

Electric Railway Journal

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Railway Association and Its Affiliated Associations

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Extent of Revenue from Freight

The Committee on Express and Freight Traffic, which made its report to the Transportation & Traffic Association, ascertained the percentage of gross revenue contributed by the freight business of 31 companies. The figures obtained range from 0.3 per cent to 30 per cent, while the average would be less than midway between these figures, or 11.4 per cent. It will surprise many people to learn that 15 of the companies show that 12 per cent or more of their gross revenue is derived from freight traffic. We think that it is important to calculate with great care the net revenue secured from this business. Some companies are believed to be handling freight at rates which do not afford a return on the actual expense incurred, even if no allowance is made for the interest on the investment involved.

The Electric Railway Dictionary

At the Wednesday afternoon meeting of the American Street & Interurban Railway Association a resolution was adopted emphasizing the need of an electric railway dictionary and accepting the offer of the McGraw Publishing Company to publish such a book under the supervision of a representative editing committee which was appointed by the president. Such a book has long been needed in the electric railway field, and the proposal to publish it at this time is especially opportune in view of the important work being carried on by the Standardization Committee of the Engineering Association. The preparation of the book is a task of magnitude and will require at least a year, or perhaps longer. It is believed, however, that the publishers can be assured of the hearty co-operation of

manufacturers and electric railway officers who will be equally benefited by the work which it is hoped will be accomplished through its general distribution. The publishers bespeak the assistance of every manufacturer in the electric railway field, and of the railway men as well, in supplying the necessary data and other material to the editors. The personnel of the editing committee appointed by the association is sufficient assurance that the book will be a volume of the highest class.

Prizes for Car Designs

At the same meeting the American Association approved another resolution, calling for the appointment of a representative of a member-company of the association to serve on the committee of three judges in the prize competition recently announced by the J. G. Brill Company. This competition was established primarily with the idea that it might serve to attract to the study of rolling stock design, and to the electric railway field as a whole, the best of the men graduated every year from the technical schools in this country. The announcement of this competition is of particular interest in connection with the report of the Committee on Education presented at the same meeting of the association. The latter report indicates that in the past there has been a tendency for many of these young men to pass from the schools to other branches of electrical work than that of railways. Undoubtedly this is partly due to the fact that for a long time those directing the affairs of the corporations in these outside lines of work have recognized the value of adding to their forces the best of the graduates of the technical schools. But in no field are there greater problems to solve than those of electric railways, and among them the question of car design is one of the highest engineering interest. No better plan could have been conceived to induce the young engineering student to focus his attention on this problem than by means of monetary prizes of considerable value. Its solution demands a close study of the operating problems of city service, for the two go hand in hand. If interest can be aroused in this way in some of the many problems of the engineering and operating departments of electric railways among young men who are starting out on their careers, the effect cannot but be beneficial to the electric railway fraternity as a whole.

The Close of the Convention

To-day marks the close of the 1908 convention. Indeed, all but two of the associations have held their final sessions. This evening the exhibits will be dismantled. The hotels have already begun to be less crowded, although many of the delegates have expressed an intention of staying out the week-end. In reviewing the experience of the week the first thought which suggests itself is that the results have justified the selection last spring of Atlantic City as the meeting place for the 1908 convention. All-in-all it possesses more of the desiderata of a convention city than

any other, and undoubtedly will for a long time to come, if the plan of holding the conventions of all of the associations at the same time and place is retained. No other city is so well prepared to care for a large number of transient guests amid pleasant surroundings; no other place is as well provided with exhibit space. This does not mean that the association will always have to meet at Atlantic City. It may go to the far west, or may select some intermediate city, on occasions. But unless through some change in organization the number of attendants at its annual conventions becomes much smaller than at present, the association will have to follow the practice of the Master Mechanics' and the Master Car Builders' Associations, and make Atlantic City its main abiding place.

The Convention Daily

This is the last issue for 1908 of the daily edition of THE ELECTRIC RAILWAY JOURNAL, as the reports of the proceedings of the conventions to be held today will be published in New York in the regular weekly edition issued on October 17. The editors and publishers of this paper have had a strenuous week, but have endeavored to give the attendants at the convention what they have evidently wanted—a morning paper, ready for them at the breakfast table, with a full account of the proceedings of the previous day. In their effort to do this they have been greatly assisted by the cordial co-operation of the officials of the different associations, who have in many ways facilitated the work of publication. They are also greatly indebted to the manufacturing companies for their advertising announcements, without which the publication of the daily would have been impossible.

In many respects the work has been similar to that on a large daily newspaper. In quantity of reading matter, that is, in the number of words printed, each issue of THE ELECTRIC RAILWAY JOURNAL corresponds in size to a large daily paper of 20 to 24 pages, and there is the same necessity to insert late news. In many respects, however, the ELECTRIC RAILWAY JOURNAL daily is handicapped, as compared with the daily paper. One of these lies in the fact that the printing office is 60 miles away from the editorial office, and that the train service between the two places, while fair during most of the day, is infrequent during the hours when a great part of the work has to be done. Another difficulty is that owing to the half-tone illustrations used in many of the association papers, it is necessary to print THE ELECTRIC RAILWAY JOURNAL daily with a flat-bed press instead of the more rapid cylinder press, and on coated paper, which absorbs ink far less rapidly than ordinary newspaper stock. It may be of interest to those who have been reading this paper each morning during convention week to learn the plan followed in publishing it.

The cover and a considerable part of the advertising pages are printed in New York prior to the convention, but of course all of the reading pages and some of the advertising pages have to be printed "on the ground," which in this case is Philadelphia. The editorial offices of the paper are in the booth of THE ELECTRIC RAILWAY JOURNAL on the Pier. The articles are set and printed at a large printing shop on North Tenth Street, Philadelphia, as no office in Atlantic City was capable of undertaking this work. Between these two places boys are kept traveling back and forth during the day, taking copy to Philadelphia to be set as fast as it is prepared. Every attempt is naturally made to have as much matter as possible set in type early in the day, so as to reduce the night congestion in the printing office. After the last report is in, the members of the editorial force, or

most of them, take the train to Philadelphia, where one or more remain until the entire paper is on the press. This is usually between 1 and 1:30 a.m. Binding commences at about 2:30 a.m., because the copies destined for Atlantic City have to be on the first morning train, leaving Camden at 4:45 a.m. The supply of papers for Atlantic City, weighing nearly half a ton, is packed on a truck at about 4:00 o'clock in the morning, under the supervision of a representative of the editorial department, who remains with them until they reach Atlantic City. Arrangements are made so that a high-speed automobile is ready to take the papers to Atlantic City if the train connection should be missed, because the next train does not reach Atlantic City until 9 a.m., too late to permit the delegates to read the paper at breakfast.

At Atlantic City the papers are transferred from the train to representatives of the business department of the paper, by whom they are distributed among the different hotels. After the rush edition for Atlantic City has been printed and shipped, the additional copies required for the regular subscription list are run off the presses and are mailed to each subscriber of the paper.

The McGraw Publishing Company has at Atlantic City and Philadelphia on this work seventeen representatives, of whom ten are regularly engaged in the editorial department and seven in the business department.

The Social Week

It all lies in the point of view, but it is worth recording that an assiduous convention goer, a well-known man of affairs, once said that his chief object in going to a convention was to stay away from it. In other words, he cared little for the regular business program and the formal exercises, but he did want to meet people, to see exhibits, to make acquaintance with the newer men, and generally to keep himself abreast of the art as a whole by approaching it from the social side. He said that the average elocution of the authors of the papers was so distressing it almost made one do an injustice to their really good qualities; and it has been his plan to get the man who interested him to give him a little personal private synopsis; or else he would read the paper quietly at home afterwards. It is evident, indeed, that there are many ways of viewing a convention, and that to a great many people what goes on in the meeting rooms is quite a negligible quantity.

We should imagine that pretty well all tastes have been gratified during this present week of superlatively fine weather, when every element of air and earth and sea has combined to render work easy and entertainment enjoyable. Referring here more particularly to the social side of the week, we feel that congratulations and thanks are heartily due to the members of the Entertainment Committee—and their wives—who have been simply indefatigable in trying to make other folks happy. With no encroachment for a single moment on the serious functions of the convention, there has been afforded a constant round of pleasure, beginning with that notably perfect reception on Tuesday night and going from day to day with amusement indoor and out—musical recitals, vaudeville, theatre parties, golf, automobiling and roller chairs galore. To the regular official entertainment have been added the various auxiliary dinners and amusements of well-known men and firms, and the whole week has gone through on a high plane of dignity that has left the best possible impression with everybody.

Conventionalities

Good bye—and au revoir!

Came to our booth and asked for the "yellow journal." Think of it!

Ask a Philadelphia Rapid Transit Company delegate for his visiting card and get a free ride.

There were nearly 650 ladies registered by Thursday morning. Every one has declared her intention of coming again.

Have you seen that bogey man "local conditions" prowling around the Greek Temple and Aquarium Court Hall? He has appeared in every discussion to date.

It will be interesting news to a great many old friends that T. P. Bailey is back again with the General Electric Company, and that an important assignment awaits him in the near future.

It is felt that the only adequate reward for the hard-working roller chair committee is to give it a fifty year trolley franchise along the beach front, without conditions, and permitting it to charge a 25 cent fare.

John Ohmer, of the Ohmer Fare Register Company, of Dayton, Ohio, is in Europe, and is missed by all of his numerous friends, who would have liked to register a call. Mr. Ohmer has not missed a convention in ten years.

