, to name gentlemen who had served on committees, and to include four general managers, three superintendents and one passenger man. He then read the nominations of the committee, which were as follows:

For president, H. C. Page, general manager, Worcester Consolidated Street Railway, Worcester, Mass.

First vice-president, J. N. Shannahan, general manager, Washington, Baltimore & Annapolis Electric Railway, Baltimore, Md.

For second vice-president, C. E. Learned, superintendent of inspection, Boston Elevated Railway, Boston, Mass.

For third vice-president, Dana Stevens, Cincinnati Traction Company.

For members of the executive committee: C. D. Emmons, general manager, Ft. Wayne & Wabash Valley Traction Company, Ft. Wayne, Ind.; J. B. Sullivan, general supervisor, Chicago Railways Company, Chicago, Ill.; J. W. Glendening, general passenger agent, Saginaw & Bay City Railway Company, Bay City, Mich.; A. Gaboury, superintendent, Montreal Street Railway, Montreal, Can.

These officers were unanimously elected, and President Todd appointed Mr. Allen to escort President-elect Page to the chair.

President Page, upon being installed, expressed his appreciation of the honor which had been extended to him in his election and solicited the support of the members in making the work for the coming year a success.

Mr. Allen then moved a resolution of thanks to the officers of the association for their efficient work during the past year. This motion was seconded and carried. Mr. Page then announced that the meeting was adjourned.

The Acme Indicator Company, Cleveland, Ohio, has recently received an order for the entire equipment of the Hudson & Manhattan Railroad, New York, and for the partial equipment of the Metropolitan West Side Elevated Railway. The company's register shows a large number of railway managers who are investigating the matter.

## MEETING OF THE AMERICAN ASSOCIATION

The final meeting of the American Street & Interurban Railway Association, now the American Electric Railway Association, was held yesterday afternoon, at the Greek Temple on the Pier. President Shaw called the meeting to order at 2.30 p. m. The report of the committee on education was then presented. The following papers were then read: "Franchises," by Charles V. Weston, president South Side Elevated Railroad, Chicago, Ill.; "What Interurban Railway Companies Do for the Public," by Joseph A. McGowan, secretary and treasurer Terre Haute, Indianapolis & Eastern Traction Company, Terre Haute, Ind., and "Taxes and Licenses," by Guy E. Tripp, Stone & Webster, Boston, Mass.

The report of the committee on education and the two first papers mentioned are published elsewhere in this issue. The paper by Mr. Tripp will be published in tomorrow's.

The president then called for the report of the committee on nominations. This was presented by the chairman of the committee, C. Loomis Allen, who reported as follows:

For president, Arthur W. Brady, president Indiana Union Traction Company, Anderson, Ind.

For first vice-president, Thomas N. McCarter, president Public Service Railway, Newark, N. J.

For second vice-president, George H. Harries, second vice-president Washington Railway & Electric Company, Washington, D. C.

For third vice-president, Charles N. Black, vice-president and general manager United Railroads of San Francisco, San Francisco, Cal.

For fourth vice-president, W. G. Ross, managing director Montreal Street Railway.

These officers were unanimously elected. President Shaw called President-elect Brady to the chair, which invitation he accepted.

President-elect Brady then made a short address, in which he spoke of his appreciation of the high honor which had been conferred upon him. He referred to the presence at the meeting of H. H. Littell, who had issued the call for the first meeting of the association in 1882, and was elected at that meeting as the first president of the association. Only 27 persons were present at that meeting, and Mr. Brady drew a striking comparison between the condition of the industry and the association at that time and at present. In conclusion, he stated that he thought the best evidence of his appreciation of the honor of his election as president which he could afford was to follow in the footsteps of President Shaw and his other predecessors.

### RESOLUTIONS

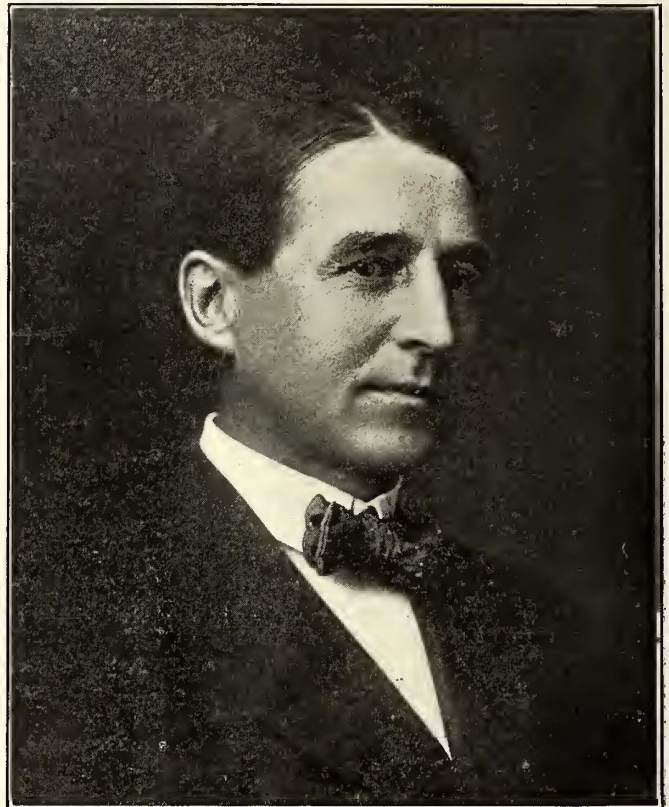
The secretary then read the report of the committee on resolutions. In the first resolution the thanks of the association were extended to all members of the association and its affiliated associations for the preparation and aid in preparation of the reports and papers presented at the meeting. The second expressed the appreciation of the association for the disinterested and unselfish labors of the committees on active and associate membership. The third extended the thanks and appreciation of the association to the Manufacturers' Association for the exhibits and entertainment provided at the convention. The fourth extended the thanks of the association to the technical press for its wise support and careful attention to the broad development of the electric railway art and to the problems confronting the various properties. The fifth referred by name to those connected with the industry whom death had taken during the year and reported the sense of loss which the association and the industry had sustained in their death.

H. H. Littell, Buffalo, then offered a resolution thanking Mr. Shaw for his able and efficient management of the association and for the work he had done in the interests of the association and for the fair and impartial manner in which he had discharged his duties as presiding officer.

Upon motion, the meeting then adjourned.

## THE NEW PRESIDENT OF THE AMERICAN ASSOCIATION

Arthur W. Brady, president and general counsel of the Indiana Union Traction Company, who was elected president of the American Association at the meeting yesterday afternoon, although a young man, is one of the foremost interurban railway executives in the United States. Mr. Brady was born in Muncie, Ind., in 1865 and received his early education in the public schools of that city and in a private school at Litchfield, Conn. Entering the academic department of Yale University he graduated in the class of 1887 and then returned to Ft. Wayne, Ind., where he read law for one year. In 1888 he entered the law school of the University of Michigan and graduated in 1889. He began the practice of law in Muncie, Ind., immediately after graduation and remained there until 1902. During the early years of his practice he was elected Mayor of the city and held that office for four years. His



Arthur W. Brady, President-Elect American Electric Railway Association.

first experience in electric railway work was in the capacity of counsel for the Citizens' Street Railway of Muncie, which was subsequently acquired by the Indiana Union Traction Company. He was also employed as counsel by the Union Traction Company of Indiana, which at that time was actively engaged in the construction and extension of interurban lines, and he was also retained as counsel by the Muncie, Hartford & Ft. Wayne Railway, now the Bluffton division of the Indiana Union Traction Company.

When construction work was begun on the Indianapolis Northern Railway, which is now the Indianapolis-Noblesville division of the Indiana Union Traction Company, Mr. Brady was elected secretary of the new company and he moved to Indianapolis, where the offices of the company were located. Shortly after the organization of the Indiana Union Traction Company in 1903 Mr. Brady was elected its vice-president and in 1904 he was elected president. At that time the general offices of the company were removed to Anderson, Ind., and Mr. Brady left Indianapolis to take up his residence in Anderson.

Mr. Brady is a director of the Ohio Electric Railway and has been closely associated with the management of the Terre Haute, Indianapolis & Eastern Traction Company and the Indianapolis Traction & Terminal Company, although he has never had any official connection with either of these companies.

At the Columbus meeting in 1906 Mr. Brady was elected third vice-president of the American Street & Interurban Railway Association, in 1907 he was elected second vice-president, and in 1908 he was advanced to the office of first vice-president, which he has held for two years.

The company of which Mr. Brady is president is one of the largest interurban systems in the United States and Mr. Brady's long connection with it in an executive and legal capacity has afforded him wide opportunities for studying the many problems connected with interurban railway management and policy. His close connection with a number of city systems has also given him an insight into the problems peculiar to urban transportation companies. Mr. Brady is an excellent presiding officer and the association is to be congratulated upon having selected as its president a man of such marked executive ability, long experience and wide acquaintance in the electric railway field.

### A CANADIAN TEA PARTY

A notable feature of the convention has been the large number of Canadians. On Wednesday evening some 22 faithful sons of the Maple Leaf assembled in one of the cafés on the Boardwalk to prove that good fellowship is not confined to Yankees. Among those who were on hand to give and take enjoyment on this occasion were the following; Thomas H. McCauley, manager and electrical engineer, Calgary Street Railway; Wilford Phillips, general manager and chief engineer, Winnipeg Electric Railway.; R. R. Knox, traffic manager, Winnipeg Electric Railway; L. Garrett, master mechanic, Winnipeg Electric Railway; C. L. Wilson, assistant general manager, Toronto & York Radial Railway; A. M. Smith, master mechanic, Toronto & York Radial Railway; Walter McRea, superintendent, motor, truck and mechanical department, Toronto Railway; A. Gaboury, superintendent, Montreal Street Railway; D. E. Blair, superintendent rolling stock, Montreal Street Railway; and A. J. McDonald, superintendent of city division, Quebec Railway, Light & Power Company.

### THE DIXIE SPREAD

The second annual banquet tendered to various executives of Southern street railway properties by the Southern Street Railway Supplymen, held at the Marlborough-Blenheim, was a splendid success. Plates were served for 52. The affair was informal, the object of the dinner being to bring the purchasers and the salesmen in closer affiliation. Quite a number of very distinguished gentlemen were present. The well-known and successful operator, T. W. Passailaigue, superintendent of railways, of Charleston, S. C., acted as toastmaster. The following railway men responded to toasts: T. H. Tutweiler, Memphis; Percy Warner, Nashville; D. A. Hegarty, Little Rock; M. S. Sloan, Birmingham; H. J. Dressel, New Orleans; D. C. Frost and A. T. Powell, Lynchburg; J. W. Hancock, Roanoke; C. A. Avant, Birmingham; W. W. S. Butler, Newport News; Mr. Embry, of Ford, Bacon & Davis, and J. T. Nyman and W. J. Masee, of Macon.

The following supplymen also spoke: George W. Watts, Electric Service Supplies Company; C. K. King, vice-president Ohio Brass Company; Sterling G. Turner, manager Atlanta Car Wheel & Manufacturing Company; Sam (Red) Watkins, Atlanta Car Wheel & Manufacturing Company; Ralph Sanger, of Wonham, Sanger & Bates; Fred L. Markham, The J. G. Brill Company, and W. A. McWhorter, Galena Signal Oil Company.

Other railway and supplymen who attended the gladsome feast included W. C. Devane, Savannah; E. A. Longmire, Norfolk; T. H. Rabe, Birmingham, and E. W. Alexander; T. D. Masee, Macon; C. A. Smith, John D. Chambers and C. H. Matthews, Atlanta; D. L. Proctor, Athens; Roy V. Collins and H. A. Goode, Wonham, Sanger & Bates; George E. Willis and J. E. Slimp, Ohio Brass Company; W. M. Beisel, National Brake & Electric Company; R. E. Holt, American Brake Shoe & Foundry Company; A. Y. Evans, More-Jones Brass & Metal Company; Lee Watson, Allis-Chalmers Company; George E. Morton and Jack Thurston, Galena Signal Oil Company; H. F. Cameron, Westinghouse Electric & Manufacturing Company, and T. C. Gibboney.

A rising toast was given in honor of Patrick Calhoun, president United Railroads of San Francisco, who was absent. After the close of the banquet the party attended the vaudeville show in a body.

The success of this banquet was largely due to the efforts of Messrs. Turner, Markham and Willis.

### THE A. S. I. R. M. A. GOLF CHAMPIONSHIP

The prize winners of the men's golf tournament, held at the Atlantic City Country Club yesterday afternoon, were R. E. Hamilton, Stone & Webster, Boston, Mass., who was three down to Colonel Bogey; T. J. Mullaney, Third Avenue Railroad, New York, who was four down, and J. W. Rollins, Jr., who was also four down. Mr. Mullaney and Mr. Rollins drew lots for second and third places. W. L. Conwell, with 89, won the prize for the low gross score. The contest was match play against bogey, with handicaps based on the handicaps allowed by the home clubs of the contestants.

### LADIES' AFTERNOON AT THE COUNTRY CLUB

Ladies' afternoon at the Atlantic City Country Club lured about 150 ladies of the convention from the diversions of the Boardwalk. Special automobiles took the guests out and back. Tea, lemonade and sandwiches were served in the club house. There were 36 entries in the clock golf putting contest and the winners were Mrs. J. W. Rollins, Jr., with a score of 19; Mrs. F. E. Donohoe, whose score was 20, and Mrs. R. E. Belknap with 21. The committee in charge of the afternoon entertainment consisted of Messrs. Garland, Berry, Oesterreich, Hegeman, Elmquist and Meeter.

### THE JAPANESE TEA

About 120 ladies of the convention attended the Japanese tea given yesterday afternoon in the Solarium of the Marlborough-Blenheim. The ladies were served with tea and other light refreshments to the accompaniment of delightful music furnished by a ladies' string quartet. During the course of the afternoon R. J. Owens, vice president of the Whipple Supply Company, rendered several songs which met with long applause. Later T. B. Owens, of the Union Switch & Signal Company, Pittsburgh, entertained the ladies with magic and card tricks.

Each of the ladies was presented with a souvenir in the form of an attractive tray. The Solarium was tastefully decorated and the committee of ladies in Japanese costumes gave a picturesque touch to the occasion. This committee consisted of the following ladies: Mrs. C. Loomis Allen, Mrs. T. C. Cherry, Mrs. W. B. Rockwell, Miss May Hedley, Mrs. W. E. Bartholomew, Mrs. William Wampler, Mrs. W. K. Archbold, Mrs. A. L. Whipple, Mrs. A. J. Pizzini, Mrs. William H. Heulings and Mrs. A. C. Clark. The entertainment committee of the Manufacturers' Association was represented at this function by the chairman, Ross F. Hayes.

C. F. Rice, works manager of the Wason Manufacturing Company, arrived Wednesday evening.

## MEETING OF THE ACCOUNTANTS' ASSOCIATION

At the opening of the Thursday morning session of the Accountants' Association, President Swift announced that he had received a letter from Prof. M. E. Cooley expressing regret at his inability to be present to present an address on the subject "Overhead Charges."

M. R. Boylan, general auditor, Public Service Railway, Newark, N. J., then read a paper on "Collection and Auditing of Receipts of Prepayment Cars." An abstract of this paper is published elsewhere in this issue.

J. H. Neal, Boston Elevated Railway, said it appeared to him that the use of a box with compartments was unnecessary. For years the conductor had made the change, placing the fares in his pocket, and turning in a record at the end of the day on a time card which was compared with a reading taken by a starter. Plenty of fare boxes would receive the money deposited, register it and allow it to pass into a compartment where the conductor could receive it, and thus continue easily to make change. It was a sufficient check to have such a box read by the starter as well as by the conductor, and very much more convenient to have the conductor turn in his money with the day card as in the past. This would require no change in the general system of accounting. By the use of an audible signal in the fare box, the advantage furnished by the register was given because an audible signal of that character could be heard easily by inspectors on the car. The only feature of the present arrangement with a register which would be absent with the fare box would be that the inspector on the inside of the car could not tell by the register the number of fares that had been taken previously. Mr. Neal thought that the compartment boxes provided a rather cumbersome way of handling the cash.

Mr. Boylan stated that in two years' operation his company had not been able to get a registering fare box which would receive the coins of the different denominations, such as pennies, nickels and dimes. There were a number of devices on the market that would receive a 5-cent piece.

Mr. Neal said that if the money was expelled from the box to the conductor, he could make change easily. Several boxes were constructed so that they would not receive a coin as large as a 25-cent piece. The conductor upon observing that a person had inserted a coin of that size would make the necessary change instantly. If a person should tender a 10-cent piece, the conductor would give two 5-cent pieces, one of which would be dropped in for a fare. If, however, a person who was unfamiliar with the arrangement should drop a 10-cent piece in a fare box, change could be given on one device. Mr. Neal thought that a method would be adopted whereby a person who dropped a 10-cent piece into a box which was adapted to receive only a 5-cent piece would be given a rebate check which might be cashed at the main office. Several devices worked well in receiving and assorting money. These devices registered 1, 5 and 10-cent pieces, and automatically sorted them. These boxes had audible signals so that an inspector on the inside of the car could count fares collected by this method.

Mr. Boylan said that his company returned the small currency daily to the banks, which supplied it to the different stores and concerns.

C. E. Thompson, Chicago & Milwaukee Electric Railroad, said that it had been the practice of his company not to accept coins which the bank would not take. Mr. Boylan said it was not the purpose to have a fare box that would take mutilated coin. The idea was to have one that would take coins a little larger than uniform size. The banks would accept coins of that kind.

C. S. Mitchell, Pittsburgh Railways Company, said that a few months ago about 125 of the compartment fare boxes were installed on double-truck cars in Pittsburgh. Before installation of these boxes a visit was made to the headquarters

of the Public Service Corporation and practically the same general details for handling money that were outlined in Mr. Boylan's paper were adopted in Pittsburgh. The company had recently ordered 100 more boxes and now had under consideration the advisability of installing some kind of a fare box on all the cars. At the present time the company was not in favor of the coin-counting box.

W. F. Ham, Washington Railway & Electric Company, said that he was perfectly satisfied that even with the prepayment car it was absolutely essential to have the fare box. Any one who used 25 cents for car fare in Washington usually bought tickets. The company was now following the practice of having reports made to the accounting department whenever any coin larger than a 10-cent piece was passed into a box. This arrangement would scarcely be practicable for companies that did strictly a cash fare business. The register on the box was not satisfactory yet. It was not necessary to use a compartment box. The fare register was portable and every conductor secured his fare box at the time he started his rounds and turned it in when he finished. The objection to the register was that the number of fares in the box did not agree with the number rung up.

Mr. Neal said that the register on the inside of the box would probably disagree also. Mr. Ham said that was not necessarily so. In registering the fares directly in the box there was more chance of making a mistake than if they were rung up on the register. While the company had not abandoned the idea of making the register operate, he could not say that it was considered satisfactory. It was an open question as to the best method of registration. Of course, it was likely that some of the difficulties were due to defect in the register.

Thomas P. Kilfoyle, auditor, Cleveland Railway, said that the majority of the fares in Cleveland were paid by ticket and the company had not yet been able to find a box that would take care of tickets. The Cleveland conductors were supplied with small slips and when a passenger inserted 10 cents or 25 cents the conductor wrote the passenger's name, the amount deposited and the car number and placed the slip in the box, notifying the passenger to go to the main office for a refund.

Mr. Ham said that his company had just started to record all tickets that were not good but were passed into the fare boxes and accepted by conductors.

Mr. Boylan said his company had a scheme similar to that outlined by Mr. Ham, but it insisted that the conductor make a note on his day card of any foreign coins or tickets deposited in the fare box. When any foreign tickets or coins were found by clerks in the cashier's department notes of the fact were made.

H. J. Davies, Cleveland Railway, stated that the Cleveland franchise ordinance contained a provision that whenever any rate of fare requiring the use of tickets was enforced a reissuable ticket should be used. That provision was inserted because at the time of passage of the ordinance a metal ticket adapted to use in the fare box installed by the Municipal Traction Company was used. It was a serious question now as to the sort of tickets to be used if the rate of fare should be so changed as to necessitate the sale of tickets. What was a reissuable ticket? Could a paper ticket be construed to be a reissuable ticket? As the ordinance was originally drawn by the city, it required a metal ticket. Upon objection by the company to the limitation of a metal ticket, the word metal was changed to reissuable. The company had not sold any of the metal tickets since it resumed possession of the property.

### MEETING OF NATIONAL ASSOCIATION OF RAILWAY COMMISSIONERS

Mr. Ham then presented the report of the committee appointed to attend the meeting of the National Association of Railway Commissioners on December 16 to 19, 1909. Mr. Ham and S. C. Rogers attended the meeting as the delegates of the association. The report said in part:

(Continued on Page 825.)



## REPORT OF COMMITTEE ON INTERSTATE COMMERCE COMMISSION AFFAIRS\*

BY GEORGE H. HARRIES, CHAIRMAN; C. S. SERGEANT AND  
FRANK R. FORD.

The "reign of economic terror" through which we have struggled and are struggling is not the destructive era which legislative propositions might have made it. Bad as many conditions are, they are better than they would be had not sober sense frequently and successfully intervened when the vicious, the uninformed, or the unthinking framed and presented legislative demands and suggestions and sought—subtly or vociferously—to compel place for them among the effective statutes.

Computation as to the output of controverting energy is impossible, but some idea of its retarding volume may be had from the bill records of the United States Senate and House of Representatives for the first and second sessions of the Sixty-first Congress.

The committee files are loaded with exhibits which historians will study with exceeding interest in years to come. We, however, must do our studying to-day.

The House of Representatives was the birthplace of 56 bills which relate to interstate commerce, while the Senate's conservatism was shown by its affording temporary shelter for only 18 legislative infants of the interstate commerce kind. Of the total of 74, but four became law—H. R. 17,536, "an act to create a commerce court, and to amend the act entitled 'an act to regulate commerce,' approved Feb. 4, 1887, as heretofore amended, and for other purposes;" H. R. 5702, "an act to supplement 'an act to promote the safety of employees and travelers upon railroads;'" H. R. 3649, "an act requiring common carriers engaged in interstate and foreign commerce to make full reports of all accidents to the Interstate Commerce Commission, and authorizing investigations thereof by said commission;" and H. R. 24,375, "an act to amend an act entitled 'an act to regulate the construction of dams across navigable waters,'" approved June 21, 1906.

Fourteen bills—nine in the House and five in the Senate—propose to deal with the rate question in one form or another. The characteristic features of some of these found place in the Commerce Court act, but the more drastic theories did not command the support of the majority. Of the unsuccessful efforts a conspicuous example is that found in S. 3776, introduced by Senator Cummins, of Iowa, which sought to compel a carrier to continue to do a portion of its business at a loss (if so ordered by the Interstate Commerce Commission) provided its entire business produced a net result which would enable it to keep alive. The proposed proviso is sufficiently interesting to be quoted, as follows:

"Provided, however, That no court shall enjoin, set aside, annul, or suspend any order or requirement of the commission determining and prescribing the just and reasonable rate or rates, charge or charges to be hereafter observed, unless it is alleged and proved that all the rates of any such carrier, as applied to all its business, will be, by reason of the order or requirement of the commission, insufficient to enable the carrier to earn upon all its business and for its whole service the compensation protected by the Constitution of the United States against legislative act."

Dealing specifically with organization and capitalization there were nine bills—seven House, two Senate.

Of these the most notable is the one (S. 3720) introduced and strongly supported by Senator Newlands, of Nevada, in which it is provided that complete control of capitalization of existing or projected lines; the character, issue, marketing or decrease of all forms of securities; records, accounting and reports; corporate merger or dissolution; differences with employees; the establishment of an accident and insurance fund

for the benefit of employees, and the payment of dividends—if anything happens to be left—shall be vested solely in the Interstate Commerce Commission. The States, however, are graciously and specifically permitted to continue interstate control and taxation, but "the Interstate Commerce Commission shall hold conferences from time to time with the regulating power of any State with a view to such harmonious adjustment and regulation of State commerce and interstate commerce as will protect the public against abuses or extortion, and the railroads against inadequate returns upon their investment, and as will promote the efficiency of such corporations as common carriers. With such end in view the said commission shall call and hold at least once each year a conference with the railroad commissioners of the several States, and with such other State officers having any duty of supervision, taxation, or regulation of railroads within their respective States. Such conference shall be held in the District of Columbia, and the presiding officer at such conference shall be the chairman of the Interstate Commerce Commission, or some other member of said commission designated by its chairman." The comprehensive and armor-plated character of federal control set forth in the measure is made quite clear in the sections which deal with service or disability pensions for employees and with dividends. The former provides that "the conditions entitling employees to pensions, the amount and time of payment, the investment of the fund, the disbursing of the same, and the entire management thereof shall be under rules and regulations to be made, and from time to time amended, by the Interstate Commerce Commission." The latter reads as follows:

"That no corporation organized under this act shall pay or distribute to its stockholders in any form, during any one year, a dividend or dividends exceeding in total amount seven per centum upon its capital stock without the consent of the Interstate Commerce Commission. If, after the payment by such corporation of its operating expenses, maintenance, improvements and betterments, its taxes, its interest on bond or on other indebtedness, and its contribution to the accidents fund, there shall be a surplus over and above the amount necessary to pay such dividend of seven per centum per annum, such surplus shall be reported to the Interstate Commerce Commission, which may direct the same to be applied, in whole or in part, to betterment of the road or equipment, or to extra dividends, or to a guaranty fund in the Treasury of the United States against future inadequacy of earnings or reduction in dividends, such fund to be controlled and invested under the direction of the Interstate Commerce Commission."

In order that there may be no doubt (if there is room for doubt) about the federal power Sec. 26 makes sweeping provision "that the Interstate Commerce Commission shall make and from time to time alter, amend, or repeal rules necessary for the complete enforcement of the provisions of this act."

Then as a closing assurance this measure—which was declared to be in the interest of a permanent understanding between the federal government and interstate corporations—winds up in Sec. 27 with this invitation to future congresses: "That this act and all franchises required under it shall be at all times subject to amendment, alteration, or repeal by act of Congress."

Bills aiming to prevent overcapitalization and the consolidation of interstate carriers were not wanting, each proposing to increase the powers of the Interstate Commerce Commission so that its control over the issue of securities would be complete.

Occasionally appeared a suggestion that ignored all thought of control; that was wholly prohibitive. One of these, H. R. 13,885, introduced by Mr. Russell, of Texas, provides that "it shall be unlawful for any corporation engaged in interstate or foreign commerce to purchase, acquire, own or control itself, or through its agents or employees, any stock in any other corpo-

\*Report presented at the annual meeting of the American Street & Interurban Railway Association, Atlantic City, N. J., Oct. 10-14.

ration engaged in interstate or foreign commerce"; furthermore, that "it shall be unlawful for any two or more corporations engaged in interstate or foreign commerce to have the same officers or board of directors; but each corporation engaged in interstate or foreign commerce shall have its own separate and distinct officers and board of directors, and they shall not be chosen from the officers, directors, stockholders, agents, or employees of any other corporation engaged in interstate or foreign commerce where such other corporation is engaged in the same kind of business or is, or may be, in the remotest degree a competitor of the corporation whose officers or directors are to be chosen."

In another section it is proposed to make it unlawful "for any trust, or combination, or association of persons in restraint of trade, or a monopoly, to use the United States mail for any purpose whatsoever." Finally there is cheering insistence that "any corporation, combination or association of persons in the restraint of trade or monopoly violating any of the provisions of this act shall be fined in any sum not exceeding \$25,000 for each separate offense, and any person violating any of the provisions of this act shall be, for each separate offense, fined in any sum not exceeding \$10,000 or imprisoned in the penitentiary not exceeding five years, or both such fine and imprisonment in the discretion of the court."

With respect to the vital topic of security issues, Congress came to the conclusion that it was without sufficient information; so it laid aside both prohibitory and permissive bills, and in Sec. 16 of the Commerce Court act authorized the "President to appoint a commission to investigate questions pertaining to the issuance of stocks and bonds by railroad corporations, subject to the provisions of the act to regulate commerce and the power of Congress to regulate or affect the same." That commission has been appointed. It is composed of President Hadley, of Yale; B. H. Meyer, professor of political economy at the University of Wisconsin, chairman of the Wisconsin Railroad Commission and representative of that commission at the national capital; Frederick N. Judson, of St. Louis who was counsel for the United States in some prominent rebate litigation; Walter L. Fisher, of Chicago, who was city attorney and a potent factor in the settlement of the Chicago street railway controversy, and Frederick Strauss, of New York, well known as a banker and economist.

Inseparably a part of the securities-issue problem is physical valuation. Two bills—S. 596 by Senator La Follette and H. R. 26,986 by Mr. Madden, of Chicago—providing for investigation and report on the value of physical property of interstate carriers, are in committee. One bill—S. 4724, by Senator Crawford—goes a step further, for it authorizes the Interstate Commerce Commission to determine the cash value of the property and franchises. In view of the reasonable certainty that some such measure will be pressed vigorously in the near future, these three bills will be found with the recent enactments in the appendix to this report.

Prospective controversies affecting interstate commerce were prospectively met by four bills, on none of which was there any action. A typical investigation measure is H. R. 12,376—by Mr. Townsend, of Michigan—which proposes to vest in the President authority to appoint a special commission of seven to take testimony and to report to him. The approved findings and recommendations would be forwarded to the principal parties to the controversy and to Congress.

Of another variety is H. R. 13,905—by Representative Steenerson, of Minnesota. This—as an amendment to "an act concerning carriers engaged in interstate commerce and their employees"—might easily, if enacted into law and declared to be effective, produce boundless confusion. It provides "that whenever controversies between a carrier subject to this act and its employees shall be of such nature and magnitude as to prevent or obstruct, or threaten to prevent or obstruct, the operation of its railroad or any

substantial part thereof, and thereby to inflict, or threaten to inflict, upon the localities and communities and general public served by such carrier great and irreparable injury, the Attorney-General of the United States, if satisfied that such controversy cannot be adjusted by mediation and conciliation, or by arbitration, may file a bill or bills in equity to prevent the commission or continuance of the public mischiefs caused or threatened as aforesaid in any circuit court or courts of the United States within whose circuit or circuits said carrier may do business. Said bill or bills shall pray for the appointment of a receiver or receivers of the road and property of said carrier pending the continuance of said controversy, and for all such other orders and decrees as may be necessary to protect and conserve the public interests involved and to secure the use and operation of said road and property in aid and promotion thereof. The defendants of said bill shall be the carrier and the employees directly engaged in said controversy, together with all known corporations, organizations, or individuals participating therein, or aiding or abetting either said carrier or said employees: Provided, however, That when said parties are very numerous, so that the joinder of them all would be impracticable or highly inconvenient, it shall be sufficient to join so many as will adequately represent all the different interests involved. The said circuit court or courts of the United States are hereby given full jurisdiction in the premises, and any orders or decrees under said bills may, in the discretion of the court, be directed to all said parties participating, aiding or abetting, as aforesaid, whether actually named or joined as defendants or otherwise, and shall be operative upon all, whether so named or joined or otherwise, having actual notice thereof: Provided, further, That nothing in this act contained shall be so construed as to enlarge the remedies at law and in equity in courts of the United States now enjoyed by private persons, firms or corporations, except as specially provided in sections four, six, seven and eight thereof; and that in cases of controversies between interstate commerce common carriers and their employees concerning rates of wages and terms of employment involving the public interests and threatening irreparable public injury, no statute of the United States shall be construed as permitting the equitable jurisdiction of the courts of the United States to be invoked except by the Attorney-General of the United States."