W. B. Jackson, the electrical expert, and partner with his brother, Professor D. C. Jackson, of the Massachusetts Institute of Technology, came in on Thursday. He expressed a very high opinion of the educational value of the exhibits.

"Greeting remembrances all," was the thoughtful cable dispatch received by E. B. Grimes on Wednesday night from Registrar Ohmer at Berlin. Nothing short of our universal circulation would enable Ohmer to reach all his friends with that timely and typical message.

President C. Loomis Allen, of the Transportation & Traffic Association, was tendered a banquet, last Wednesday evening, by the other officers and the members of the Executive Committee of the association. A. W. Warnock was toastmaster. Twenty-four were present altogether. Mr. Allen was surprised by the present of a fine scarf pin.

W. R. Garton is busily engaged arresting the lightning that has been turned on at the Lord booth. The cynical indifference with which he handles a few million volts is almost shocking. The passerby is very much impressed by the constant crackling of the high voltage discharge and the skill with which it is rendered harmless.

D. C. Frost, superintendent of the Lynchburg Traction & Light Company, and A. T. Clark, acting superintendent of shops, United Railways & Electric Company, were seen arm-in-arm critically inspecting the mission furniture at the front of the pier. They are staying at the Dennis, but that is not held against them any more than the other fact.

Painted in a hurry, the sign at the working exhibit of the thermit process called attention in large type to the "Demonstrations." The missing letter was indeed well out of place, for it did look "real devilish" there when the trick was being done, amid fumes and smoke and general spectacular effect. This show proved very attractive every day to a large throng of spectators.

Sterling G. Turner, the cast iron wheel maker, of Atlanta, had to go away from the convention by Thursday, leaving Sam Watkins at the axle. Press of business the cause—and could any one want a better reason these days! Their faith in the good time coming was shown by

the generous distribution of bill folders in which to put all the money they are sure awaits you in the near future.

A total registered attendance of about 3000 early Thursday morning is not so bad, with a probable gain of four or five hundred during the day. Of the figures up to Thursday, about 1200 were on the operating side and 1700 on the supply side. Two supply men to one operator is about the right proportion—King Richard between the two bishops! The total full attendance will roll up around 4000.

A. W. Beuttell, of New York, has but recently returned from Europe, but lost no time in hastening to Atlantic City. It was he who introduced into this country the "Linolite" incandescent lamps now handled by Johns-Manville. These lamps now adorning their booth are several inches long—hence their name, which is playfully applied by his friends to Mr. Beuttell himself. He is the tallest man at the convention.

F. F. Bodler is here all the way from the Pacific Coast, taking steam cars regretfully part of the way, as the through trolley system from San Francisco to Atlantic City is not quite complete. His firm of Eccles & Smith Company, Frisco, Portland and Los Angeles, is doing a large business in railway supplies, and finds a large demand even now, with more coming if inquiries and advance orders are any indication.

If you see a man with a boutonniere, you can tell where he has been without any help from Sherlock Holmes. The Buckeye Engine Company is distributing fresh and fragrant flowers daily at its booth, and this graceful function has become one of the recognized features of the annual convention life. Happily, Mr. Weeks has recovered sufficiently from his recent indisposition to be on hand and welcome the visitors at his booth—known to the boys as "The Rosary."

Fred Baird, of the Homer Commutator Company, and William H. Wherry, of the Forest City Electric Company, came "over the road" from Cleveland in Mr. Baird's "1909 Packard," reaching New York en route in time to see the Vanderbilt Cup Race on Long Island last Saturday. After brightening up the Metropolis by touring about the streets on Sunday the party made a southward flight to Lakewood Monday afternoon and reached the Marlborough-Blenheim Tuesday. They say that if everybody would only go to conventions this way there would be no need for special trains.

It was a graceful and altogether fit thing that the Association did in passing resolutions of regret over the deep loss sustained by the death of John A. Brill and C. Densmore Wyman. In their respective spheres, those two leaders did great good to the art and to the world. May their memories be ever green! They were deeply missed, as was President Goodrich, whose forceful personality always carries with it an influence for good, but who, it is hoped, will long be with us to help in the upbuilding of the Association, now more useful and influential than ever before in its history.

Bustling hurriedly along the pier went a delegate reading a program as he went. He reached the gate of Captain Young's classic home, tried to open it, shook the latch, peered around for a bell, and glared angrily at the buxom goddesses as though he expected one of them to let him in. "Wasn't aware you knew Captain Young," said a passing friend. "I don't know him and don't want to, but I want to get into the meeting in this blamed Greek Temple." Tableau. It is the fact that many people do not realize that

Captain Young actually lives all the year in the midst of his mythological menagerie.

The most southerly presiding officer of the convention is the genial J. S. Harrison, of the Jacksonville Electric Company. Mr. Harrison was the man who jumped into the breach for the Claim Agents' Association when a combination of misadventures kept President Goshorn and Vice-Presidents Farrell and Weh from the meetings. Third Vice-President Harrison (now second vice-president) took the reins, however, with the result that everything ran along as smoothly as water down hill. There were other Southerners present beside Mr. Harrison, and they were all actively concerned in the discussions, some of which were as warm as Jacksonville on July 4.

The staff of the Convention Daily of the Electric Railway Journal is in fine training just now for any daily newspaper enterprise that is in need of talent. After what they have done and gone through the past week they feel equal to any large journalistic proposition, such as the Philadelphia Ledger or Chicago Tribune. The staff is modest, but feels that if you don't appreciate its efforts, it must be deprecatingly self-appreciative. A little story of the work of getting out the Daily is told elsewhere in this issue. Read that, and then forgive them for getting your middle initial wrong! It was right when the copy left for the Philadelphia printer.

The ladies golf tournament at the Country Club on Wednesday afternoon was highly successful. Clock golf was played, and the game was watched with much interest. About 150 ladies, with attendant knights, were present, to make the "gallery." Mrs. Frank Donohoe was first with a score of 22. Mrs. Ross, of Montreal, was tied with Mrs. Pope, with 23, and won on the final. Appropriate prizes were awarded. No fewer than 21 ladies entered the contest. The committee of ladies presiding over this enjoyable social affair were Mesdames Whipple, Keegan, Wampler and King. There were also six tables, for euchre, in which prizes were also awarded.

One of the visitors from abroad to the convention this year is Frederick W. Hild, assistant general manager and chief engineer of the Havana Electric Railway Company, Havana, Cuba. Before going to Havana, Mr. Hild had had an extensive interurban experience in the West, and in Havana has charge of a property whose density of traffic compares favorably with those of any of the large city properties in the United States. Important extensions are under way in Havana, but are being temporarily delayed because the city is planning to install an elaborate system of sewers and the company proposes to build its new tracks at the time the streets are torn up for this work.

If W. H. Wilkinson had his way, we would all of us have forgotten, this week, how to use our legs. Was there ever a more persistent man? Anybody would think the roller chairs were pressed steel. They are pressed just the same, and he is a speedy man who can get away from Wilkinson's earnest and pleading importunity to take a ride. Such pressure from such a presser it is hard to resist. If you have a lady with you, there is no escape. Wilkinson makes you feel it is the most brutal and ungallant thing in the world to let that charming creature with you, walk; so you get in, receive his benediction and Chesterfieldian bow, and glide away feeling what a really good fellow he is after all!

General G. H. Harries, of Washington, D. C., is one of the most interesting and engaging personalities in the whole convention. Known to most of us as a leader in the field of

traction and lighting, it is an unfamiliar fact to many that he is Brigadier-General in command of the forces of the District of Columbia. At Gretna, last year, he had 9,000 troops under exercise—probably the largest command of the kind since the Spanish War. The General was educated at Sandhurst—England's West Point—and has seen active service with Miles, Shafter and many other well-known officers, here, in Cuba, etc. His acquaintance with men and affairs, and his bonhomie, make him a delightful companion at all hours.

The rising standards of the art are indicated in many ways. One is the demand for men of high education, even in what might seem to some the more prosaic branches of the industry. Thus, for example, the Brady Brass Company has enlisted recently T. M. May, a graduate of Oxford University, England, and John W. Gannon, a Yale man of '99. The latter was engineer maintenance of way of the Atlanta & West Point Railroad, and Mr. May has already a wide acquaintance in the railway field. Both of them make their headquarters at the New York office, 95 Liberty Street. Mr. May states that the signs of the times are quite encouraging, the last two weeks having seen a large number of bookings for new equipment.

W. W. Wheatley, of the city of Mexico, where he has had a prominent share in the development of electric railway enterprises and is now active in the introduction of electric railway apparatus in the Southern Republic, is now north to take part in the convention and to see the exhibits. Mr. Wheatley has a notable reputation as railway manager and expert, and applies a critical judgment to the art as here revealed. Speaking of conditions in Mexico, he remarks that a sympathetic business depression followed the American financial collapse last year, but that with her immense resources of all kinds awaiting development, the sister Republic has rallied quickly and is even to-day evidencing a marked and healthy recuperation.

One of the cosiest booths at the Pier would naturally be one of the bleakest but for the novel mitigation of climate caused by its sign. It is the Western Electric space fronting on the Court of Seals—that sounds a bit like the Alhambra! It is open to the air with an eastward exposure. But in the middle, Mr. Post, its well known publicity manager, has a lowhung sign with 400 odd lamps, showing also the location of as many branch offices, supply depots, and points of Western Electric distribution. It is an impressive display, and becomes more so when Mr. Post allows you to warm yourself in front of it. Mr. Post has amused himself with rigging up a W. E. signal "barker," which brings the seals to attention at once. He offered a large sum for the privilege of putting his "ad" on the seals' backs!