Relief associations were touched upon only in one bill—H. R. 22684, by Mr. Cox, of Indiana—in which it is declared to be "unlawful for any railroad engaged as a common carrier in interstate commerce between the States or between the States and any Territory of the United States or between any States and the District of Columbia to compel their employees to enter into any voluntary association organized and conducted by said railroads for and on behalf of the employees of said railroad, and any and all contracts made by and between any railroad engaged in interstate commerce and their employees whereby said employees are compelled to contribute to the support of said relief association and exempting all railroad companies from liability on their part to their said employees are hereby declared to be unlawful."

Of "safety" bills there were 16 in the House and two in the Senate. They deal with equipment details; block systems; the hours of labor; car construction; the manning of trains; the examination and licensing of telegraph operators, with power to the Interstate Commerce Commission to fix the operators' compensation; the establishment and maintenance of safe clearance between cars and structures; and the equipment of cars with first-aid devices (all employees to be so instructed that they "may become familiar with the application and use of such first-aid equipment;") while one proposes a world-wide prize competition (under the inevitable auspices of the Interstate Com-

merce Commission) to determine the best device or devices for the prevention of collisions, wrecks, etc. Of these bills two—specifying certain freight car construction requirements—became law.

Of five bills requiring accident reports one—now effective—became law.

With respect to the ownership of commodities by interstate carriers there were but three bills; two of them aimed directly at express companies.

Eight bills—five House and three Senate—dealing with passes presented only two uncommon features—one making it possible for the carriers to exchange passes for newspaper advertising; the other authorizing the issuance of passes to officers and employees of baggage transfer companies. These are still in committee.

Then there was Representative Mann's very comprehensive bill (H. R. 16,312) in which he proposed a Bureau of Transportation in the Department of Commerce and Labor; the Commissioner of Transportation to hear complaints, to investigate, to report (when necessary) to the Attorney-General, such report to be by him transmitted to the Interstate Commerce Commission. The superintendent would also be vested with supervisory powers over the issue of securities. The passage of the Commerce Court bill covered the ground, however, in what Congress deemed to be a better way.

There was no action as to Representative Sulzer's H. R. 17,411, "To create the Department of Transportation." This proposed to give transportation a definite place in the President's Cabinet and created offices galore, including six assistant secretaries of transportation, six chiefs of bureaus, with chief clerks, examiners, auditors and clerical assistants in sufficient number to make the organization all that a department of the federal government ordinarily is.

While your committee kept careful watch over every legislative suggestion made or discussed at the center of federal government, it naturally devoted the greater proportion of its thought and energy to the Commerce Court bill because it was known that some such measure would certainly become a statute. The hottest corner, for the electric carriers, of an extremely hot fight—a painfully and exhaustively prolonged struggle—was where we had to deal with through rates, general classification and joint rates. There was more than a mere disposition on the part of many of the standard steam roads to prevent through routing of freight over electrically operated roads. The details of the contest are many and discussion thereof would hardly be profitable. Sufficient be it to say that when the act received the approval of the President section 15 contained the following provision: "The commission shall not, however, establish any through route, classification, or rate between street electric passenger railways not engaged in the general business of transporting freight in addition to their passenger and express business and railroads of a different character. \* \* \*"

Another feature of the law which should be given careful consideration by this association is that paragraph of Sec. 6 which provides that on or before the eighteenth day of this month "every common carrier subject to the provisions of this Act shall designate in writing an agent in the city of Washington, D. C., upon whom service of all notices and processes may be made for and on behalf of said common carrier in any proceeding or suit pending before the Interstate Commerce Commission or before said Commerce Court, and file such designation in the office of the Secretary of the Interstate Commerce Commission. \* \* \*". Since the passage of the act there has been much solicitation by attorneys resident in Washington for designation as agents. Some of those seeking the business have offered to accept the responsibilities for a sum so insignificant that the figures are or should be clear indication of inefficiency or lack of standing. Complying with many requests and after conference with the president and other officers of the association, the chairman of your committee gave careful thought to the

agency question, and after duly weighing the relative merits (as he saw them) of possible agents recommended to the president that it was more than advisable—almost essential—that representation of electric carriers before the Interstate Commerce Commission should be centralized, and gave the name of a firm which would undoubtedly render service of the most efficient sort. Up to this time nothing has appeared to show that our member companies are likely to be of one mind with regard to organized action in their dealings with the Interstate Commerce Commission and the Commerce Court. The evils which will surely spring from lack of cohesion in this most important matter must be evident to every official who will give to the subject the thought it deserves.

Since the 1909 convention there has been a great awakening of those who had previously been unmindful of the forward movement of federalization and the consequent decline of local self-government, but the discussion is as yet vague and is minus a well defined objective. After the results of the forthcoming State and Congressional elections are apparent it may easily be that the popular desire—in some parts of the country at least—will be clearly on record.

Throughout the entire term of our national life there has been bitter controversy over the constitutional relationship of the sovereign States and the supersovereign federal power which of necessity they had created. Always the creators have insisted that their creation should be entirely conscious of its artificial construction and its material dependence. Always the created has striven to acquire and retain at least all of the powers—expressed or implied—which the creators wrote into the great instrument that made and keeps us a nation. Always—with only an occasional halt—has there been steady progress of federalization until it has about achieved all that is possible in centralized popular government.

At this boundary line is a problem of the greatest moment to all mankind, the solution of which calls for all that is best in human wisdom.

Those of us who demand a strong government are face to face with those of us who demand that there be even less of interference with the natural rights of the States; while between these two millstones vast and vital property interests are being ground to inequitably diminished proportions. That some of the grinding can be justified affords no comfort to the innocent investor, financier or operator; nor is there any profit to the millions who, while applauding the processes, fail wholly to realize that efficient transportation is as essentially a part of their daily lives as is clothing for their civilization-softened bodies.

That practical socialism has made many strides during recent years is now evident as we essay to assemble for review the active components of disturbance. Widely separated utterances and happenings, seeming to be of trifling importance, were little noticed and soon forgotten. Relatively, they appeared as unimportant as was the fabled request of the camel that he be permitted to warm his nose by putting it barely within the doorway of his sympathetic owner's tent. We were not wholly sympathetic, but we offered no objection to the apparently harmless nose of an "ism" which is, anyhow, more or less in harmony with the general disposition of republican government. We all remember that the camel's head and neck and shoulders were progressively sheltered (with the owner's consent) and that finally the animal occupied all of the tent, having first thrust his humane but thoughtless proprietor into the chilly outer world.

It is now our duty to ask ourselves and our neighbors, "How far is it desirable to extend the practice of socialism?" We have admitted the beauty of the socialistic ideal, and have long had acquaintance with some of its non-ideal performances. We shall see others unless there

be a speedy check. It is a comparatively short march from governmental control to public ownership. Indeed, the latter may some day prove to be the only way out for investors in public service securities. Many of us have many times considered seriously the tremendous applause which has greeted—in recent days—the announcement of the politically prominent favoring “the rights of man rather than the rights of property;” that illogical and class-making war cry which the multitude never analyzes, but which survives and is potent despite the unassailable fact—for which every man will fight—that one of man’s primary and essential rights (under any form of government) is his right to the property he has secured by conquest, by inheritance or by purchase.

A campaign of reason, of education, is the present duty. That there are minor corporate evils to be extirpated—in very few places—is certain, but while we are at work on the desirable extermination let us make known the fact that corporate honesty is the rule, and that we of the transportation agencies have contributed and are contributing in overflowing measure to a national welfare which without such agencies could never have achieved existence. Let us seek to avert the hasty legislative action which is nothing less than revolution. Let us insist that time is an important element of true reform. Let us give combat to those who—did nature accept the theories and practices which they endeavor to force upon us—would shorten to one-half or one-third the period of human gestation.

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### REPORT OF THE COMMITTEE ON EDUCATION.

BY H. H. NORRIS, CHAIRMAN; R. E. DANFORTH, A. S. RICHEY, W. F. KELLEY, J. F. CALDERWOOD, D. C. JACKSON

Your committee on education has now been in existence for three years, and a fair question to ask is, “What has been accomplished in this time?” The committee was created to keep the members of the association in touch with methods for improving the efficiency of employees by direct and indirect efforts to make them more intelligent in regard to their work. The executive committee realized that steam roads, gas companies, manufacturers and others were making more rapid progress in this direction than the electric railroads.

During the period before the next annual meeting after its appointment the committee collected material regarding the practice of companies in other fields and presented it at the meeting. In the following year an effort was made to interest the members in a cadet or apprentice system. Last year correspondence was conducted relative to the introduction of a correspondence course for bright young men in the employ of the member companies. The plan was laid before the membership by means of a circular letter and considerable enthusiasm was manifested. The members stated that at the start they would put from 500 to 1000 young men into such a course if it was established. The committee considered all the details of the proposed plan and reported these to the last annual convention. The matter was referred to the executive committee for action during the past year. The committee has held itself in readiness to carry out the wishes of the executive committee, but under the circumstances it could take no further initiative in the matter until instructions from the executive committee were received.

At the request of the president, the chairman of the committee attended the midwinter conference of the association in New York city to be prepared to give the executive committee any desired information regarding the work of the committee. Mr. Danforth, of the committee, was also in attendance. Mr. Danforth and the chairman were requested to present a working plan to the executive committee, which they did. The plan was as follows:

That several, say five, member companies within easy

reach of one another be requested to assist in some experimental work by the committee. The committee proposed to ask each of these companies to select five bright young men in their employ to form an A. S. I. R. A. correspondence class. These boys were to be furnished by the committee with questions, sheets, and instructions along the lines already suggested. That is, the committee was to furnish questions based on the surroundings of the young men, who were to be educated in the terms of their environment. The committee proposed to engage the part-time service of a young man of the necessary experience to visit the classes now and then and become acquainted with actual conditions surrounding such a course. It was proposed that the association bear the entire expense of this preliminary work and for this purpose an appropriation of \$500 was asked. The members of the committee could not devote the necessary time and energy to do this work, hence the request for the above amount. As the complete scheme contemplates the eventual employment of an educational secretary, the proposed expense was considered by the educational committee to be reasonable and expedient. The executive committee took the suggestions under consideration, but did not deem it wise to make the appropriation at the time. The committee has, therefore, taken no further steps while awaiting the decision of the executive committee. It believes that a preliminary experiment on a small scale would be a conservative method of determining the details of the complete plan.

During the month of August the committee, through the secretary’s office, sent out a circular letter to obtain information regarding recent progress.

In conclusion, your committee would state that while little in the way of practical results has been accomplished this year, the committee feels that educational work may be of great value to the companies large and small. The member companies are evidently endeavoring to apply the educational principles to their several needs. Undoubtedly they would welcome the unquestioned stimulus which a well directed correspondence course would provide. The committee has requested one of its members, R. E. Danforth, to give a report of his experience with the cadet plan which his company adopted several years ago.

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### VALIDATION OF RAILROAD TICKETS

It is very important that the return coupons of all railroad tickets sold at reduced excursion rates be validated before starting home. Tickets reading via the Philadelphia & Reading Railroad may be validated at the city ticket office on the Boardwalk, in front of the Chalfonte Hotel. Pennsylvania Railroad tickets should be validated at the company’s ticket office, corner of Atlantic and South Carolina Avenues. Tickets which have not been validated will not be accepted by the conductors on trains. Pullman reservations may be made through George E. Armstrong, representing the American Railway Guide Company, who has a booth on the north side of the lobby, on the Convention Pier.

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Even the natives of Atlantic City, who are used to seeing strange sights, stood on the edge of the Boardwalk Wednesday night and gazed with amazement on the peregrinations of an electrically lighted wheel chair which made irregular journeys to the Apollo Theater, the hotels and the cafés. The chair was elaborately decorated with autumn foliage and flowers and festooned with myriads of small incandescent lamps. During the early part of the evening it served as a carry-all for the ladies only, but later the police report that it was engaged in the less gallant but more utilitarian work of helping night owls to their rooms. The superintendent of transportation in charge of the chair was McConnaughy, of the Dearborn Drug & Chemical Works.

## STREET RAILWAY FRANCHISES\*

BY CHARLES V. WESTON, PRESIDENT, SOUTH SIDE ELEVATED RAILWAY, CHICAGO

Urban and interurban railway companies have a right to exist equal with that of other corporations. Primarily that right is based on the charters conferred on them through general or special statutes. Above these are limitations imposed by the constitutions of the States. In general, the charter regulates the internal government of the company. A clear distinction should be kept in mind between "charter" and "franchise." The charter grants the right to be. The franchise permits the occupation of specific localities—usually streets or highways—and is issued as an additional authorization by the local governments within whose jurisdiction the railway is to be operated, and provides certain rules under which the company must conduct its business.

These pioneers of urban transportation were hailed as public benefactors. The public conceded that here were men who were willing to risk their money in experimental efforts in which, if the experiments succeeded, the people would gain quite as much in swifter and more comfortable traveling methods as those who built the systems. The service which those road builders rendered to the people soon came to be not only a convenience but a necessity of the first magnitude.

It was the happy period of the street car business—those early days. Companies became prosperous, outwardly, almost in a night. It appeared to be but the simple case of keeping the rolling stock moving and gathering in the nickels. Alas! these companies appeared to be more prosperous than they really were. Few, if any, of the first owners of street railway privileges had the gift of foresight. Things that to-day we know to be elemental principles in railway management were to them unknown quantities. They failed utterly to take into consideration some of the most important matters of expense, matters which later experience has taught managers to recognize, and to know that upon their treatment depends success or failure of the enterprise.

Thus there was opened up a tremendous field, and into it flocked not only the unscrupulous operators who, by manipulation of securities of the companies, extracted larger and larger sums, to the ultimate loss of the investors, but also those political parasites who, began to see that the franchises granted to public service corporations had a value which could be converted into money and political power.

The remarkable success achieved by each of these two classes was accepted by the public as conclusive evidence that the urban transportation business was unreasonably profitable. It was popularly believed that the users of the service were paying more than a fair price for it and that the companies, with facilities located on the public's property, maintained and operated there by virtue of the privileges conferred by the people, were getting rich through the control of a public necessity. That spirit of antagonism—which in considerable degree still exists—soon manifested itself in the form of demands for the enactment of legislation placing restrictions on the companies—by limiting the life of the franchise to a few years; reducing the rates of fare either directly or indirectly through unlimited transfer privileges; the payment of special compensation for rights conferred in addition to the ordinary taxes on the property and business of the companies in the form of car licenses, paving, sprinkling, cleaning and lighting streets; payment of a percentage of the gross

receipts and numerous other requirements which, like those enumerated, are of doubtful value in respect to promoting the public welfare.

One popular form of grant is that fixing the rate of compensation and limiting the term of the franchise without making provision for the disposition of the tangible property at its expiration. Chicago has done somewhat better than this in that it has provided for the integrity of the investment. The rate of purchase is at a fixed valuation, the computation being defined in the ordinance. But Chicago has also fixed its rate of compensation, and this must be paid under a flat rate of fare, almost unlimited transfers and other special compensations which make the conditions, other than the guarantee of the value of the properties, much as they are elsewhere.

Laws which have been laid down for the regulation of the street car corporations are as varied as the weather. One of the points, of course, toward which there is a great municipal effort at control is the fare. It has been said that a reduction of fare was offset by the increase in traffic. This, I believe, has been proven to be an unsound argument. It is now a recognized principle that in fixing the rates of fare the distance which a passenger rides must be taken into consideration. All expenses of conducting the business are figured with the utmost accuracy on a car-mile basis, and with the same exactness the revenues should be determined on a passenger-mile basis.

The belief of pioneers in street railway building—that a low rate of fare, irrespective of the length of ride within a city, would so stimulate traffic as to defeat the apparent inequality between revenue and service—does not hold good except in very densely populated districts, where the great number of very short hauls compensates for the unprofitable long hauls. In such situations the average distance of haul is the factor which determines the financial success or failure of an enterprise where a flat rate of fare prevails.

Another element of expense which works unjustly toward both the companies and the public is car license. This, in theory, has the same basis as the licensing of the huckster and the cabman, and is primarily intended not to be a source of revenue but a matter of regulation. Being fundamentally a matter of regulation, it holds for the companies all the terrors of any law which may be changed once or twice or ten times a year, at the whim of a city council, unless the amount of the license fee is fixed for the full period of the franchise and named therein. Regarding the matter from the standpoint of the public, the license law is objectionable because it may tend to reduce the number of cars operated.

Another form of taxation may be seen in several cities of Pennsylvania, where a fee is charged on the poles of the traction corporations.

Paving: There is a saying that but two things are inevitable—taxes and death. The traction manager easily may add a third—paving. So general is the custom of cities to require the street railway lines to pave that it may be said to be universal. There are small differences in the various municipalities, but generally it may be said that all corporations are made to bear the expense of paving and maintaining the space between their tracks and in many cases a certain distance outside.

In many cases also the company must clean the street space occupied, remove snow and ice, and sometimes keep it sprinkled.

It is probable that, aside from car licenses and paving requirements, the most common form of special compensation in this country is that which demands a percentage of the gross receipts. Occasionally also there is found an instance where a company is required to make an annual payment based on profits rather than on the gross business.

I think no one will dispute me when I say franchise granting should be done in a systematic manner. It should

\*Abstract of report read before the American Street & Interurban Railway Transportation & Traffic Association, Atlantic City, N. J., Oct. 10-14, 1910.

be according to well established principles of business, instead of in the haphazard way that has heretofore obtained in every important center of population in this country. It is gratifying, however, to note that there has been within the last few years some advancement in the recognition and acceptance of fundamental ideas relating to public service utilities which formerly were antagonized by legislative bodies and by many corporation managers. Regulations should guarantee to the public adequate, safe, speedy and convenient service at a reasonable cost, and in the same enactment there should be protection for the investor by preserving the integrity of the investment and providing a reasonable return thereon.

Referring specifically to the matter of speculation, if the street railways are to be recognized and treated as legitimate business enterprises, in which the owners and the people have a mutual and equally important interest, these enterprises must be permanently removed from the field of stock manipulation, which has for its sole purpose the drawing out of the people's money in payment for that which does not represent intrinsic value.

With this end in view, one of the first things to be considered and adopted in the construction of franchise grants is the limiting of capitalization of the corporations to such sums as will represent only the actual cost of the physical property plus reasonable allowance for discounts, interest, supervision, legal expenses and other legitimate charges during the creative period, and for additions to the physical property subsequent to the time of commencing actual operation. In other words, capital investment should represent only such expenditures as can be reconciled with accepted methods of accounting the various elements of cost in the creation and extension of the property. In any valuation of existing properties on account of expiring franchises or for other reasons due consideration should be given to that part of the original investment represented by facilities which have been abandoned in the effort to satisfy public demand and in keeping pace with the development of the art.

Another matter which is of the very greatest interest is the publicity of accounts. Uniformity and publicity of accounts are coming more and more to be an essential question in the relations of the people and public utility corporations. This matter of uniformity and publicity of accounts must be considered in any comprehensive method of franchise granting. Not only must there be a safeguarding of public rights, but there must be employed such methods as will convince the people that their rights actually are being safeguarded. We must bring them to a perfect belief in the fairness and integrity of the corporations.

Most of us, I believe, are convinced of the fact that the street railway business is a natural monopoly. The majority of latter-day economists admit this to be the case. In the rendering of public service, competition means a duplication of investment, of service and of expenses, all of which spell ruin to the enterprises involved. With competition there always is the frantic effort to pay interest on wasteful investment and service is skimmed to the disadvantage of the public, whereas if only one system had originally been given monopolistic privileges under proper public control both the company and the public would have been the gainers.

Study of the history of competition in public service undertakings leads to the conclusion that, no matter what provision a franchise may contain against consolidation, it is only a question of time when every franchise holder seeks the safe haven of monopoly and that, from the standpoint of the people and from the standpoint of the business itself, monopoly franchises, under proper public control, are the best.

The franchise, I believe, should fix the rate of dividend or profit to the investor, but it should not undertake to determine the rates to be charged for the service. The return on the investment should be in proportion to the hazards and should be liberal enough to attract capital. The rate charged for the service should be that which will yield a fixed return on the investment, the operating costs, maintenance and renewals, and fixed charges, and provide for a fair sinking fund, unless there is provision for returning to its owners the capital investment at the termination of the grant by purchase by the city or otherwise. It is my belief that the municipality should not share in the earnings of the public service corporations. The compensation which the people should receive for the privileges granted is adequate service at cost plus the reasonable return on the investment.

Franchises based on the principle of regulating the rate of dividends or profits and of controlling the amount of capitalization would, in the case of urban transportation companies, operate automatically to increase or diminish the rate to be charged for the service as the density of population over the entire system increased or diminished and as the length of the average haul varied with the shifting of the centers of population. The periods for the readjustments of rates should be fixed as to each community served.

Furthermore, I am of the firm belief that some law permitting assessment aid should be incorporated in the statutes of each State so as readily to bring about financial assistance toward the construction of lines into territory which is not sufficiently populated. It seems perfectly fair that those who inhabit a sparsely settled section and induce traction managers to build lines into their region should be made by law to pay a certain percentage—even though very small—of the upkeep cost of those lines during such period as they may be non-paying. Such a provision recently has been enacted in the State of New York.

I venture the opinion that the plan of franchise which I have described in outline is entirely practicable, and is susceptible of being worked out in detail and in harmony with all constitutional limitations of the various States of the Union; that it is scientific in its construction, reasonable and eminently fair to both the people and the corporations, because it safeguards the public in every respect, and that it insures to the company the integrity of the investment and a reasonable return thereon.

I predict that future franchises will be monopoly grants, embodying all of the principles herein suggested, varying only in detail to suit different local conditions, and that in the readjustment of the affairs of existing corporations these fundamental ideas will be adopted so that we may reasonably look forward to the time when public service companies will operate under licenses which conform to a consistent theory of franchise granting.

From the practical application of grants based on the principles suggested we may fairly be assured of these results:

The public interest is safeguarded by limiting the capitalization to the amount actually invested in the enterprise, thereby preventing the inflation of securities and their manipulation in the market.

To the users of the service offered by the corporations there is assured an adequate transportation at a reasonable cost.

To a great extent it solves the labor problems in respect to wages, hours and general working conditions. With an inflexible amount demanded of the company by the municipality, the company is the sufferer when cost of materials, etc., increases. Should labor demand an addition in wages at such a period, the natural result is that the company resists, creating a condition which is detrimental to the corporation, the city and the employees.

## THE USE OF METAL TICKETS\*

BY GEO. L. RADCLIFFE, SUPERINTENDENT, CLEVELAND RAILWAY CO.

It insures the upkeep of the property along lines which will provide for the highest degree of safety and efficiency and will maintain the intrinsic value of the property represented by the investment, and gives further assurance that the facilities provided for the operation of the properties will keep reasonable pace with the development of the art.

Under such conditions the transportation problems of cities would cease to be a political question and would no longer be considered a temptation to public wrong-doing.

The value of street railway securities would be made stable, and the shares would be sought by the public as permanent investments.

There is no question that the transportation companies have very serious obligations to the public, but the public also has an honest obligation to the traffic corporations. If the people receive a speedy, efficient service, they should in all fairness pay what that service costs, plus the reasonable profit which is due to any man or body of men who risk their money in a legitimate enterprise, and who are endeavoring to live up to the obligations imposed on them by their franchises.

Coöperation between the public and the transportation companies is a vital necessity. It is the one thing that will bring order out of a disordered business; the one thing that will place carrying corporations on a basis of fair profit where they will be enabled to pay more and more attention to the every need of the traveling public, rather than to the gnawing question of how long they will be able to keep afloat.

The situation is urgent. How long, with constantly increasing expenses, demands on the part of the cities for through routes, better equipment, more liberal giving of transfers, the added cost of materials and higher wages, can the companies carry passengers for indefinite distances for a flat rate of 5 cents? That they cannot do it much longer is asserted by those who have most closely studied the question.

That the problem to be solved is a great one is certain, yet unquestionably it is possible of solution, and that in a manner which will be acceptable to both the companies and the public.

I have suggested that the real answer to the problem lies with the people in the granting of franchises, which are equally fair to both sides. I have also suggested that coöperation between the public and the transportation companies is a vital necessity.

There seems to me to be only one way to bring about that coöperation and to arrive at the final answer to the problem—that is by placing before the people the exact truth in regard to the situation and by advocating those fundamental principles of franchise granting which will place the business of transporting people in and about the great centers of population on a firm basis of permanency and stability which will give to the people full value of the price they pay for the service.

It seems to me, too, that the only reliable source from which the truth about these matters can emanate is from those who have been in closest contact with the problem and who have real expert knowledge concerning all phases of it. That means you and me, and it will require not only our individual effort, but also our combined efforts, exerted consistently and persistently in accordance with a well defined plan of action, to inaugurate a campaign of education which will give the widest publicity to the truth in respect to public service corporations. I have an abiding faith in the justness and willingness of the plain people of this country to stand strongly for that which is fair and right.

J. B. Strong, of the Ramapo Iron Works, reached Atlantic City Thursday morning.

The representation of the G. Drouvé Company, Bridgeport, Conn., has been increased by the arrival of H. F. Tatlow.

I find that the scarcity of available material on the subject of the use of metal tickets makes it very difficult to prepare a paper which will be of any considerable value to this association, in fact I have been unable to obtain any information on this question outside of Cleveland.

Years ago, before the advent of electric cars and even before the appearance of the horse car conductor, several railway companies in Cleveland were using a composition ticket. These tickets were made in the shape of a coin somewhat larger in circumference than a nickel. The ticket used by the Broadway & Newburgh Street Railway at that time was made of a pressed paper or pulp composition; the Brooklyn Street Railroad had tickets made of celluloid, while the East Cleveland Street Railway Company used hard rubber. The tickets bore the name of the issuing company and the usual marking to designate that they were good for one ride on the cars operated by the company. These tickets were adopted because of fare boxes being in use on the cars; they were more easily dropped into the box and less readily taken out than the paper ticket. As soon as the several companies put conductors on the cars and removed the fare boxes, they discontinued the use of the composition ticket and began to use paper tickets. This was true of all the companies in Cleveland except the Brooklyn Street Railway, which continued to use the celluloid ticket until 1893, when it was merged into the Broadway & East Cleveland Railroads.

Metal tickets were first used in Cleveland by the Municipal Traction Company when it began the operation of the 3-cent line. This ticket was of aluminum and was about the size and thickness of a five-cent piece, with a hole in the center. One side of the ticket bore the name "Municipal Traction Company," while the other side bore the inscription, "3-cent Ticket, 1907."

There were several reasons for the introduction of these tickets on the 3-cent fare line, none of which would be of particular value to a going railway system. One important factor was the considerable amount of advertising which the introduction of a new kind of ticket gave the company, which it was very desirous of obtaining at that time. Another reason was that the company desired to procure some working capital and figured that metal tickets would soon be accepted by merchants in payment for groceries, meats, etc., and as a matter of fact tickets did pass quite freely as money for small change, especially among the newsboys and small grocers. It was also thought that a great many of these tickets would be carried away from Cleveland as souvenirs, and that it would not be necessary for the company to redeem them. To what extent this hope was realized I am unable to state, but I have seen tickets in cities far distant from Cleveland being carried as souvenirs.

As to the results of the use of metal tickets in actual service, let us first consider the question from the standpoint of the conductors, who as a general rule did not like the tickets. One of the strong objections advanced was that the tickets were heavier and much more bulky in the conductor's pockets, and could not be put up in the small neat package in which the conductors were accustomed to handle their supply of tickets.

On the ordinary cars equipped with registers the supply of tickets was left continuously in the hands of the conductor or the passengers. The company did not permit the conductor to turn in any tickets when making returns of the daily receipts, which, of course, was an advantage to the company, the receipts being entirely in cash. The conductor was compelled to

\*Abstract of a paper read before the American Street & Interurban Railway Transportation and Traffic Association, Atlantic City, N. J., Oct. 10-14.

resell all tickets which he collected and in many cases found this a difficult proposition.

Some opposition also developed on the part of the public, for the reason that the conductors at times became offensively insistent in their efforts to have passengers purchase tickets. To force the sale of tickets an order was issued by the company instructing conductors to refuse to make change for a nickel or a dime, so that if a passenger did not wish to buy tickets it was necessary for him to present the exact amount of fare to the conductor, namely, 3 cents. Following out this rule a passenger who presented a nickel to pay one fare, or a dime to pay two fares, did not receive any change, although the rate of fare at that time was only 3 cents. The final result was that the company redeemed the conductor's tickets at the station, but still maintained the rule that the daily receipts should be in cash only.

Under this system of fare collection the cashier's office and the counting room were relieved of considerable work in the counting of the daily receipts. The cashier was not burdened with the responsibility for tickets after he had verified the manufacturer's count, placed the tickets in packages and made his first sale to the conductors.

With the advent of the prepayment fare box, however, an entirely new proposition presented itself. The first fare box installed by the Municipal Traction Company was designed especially for the reception of metal tickets and paper tickets could not be deposited, as the fare boxes were built with a metal runway in the top of the box, through which nickels and tickets passed before reaching the magazine. The runway was placed in a slanting position so that when a nickel or ticket was deposited in the small slot at the mouth of this runway, it passed through the runway by its own weight. The entrance to the runway was made only large enough to receive a 5-cent piece. The metal tickets were dropped into the fare box and could not be re-sold by the conductor. It was necessary therefore that a supply of tickets be kept on hand for sale to the conductors in the same manner as had formerly been done in the case of paper tickets. The magazines were drawn from the car and sent to the counting room, and the contents counted, a process which involved a greater amount of labor than was necessary with paper tickets under similar conditions. The cashier was then required to verify the counting room returns and place the metal tickets in packages for distribution to conductors each day. At first the metal tickets were placed in small envelopes, but as this method was unsatisfactory, a wire clip, holding the tickets in packages of five, was adopted. A considerable amount of extra help was employed to count and place these tickets in packages.