The lighting of the Grand Stairway, leading up to Building "B," is eliciting a great deal of attention, due to the effects produced by the lamp provided by the Cooper-Hewitt Company. Four lamps of a new type are utilized. This new lamp, known as Type "T," consists of a Cooper-Hewitt mercury vapor tube formed into a circle with a tungsten lamp placed in the center, the whole being placed under a holophane bowl. The tungsten lamps supply the red rays lacking in the mercury vapor tube. As compared with other illuminants, most favorable economical results are said to be obtained. The tungsten lamp, as most of our readers are probably aware, is the new incandescent lamp, in which the carbon filament is abolished and is replaced by one made from the metal tungsten, taking about 1.25 watts per candle instead of 3.1.

TRANSPORTATION AND TRAFFIC ASSOCIATION— THURSDAY

The meeting was called to order at 10 a.m. with Vice-president A. W. Warnock in the chair. Mr. Warnock announced that the convention would first take up the subject of the Possibilities of a Well Conducted Publicity Department, where it was left yesterday.

George S. Brush (Boston Elevated Railway) then presented his paper. The paper of George H. Gall (Washington, Baltimore & Annapolis Electric Railway) was then presented. The paper on the same subject by Mr. Lamb, of Milwaukee, was read by title and will be printed in the proceedings.

Mr. Warnock then read a statement from W. A. House, president United Railways & Electric Company, Baltimore. This was an extract from a personal letter. The statement was as follows:

All corporate interests should recognize that, to a greater extent than ever before, it is to their advantage to supplement and support their regular legal staff by skilled advertisers, not in the usually accepted sense of the word "advertising," but by employing agencies and men who have the requisite experience, acquaintance and connection and are expert in grouping and presenting facts to the public; in short, persons who are qualified to carry on an educational campaign concerning the interests they represent.

The time for the "let-alone policy" has passed by. So long as corporations conduct their affairs with due regard for the rights of the people, and do not disregard reasonable public demands, they should have nothing to fear from inimical legislation.

When a corporation takes the public into its confidence, and invites its patrons to point out any defects in its service which constitute a reasonable ground for complaint, it manifests sound judgment and good sense. It cannot and should not be expected to consider complaints that are frivolous or are inspired by petty malice, but honest criticism should be welcomed.

A publicity department is a decided step forward in an attempt to get in closer touch with the public in the form of heart-to-heart talks about mutual trials and tribulations. While it may be a novel thing for public service corporations to welcome publicity in their affairs, it is beginning to be recognized that the best-paying policy is to deal liberally and fairly with patrons, and encourage a spirit of co-operation and not a feeling of animosity.

Corporations should take notice of the things around them, display an interest in their patrons and show the latter that their corporate strength is to be used for the patrons' benefit and not against them, and thus gain the respect, confidence and co-operation of the public.

While naturally, when a public service corporation makes large expenditures upon its property in the reconstruction of tracks or equipment of its lines with larger and more modern cars and operates them at closer intervals so as to meet the demands of the traveling public, there should be a marked change of sentiment towards it by the public, yet it is believed that there is necessity for further popularizing it.

In some places there is a constant agitation against public service corporations. In some places it is deserved, in some it is not.

People do not always take the trouble to discriminate; and in this connection, a well-organized publicity department, in inaugurating a campaign of education, should be in a position to place before the public the facts regarding the great work the company is doing. Such a department should call attention, if deemed advisable, to the large amount of taxes that is paid; also, to the vast sums that are expended for improvements to tracks, power-plants, purchase of modern cars, as well as in developing excursion resorts and the improved service thereto.

The head of such a department should be a man who possesses tact and is skilled in the preparation of advertising matter. He should present in attractive, readable form such matter as it might be considered advisable to place before

the public. At the same time, this person could, if desired, make proper replies to such of the numerous newspaper complaints as are deemed worthy of reply (in a large number of cases there being no foundation in fact for the statements contained in such communications). The person in charge of such a department could also ascertain from other public service corporations what they are doing on these lines, as well as what is being done in the way of preparation and distribution of advertising matter. In brief, his duties would be to gather and present to the public, through the press, correct information concerning the operations of public service corporations which may be of value and interest to the public.

Where a corporation pursues a policy of antagonism towards the municipality or State, such feeling will be reflected, to some extent, by the public towards the corporation, the public invariably believing that the corporation is in the wrong. Therefore, the adoption of a liberal, progressive and generous policy, backed by a thoroughly organized and enlightened publicity department with a wide grasp of problems and possibilities, is recommended as one of the surest ways to avoid the bitter criticisms that are so frequently indulged in at the expense of the corporation. The latter should realize, at the same time, that one of its most valuable assets is the good-will of the public, which can be secured only by a fair and liberal attitude in all its dealings.

The two interests, corporation and individual, are interdependent, and should co-operate to secure the best results.

The chairman asked E. A. Kendrick, secretary, Matthews-Northrup Works, Buffalo, N. Y., to give his views on the subject of publicity.

Mr. Kendrick felt that business relations between the public service corporations, the public and the press, when conducted as they should be would be upon a basis of mutual confidence, frankness and truth, and that in the bright lime light of intelligent, broad-minded publicity would be found a solution of the problems which confronted the traffic men in dealing with the press and the public.

It was the business of a newspaper to tell the news, and the right of the people to have the news, and it was to the road's interest to have the truth told to the public so far as the public had any interest in that business.

The attractions of a line should be presented in the most attractive manner possible. In advertising success was always cheaper than failure. It was often the last dollar that did more good than all the dollars that had gone before.

Mr. Kendrick spoke of a folder illustrating "one of nature's greatest wonders," the Niagara Falls and the gorge of the Niagara River. Over a million copies had been distributed in the last two seasons at an average cost of about 1 cent a copy. They had been sent all over the United States, and feebly as it portrayed the beauties of the gorge it was an attempt to impress upon the reader the attractions which should draw him to a visit to this spot.

Finally, it was better to advertise in a small way if necessary, and do it well, than to attempt to spread over too much ground and make too large a distribution of advertising matter of a poor character. A beautiful series of pictures or a beautiful small folder, finely executed and judiciously distributed, would do more good than a large map in a large edition if that map were poorly executed.

H. A. Faulkner (passenger agent Boston & Northern Railroad) said that the matter of advertising was of recent development in street railway business. His company had 930 miles of track spreading in all directions from Nashua, N. H., to Newport, R. I., with the exception of the lines around Boston and a few others, and in that territory were something over 60 cities and towns and 150 newspapers and other publications to be dealt with. His relations with the

publications had been exceptionally good. He had tried to use them squarely, and they had done the same by him.

The information bureau was an interesting feature in publicity work. This is handled under the passenger department. The bureau has an office on Washington street, in the center of the railroad office district. That office is fitted up with every kind of literary information, including folders of all sorts, everything of the sort that there is in New England. It also is the aim to get as much material as possible from roads outside of the New England States. The clerks are instructed to give absolutely impartial information, whether an inquiry is about the Boston & Northern lines or competing lines, and to give the information to the fullest extent possible.

Mr. Faulkner thought he spoke fairly when he said that in his own case he would not really put the newspapers first for the special advertising purposes. He thought the cars constituted the best advertising medium possible. He used four posters on many of the cars on each end, and in some cases five. The Boston Elevated Company had five posters on quite a number of its cars. The posters became so numerous that one newspaper published a good-natured joke about one of the cars coming up the street looking like a circus billboard. The company advertises everything that is happening in Boston or any of the other cities and towns through which the road runs. The division superintendents keep the publicity department notified as to what is going on in their sections, and it gets out dasher signs and tries to induce travel in that manner.

He had found the publishing of a monthly publication called "The Tri-State Tourist," was of great value.

The chair suggested that those who had prepared papers and had gone to the great trouble of bringing the information and the result of their work to the meeting send to the secretary, in order that it may be embodied in the proceedings, a statement of the appropriations at their command each year, if they had an appropriation for publicity work. If it was not in the form of an appropriation, a statement of what amounts of money they had spent in any one year. He was sure the information would be very interesting to every one of the member companies.

REPORT OF THE COMMITTEE ON INTERURBAN RULES.

The report of the Committee on Interurban Rules was then presented by J. N. Shannahan, the chairman. This report is published elsewhere. In commenting on the code of rules presented, Mr. Shannahan said the committee had made a number of changes from the code adopted at Columbus, some radical. It seemed that the work would lie largely in getting the various codes to harmonize so that if possible all the roads in the country operating high speed lines could adopt the same codes. He wanted particularly to call attention to the semaphore signal on page 26. The rules as given there were precisely as they had been reported at Columbus. Mr. Shannahan consulted with the executive committee of the Signal association, and when he found how extensive the subject was, he saw that there was hardly time to formulate a code to be put into this book. For that reason he recommended that the new committee consult with the committee to be appointed by the signal people. They were perfectly willing to give the Transportation & Traffic association the benefit of their experience, and he thought advantage should be taken of the offer. The clearance card was the standard card of the American Railway Association and in re-printing it the word "engine man" was used instead of "motorman." The form of train order blank was something of a departure. At least

it was a very radical departure from the old 31 order. Rule 256, "How to obtain orders," he supposed, was perhaps the most important rule in the entire code. The committee considered the rule as it had been adopted by the Indiana companies, and with some slight modifications, which were entirely acceptable to those companies, it was incorporated in this code. He hoped the members present would discuss this particular rule so that the committee might find out if it was the sense of this association that that was good practice or acceptable to them. Rule 365 was absolutely a new rule. It was found in the Code of the Illinois Traction System and the committee was very much impressed with the rule.

Mr. Shannahan expressed the appreciation of the committee of the very generous help that had been given to it by C. D. Emmons, who served as chairman of the committee for the Indiana companies. He would like to have Mr. Emmons discuss the report.

Mr. Emmons said he had in mind, rather than a discussion, the idea of making a motion that the report be received merely as a progress report and the committee continued for that reason. He felt that it was impossible to discuss the report intelligently because the members present had not had the opportunity of going over it carefully. He felt also that the committee should be continued for the reason that there were some parts, such as the rules on signals, which were not complete. His company in Indiana had a set of rules which had been formulated under the direction of the railroad commission under which it was operating. Those rules he believed were an excellent foundation and he believed that as an American association they should have a set of rules which should be absolutely satisfactory as a basis of all American rules. For that reason he believed that another year for study and further discussion of the rules could well be afforded. He thought that if the association started with a discussion of the rules there would be time for very little other business, and as the time was short he moved that the report be received as a progress report and the committee continued. The motion was carried.

President Allen said he would bring before the members the question of the proper method of handling these reports. This committee had done more work than any other of the standing committees. The question was whether the report should be distributed before the convention. At Detroit the executive committee discussed the question of printing papers and reports and it was of the unanimous opinion that the report should be read verbatim, and that nothing should be given out until the chairman of the committee had presented the report. Obviously to read the report under discussion in detail would compel meetings until Saturday night.

Mr. Shannahan asked if it would not have been better to have had the report sent to the member companies a sufficient length of time before the convention so that notes could have been made on points that it was desired to bring up. After such points had been discussed the committee would have had sufficient information and would know how the members wanted the rules formulated.

Mr. Emmons thought it was absolutely necessary to have the rules in the hands of the member companies at least 30 days before discussion and before a vote was taken.

James E. Marvelle (New Bedford & Onset Street Railway), said he would want 30 days to satisfy himself whether he wanted to criticize or approve the report. The form of

train order would be a very serious problem. Personally, he was in favor of a train order blank, although in his experience in the dispatching department of a steam railroad, while he adhered strictly and absolutely as near to the specified example and forms of moving orders as possible he had seen more orders issued that were varying from the form, when phrases had to be added, than adhered strictly to the form. He noticed this form was drawn up with a blank line at the bottom which he assumed was for the purpose of flexibility.

President Allen said he would like, if possible, to hear from Mr. Emmons as to the reason for departing from the standard form of train order blank, recommended by the American Railway Association. He understood that the new form had been devised by the Central Electric Association, and had been approved by the Railroad Commissioners of Indiana, Ohio and Illinois, and thought it would be interesting if Mr. Emmons stated the reasons for its adoption.

Mr. Emmons said that on every rule committee on which he had served there had been a division of opinion as to whether the electric roads should stick to the old 31 order with a complete blank with nothing printed thereon, or should adopt a code form by which the trainmen will have the least writing to do. Everyone knows that on the steam road the 31 order is taken by an operator, who writes it down and hands it out to the trainmen. In the operation of the electric roads it is different—there the trainmen take the order as they proceed along the line. For this reason it has been the opinion of the majority of whatever rule committees the speaker had been connected with that the orders which are most frequently taken should be printed out to such an extent that the least writing is necessary by the train crew as they pass over the road. In the Indiana rule book there is less coding than in the case of the form which has recently been presented. This additional coding was put on tentatively, largely because it was desired by a company in Illinois whose form of train order was a much more complete code than that used on the Indiana lines.

W. R. W. Griffin (Rochester Railway) said he seriously objected to a coded form, because it had caused a head-on collision on a line with which he had been connected. Men get into the habit of reading these orders at a glance, and using in the blank spaces nothing but figures, and the mistake was made by taking the car number to mean the siding number by the one crew, and the reverse with the other crew. The 31 order, on the other hand, must be written out, and handled by at least two men and many times by three men in completing. Hence the chances are less for this mistake, because the second man cannot read the order at a glance. He must read the words written, as each man has his own peculiar handwriting. That was the greatest objection in the proposed form, and he said he would be afraid to try it. He also noticed in the Code that the rule given for the taking of the order is confined entirely to train men. Yet, a great many roads employ agents at stations, with operators as well, and he thought they should be included as well. He thought that the rule for obtaining an order by the train men, as given in the Code, was good, because it insures the order passing through the hands of three men, the dispatcher and both of the crews. He thought it should be the same way at the operating office, that is it should pass through the operator, the dispatcher and one member of the crew at least.

Mr. Emmons said that disastrous train wrecks had occurred under the 31 order.

Mr. Shannahan thought that if there was any faulty

work with the code form, it was not inherent in the form, but was caused by not compelling the men to repeat the order word for word without regard to whether the order was printed or not. That may require some discipline, but the speaker believed it could readily be enforced. He said the committee had purposely omitted the siding number from the Code, because it was considered an unwise policy to number the siding, as it gave an opportunity for the very sort of mistake of which Mr. Griffin spoke. In other words, the wreck to which Mr. Griffin referred was seemingly caused by numbering the siding rather than using the coded form. He asked Mr. Emmons to explain how the Indiana Railroad Commission came to formulate and approve the code bearing its name. It was the opinion of some members that the work of this committee should include meeting representatives of various State commissions and endeavor to secure their approval of the rules in writing.

C. D. Emmons (Ft. Wayne & Wabash Valley) said that a representative of the Indiana State Railroad Commission, after going over the various lines in the state, came to the conclusion that the roads were not operating under proper rules. The commission called a meeting of the representatives of the interurban railways and at that meeting appointed a committee of five members, general managers of the different interurban railroads, to meet with the two representatives of the Commission to formulate a set of rules and present them at a subsequent conference for approval. The joint committee had five meetings, at which copies of the steam railroad rules, the rules of the New York State Association, the Central Electric Association, the American Association, and the rules of a number of individual companies were gone over very carefully. The report of the committee was not made final until all of the roads in Indiana had been sent a copy of the proposed rules, and had been given an opportunity to say whether or not the rules met with their approval. At the conference at which the rules were submitted they were adopted by the almost unanimous vote of the mileage of Indiana. Almost all of the roads in Indiana are now operating under these rules.

D. McDonald (Montreal) thought that the practical way of getting the rules started was to adopt the rules as submitted and after the rules are adopted provide that any rule may be changed if sufficient reason is given therefor in the future, by any member of this association giving 30 days' notice to the committee, which will prepare to hear him and discuss the matter with him, and if it is not too far removed from the time of the annual meeting the member who desires the change will propose his amendment to the code of rules at the annual meeting. He believed that to discuss the rules in detail would be an impossible task.

Mr. Shannahan did not think the association could afford to approve a code of rules which no member had tried. The committee was not a unit on all these rules, which were adopted by a majority vote, where there was a division of opinion.

On motion the authority of the present standing committee was extended to confer with the various public service commissions throughout the United States, and in its discretion send out the copies of the rules as presented by the committee.

D. F. Carver presented by title a paper on the operation of multiple car trains on interurban roads. Owing to the lateness of the hour, the discussion of this paper was passed. Similarly, the report of the committee on Passenger

Traffic was received, and the report of the committee on Rules for City Operation. Written discussions were asked for to be presented at the next meeting.

Mr. Hunt presented the report of the nominating committee.

In view of the fact that this association was created at the organization meeting on January 30 last, at which its present officers were elected, and also in view of the fact that these officers have in the short time of 8½ months brought about a most successful convention, your committee feels that this association in convention assembled should endorse the work of these officers by formally electing them again for a year.

We therefore present the following nominations: President, C. Loomis Allen; first vice-president, R. I. Todd; second vice-president, G. L. Radcliffe; third vice-president, A. W. Warnock; Executive Committee, the officers and G. W. Parker, Detroit, Mich.; H. C. Page, Springfield, Mass.; N. W. Bolen, Newark, N. J.; H. A. Davis, Nashville, Tenn.

On motion of Mr. Shammahan the report was adopted.

President Allen said that he appreciated fully the honor bestowed upon him and assured the members that at the close of the convention of 1909 he would know enough to get out. He thought there were two things that the association should adopt. The association has never adopted formally the constitution and by-laws.

A motion to adopt the constitution and by-laws was carried.

After a further short discussion the convention adjourned.

ACCOUNTANTS' ASSOCIATION—THURSDAY SESSION

Acting President Wallis called the Accountants' association to order at 10.20 o'clock on Thursday morning. Mr. Wallis said it was thought wise by the executive committee to take a step in the direction of a little closer relation between the Accountants' association and the other affiliated associations of the parent body, and representatives of each one of the so-called affiliated associations had therefore been invited to be present. He introduced Fred G. Simmons, president of the Engineering association. Mr. Simmons made a talk.

On motion of C. N. Duffy the recommendation of Mr. Simmons for the appointment of a joint committee was referred to the incoming executive committee.

President Wallis then introduced, representing the Claim Agents' association, Ellis C. Carpenter, Indiana Union Traction Company. Mr. Carpenter made an address.

The paper on "Interline Accounting of Interurban Railways," by William H. Forse, Jr., secretary and treasurer, Indiana Union Traction Company, was then read. This paper is published elsewhere.

Charles L. Wight (Des Moines City Railway) said he had had no experience with interurban lines, only with steam roads, and his method was similar to that described in the paper. He had to conform in interurban work with the methods of all steam roads.