I had no personal experience in the handling of these metal tickets, as the Cleveland Railway returned to the use of paper tickets when it resumed the operation of Cleveland lines, on March 1 of this year, but W. E. Camp, our cashier, has given the following information on this subject, with a comparative estimate of the cost of handling paper and metal tickets on our system. He estimates that it would be necessary to have on hand a number of metal tickets five times as great as the number of tickets received on the cars every day, in order to keep the conductors supplied, and estimates that the life of the metal ticket will not exceed five years in continuous service. Based upon our entire system being equipped with prepayment cars, he finds that the extra cost of using metal tickets instead of paper tickets would be about \$79,000 for five years, or about \$16,000 per year. In this estimate he has included in the cost of metal tickets the labor for counting and assembling, the cost of wire clips, rent of room, repairs to counting machines, handling and storing on account of extra bulk, the first cost of the ticket supply, and the cost of extra machines and trays for counting tickets. In the cost of paper tickets he has included the first cost of tickets each month, labor for counting same, labor for destroying cancelled tickets and royalty on counting machines used in counting the paper tickets. I might add that our company is using about eleven

million tickets per month, and the above comparison is made on this basis.

The metal ticket, I believe, has one advantage over the paper ticket, and that is its adaptability to the prepayment fare box. We have had considerable trouble in finding a fare box in which the paper tickets do not stick and become clogged before reaching the magazine. While we have overcome this to a very large extent, it is not unusual to have a car turned in because the fare box does not work properly on account of clogging due to paper tickets. I believe that this trouble would be entirely overcome by the use of metal tickets.

No doubt, if the railway systems of the country adopted metal tickets, machines for counting such tickets would soon be brought out, but at the present time there is no machine on the market adapted to this purpose. Should such a machine be produced, it would greatly reduce the present necessary labor cost.

There is another feature of the metal ticket which might become a serious matter, and that is counterfeiting. While paper tickets have been and still can be counterfeited, I do not think the counterfeiting can be done as easily with paper tickets as with metal tickets. I am told that a machine can be constructed at a very slight cost, by an ordinary skilled mechanic, which will produce metal tickets similar to those which were used in Cleveland. There is one way in which the counterfeiting of metal tickets could be stopped and that is by making the intrinsic value of the metal of which the ticket is made of greater worth than the fare which it is required to pay. There would then be no object in counterfeiting tickets, though whether this plan is practical or not, I am unable to state.

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### THE LAST DAILY

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This is the last daily issue of the ELECTRIC RAILWAY JOURNAL for 1910. An issue of the paper will be published tomorrow in New York, but it will be our regular weekly issue. It will contain the papers read at the sessions held to-day, reports of the discussions at those associations and one or two of the longer papers presented at Atlantic City which could not be published in the daily issue.

The reports and papers at the convention this year have been much more numerous than ever before, and the discussions at some of the sessions have been so interesting that they have lasted late into the evening. These conditions have complicated somewhat the publication of the daily issues, especially when all the printing has to be done in Philadelphia, 60 miles away. Nevertheless, there seems to be the need of a medium like the daily for promptly informing those in attendance at the convention of what has occurred at the different meetings. With five associations, each meeting three to five times during the week, it is manifestly impossible for any one to attend all or even most of the meetings. If the daily has been of assistance, and has facilitated the work of the association, we feel that it has accomplished its purpose. In this connection we wish to express our appreciation of the kindness extended us by the officials of all of the associations and particularly by the secretaries. Without this assistance the publication of the daily would have been impossible.

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May & Turner Company, of Atlanta, Georgia, a recently organized company, is showing the Burroughs railway nut lock at space 684, Building 2. This nut lock is manufactured from American ingot iron and also from open-hearth steel and is made to fit any joint. It consists of one piece of iron with square upset surfaces fitting directly beneath and locking each nut. The spikes that fasten the rails to the ties hold the nut lock in position. The company is represented by Sterling G. Turner and Oliver B. Burroughs, the inventor.





location for third rail, which location has since been recognized as standard by a majority of roads adopting heavy electric traction.

In view of the fact that the American Railway Association has adopted a standard location, it is obviously inexpedient for this association to adopt another location as standard without very good cause. It has been found that the data and conditions governing the adoption of a standard location at this time are practically the same as those upon which the American Railway Association based its action in 1908. The committee further considers that the conclusions reached by that association are consistent with said data, and therefore recommends the same standards.

The committee, one member dissenting from first item, recommends that the following standards be adopted by the American Street & Interurban Railway Engineering Association:

1. The gage line of the third rail to be located not less than 26 in. and not more than 27 in. from the gage line of the track, and the contact surface of the third rail to be not less than 2 3/4 in. or more than 3 1/2 in. above the plane of the top of the track rail.

2. Lines of clearance for both rolling equipment and maintenance of way structures to be as shown in accompanying engravings, leaving the space as shown within the lines A, B, C, D, E, F, G, H, I, J and K available for third-rail construction.

3. In designs of new rolling equipment that is to be used in interchange the clearance line K' A' B' C', including such horizontal and vertical variations as may in any reasonable probability occur in combination at one time, should not be exceeded. In determining this, the position of the equipment on a 20-deg. curve should be considered, making allowance for the side-throw of the bolster and the consequent effect on the location of such portions of the equipment as are attached to the car body. Variations in equipment should be allowed for as follows: Horizontal, 2 1/2 in. in all; vertical, 4 in. in all.

4. In designs of new bridges, trestles, tunnels and platforms no part that is continuous for more than 7 ft. should come within the space indicated for third-rail structures, i. e., A, B, C, D, E, F, G, H, I, J, K, and such parts should preferably clear this line by at least 1 in., as is shown by the line C' D' E' F' G', but structures that are not continuous for more than 7 ft. may be allowed to come to the line X Y.

Horizontal variations in rolling equipment should be allowed as follows:

Wear of axle, collars and boxes.....	3/8 in.
End play of brasses.....	1/8 in.
End wear of brasses.....	1/4 in.
Wear on wheel flange.....	3/8 in.
Clearance between new flange and rail.....	1 in.
Constructional variations.....	1 in.
Total.....	2 1/2 in.

Vertical variations in rolling equipment should be allowed as follows:

Wear of journals and brasses.....	3/4 in. passenger	3/4 in. freight
Radial wear on wheels (passenger, steel tires; freight, cast iron tires).....	1 1/4 in.	1 1/4 in.
Compression of springs.....	4 1/4 in.	1 3/8 in.
Sagging at center of car.....	1 in.	1 in.
Constructional variations.....	1 in.	1 in.
Total.....	8 1/4 in.	4 3/8 in.

The probability that the combination of variations mentioned will occur in any one piece of equipment at the same time is very remote and it seems not unreasonable to consider that when a vertical variation of more than 4 1/2 in. occurs it may be considered in the same light as a wreck with the consequent indeterminate damage done, although in this case it probably would be no worse than the breaking of steps or some of the third-rail protection.

The committee further recommends that the following

terms and definitions be adopted in connection with third-rail working conductors:

1. Third Rail: An electrical conductor placed adjacent to and parallel with the track rails as a means of conducting electric current to the locomotives or cars. It is maintained in permanent relation to the tracks by suitable supports and is insulated from ground.

2. Third-Rail Contact Shoe: A conductor attached to the car or locomotive for the purpose of collecting current from the third rail.

3. Third-Rail Contact Surface: The surface of the third rail with which the contact shoe makes contact.

4. Top-Contact Third Rail: A third rail with the contact surface on the top.

5. Under-Contact Third Rail: A third rail with the contact surface on the bottom.

6. Gage of Third Rail: The distance measured on the plane of the track between the gage line of the nearest track rail served to the nearest gage line of the third rail.

7. Elevation of Third Rail: The distance at right angles to the plane of the track between the top of track rail and the contact surface of the third rail.

8. Third-Rail Support: The support that holds the third rail in position as regards elevation and gage.

9. Third-Rail Insulator: That part of the third-rail support that insulates the third rail from the ground ties, track work and other grounded structures.

10. Third-Rail Protection: A covering employed to guard the third rail against the weather and from accidental contact of persons and material.

11. Third-Rail Platform Protection: The guard used at low station platforms to protect the contact shoes from persons on the platform.

NOTE.—This term applies principally to the protection along edges of platforms when the third rail is on the opposite side of the track from the platform.

12. Third-Rail End Incline: The sloping approach at the end of a section of third rail made to receive contact shoes moving in line with the third rail and bring them from their free position to contact with the normal surface of third rail.

13. Third-Rail Shoe Incline: The sloping approach at the side of a third rail made to receive contact shoes moving laterally toward the third rail and guide them from their free position to contact with the normal surface of third rail.

14. Third-Rail Tie: The tie which is extended beyond the end of the standard track ties to provide a base for the third-rail support.

15. Third-Rail Anchorage: A device that holds the third rail in position longitudinally, preventing creeping.

16. Third-Rail Jumper: A cable connecting the ends of the third rail at openings made necessary by track and road crossings or other local conditions.

NOTE.—On surface roads the third-rail jumpers are usually placed in conduit under ground.

17. Third-Rail Jumper Head: A device placed at the end of a conduit for a third-rail jumper to protect and insulate the end of the jumper.

NOTE.—This is usually an insulated structure projecting above the track ballast and from which the third-rail jumper may be flexibly attached to the third rail.

18. Third-Rail Bond: An electrical conductor bridging a joint in the third rail used to secure electrical continuity of the third rail.

19. Third-Rail Feeder: The connection between the source of power supply and the third rail.

NOTE.—This is usually a cable carried either overhead or in conduit underground.

20. Third-Rail Feeder Tap: A connection between the third-rail feeder and third rail in which there may or may not be a switch.



haul business, or lines operating through a business center where many passengers are entering and leaving the cars. The pre-payment car practically puts an end to losses through missed fares; eliminates the conductor from the interior of the car, where he frequently causes passengers discomfort in crowding back and forth in pursuit of the nickels, and pleases riders because having once paid their fare they are not again annoyed. Supervision of fare collection is simplified when the conductor makes all collections from one point. Where the fare box is used the company receives all the fares put in the box, even though, during the rush, a conductor might inadvertently fail to register some of them. The location of the conductor upon the platform or at the entrance places him in a position to safeguard the passenger in boarding and leaving, thus reducing the claims arising from this class of accidents. During the rush hours the cars can be operated at a faster schedule speed because the conductor is at the entrance where he is able to determine the very instant when it is safe to start the car.

## WHAT INTERURBAN RAILWAYS DO FOR THE PUBLIC

BY JOSEPH A. M'GOWAN, SECRETARY AND TREASURER, TERRE HAUTE, INDIANAPOLIS & EASTERN TRACTION COMPANY

Twelve years ago the first interurban road in Indiana was built. Two years later, in 1900, the first interurban railroad to enter Indianapolis was opened. Between 1900 and 1903 several other lines were built into Indianapolis and the number of passengers carried in and out of that city increased from 378,000 in 1900 to 2,348,000 in 1903. Each road had for its terminal a spur track and there was no common depot or shelter. This awkward condition was overcome by the construction of the nine-story Traction Terminal Building and train shed containing nine tracks, located in the business center of the city. This terminal station, which cost \$1,500,000, was opened to the public on Sept. 12, 1904. From this date began a new era for the interurban railways in Indiana.

In 1904 3,275,000 interurban passengers were carried into and out of Indianapolis. During 1905 old lines were extended and new lines were built so that at the end of the year 10 roads entered the city. They carried approximately 4,000,000 passengers in and out and this number was increased to nearly 4,600,000 in 1906 and exceeded 5,000,000 in 1907. The panic, while not materially affecting the business of the interurban railways, arrested for the time being further extension and building of new lines. The number of passengers carried in 1908 and 1909 was only slightly in excess of the number carried in 1907. At the present time there are 14 different interurban lines entering the Indianapolis Terminal Station and it is conservatively estimated that by the end of 1910 5,500,000 passengers will have been carried in and out.

Over 425 cars arrive at and depart from the station daily. These reach all the principal cities in the State and connect with lines in Illinois, Ohio, Michigan and Kentucky. The erection of the Terminal Building has increased real estate values in the immediate vicinity by millions of dollars. While the population of Indianapolis is about 250,000 it is conservatively estimated that the trading population is nearly 500,000. This is due largely to the facilities for travel offered by the interurban lines. Some merchants state that 50 per cent of their customers come to the city on the interurban cars. In this connection it is well to state that while large business centers profit by interurban service, the smaller towns are also benefited by this easy means of travel from the rural districts.

The interurban freight and express business has developed steadily also. During the early years of their existence the interurban roads paid little attention to carrying freight and

express packages. At the present time all lines entering Indianapolis do a profitable freight and express business. Three large brick freight houses adjoining the Terminal Station are used for this purpose.

Perhaps a more comprehensive idea of the growth of interurban railways throughout the whole State of Indiana may be given by stating that as compared with 11 miles in 1898 there are at the present time 1800 miles of interurban roads exclusive of all city lines operated by interurban companies. The number of passengers carried in 1900 was less than 1,000,000, while in 1909 nearly 20,000,000 passengers were carried. Gross earnings in 1909 were \$10,000,000. Farm property in Indiana, which was taxed on a valuation of \$540,754,000 in 1900, increased in value to \$666,200,000 in 1909, largely through the development of interurban railways.

## THE BRADY LUNCHEON

A distinguished company sat at luncheon at the Windsor Hotel yesterday in honor of A. W. Brady, the president-elect of the American Association. It was a Brady function, as D. M. Brady, of the Brady Brass Company, was the host. The compliments to the Bradys to the Bradys were numerous and luminous. Intermissions were active, with stories, quips and repartee from such artists as Peirce, Shaw, Ely, Harries and Williams. Those present were: James F. Shaw, retiring president; W. Caryl Ely and H. H. Littell, past-presidents of the American Association; Arthur W. Brady, president-elect of the American Association; E. A. Maher, vice-president and general manager, and J. S. McWhirter, superintendent of car equipment, Third Avenue Railroad Company, New York; H. C. Evans, Lorain Steel Company; Hugh M. Wilson, vice-president McGraw Publishing Company; J. R. Ellicott, president American Street & Interurban Railway Manufacturers' Association; David Belden, vice-president and general manager New Hampshire Traction Company; E. C. Foster, ex-president New Orleans Railway & Light Company; General G. H. Harries, second vice-president Washington Railway & Electric Company; E. H. Baker, Galena Signal Oil Company; J. M. Richmond, vice-president and general manager Berkshire Street Railway; John F. McCabe, purchasing agent New England Investment & Securities Company; E. M. Williams, Sherwin Williams Company; C. C. Peirce, General Electric Company; C. C. Castle, United States Metal & Manufacturing Company; John Reid, Brady Brass Company; Mr. Rhoades, Pennsylvania Railroad; Henry A. Robinson, New York; William H. Heulings, The J. G. Brill Company. Much to their regret, the golf engagements of Frank Hedley, vice-president and general manager of the Interborough Rapid Transit Company, and of W. O. Wood, president of the New York & Queens County Railway Company, prevented them from attending.

## EXHIBIT OF NATIONAL BRAKE AND ELECTRIC COMPANY

The National Brake & Electric Company is exhibiting in spaces 539-545, Machinery Hall, a complete line of air brake apparatus, as well as stationary and portable air compressors, of various capacities and voltages. The compressors for air brake purposes are from 11 ft. to 50 ft. capacities. Various styles of governors and engineers' valves are shown. The latest type of engineers' valves is known as the P. V. valve, and is constructed without ground joints. Since this valve was introduced it has given such good satisfaction that a number of street railways have adopted it as standard, and have changed over the slide and rotary valves. A three cylinder vertical 3 V. S. compressor of 100 ft. capacity is in operation, and is equipped complete with combined automatic controlling devices. Portable outfits, equipped with water-jacketed compressors, cooled by circulation of water through automobile type of radiators, are also on exhibition.

\*Abstract of paper read before the American Street & Interurban Railway Association, Atlantic City, N. J., Oct. 10-14, 1910.