R. Morrison, Jr. (Michigan United Railways) said the system outlined by Mr. Forse was practically the same as the one he used. The forms were almost identical. His company did a package freight business with the United States Express Company and the Detroit United Railway. The minimum charge was 25 cents. The road handled a great deal of milk, newspapers, ice cream, etc. He billed right through any number of items on one way bill if they were sent to the same destination. He had a cer-

tain amount of package business, but money packages, articles of value, and such items as were usually carried by express companies, were sent only by the United States Express Company. H. S. Swift (Toledo Railway & Light Company) said his methods were practically the same as those of Mr. Forse. His company owned one line which interchanged business with steam roads, and had a very little business interchanged with one or two of the interurban lines. With two roads an auditor's settlement was made, and with the other a junction settlement. The company had also a contract with the United States Express Company by which it operated the cars, but did not handle any business local to the Toledo lines. The company did a package business at a minimum charge of 25 cents.

Mr. Wight asked Mr. Forse if any of his lines shipped in car load lots, that is, from Indianapolis, say, to New York or Chicago.

Mr. Forse said that the interurban properties, while they had fairly long systems, were not trunk lines, and therefore, did not have this business. In his section of the country only three steam roads, as he recalled, recognized the electric roads at all. His company exchanged considerable carload business with other electric roads.

Mr. Wight said his company not only sold tickets for passenger service from any little way station to California or New York, or any other point, but it shipped car load lots of hogs, cattle or any other products that Iowa had.

Irwin Fullerton (Detroit United Railway) said that company had several lines that did an express business. The interline ticket accounting was almost exactly as outlined by Mr. Forse. In addition the company had a contract with the American Express Company, which handled all the express packages over the lines. The company had also a line connecting with the Grand Trunk Railway. On that it shipped car loads to New York, San Francisco, New Orleans or any other point.

P. S. Young (Public Service Railway) asked how these accounts were handled on the general ledger.

Mr. Forse said that in the first place there was taken into earnings only the company's proportion of the charge.

R. J. Clark (Toronto Railway) asked if the intricacies of the interline business were becoming so involved, or the systems so large as to make a report of daily earnings desirable.

Mr. Forse said he thought the interurban properties in the central western territory still kept up the daily earnings system. In every plan followed, or improvement or change suggested, the point had been kept in mind that the daily earnings must be shown promptly. The interline reports were received promptly and the division of revenue made each day.

Mr. Clark asked if the result was to make the reports at least three days behind in earnings.

Mr. Forse said the earnings reports were issued on the second day after, usually. On interline tickets the report from the other road selling a ticket over the line was not received every day. The coupon that the conductor turned in was taken, and values were computed from the tickets lifted, in the case of interline tickets, and in the case of interline shipments, as stated in the paper, a copy of the way bill, or abstract, was sent daily.

Mr. Clark asked if Mr. Forse at the end of the month added to the earnings the difference between the tickets that had been sold and tickets redeemed, as reported at the end of the month.

Mr. Forse said that usually about the same number of

tickets lifted on the cars was reported. There was scarcely any adjustment necessary.

W. J. Kehl (Norfolk & Portsmouth Traction Company) said that company did an interline business to a very large extent, especially during the summer months. It had a summer resort at Norfolk which connected with the Southern Railway, and also with the Norfolk & Western road, the Chesapeake & Ohio road, and the Merchants & Miners Transportation Company. With some of the roads he settled on a basis as made by the auditors of receipts of those companies. The trouble he had experienced had been to keep up a daily report of the earnings. The earnings for the interline tickets were entered up at the end of the month, and as they amounted some months to from \$1500 to \$2000 the average revenue per passenger was increased abnormally from eight to ten cents, while on the actual days of excursions the earnings were reduced to an average of a little over three cents.

A. L. Linn, Jr. (Mohawk Valley Company) said the Oneida Railway accepted New York Central transportation so as to enable a passenger to get off at a larger station and continue his journey to smaller towns, taking advantage of the fast trains.

C. L. S. Tingley (American Railways Company) said his lines at the present time had no real interline business. They had, however, in a number of places terminal contracts, where they brought the cars of the interurban company into town, over their rails, and received a percentage of the passenger and freight receipts. In these cases his company received a monthly report from the operating company showing the amount of business handled, and the accounts were always open for verification and settlements were made monthly.

Mr. Cogle (Nashville Interurban Railway) said the remarks so far seemed to show that his road was in a somewhat unique position in regard to interline business. His company would begin to operate in 30 or 40 days a line of about 20 miles, the first division of its line. At the southern terminus it had a feeder in a steam line that was under construction and would be in operation inside of 90 days, which would give considerable phosphate in car load lots. This would be hauled to the outskirts of Nashville, and delivered to another steam road. The cars would be run over the city railroad tracks, and through the passenger station, under an agreement, paying so much a passenger with monthly settlements. The contract with the steam road at the southern terminus provided also for monthly settlements on freight. He had drawn up in his mind a form for daily revenue report and put in a column there covering daily receipts with the idea of showing the actual cash receipts from freight business in that column, and keeping a separate freight account.

C. N. Duffy (Milwaukee Electric Railway & Lighting Company) asked what was the practice with respect to ascertaining the passenger traffic from and to each station served or each fare point at which cars were stopped.

S. C. Rogers (Mahoning & Shenango Railway & Light Company) said that on the interurban line of his company the system of fares was so operated that he could furnish passenger statistics. The earnings not received on interurban lines would be covered by cash fare receipts which would show both the intermediate stops and destination stops. No effort was made to get the information unless it was asked for specially. The expense of getting it was large and not justified by the results obtained.

Mr. Linn said that his lines compiled daily statements showing the passengers carried from every station to every

other station on the interurban roads. These figures were shown not only for the local trains but for the limited trains. On one line that he had in mind, carrying 4,000 or 5,000 passengers a day, covering 50 miles of double track, it took one clerk to do the work, and the information was invaluable. This record was kept only, of course, as between the fare points. The information was compiled more for the purpose of determining the trend of travel and to enable the operating department to place the proper service than to show the earnings.

Mr. Fullerton said that from his own point of view he could not see what good the record would be to anybody of the number of passengers that got on at station 1 and rode to station 2, for instance, or got on at station 2 and rode to station 3.

Mr. Morrison said his company had about 100 miles of interurban track. He made daily statements. In each of the four cities served he kept the earnings by the street and line. On the interurban lines the local cars stopped at every farm crossing, and he had never considered that information valuable enough to make it pay to keep track of the number of passengers getting on and off at the farm crossings. He had comparative statements of the ticket sales at the different stations, but the conductors' cash registers were credited as earnings of that division, without regard to the distance the passengers were carried.

Mr. Linn said that these figures had been compiled daily for over a year and this practice would be continued until the operating department no longer wanted the information.

P. S. Young, comptroller, Public Service Railway, Newark, N. J., then presented a paper on "Accounting Methods of a Holding Company." This paper is published elsewhere.

W. F. Ham (Washington Railway & Electric Company) presented the report of the Committee on Standard Classification of Accounts and Form of Report. This report is published elsewhere. In discussing the report of the committee after its adoption, President Wallis said the association would be glad to hear again from F. W. Sweney, special examiner, Interstate Commerce Commission. Mr. Sweney said the plan had been with the other carriers for which classifications had been prepared, especially the steam carriers, to develop the classifications through correspondence and rulings of the commission. The steam carriers had a committee of 25 which represented the steam roads of the country, and all matters which were called to the attention of the commission for a ruling were eventually referred to this committee, and all of the rulings which were issued on July 1 in the form of a bulletin, received the approval of that committee. Prof. H. C. Adams had authorized him to say that he would be very glad to have the committee of this association, if it appointed such a committee, pass on all matters which were brought before the commission for ruling, in order that there might be uniformity. In other words, if, when members of the association looked over the classifications carefully, or put them into effect later, they found things which they thought should be made clearer or on which they would like to have a ruling, they would take the matter up with the commission if there was any question at all about the answer, the opinion of the committee will be secured on the matter. These rulings would be issued from time to time, as there were enough to justify publication, and the commission would be very glad to have the opinion of the committee of the association in regard to

all rulings; as in the case of the steam roads, the commission no doubt would be very glad to be governed by the opinion of the committee.

In regard to the other points, Mr. Sweney did not know as he had anything special to say at this time except as to discounts and commissions. He would suggest that the recommendation be taken up in writing with the commission. The text of the three classifications would be found to be almost identically the text which was prepared at Atlantic City, with one or two slight changes.

President Wallis then introduced A. F. Weber, statistician for the Public Service Commission for the First District of New York, who addressed the meeting briefly.

The concluding meeting of the Accountants' association will take place at 9.30 o'clock this morning.

AMERICAN ASSOCIATION—THURSDAY'S SESSION

Vice-President Shaw called the meeting to order at 2:50 o'clock. The first business was the report of the Committee on Insurance, of which H. J. Davies, of Cleveland, is chairman. Mr. Davies was not present at the meeting, but sent a letter describing the work which had been done by the committee during the past year. The statement made by Mr. Davies was on motion accepted and filed.

E. G. Connette, of Worcester, chairman of the Committee on Welfare of Employees, then presented the report of that committee. The report is printed elsewhere in this issue. Mr. Connette explained that one member of the committee, J. B. Crawford, of Lexington, dissented from the statement in the report which says that the merit and demerit system is not to be recommended.

C. D. Emmons (Ft. Wayne & Wabash Valley), in discussing the report, said that one reason why Mr. Crawford may have urged the merit system was that he had been connected with the Ft. Wayne & Wabash Valley Railway, on which it is in use. Mr. Emmons said that their experience with the system in the last two years had been very satisfactory indeed. He considered that the merit and demerit system was the most practicable way of recording the service of employees, and any fault which may have been found with the system at any place was due to the lack of keeping proper records. He said that on his system they have a "Discipline Committee," consisting of the general manager, the clerk of the superintendent of transportation and four division superintendents. All cases calling for discipline which have occurred during the preceding week are considered at meetings held each Monday, when action is taken and merits and demerits are given. If it should happen that the general manager or any of the others is not able to attend the meeting, the meeting is still held and the business transacted. After merits or demerits are given, the employee has the following week in which to file a protest, and, if necessary, he will be given a hearing.

W. G. Ross (Montreal Street Railway) stated that his company had formed a mutual benefit association some five years ago. The men pay an initiation fee of \$1, and 50 cents a month in dues. The company duplicates the initiation fee, and 50 per cent. of the annual dues. In addition, the company pays the entire cost of the maintenance of the association, and makes a donation at Christmas time of some \$3000. Every man in the employ of the company is a member of the association. There is now a sum in the treasury of the association of \$50,000, invested in securities. The cost of the association to the company is \$15,000 a year, and it is considered to be money well spent in a good cause.

John R. Graham (Bangor, Me.) stated that his company

established a mutual benefit association on its road some four or five years ago. The initiation fee is \$1, and the dues 50 cents a month. The benefits received by the men are \$1 a day in case of illness. The company also furnishes necessary facilities at the depots for the men to pass their time usefully.

C. H. Hile (Boston Elevated Railway) said that his company provided all conveniences necessary for the men, lockers, toilets and facilities to keep themselves in neat shape, blacking and brushes, soap and towels, etc., but had not gone to the extent of installing billiard tables or bowling alleys. The company, however, furnishes reading matter, technical journals, magazines, etc. They have two benefit associations. One is a death benefit as well as a sick benefit. The limit of death benefit being \$1000 and the sick benefit \$7 a week, which may run to 13 weeks. The association just named has a membership of between 2500 and 3000 men. The dues of this association are 50 cents a month, and \$1 death assessment, not necessarily an assessment for each death, but the men are assessed when it is necessary to make up a sum sufficient to pay a benefit. The total cost is close to \$14 a year for that insurance. The other association simply pays a sick benefit, the weekly contribution being ten cents. The company furnishes a meeting place for these associations, provides the light and heat and also contributes several thousand dollars each year towards the management, collection of dues, etc. The membership is optional.

D. A. Hegarty (Little Rock Railway & Electric), incidentally mentioned that in the benefit association connected with his company after all benefits have been paid, they divide up the balance among the members at the end of the year and start anew.

Mr. Hile further said that his company did not do this and that many of the men who left the employ of the company continued their membership in the benefit association and so secured the advantages of their membership in past years by continuing to receive the insurance benefit, of course paying their dues the same as the present employes. He did not believe it was quite right to have these men continue as members of the benefit association but they saw no way of changing that at the present time. In connection with the merit system Mr. Hile stated that they had a limited merit system on which they base a yearly donation of \$15, given at the end of the year, and it is based on the record of the men during the year. The number of employes who participate in this annual donation is from 75 to 80 per cent. The company gives very serious consideration to a charge before a man is discharged, and no man is discharged from the company without the approval of the president.

George R. Folds (West Penn Railways) remarked that he had been the assistant to the vice-president of the Brooklyn Rapid Transit Company at the time the benefit association of that company was formed. When a new man is employed by the company he signs an application blank for membership in the association, so that membership is compulsory. He considered that the weakest point in the Brown system, or the merit and demerit system, of discipline is that not sufficient attention is given to the merit side of the system. It was his experience, as a claim agent and in the discipline of men, that the average superintendent does not thoroughly and properly investigate all accidents. He thought that the men should know that the superintendents and officers who are running the road know exactly how all accidents happened.

On motion the report of the committee was approved.

Chairman Shaw then introduced George W. Bishop, of the Board of Railroad Commissioners of the State of Massachusetts.

Mr. Bishop said that he appreciated the privilege of being present at the meeting, and that he had come representing the Board of Railroad Commissioners of the Commonwealth of Massachusetts to get such information as might be possible relative to the best construction, equipment and method of operation of the electric railways. He considered the conventions and exhibition afford an unusual opportunity for collecting such information.

The chairman then asked if there was any discussion on the subject of separating the conventions of the various associations.

On motion of A. W. Brady, seconded by W. E. Harrington, the following was adopted:

Resolved: That the recommendations of the president relating to a separation of the meetings of this association and its affiliated associations be referred to a committee to consist of the incoming president and seven other persons to be appointed by him, at least two of whom shall be past presidents, which committee shall report its conclusions, together with any other recommendations as to the advisability of a separation of the meetings of this association organization and procedure of the associations, at the next annual meeting.

Resolved further, that the report of the committee be printed and sent to the members of the association at the earliest possible date and not less than thirty days before the date of the next meeting.

The next business being the report of the Committee on Nominations, Albion E. Lang, Toledo, as chairman of the committee, presented the following nominations:

For president: James F. Shaw, Boston, Mass.

First vice-president, Arthur W. Brady, Anderson, Ind.

Second vice-president, Thomas N. McCarter, Newark, N. J.

Third vice-president: General O. H. Harries, Washington, D. C.

Fourth vice-president: Charles N. Black, San Francisco, Cal.

Mr. Lang stated that under the constitution the executive committee was composed of the presidents of the affiliated associations, and as all of these presidents had not been elected the committee would leave that part of its report blank, to be supplied later.

On motion, the report of the committee was accepted, and the secretary authorized to cast the ballot electing the gentlemen to the various positions named.

President Shaw, upon being installed by the chairman, Mr. Brady, said that the association had been unfortunate in not having President Goodrich in attendance, but he was sure if President Goodrich was present he would say a word of appreciation to the member companies and their representatives for the close attention which they had paid to the convention this year, and also to those who were kind enough to prepare the papers. In his experience in the last eighteen years in connection with the work of the association, and he was sure his views were shared by many of the other members, he felt that the present convention had got down to more real business, not only in the case of the American Association, but in the other associations, than ever before. He then expressed his high appreciation of the compliment paid him in electing him to the office of presiding officer. The association in the past had been most fortunate in the selection of its officers, and it was to be

congratulated. These officers had received the united support of the members of the association in carrying out their work, and he thought he had the right to assume that he would have the support of the member companies for the next year. He called attention to the report of the secretary, which showed the increase that had been made in new member companies and associate members, which was very gratifying, but to keep up the work it was necessary to increase the membership, and he hoped that each and every one of the gentlemen connected with the association would appoint himself an honorary member of the Committee on Membership and bring in some new members during the coming year.

As chairman of the Committee on Resolutions, Mr. Harrington of Pottsville then presented the following:

REPORT OF THE COMMITTEE ON RESOLUTIONS

To the Street & Interurban Railway Association:

Gentlemen:—Your Committee on Resolutions begs to submit the following report:

I. Whereas, The American Street & Interurban Railway Manufacturers' Association has brought together for the inspection of the delegates a very elaborate collection of railway appliances, exceeding in interest even that shown in 1907; and

Whereas, Special care has been given not only to the arrangement of these exhibits so that they can be very conveniently inspected, but to the artistic effects of the entire hall; and

Whereas, The American Street & Interurban Railway Manufacturers' Association has given elaborate attention to the social and entertainment features, which have added greatly to the pleasure of all in attendance;

Now, therefore, be it resolved, That the American Street & Interurban Railway Association express its thanks and appreciation to the American Street & Interurban Railway Manufacturers' Association, its officers, executive committee, exhibit committee, and to all its members, collectively and individually, for these efforts and for the very successful results which have followed them.

II. Whereas, The members and guests of the American Street & Interurban Railway Association are under great obligations to the mayor of Atlantic City, the Atlantic City Business Men's Association, the Atlantic City Hotel Men's Association, and the technical and local press, for the numberless courtesies and sustained attention extended during the past week,

Now, therefore, be it resolved, That the members place on record their appreciation of the many favors thus shown.

III. Resolved, Also, that the association tenders emphatic expression of its enduring thanks to the officers for the very steadfast attention given the affairs of the association during the year, to the authors of the valuable papers read at this meeting, and to the standing and special committees of the association for their faithful work and the valuable reports submitted.

IV. Resolved, Also, that the association wishes especially to record its appreciation of the efficient work accomplished by the committee to confer with the Interstate Commerce Commission, on depreciation, which has produced results of inestimable value to the member companies.

V. Resolved, That the association expresses its regret that President Goodrich has been unavoidably prevented from attending the present meeting of the association, and thanks President Goodrich for the close attention which, notwithstanding unusual demands during the past year on his time, energies and sympathies, he has given to the affairs of the association.

Respectfully submitted, W. E. Harrington, Chairman, P. P. Crafts, H. C. Page, Committee on Resolutions.

Whereas, In the death of C. Densmore Wyman, the American Street & Interurban Railway Association has been deprived of one of its oldest and most active members, it is hereby

Resolved, That the association place on record its sense

of bereavement in the death of Mr. Wyman, whose interest in its affairs and services as a member of its executive committee were of the greatest value to it in years past, giving it the mature and sound judgment of an experienced man of affairs; and

Resolved, That these expressions of grief at the loss of this amiable and accomplished fellow member be spread upon the minutes of the association and that a copy be sent to the family.