**REPORT OF COMMITTEE ON CONSTRUCTION OF SCHEDULES AND TIMETABLES\***

BY N. W. BOLEN, CHAIRMAN; P. N. JONES, WM. SIEBERT, TIMOTHY CONNELL, J. J. DOYLE, JAMES BRICKER, BRUCE CAMERON

The proper treatment of the matter of schedules and timetables is probably the most important single feature of electric railway operation, for on no other unit rests so great a measure of responsibility for the prosperity of the operating company. This is true, first, because practically it is the medium which through the character of the service rendered moulds the public feeling for or against the railway company; second, because it influences the attitude of the employee through the division of the hours of work, and, third, because it is the foundation upon which the whole financial structure is built. Therefore, it may be said that insofar as it may be practicable there should be embodied in all schedules and time-tables elements which will tend to bring about the following results:

- a. A public satisfied that the company, to the best of its ability, is supplying a fair and adequate service.
- b. A working force convinced that the division and arrangement of the hours of work provide a fair average day's wage

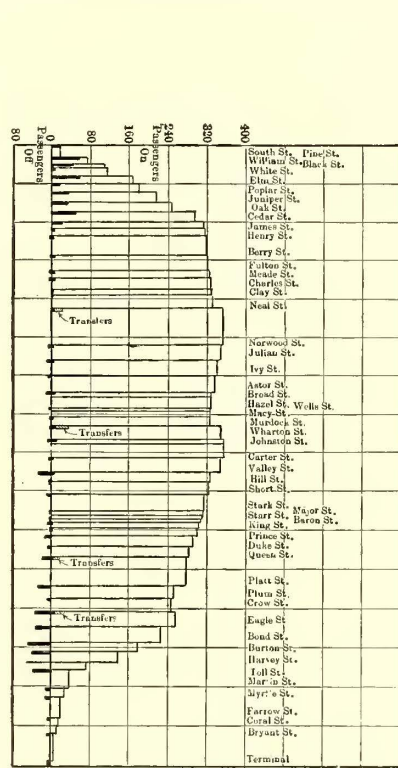
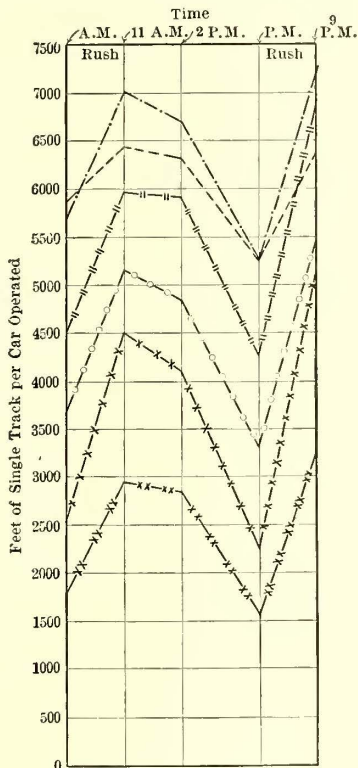
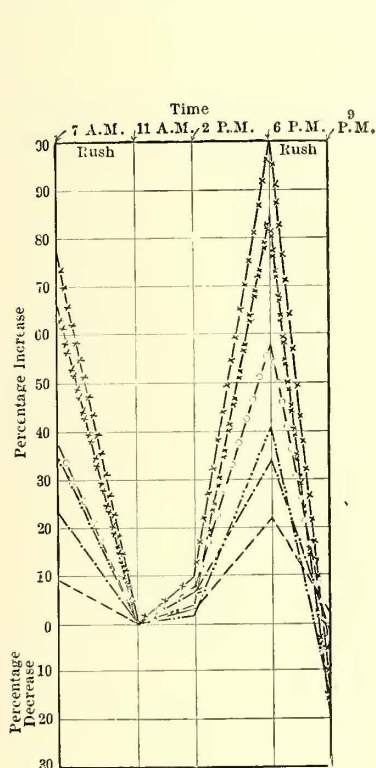
ing the a. m. rush, at 11:00 a. m., at 2:00 p. m., during the p. m. rush and at 9:00 p. m. The accompanying diagrams indicate the manner in which the service is changed by the different companies. In these diagrams the companies have been divided into classes according to number of cars operated and it has been assumed that 11:00 a. m. is the hour at which the normal service is given. Therefore, all other periods are shown in their relation to the 11:00 a. m. basis. The first diagram shows the percentage of variation in number of cars operated at different hours of the day, the service being assumed to be normal at 11:00 a. m. The second diagram shows the average number of feet of track per car operated at various hours.

**KEY TO CHARTS.**

Class A	1- 25 Cars Operated
" B	26- 50 " "
" C	51- 100 " "
" D	101- 200 " "
" E	201- 500 " "
" F	501-1500 " "

**LAY-OVER TIME**

Thirty-seven members reply that they do not allow any lay-over time, and 25 state that such time is allowed on all trips or during certain portions of the day only, generally in the



Schedules and Timetables — Diagrams Showing Cars Operated at Different Hours of the Day. Normal Service at 11.00 A. M.

Schedules and Timetables—Passengers on and off Cars at Stated Periods and Points

for a maximum number of employes, and that in addition due consideration has been given to the health, comfort and general welfare of the employee and his family.

c. Traffic receipts which will insure a reasonable return on the investment.

**ANALYSIS OF DATA COLLECTED (CITY LINES)**

The number of city railway companies responding to the data sheet was 66, with a total of 7696 miles of single track or an average of 116.6 miles per company.

**CARS IN SERVICE AT DIFFERENT PERIODS**

To ascertain the general practice with regard to changes in headway during various periods of the day, your committee requested information as to the number of cars in operation dur-

ing rush hours. A tabulation of the relation of lay-over time to running time of all the companies reporting shows that the lay-over time constitutes 6.1 per cent. of the total service time of all the companies replying to this question and 12.5 per cent of the total service time of those companies reporting lay-over time. Your committee respectfully suggests that the matter of lay-over time be given thoughtful consideration, to the end that it may either be entirely dispensed with or reduced to a minimum.

**RUNNING TIME, HOW DETERMINED AND MAINTAINED, AND WHEN CHANGED**

Many points must be considered in the determination of running time. Among them are: Franchise requirements, speed and stop ordinances, intersections (number and character), grade crossings, width of streets and character of district, both

\*Abstract of report read before the American Street & Interurban Railway Transportation & Traffic Association at Atlantic City, N. J., Oct. 10 to 14.

as to business and population, type of cars and equipment, vehicular obstructions, stops and passenger traffic in total and in kind. The following tabulation shows various methods in use:

- 24 companies report simply an observance of speed regulations, allowances for character of line, and street inspection or inspection of trip reports, both as to first determination and later checks.
- 14 companies report periodical check at time points and at terminal.
- 2 companies report a general inspection of grades, curves, switches, frequency of stops, traffic, etc.
- 7 companies report a system of periodical trial trips either on special cars making arbitrary stops or on cars in actual service.
- 1 company reports that running time is based upon the average running time of a given number of trips.

Following the establishment of running time and the subsequent checking to see that it is basically correct comes the question of how to maintain a strict observance on the part of the trainmen. The following is a summary of the methods in vogue:

- 34 companies report that motormen are checked at time points by street inspectors who, as a rule, are required to report delays beyond a certain number of minutes.
- 6 companies report that all cars are checked at a given point (loops generally) usually by the dispatchers stationed there.
- 2 companies report that all cars are checked at the terminals.
- 1 company reports a combination of check-ups by street inspectors
- 1 company reports a continuous check-up at a central point and at terminals also.

- 36 companies maintain the same running time throughout the entire day.
- 19 companies increase the running time in the a. m. and p. m. rush hours.
- 3 companies increase the running time in the a. m. and p. m. rush hours, maintaining normal time during other daylight and evening periods, except that a reduction is made at night.
- 5 companies maintain the same running time in the early a. m. and at the conclusion of the p. m. rush, when a reduction is made which continues until the beginning of the morning rush.
- 1 company reduces running time after 9:00 p. m. and another after 10:00 p. m.

Decreased running time on Sundays and holidays appears to be a general custom.

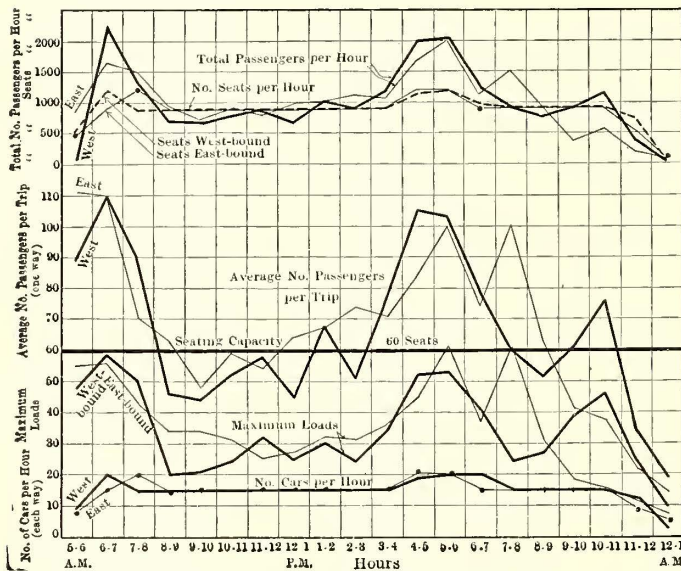
Rules vary on different systems as to the application of the change of running time. One method is to make the change effective at a given hour, regardless of where the cars may be located. Another plan specifies both hour and location; for instance, at 6:30 p. m. in a prescribed belt. The cars would then not pick up the new speed until they reached the belt named, on the trip first following the hour fixed. In this last named plan some slight adjustment of headway is necessary to secure uniformity of spacing between cars running at the different speeds.

Your committee recommends that advantage be taken of variations in operating conditions due to fluctuation in traffic, vehicular interferences, etc., by adjusting running times to conform thereto, the hour and method of application to be left to the judgment of the respective operating officials.

PASSENGER COUNTS

Thirty-six companies report that they have methods of making passenger counts. In most cases inspectors are used, but in a few cases conductors are employed for this work. All of the companies which report that they use the conductors' reports for this purpose state that they tabulate these figures daily. The other companies conduct these counts at various intervals, varying from twice a week to once a month or at irregular intervals. As a rule the point at which the count is taken is the point of the maximum load or heavy transfer points, but others conduct it all over the city. One company keeps a special staff for this purpose. The results are usually charted, and two typical charts are presented herewith.

In the opinion of your committee the periodical development of records of passenger traffic is an absolute necessity in present-day electric railway operation, not only because such records are valuable as a means of determining service requirements, and thus probably effecting increases in gross return or decreases in operating cost, but also because they may bring to light conditions in need of correction and permit of their remedy before these conditions are made the subject of public criticism or complaint. The size of the property, the character of the territory served and the rapidity of its growth, the density of traffic, variations in travel due to business conditions and season changes, are some of the factors which may automatically determine the period at which these counts should be taken. But the committee feels that the interval between counts, while varying on different roads, should be comparatively short to secure full advantage of fluctuations in traffic and to anticipate public complaints. As to the method of making such counts, the committee is not a unit. Some members have had considerable success with the plan of requiring conductors at stated times to tabulate the number of passengers on board at various points along the line on each trip for an entire day; other members have had unsatisfactory results from this method and prefer that special inspectors stationed at maximum load points count the passengers being carried. The summarized data resulting from the count made, whether in tabular or charted form, should show volume of travel for the entire day in divisions of time not to exceed 30 minutes.



Schedules and Timetables—Traffic Chart Showing Number of Cars Operated, Maximum Loads, Average Passengers Per Trip, Total Passengers and Total Seating Capacity Per Hour in Both Directions

One method reported is that of a periodical check by employees of the time-table department, usually at an intersection where two or three lines may be observed. In connection with this there is a daily examination of all delay reports and, in addition, supervision by line inspectors and dispatchers at terminal points.

In the opinion of the committee, conditions in various cities would seem to warrant a shorter running time during certain hours of the day. Considerable saving may be effected in adjustments of this nature, but a study of the replies received does not indicate any very general adoption of the plan. The committee finds that,

## TIME-TABLES MADE ON HOURLY OR TRIP BASIS

Fifty-six companies responded to this inquiry as follows: 28 companies use the hourly basis; 26 companies use the trip basis; 2 companies utilize both plans.

## ADJUSTMENT OF SERVICE IN STORMY WEATHER

A summary of the replies to this is as follows: 39 companies maintain regular schedule during stormy weather; 5 companies increase the number of cars; 7 companies decrease the number of cars; 1 company decreases beginning at the noon hour; 1 company decreases service on Sundays and holidays during snowstorms only; 1 company decreases service during snowstorms only; 1 company decreases service only on lines having a short headway; 2 companies discontinue service altogether during electrical storms.

The replies show that the superintendent and division superintendent are in most cases given authority to make changes in schedules. In a few cases, however, dispatchers or starters may do so, provided they first secure the approval of the general manager or superintendent of transportation.

## SUPERVISION OF SUNDAY AND HOLIDAY SCHEDULES AND TIME-TABLES

Sunday and holiday schedules under the direct supervision of the local superintendent or supervisor brought forth the following:

In most cases the Sunday and holiday schedules are under the direct supervision of the local or division superintendent. A novel method for determining the proper service for a given holiday is reported as follows: "For holidays the division superintendent stipulates the schedule he desires; this is checked with the records of previous years and with current traffic counts; is generally discussed by all superintendents at a meeting and the table decided upon at this meeting made effective."

## THE USE OF "PATCHES" FOR TIME-TABLES

The following is a summary of replies received to this question: 40 companies report that they do not use patches for time-tables; 18 companies report that they do use these patches; 2 companies report the use of patches for holidays only.

The committee recommends that companies should avoid as far as possible the use of inflexible time-tables. They should rather treat the established time-table as the basis of operation and permit the proper officials to add to or take away from the number of cars in operation, as the service requirements of the day seem to demand.

## DEFINITIONS OF "STRAIGHT" AND "SWING" RUNS

The confused and uncertain views as to what constitutes a "straight" and what a "swing" run have convinced your committee of the necessity of establishing definitions of these terms. After a careful study of the replies received, it recommends the following:

Definition of a "straight" run: A "straight" run consists of a day's work of an established number of continuous hours, broken only by an interval for a meal.

Definition of a "swing" run: A "swing" run is a run constituting a day's work in which the time composing it is divided into two or more periods, with intervals of not less than two hours intervening.

## SELECTION VS. ARBITRARY ASSIGNMENT OF RUNS

While almost universally the rule of seniority prevails, there still remains a well-divided sentiment concerning the merits of the two methods of making actual assignments, *i. e.*, arbitrarily assigning runs or permitting trainmen to select them. The replies show that 25 companies employ the arbitrary plan and 39 companies allow the employes to indicate their preference. In some cases and in both plans reassignments are made weekly, monthly, semi-annually, just previous to season changes, or at other stated periods, even though vacancies may not have occurred, and some latitude seems to be allowed men with regard to changing runs among themselves, in some instances, however, the approval of the operating official being required.

The majority of the committee heartily favors the individual selection of runs, the dissenting members basing their disapproval upon the ground that the pronounced success of the arbitrary plan on their respective systems does not warrant any change. A unanimous assent being therefore impossible, your committee submits a majority recommendation that trainmen, in such manner as may be consistent with their seniority of service, be permitted individually to indicate and obtain preferred runs, that reassignments be made as vacancies occur throughout the year and that a general reassignment be made at stated intervals regardless of whether or not vacancies exist. It also recommends that the practice, wherever followed, of permitting trainmen to trade runs at will among themselves be discontinued as being against the best interests of the employees.