W. E. Harrington, Chairman; P. P. Crafts, H. C. Page, Committee on Resolutions.

Whereas, The street railway art has suffered an irreparable loss during the past year in the death of John A. Brill, a pioneer in the great American industry of car construction, it is hereby

Resolved, That the American Street & Interurban Railway Association place on record its profound regret at this sad occurrence, depriving the world of a master spirit whose close connection with the street railway business was one of the most potent factors in its rapid growth and development; and

Resolved, That the American Street & Interurban Railway Association make acknowledgment not only of these conspicuous elements of public service to his home city, Philadelphia, and to his country, but of those more intimate personal qualities of head and heart that endeared him to all his associates; and it is also

Resolved, That the heartfelt expressions of sorrow and admiration be entered upon the minutes of the association and that copies be sent to his family and his business associates.

W. E. Harrington, Chairman; P. P. Crafts, H. C. Page, Committee on Resolutions.

The meeting then adjourned.

THE INLAND EMPIRE EXHIBIT

The delegates who attended the sessions in the Greek Temple on Tuesday were treated to a pleasant pictorial surprise by Charles E. Flagg, of the publicity department of the Inland Empire System. Long before the breakfast hour Mr. Flagg, with the assistance of George L. Wilson, engineer of roadway of the Twin City Rapid Transit Company, was at work hanging or mounting photographs, posters, picture cards, time-tables, etc. Mr. Flagg's idea was so to arrange this material that visitors could appreciate adequately the scope of every department of the Inland Empire System. He has hung a large linen wall map upon which are shown the four mountain ranges which surround the basin served by the Inland Empire System. The walls of the room are covered with tastefully arranged photographs of the roadway, the great hydro-electric plants described in the Oct. 10 issue of the *ELECTRIC RAILWAY JOURNAL*, typical passenger stations, freight depots and views of the company's magnificent rolling stock. There are many posters and other advertising material interspersed among the photographs.

The Inland Empire System not only penetrates a great wheat belt but also a lake and mountain region of wonderful beauty. The latter fact is emphasized by the line photographs which are also shown in two albums.

These pictures are vivid enough to make any onlooker willing to accept Horace Greeley's advice to "go west" without much urging, and the illustrations of trout taken from Hayden Lake are sure to make Izaak Walton's disciples believe that the promised land, or rather the promised water, has been found at last.

THE ANNUAL VAUDEVILLE SHOW

The annual manufacturers' amateur vaudeville and theatrical performance went off with great eclat—like a 250,000-volt discharge—on Wednesday evening at the Savoy Theatre. The house was, of course, packed to the doors, but there seemed somehow always room for one more to squeeze in. Street railway men have that knack down fine—from practice. The orchestra led off with songs and then came the baritone, Saul Lavine, followed by A. V. Thompson, both appearing by courtesy of the General Electric Company. Mr. Thompson gave an amusing sketch in colloquial Americanese, describing the antics of a Western street railway manager at the convention. Messrs. Kenneth, Murcheson, Howard S. Borden and Charles R. Sanford then appeared as the "Three Musical Impossibilities," by courtesy of the American Blower Company. After the intermission, Theyre Smith's clever little one act comedy, "Mrs. Hilary Regrets," was given by Jacob Wendell, Jr., John T. Conover and Mrs. Conover, by courtesy of the Wendell & M. C. Duffie Comedy Company, of Madison Square. R. M. Campbell, appearing by courtesy of the Ohio Brass Company, won hearty applause for his songs; and Deemis Taylor, of the Westinghouse Traction Brake Company, made a hit with his "Stuff and Nonsense." One of the big sensations of the entertainment was Gertrude Tankway's "Vision of Salome," by courtesy of the Pantasote Company, without the panta—beg pardon—pantasote. Never was the convention raised to greater enthusiasm than by this chaste and instructive lesson in the art terpsichorean. Street railway men know how to "side step," but some of this side stepping was new to them; and when the curtain fell on the panting beauty, the full measure of the entertainment committee's effort was realized and expressed in a mighty burst of applause.

Rehearsals are now going forward for the vaudeville of next year. This convention feature will now never be allowed to disappear from the annual program, and there will never be any occasion to "get the hook."

A CORRECTION

In the report of the Tuesday afternoon session of the Engineering Association, E. Gindre was reported as speaking for the Le Valley Vitae Carbon Brush Company. In reality, Mr. Gindre is the general manager of Le Carbone Company, of Paris, France, the New York office of which is managed by W. J. Jeandron. The error occurred as the result of the strenuous effort on the part of the editors to get the Daily to press on time in Philadelphia, sixty miles away from the *ELECTRIC RAILWAY JOURNAL* office.

PULLMAN RESERVATIONS AND TIME TABLES

George E. Armstrong, who is representing the Travelers' Railway Guide, in space 421, just two booths beyond the *ELECTRIC RAILWAY JOURNAL* headquarters, will be pleased to arrange Pullman reservations and furnish time table information covering any railroad. Mr. Armstrong can also be reached by telephoning to 3455, on the Billion Dollar Pier.

The Pittsburg Chamber of Commerce, on Oct. 9, by an almost unanimous vote, declared in favor of a municipal subway system from the business district to outlying residential territory.

THE POSSIBILITIES OF A WELL-CONDUCTED PUBLICITY DEPARTMENT*

BY GEORGE SABIN BRUSH, CLERK, TRANSPORTATION DEPARTMENT,
BOSTON ELEVATED RAILWAY COMPANY, BOSTON, MASS.

Street railway officials are to-day commencing to realize that if their business is to be increased they must, at least to a certain extent, make efforts to create traffic. There is, of course, a certain amount of regular business that they are sure to get, but the traffic during the hours between the so-called morning and evening rush hours and after the evening rush hours can be built up by a reasonable expenditure of money, time and thought. This is true of all roads, large or small, urban, suburban or interurban. It has taken a number of years to realize this, but so surely as we are following steam railroads in certain practices, we are just as sure to follow them in our publicity work.

We, of course, are all familiar with the tremendous amount of such work done by some of the large steam railroad systems, such as the New York Central, Pennsylvania, Union Pacific, Southern Pacific, Great Northern, Northern Pacific, Seaboard Air Line, etc.

In the first place, the man in charge of the publicity department of an electric railway must be, to use a slang phrase, "Right on to his job" every minute; he must be on the lookout for every possible chance to bring his road before the public in its best light; he must, in a measure, be his own master and not tied down to iron-clad restrictions.

One of the most essential features of a publicity department is that the railway company and newspapers work together harmoniously. To accomplish this the papers must be given all of the news. If there is an accident on the system and a reporter inquires about it, he must not be given an opportunity to fake up some story; tell him the truth and show him actually how it happened, and don't try to deceive him. You will find that if he knows that he can absolutely rely on your word he will always come to you, and at the end of a short time the greatly exaggerated reports of your accidents will disappear and the true account will be given. This will not only help you, but help all railway men, as unquestionably the average electric railway accident is grossly exaggerated.

It was but a short time ago that there appeared in one of the leading Boston Sunday papers a page and a half article telling the good the street railways had done for the city and state. There are daily occurrences on electric railways that make good reading that not only help the road, but help the papers, and it is not a difficult problem to secure the publication of such reading matter.

In regard to paid newspaper advertising: This unquestionably must be done to some extent to reach a certain percentage of the reading public and to facilitate the placing of reading notices, as almost all papers are willing to give reading notices together with a certain amount of paid advertising. This advertising, however, need not be done merely to influence the newspaper, but can unquestionably be made to pay the street railway company. There should not be one or two large advertisements a year in special editions; during the summer months an advertisement of from one inch to two inches can be run daily and a good return secured for the money expended.

Street railway advertising, however, is like all other forms

of advertising; that is, we must not expect to receive returns the following morning from an advertisement of the night before. Advertising for a street railway company should be to a very great extent of an educational nature, endeavoring to gradually and surely educate the public to make use of its electric car lines continually.

In addition to newspaper advertising, there unquestionably should be printed booklets, maps, etc. To my mind, the booklet to be an A No. 1 advertising medium must give to the public a short history of the city or state, the population and the points of interest, the fare, running time, mileage, transfer points, etc. It must be profusely illustrated with cuts, well made, and give to the reader a good impression of its territory and the points of interest to be seen on or near the railway company's lines. In regard to the map, it should not be a small one-colored affair, but a large four-colored map giving, in addition to all of the electric railway lines, the best carriage and automobile roads, in order that the map will secure a broad and thorough distribution. The trolley book and the map are the two most important publications, and, in addition to these, smaller books, pamphlets, etc., should be printed on special subjects, such as some particular historic point or particularly fine ride, etc.

Many street railway advertising men make the great mistake of doing this advertising in a very cheap manner, and consequently find that it does not pay. This form of advertising will not pay if it is done by a small local second-grade printer. He has not the tools nor the facility to do it in the matter in which it should be done. You would not expect your local carriage builder to build you the same car that the Brill, St. Louis or the Pullman car shops could build you. There are a few A No. 1, first-class printers in this country who make a specialty of railroad and railway work, and it is such people to whom you should go for this kind of printing.

Print your book or map on 70 or 80-pound coated paper and have your cuts the best that money can buy, made from artistic photographs. You will then see a return for your money invested.