## TRIPPER SERVICE

Important in its relation to the general make-up of schedules and time-tables is the question of whether the trippers should be included on the time-table and assigned like the regular cars or treated as extra service entirely and assigned to extra men. The inquiries made, with 50 companies responding, show that 31 companies hold trippers wholly as extra service; 17 companies include them in tables and assign them the same as regular cars, and 2 companies use a combination of both plans. Despite this indication of majority practice, your committee is of the belief that tripper service should be shown in its proper place on the time-table and the hours of work which this service covers regularly assigned. To sustain its position your committee advances the following as some of the advantages which may be derived from the recommended method: Increase in total hours of work assigned regular men; possible increase in number of regular runs or increased general average length of runs (in each of which cases the regular employees as a body are benefited); improved flexibility permitting of a more equal division of hours of work and a minimum of short length runs; greater uniformity in headways and fewer accidents on account of the greater familiarity of the trainmen with service conditions at specified times, and reduction of clerical work in making assignments, pay-rolls, etc.

## NIGHT CAR CREWS

Below will be found several different plans of assigning work for night car crews:

7:00 or 8:00 p. m. to 5:00 or 6:00 a. m.

6:00 p. m. to but not including a. m. rush.

P. m. rush until a. m., with one hour at midnight for meal.

Last half of late straight run, relief at midnight (1 hour), then runs balance of night.

Makes dinner relief and takes night car at 4:00 p. m.

Assigned to men at top of extra list, who also work a. m. and p. m. trippers in order to secure full day.

Seventeen companies require night car crews to operate through as a. m. trippers.

Thirty-one companies do not require this.

## SCHEDULE AND TIME-TABLE DEPARTMENTS

As will be noted below, comparatively few of the companies reporting are maintaining specially organized departments for the preparation of schedules and time-tables and the development of charts and records. The proper construction of and time-tables demands more than the drawing up of a headway sheet and a development of runs. A few of the requirements are:

A thorough knowledge of the population served, its character and habits, its business pursuits and hours of labor.

A clear conception of the physical characteristics of the city and the nature, extent and location of manufacturing enterprises and business districts.

A full understanding of operating difficulties of all kinds, particularly pedestrian and vehicular congestion and fluctuations thereof.

Information as to the conditions of the physical property of the company itself, particularly as to the rolling stock available for service.

The above points toward the need of centralizing time-table work, and your committee, after careful consideration, is of the opinion that all electric railways operating 100 or more 10 to 18-hour cars should install a schedule and time-table department under the jurisdiction of the proper operating official. This department should have charge of all work connected with the development of statistics of population, traffic counts and traffic charts, the determination of original running times and of periodically checking them, and the development and final preparation in written or printed form of all schedules and time-tables, headway sheets, run sheets, etc., but not the actual assignment of runs. It should also be familiar with causes for delays and do such other work having to do with passenger traffic and service as the superior officer may elect.

On smaller roads the committee recommends that all schedules and time-tables be made by one man, especially trained for the work; that he be given such assistance as he may need from time to time in performing his duties, and that such of his time as may not be required in the preparation of time-tables, schedules, and charts be devoted to actual supervision of cars in operation.

#### TYPES OF TIME-TABLES USED

Two general methods of time-table construction are employed, viz., the original street railway type, showing the time of car or train horizontally across the table, with headways in vertical columns, and the steam railway plan, showing time of cars or trains vertically and headways horizontally. The first plan seems to remain the prevailing practice, though some few of the companies reporting utilize the steam railway type.

The evolution of a time-table can briefly be described as follows:

1. Development of figures showing passenger movement by periods of time and direction.
2. Determination of fluctuation in passenger movement as it occurs on each day of the week and as it is affected by weather conditions.
3. Determination of intervals between cars required to accommodate the traffic.
4. Determination of time required for a trip under varying conditions of traffic, etc.
5. Determination of number of cars required to fill the line at various periods.
6. Arrangement in tabular form of the times of departure from the terminals of each car operated.
7. Division of the trips of the several cars into sections and assembling of these sections into groups to form runs or periods of work for the trainmen. These assembled sections are gathered together on a run, guide or assignment sheet.

#### TIME-TABLES FOR INTERURBAN OPERATION

A considerable fund of data covering the practice of interurban member companies in the construction of schedules and time-tables has been collected by the committee, but because of the amount of time which would be required to develop the study properly, the committee suggests the material in hand be submitted to the committee for 1911 with a request that there be included in its report a section devoted to interurban operation.

#### CONCLUSION

In conclusion, your committee groups and briefly repeats below the recommendations covered in this report, namely:

1. Lay-over time—That it either be entirely dispensed with or reduced to a minimum.
2. Adjustments of running times—That the member companies take due advantage of variations in operating conditions due to fluctuations in traffic or vehicular interferences by adjusting running times to conform thereto.

3. Passenger counts—That there should be periodical developments of records of passenger traffic with comparatively short intervals intervening.

4. Adjustments of service to meet changes in traffic requirements—That member companies should avoid as far as possible the use of inflexible time-tables, but rather treat the established time-table as a basis of operation permitting proper officials to add to or take away from the number of cars in operation, as service requirements of the day seem to demand.

5. Definitions of "straight" and "swing" runs—That the following definitions be approved as interpreting straight and swing runs:

"A 'straight' run consists of a day's work of an established number of continuous hours, broken only by an interval for a meal;" and "A 'swing' run is a run constituting a day's work in which the time composing it is divided into two or more periods with intervals of not less than two hours intervening."

6. Individual selection of runs—A majority recommendation, that trainmen, in such manner as may be consistent with their seniority of service, be permitted individually to indicate and obtain preferred runs; that assignments be made as vacancies occur throughout the year, and that a general reassignment be made at stated intervals regardless of whether vacancies exist or not.

7. Trading runs—That the practice wherever followed of permitting trainmen to trade runs at will among themselves be discontinued as against the best interests of the employees.

8. Assignment of tripper service—That tripper service should be shown in its proper place on the time-table and the hours of work which this service covers regularly assigned.

9. Schedule and time-table departments—That electric railways, operating 100 or more 10 to 18-hour cars, install a schedule and time-table department under the jurisdiction of the proper operating official. On smaller roads, that all schedules and time-tables be made by one man especially trained for the work, etc.

Finally, the committee desires to call attention to the need of clearly defining many terms in common use in street railway work, for instance, patches, run, run guides, run number, train number, block number, assignment sheet, a car, a train, etc., and respectively suggests that this be made a part of the work of the committee for 1911.

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The resignation of John W. Corning, secretary and treasurer of the Engineering Association, which was announced at the meeting on Wednesday morning, was received with regret by all the members of the association. Mr. Corning was elected secretary and treasurer of the association at the first Atlantic City meeting in 1907 and has held that office for the past three years. The valuable work which has been accomplished by the association during his term of office has been due in no small measure to his untiring efforts in attending committee meetings, preparing data sheets and editing the reports of the committees before printing. He also has served as editor of the association "Question Box." His tact and patience have been appreciated by every member of the association with whom he has come in contact. The increasing duties of his position as electrical engineer of the Boston Elevated Railway prevent him from continuing to serve the association for a longer time. Mr. Corning is a graduate of Johns Hopkins University in the class of 1894. Immediately after graduation he accepted a position with the West End Street Railway of Boston and took up electrical work in the power stations of that company. In 1905 he was appointed electrical engineer for the Boston Elevated Railway, which position he still holds.

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The London County Council Tramways has announced that blind persons properly authenticated, and accompanied by a guide, will be carried free on the Council's tramways system.



(Continued from Page 808.)

"With the tendency of state railroad commissions to exercise more and more jurisdiction over electric railway companies, the honorary membership enjoyed by this association in the National Association of Railway Commissioners is a privilege that should be highly esteemed. We recommend that our delegates to attend their conventions be selected sufficiently in advance so that their attendance may be insured. Their next convention is to be held on Nov. 15, 1910. As this date is only about one month later than the usual date of holding the convention of our association with the attendant election of new officers, it appears to us wise that the delegates to attend their next convention should be appointed by the present president of our association. We furthermore suggest that the delegates be appointed from States where railroad commissioners are active in their supervision over electric railway companies. If the same delegates from our association are selected for more than one year we believe greater good can be accomplished than by selecting different delegates each year, personal acquaintanceship with the commissioners being a decided advantage."

Mr. Ham then read a report of the committee on construction and operating expenses of electric railways, submitted to the National Association of Railway Commissioners and adopted by that organization. An abstract of this report was published in the report of the executive committee of the Accountants' Association in the issue of the daily *ELECTRIC RAILWAY JOURNAL* for Oct. 12, 1910, page 720.

The report was accepted and, in accordance with the recommendation of the committee, President Swift appointed the following committee to attend the 1910 convention of railway commissioners: A. L. Linn, Jr., New York State Railways, chairman; H. L. Wilson, Boston Elevated Railway; W. F. Ham, Washington Railway & Electric Company.

#### REVISION OF BLANKS AND FORMS

H. E. Weeks presented a report of the committee on revision of blanks and forms. An abstract of this follows:

"The revision of the collection of blanks and forms was made necessary by the change in our classification of accounts. The collection now contains 16 books, carefully indexed, and the information included in these books is of great value. The detail work of making up the revised collection was under the supervision of Secretary Donecker, and much credit is due him for the manner in which it has been accomplished.

"The following inquiry was sent out and the information collected is of interest as it indicates that uniform accounting, which this association has so long worked for, is making rapid strides: 'Have you put into effect the standard classification of accounts adopted by the Accountants' Association at the 1908 convention?' One hundred and sixty-three answers were received. Ninety-six companies had adopted the classification. Fifty-seven companies had not, and 10 companies were using the classification required by the State commission of the State in which they were operating."

Upon motion, the incoming president was directed to appoint a joint committee to act with the Engineering Association and a similar committee to act with the Transportation & Traffic Association. The latter committee will take up the subject of freight accounting.

The letter of Charles S. Clark, Pennsylvania Steel Company, in reference to a uniform invoice was referred to the incoming president. An abstract of this letter was published in the daily *ELECTRIC RAILWAY JOURNAL* for October 12, 1910, page 721.

#### STANDARD CLASSIFICATION OF ACCOUNTS

Mr. Ham, as chairman, then presented the report of the committee on standard classification of accounts. This report said:

"At your last convention this committee submitted to you for consideration cases which had arisen under the standard classification of accounts up to that time. These decisions were known as cases Nos. 1 to 58, inclusive, and after discussion and consideration received your approval.

"Your committee now presents decisions in cases Nos. 59 to 185, inclusive, and recommends their approval. These cases, as well as cases Nos. 1 to 58, are contained in accounting bulletin No. 5, issued by the Interstate Commerce Commission, and through its courtesy presented now to this convention in pamphlet form. We ask that this bulletin be considered as part of our report.

"Besides the 185 cases contained in this bulletin, your committee has passed upon about 50 other cases, which will be published in due course. You will appreciate that to give careful thought and consideration to all these cases, involving questions which have arisen in every part of the country, has required much time and effort on the part of your committee. They have had two meetings, one at New York City, in January, and one at Atlantic City during this convention week. They have conducted a vast amount of correspondence, as the members of the committee live in widely separated sections of the country. We have felt at times that possibly we were sacrificing the interests of our own companies to devote so much time to committee work. Yet we have felt justified in such expenditure of time and labor in the belief that we were engaged in a constructive work which, in the long run, will be of great value to the electrical industry.

"At your last convention the matter of defining car-miles and car-hours was referred to this committee. We have not been able to give to this question more than passing attention, and believe that it will be to the best interests of the association that this work be assigned to a separate committee for report. We therefore ask to be relieved of further consideration of the matter.

"Our relations with the Interstate Commerce Commission have continued most harmonious. We believe that the continuance of the coöperation now existing between this association and the commission will bring about most satisfactory results, not only to our companies, but to the public as well."

Supplementing the report, Mr. Ham said that the classification committee had been in the work of classification since 1897, when the association was organized. At that time there was nothing that was uniform in the way of electric railway accounting. The great criticism was that uniformity was impossible. In the course of the last three years the committee had worked in coöperation with the Interstate Commerce Commission in what was called the new classification. This classification included a greater number of accounts than the old classification, but in general Mr. Ham thought it was quite true to say that it did not depart materially from the old classification. He believed the old classification, which was adopted when there was no governmental authority to compel its adoption, was adopted mainly on account of two things: First, its simplicity, and second, its elasticity.

Mr. Ham thought those two features were continued in the present scheme. The elasticity feature was well illustrated by the report of the joint committee on shop accounting, which recommended that a given account may be subdivided into some 40 or 50 or 60 special accounts. That was what he meant by elasticity, that one primary account was capable of infinite subdivision. It might be carried so far as to keep a record of the account of maintenance of every type of car, of every type of motor, whatever it might be, and yet it all fitted into the scheme of having the primary accounts. It was possible for a small company that wanted a simple system of accounting to keep its books according to this classification, and yet the large company could get all the information it required from the same scheme by simply elaborating and subdividing the accounts.

By simplicity, Mr. Ham meant in essence that the scheme should be simple; that there should not be an attempt to carry

out subdivisions or apportionments of items, charging up to this account one little thing and to that account another little thing, but that there should be certain general groups of accounts, and that each one of these accounts be carried as far as possible in its integrity.

The classification of accounts was not a system of cost accounting. No attempt was made to say in the primary account what represented the total cost of the things that might be covered by that particular head. The classification of accounts simply meant a subdivision of operating expenses; nothing more than that. It was not intended to say that account No. 2 covered all the expenses in connection with the maintenance of cars. A large portion of the shop account was on the two accounts, Nos. 32 and 36, maintenance of cars and maintenance of electrical equipment of cars. They were not separated because it was preferable to keep the shop expenses together. It was desirable to keep all the printing and stationery in one account and to keep in one account the maintenance of surface equipment.

Simplicity was secured by avoiding the unnecessary refinements of accounting, by not spending time in distributing things that didn't amount to anything after they were distributed.

A. F. Weber, statistician New York Public Service Commission, First District, said he had been particularly interested in this meeting and especially in the very valuable and timely paper by Mr. Davies, because the Cleveland situation was one that was of very general interest throughout the country. Outside of Massachusetts and some cities in different parts of the country, there was still no real settlement of the traction question, and the Cleveland settlement was one that interested everybody. One possible weakness in the settlement was discussed. Of course, there must be some incentive to the management of any enterprise, if all possible economies were to be secured; yet it seemed to him that the directors of the Cleveland company might very well take this position, that 25 years from now their franchise would expire, and there would then be a readjustment of the situation and a new settlement. The company would then presumably desire to be in a good position for negotiating another settlement, and it would be very much to its advantage to have the goodwill of the people of Cleveland.

That could best be secured by giving to the people a good service at the lowest possible price. Even though larger profits could not be secured it seemed to Mr. Weber that it would be altogether to the benefit of the company to give the people of Cleveland the lowest fare provided in the ordinance; and if in pursuance of that policy the directors should pass a resolution to give a bonus to the management, to the president or the general manager for every improvement that reduced operating expenses, he could not believe that the council at Cleveland would disapprove of any resolution for increased compensation.

It did not seem to Mr. Weber necessary to pay a bonus to the stockholders to get that increased efficiency in management.

Upon motion, the incoming president was directed to appoint a special committee of three to consider the question of defined car-miles and car-hours.

W. B. Brockway presented the report of the committee on resolutions, expressing the appreciation of the association to all who assisted toward the success of the convention.

C. L. S. Tingley, American Railways Company, then presented the report of the nominating committee, as follows:

President, W. H. Forse, treasurer, Indiana Union Traction Company; first vice-president, M. R. Boylan, general auditor, Public Service Railway Company; second vice-president, Will Browne, auditor, Utah Light & Railway Company; third vice-president, H. E. Smith, comptroller, Montreal Street Railway; secretary and treasurer, H. E. Weeks, secretary and treasurer, Tri-City Railway Company; executive committee, L. T. Hixson, auditor, Terre Haute, Indianapolis & Eastern Traction Company; F. B. Lasher, traveling auditor, New York State Railways; Charles H. Lehr, audi-

tor, Northern Ohio Traction & Light Co.; F. J. Pryor, Jr., auditor, American Railways Company.

The secretary was instructed to cast a vote for the nominees and they were declared duly elected.

Mr. Forse, the new president, and others of the new officers expressed their appreciation of the action of the association.

The convention thereupon adjourned.

### PROMENADE CONCERT AND BALL

Last night the lobby on the pier was again the scene of a delightful entertainment. The symphony orchestra of Louis Aroll rendered a charming concert program of six numbers, beginning at nine o'clock. The entire lobby was filled with animated groups of congenial friends and the galleries also were crowded with appreciative listeners. The ladies, as usual, were gowned in lovely creations. At 10 o'clock the floor was cleared for dancing, which continued until a late hour. After the fourth dance a flashlight picture was taken of the assembly.

### AMERICAN BRAKE SHOE COMPANY'S DISPLAY

The exhibit of the American Brake Shoe & Foundry Company is located in Section 801, where it shows samples of various types of brake shoes ranging from the extra durable and efficient shoes of heavy interurban equipment and subway coaches, to the narrow-tread shoes for the lighter city cars. A catching object lesson is shown of the advantages obtained by standardization of heads and shoes, by which, through the efforts of this company, many railroads have largely benefited. Thirty-eight old-type non-standard brake shoes representing a new weight of 1174 lbs., a scrap weight of 478 lbs. and a mileage of 146,876, are shown alongside of a pile of standard shoes, 38 in number, representing a new weight of 917 lbs., a scrap weight of 197 lbs., and a total mileage of 152,000, effectually demonstrating the saving due to standardization, where the cost per pound of the non-standard and standard shoes is the same. To this must be added the fact that the standard shoes represent a single pattern, while the non-standard shoes cover many patterns, some of which are right and left hand. A large proportion of the railway officials visiting the exhibit personally testify to the saving due to standardization and their appreciation of the efforts of the company to bring it about. F. W. Sargent, chief engineer, is in charge of the booth.

Atlanta Car Wheel & Manufacturing Company is represented at the convention as usual by Sterling G. Turner, manager, and Sam Watkins. Their exhibit space is 683, in Building 2, and this year was used as a reception booth which was in the nature of "headquarters" for Southern railway men.

Meyer Safety Guard Company, Omaha, Neb., is showing a 12-ft. working model in space 941-943, Building No. 3. This guard is designed to prevent passengers from falling off moving open or closed cars. It gives the conductor and motorman complete control of passengers in boarding and alighting from a car. Its ease of operation is one of its commendable features. Martin Meyer and R. N. Burgess are in attendance.

The Hoeschen Manufacturing Company, Omaha, Neb., is showing its Batteryless crossing bell in the booth of Forsyth Brothers Company, space 954, Building No. 3. This bell is very serviceable and is used as a signal at highway crossings to warn of approaching cars. It is simply operated by the depression of the running rail by the weight of a passing car. H. P. Ryner, manager of the company, has charge of the exhibit.

## Among the Exhibits

F. E. Felt has joined the publicity department of The J. G. Brill Company, Philadelphia.

\* \* \*

Sterling Meaker Company, Newark, N. J., is represented at the convention by Raymond T. Stowe.

\* \* \*

G. T. Abel, Brooklyn, N. Y., expert in car painting by contract, is at the convention in the interest of his business.

\* \* \*

Mason Rummey, general superintendent, Detroit Steel Products Company, is here in the interest of "Detroit-Fenestra" steel sash.

\* \* \*

C. E. Sawtelle, vice-president and general manager, Tool Steel Gear & Pinion Company, Cincinnati, is highly gratified at the number of customers who have brought prospective users to his exhibit.

\* \* \*

Habirshaw Wire Company, New York, although not represented with an exhibit, has its interests ably cared for by James B. Olson, secretary of the company. Mrs. Olson is accompanying Mr. Olson.

\* \* \*

Major Robert E. Mills, special representative of Berry Brothers, Ltd., Detroit, Mich., is actively explaining to visitors at space 651 the diverse merits of Berry varnishes as applied to car woodwork.

\* \* \*

The post cards of the Indianapolis Brass Company were hailed with delight by the delegates who were so busy, of course, that they did not have the time to write long letters to their stay-at-homes. It was much easier to fill in the blanks on these conveniently worded cards.

\* \* \*

W. J. Jeandron, New York, had a visit at his booth on Wednesday from Mr. Misaki, chief engineer, Hanshin Electric Railway Company, Amagasaki Setsu, Japan. Mr. Misaki has placed an order for approximately \$5,000 of "Le Carbone" brushes.

\* \* \*

Presto Company (owner and patentee of the "Presto" convertible coat collar) is exhibiting many different styles of conductors' and motormen's uniforms equipped with this collar. J. W. Starbuck, advertising manager for the company, is in charge of the exhibit.

\* \* \*

A timely exhibit is that of the National Carbon Company, Cleveland, Ohio, in spaces Nos. 463, 465 and 467. The noted Laclede brush is on exhibit, and a number of very interesting specimens of brushes that have given several hundred thousand miles' service are there for the inspection of visitors.

\* \* \*

Economy Oil Cup Company, Augusta, Ga., is showing its new oil cups in space 525, Machinery Hall. This device fits any journal or motor bearing and has a felt pad at the bottom which distributes the lubricant direct to the shaft. The wear on the felt is compensated by the weight of the cup and its contents. The interests of the company are looked after by H. E. Fitzgerald, E. M. Crozier and Wonham, Sanger & Bates.

\* \* \*

Jewett Car Company, Newark, Ohio, did not bring a car to the convention this year and therefore had no formal exhibit, but Edward Besuden, their genial and popular sales manager, was on hand, of course, and displayed his usual activity. Mr. Besuden always shows much zeal in the work of the Manufacturers' Association and among other things served very acceptably on the nominating committee at the annual meeting Wednesday.

Globe Ticket Company, Philadelphia, Pa., is showing in space 960, Building No. 3, a full line of city and interurban railway tickets, books, transfers and cash receipts. The company is making a specialty of the Pope patent p. m. transfer, which is used by practically all of the largest city companies in the country. There is also shown the Globe ticket destroyer, the Globe ticket chopper, and various kinds of ticket punches. The company is represented by W. C. Pope, P. C. Snow, R. C. Osman, J. Elliott and E. Elliott.

\* \* \*

Warren Webster & Company, Camden, N. J., have an exhibit consisting of a 50-hp. "Star vacuum" feedwater heater and purifier, oil and steam separators, grease traps and various Webster specialties, beside their well-known Webster water-seal motor for use on the Webster system of steam circulation for heating purposes. A miniature copper air washer is shown in operation to illustrate the Webster method of cleaning and pumping air. Represented by H. A. Terrell and W. F. Bilyeu, of the Camden office; G. A. Eagan, of the Philadelphia office.

\* \* \*

U. S. Metal & Manufacturing Company has space 609 in Building No. 2. It is now sales representative of the Carbon Steel Company for interurban and street railway lines handling that company's various axle products. It is exhibiting a sample of the Cunningham axle, which is an exclusive product of the Carbon Steel Company. Other products handled are: "Barol," a coppered carbolineum wood preserver; "Diamond" tapered steel poles, the type recently installed by the North Shore Traction Company (Long Island, N. Y.) throughout its line; Wolfe rail joint lock, and the Columbus lock nut. Represented by A. B. Hegeman, Charles C. Castle, Edwin D. Hillman, F. C. Dunham, H. A. Hegeman, Arthur Masters.

\* \* \*

Coin Counting Machine Company is in spaces 659 and 661, Building No. 2. The company's representatives are demonstrating the Johnson coin counters, which have been successfully used for several years by the United States Treasury, Bank of England, leading American banks, Interborough (New York) Rapid Transit Company, Chicago City Railway, United Railways of St. Louis, and hundreds of other traction companies. These machines count 1000 coins per minute, and have attachments for wrapping coins, stopping automatically when a given number has been deposited in the wrapper or bag. This year the company is showing a nickel machine, designed to facilitate the separation and count of coins collected in fare boxes. The Public Service Railway Company uses 30 of these machines in Newark and Jersey City; 20 are used by the Third Avenue Railroad, New York, and others are used in Baltimore, Rochester, etc. Represented by C. H. Birdsall, W. P. Butler, S. F. Champion, Jr.

\* \* \*

The efficient telephone service provided on the pier by the Delaware & Atlantic Telegraph & Telephone Company, which is one of the associated Bell system companies, is greatly appreciated by the exhibitors and others in attendance at the convention. The telephone company installed 105 telephones and switchboard to connect the various exhibits and placed a switchboard with two operators in a private room on the pier. Ten trunk lines connect this switchboard with the Atlantic City exchange. In order to obtain the quickest service possible, operators on the pier were furnished with a list of the names of the members registered, together with the name of the company which they represented, the number of the exhibit space, the telephone number and the hotel address. This list is used by the operators to enable them to locate readily any person connected with the convention. The printing of the daily edition of the ELECTRIC RAILWAY JOURNAL has been greatly facilitated by the long distance telephone service between Atlantic City and Philadelphia.

E. G. Long & Company, New York, are having their interests carefully attended to at the convention by E. H. Mays.

\* \* \*

Wright Wrench & Forging Company, Canton, Ohio, has space 812, Building No. 3, where it is displaying drop-forged levers and wrenches. Represented by William B. Haight, sales manager of the company.

\* \* \*

Badger Fire Extinguisher Company, Boston, Mass., is exhibiting in space 436 its 40-gal. chemical engines, mounted on truck for station, car house and repair shop service; also its hand chemical fire extinguishers for car interiors. Represented by C. R. Edwards, A. E. Stone.

\* \* \*

The Philadelphia Electric Manufacturing Company is exhibiting several different styles of Tungsten arc lamps, ornamental street lighting fixtures, fuse boxes, line material of all kinds and a new device for detecting open circuits in railway motors. Represented by W. O. Dale and C. L. Bundy.

\* \* \*

Walter Chur, of the American Railway Supply Company, New York, is enjoying the week at the convention, meeting his many friends and customers. On a neat board in his booth, space 826, are displayed conductor coat and cap badges, motorman and employee cap and coat badges, uniform buttons, police badges and other specialties manufactured by his company.

\* \* \*

Adams & Westlake Company has a display, in space 682, Building No. 2, of a new type of sliding-door lock which locks open and shut. The representatives are also showing a pressed steel headlight which weighs about one-quarter less than the ordinary cast headlight. Other devices shown include samples of the company's line of car hardware, headlights, lanterns, etc.

\* \* \*

Whitmore Manufacturing Company, Cleveland, Ohio, is showing several gears and pinions which have been in service on some of the large electric railways and have been lubricated by Whitmore lubricating composition. It is very adhesive, forming a cushion between the metal surfaces of the gear and pinion to minimize frictional resistance and wear on the metal surfaces, and at the same time doing away with the usual gas noises.

\* \* \*

Standard Paint Company, New York, is in space 822, Building No. 3, which has been fitted up as a reception room, where the friends of the well-known P. & B. products are received by the representatives of the company. Represented by J. H. Thomas, general manager of sales; Chas. E. Smith, manager of the electrical department; H. E. Lavelle, street railway representative from the New York office; H. A. Inwood, street railway representative from the Chicago office.

\* \* \*

Leeds & Northrup Company, Philadelphia, Pa., is exhibiting in space 617, Building No. 2, a complete line of electrical measuring instruments for traction companies. The Herrick inspection test set is of special interest. This instrument is used for the rapid and accurate determination of the resistance of the various circuits of an electric car. It may also be used for the measurement of insulation resistance and for determining the position of armatures with relation to the pole faces. The set includes all connections, leads, etc.; also a frame for use in measuring armature coil resistances. There is also exhibited a bridge for locating faults in heavy cables by means of the Murray loop special construction. Among other apparatus exhibited is a complete potentiometer outfit, various types of Wheatstone bridges, a portable testing set, insulation testing apparatus and resistance thermometers. Represented by Morris E. Leeds, Charles S. Redding.

Fred S. Wonham, president of Wonham, Sanger & Bates, arrived at the convention early Wednesday morning. After the fender and wheel-guard test of the Public Service Commission at Schenectady two years ago, Mr. Wonham had the courage of his conviction that the "H-B" life guard had merits to justify him in introducing it into the United States. In less than two years over 15,000 "H-B" life guards have been installed in the United States.

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National Lock Washer Company, Newark, N. J., is displaying its sash balance in spaces 650 and 652, Building No. 2. This is a spring roller installed in the heading above the sash and connected to the sash by belts with brass straps at either end, making a noiseless fixture. The webbing is chemically treated to make it waterproof and fireproof. The company is also furnishing chain connections with this balance, when desired, and has a new device for fastening the chain to the roller without soldering.

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Corell Railroad Tie Company, Mount Jewett, Pa., is exhibiting at space 457 a model of the Corell concrete railroad tie. It is a double sleeper instead of a long rigid tie. The ties thus far made have been about 12 in. wide, 10 in. thick, and each block or sleeper about 28 in. long on the bottom, tapering to about 22 in. on the top. The dimensions are subject to the requirements of the roads where installed. Among some of the roads now using this tie are the International Railway, Cleveland Railway, Buffalo, Rochester & Pittsburgh Railroad and the Buffalo Creek Railroad. H. J. Corell and J. W. Caverly are in charge.

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In recent years heavier cars and increased traffic have made it absolutely necessary in some places to use switches, mates, frogs and crossings, built entirely of manganese steel. Particularly is this true of steam over electric crossings, where the constant pound of the car wheels soon shakes bolted crossings apart. In Wm. Wharton, Jr., & Company's exhibit in spaces 208-216 and 304 a crossing of the latest solid manganese steel construction is shown, as well as switches, mates and frogs of solid manganese steel and manganese steel center construction. Springs and locks for switches are also exhibited.

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Black Diamond Boring Machine Company, Monongahela, Pa., has on exhibition in space 537, Machinery Hall, a machine for boring armature and axle bearings and other parts; also a patent adjustable boring tool and an adjustable rolling tool. All of these devices are being demonstrated. The company has recently received orders for its products from the Boston (Mass.) & Worcester Street Railway; Virginia Passenger & Power Company, Richmond, Va.; Little Rock (Ark.) Railway & Electric Company; Pacific Electric Company, Los Angeles, Cal.; and a repeat order from the Pittsburgh (Pa.) Railways. Represented by T. M. Boggs, A. J. Brown.

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Hess-Bright Manufacturing Company, Philadelphia, Pa., is showing in space 571-573, Machinery Hall, an exhibit of ball bearings for main journals on railway cars and for railway motors. The first includes one axle and wheels on ball bearings rotated light to a speed of 45 m. p. h.; sample bearings and boxes as used on the Atlantic City & Shore Railroad. Pictures of these cars are in the booth, while the cars themselves may be seen on the Boardwalk near Virginia Avenue and near the exhibit pier respectively. The main feature of the second portion comprises two G. E.-80 motors, one with and one without ball bearings, showing how it is possible to put these ball bearings on motors with integral frame heads. Represented by Henry Hess, president, Cyril J. Hopkins, E. W. Rubencame.