At the time I was connected with the Lexington & Boston Street Railway Company I printed a small booklet of 48 pages in three colors, giving the story of Lexington and Concord from a historic standpoint, and these folders have been sent for from practically every State in the union. That, I believe, is indicative that the booklet is the proper kind of advertising. After the advertising has been printed there should be some effort made to properly place it. Hotels are, as a rule, willing and glad to have it, as it saves them answering innumerable questions.

Most railroad ticket offices are glad to have it for the same reason, and in fact all places where the traveling public is likely to make inquiry, such advertising matter is very welcome. Advertisements and stories in newspapers about these booklets and maps bring innumerable requests for them by mail.

In regard to other forms of advertising, I think the bill boards are of exceptional value, if it is carried along with newspaper and booklet work and is done in a thorough and systematic manner. Also half-sheet cards in windows are a help, in constantly keeping street railway matter before the eyes of the public.

Without exception, however, the best card advertisement is that which you place in the cars. The largest and most successful advertisers in the world all use cards in cars, and yet we who have the space do not utilize it.

*Read before the American Street and Interurban Railway Transportation and Traffic Association, Atlantic City, N. J., October 12, 13, 14, 15 and 16, 1908.

The Boston Elevated first started using a special form of this advertisement and then the Newton Street Railway system and the Old Colony Street Railway Company copied them. The idea is to suspend two skeleton frames, 9 by 28 in. in size, from the deck of each car, about six feet from the end of the monitor, and insert, from time to time, cards printed on both sides. These can be used for advertising places of amusement, special cars, excursions, parks, and, if in open cars, warnings not to leave car while same is in motion, or, as the elevated first used it, to request passengers to pay fare with a five-cent piece in order to facilitate the collection of fares. This, in a general way, covers the advertising field, but, of course, there are a number of other novel forms of advertising which can be used.

There is one point in electric railway work which has received so far very little attention, and that is the building up of unsettled districts; in other words, opening up new territory. All electric railways have localities on their lines with large stretches of vacant lots, and the natural question is, "Why should not the railway company endeavor to persuade prospective patrons to build up this territory in a manner similar to that pursued by steam railroads?" This practice so far has not been common with electric railways, but I sincerely believe that if other forms of transportation companies can accomplish this, electric railways should be able to do it also.

You all are familiar with the folders, maps, photographs and newspaper advertisements that steam railroads get out proclaiming by pictures and reading matter the tremendous possibilities of the new district. This brings people from territory more thickly settled and, in the case of electric railways, would influence people to move farther than a walking distance from their place of business, thereby enabling the electric railway to secure one or more fares from them.

Another opportunity for a publicity department is to make the most of all events as they happen in each territory. A big fire, flood or even a crime bring people to the afflicted territory, and with a little judicious advertising many more will go. This need not necessarily apply to lines of your own company alone. Any event out of the ordinary, such as the above, or conventions, etc., on foreign lines can be used in the same way. Especially is it true when this event has occurred in the metropolitan district, that an opportune moment has arrived for suburban lines to create business.

The second day following the late terrible catastrophe at Chelsea, just across the river from Boston, the Boston Elevated had completely repaired all its wire and tracks and immediately displayed conspicuously, advertising cards, dasher signs, and placed notices in the papers advertising the fact that the Chelsea service had been resumed, with the result that the tunnel was taxed to its utmost capacity to carry those desiring to witness the result of the fire. While the criticism was made that the electric railway company should not take advantage of a terrible catastrophe to increase its business, the reply was made by the elevated management that "It was doing a benefit to Chelsea by encouraging the public to see the result of this terrible fire and thereby bringing the suffering nearer home, with the result that they would give more freely to the public subscription which was being raised to relieve the suffering inhabitants." There are continually being held excursions, outings, conventions, revival meetings, church picnics, etc.; any or all of these can be sent on special cars, and no one will deny that the revenue derived therefrom is far more profitable than the average regular

service, not only because it is cheaper to operate such cars, but there is not the liability of accident on special cars that there is on the regulars, with people continually boarding and leaving as they do in the latter case.

The matter of park business is really a subject in itself, and, therefore, I will deal with it very briefly. Such a business unquestionably must affect all properties directly or indirectly.

If there is not a park on your road, there may be one on a connecting road, and you can work in conjunction with them. My whole park experience has been with Norumbega Park on the Newton Street Railway system, and each and every year has brought some new feature of advertising that has paid. The billboard or newspaper advertisements were, of course, used. The 9-in. by 28-in. cards in the frames, which I have spoken of, were also used in the cars. Then there was an 11-in. by 14-in. card printed and tacked up in both ends of each car, just to one side of the registers, advertising the park, fare, admission, time of beginning the performance, etc.

Each week the vaudeville program at the park theatre is changed and a poster 14-in. by 21-in. is printed Saturday. On Sunday one of these cards is placed on each end of every car on the system and on many of the cars on connecting roads, giving the names of the new acts. Window cards are also used to a great extent.

A novel form of advertising in connection with the parks, which originated on the Newton Street Railway lines, was to place on the trolley pole of every car running to the park, or connecting with the cars for the park, a blue pennant, about thirty-six inches long, with a white "N" in the center. On all advertising matter thereafter a cut of the flag, together with the words, "Follow the Flag," was used to the greatest extent, until the people of Boston and vicinity realized that to get to the park all one had to do was to board a car with a blue flag on the trolley pole. Among the novel advertising which was issued was a song, "Out to Norumbega," which was written for the park by the composer of the well-known songs, "Any Rags," "Lindy Lou," etc. This song made a great hit and was unquestionably valuable as an advertising medium. This placed the name of the park in a great many homes where previously little was known of it, and kept it constantly before the public.

Most of the work so far mentioned has referred primarily and essentially to summer travel, and while there is not as much opportunity to create patronage in the winter, there is always enough to keep the department busy.

While not really winter work, at the same time, the outing business can be carried on, at least in the New England Territory, until the middle of October, and from then until the middle of the following March is the time to lay out and work up the advertising campaign for the ensuing summer. The printing for advertising should also be done at this time, as it is the dull period for the printing houses and they cannot only afford to do the work much cheaper but also they have more time to put on same, with correspondingly better results. To make use of the parlor cars is another feature of the winter work that should be given more attention. This is a feature that means more money than many railway men realize.

In closing let me say: Give the publicity man all the freedom possible; give the newspapers the truth or nothing; give the public its money's worth; tell the truth in your advertisements, and have the best work in printing, and the publicity department will be a success, because a satisfied patron is always the best advertisement.

THE REPORT OF THE COMMITTEE ON PASSENGER TRAFFIC*

BY M. C. BRUSIL, CHAIRMAN, E. F. PECK, FRANKLIN WOODMAN, R. D. APPERSON, F. W. COEN.

In view of so many question circulars being sent out to all member companies by committees of the American Association and of the affiliated associations, it was decided by this committee that much more satisfactory information could be secured by assigning to each member of the committee the territory in which he was situated and permitting him to secure such information as he could from the territory within a reasonable distance of his property.

THE AMOUNT OF TRAFFIC DUE TO SUMMER RESORTS

The Southern railways show that from 2½ to 25 per cent, or an average of 11.75 per cent, of their summer business was due directly to summer resorts; the Central States, from 1 to 16 per cent, or an average of 7 per cent; New York State, from 1½ to 35 per cent, or an average of 24 per cent, and the New England States, from 15 to 50 per cent, or an average of 30 per cent.

From the information received it would appear that there is not the effort made, in either the Southern States or the Central States, to create a marked increase in business through the summer months by establishing, maintaining, operating or supporting pleasure resorts of various character. It is evident that the roads in New England and in

TABLE A, SHOWING PER CAPITA STATISTICS (EARNINGS, CAR MILEAGE AND MILES OF TRACK), EARNINGS PER CAR MILE AND RECEIPTS PER MILE OF TRACK OWNED FOR TYPICAL ELECTRIC RAILWAYS IN VARIOUS SECTIONS OF THE UNITED STATES.

(NOTE—Each set of figures refers to an individual property, no average figures being shown.)

NEW YORK STATE.

Kind of Road Operated.....	City and Suburban	City and Interurban	City and Interurban	City and Interurban	Interurban	Interurban
Annual gross receipts per capita.....		\$2.84	\$7.45	\$11.64	\$1.02	\$2.03
Annual car mileage per capita.....	\$24.39	11.37	30.96	44.60	5.25	7.93
Earnings per car mile.....		0.245	0.248	0.2605	0.194	0.256
Miles of track owned per capita.....	0.0004	0.0004	0.0008	0.0006	0.0003	0.0004
Annual gross receipts per mile of track owned.....	\$15,509	\$7235	\$8321	\$19,219	\$6162	\$10,327

SOUTHERN STATES.

Kind of Road Operated.....	City and Suburb'n	City and Suburb'n	City and Suburb'n	City and Suburb'n	City and Suburb'n	City and Suburb'n	City and Suburb'n	City and Suburb'n	City and Suburb'n	City and Suburb'n
Annual gross receipts per capita.....		\$1.81	\$2.17	\$3.41	\$4.80	\$4.83	\$6.13	\$8.51	\$10.92	\$12.18
Annual car mileage per capita.....	16.50	18.25	18.98	13.09	20.70	21.16	24.33	32.81	43.40	40.97
Earnings per car mile.....		0.099	0.120	0.260	0.230	0.276	0.252	0.259	0.257	0.297
Miles of track owned per capita.....	0.0005	0.0004	0.0004	0.0003	0.0005	0.0005	0.0005	0.0005	0.0010	0.0009
Annual gross receipts per mile of track owned.....		\$6399	\$20,836	\$10,854	\$14,775		\$21,168	\$19,728	\$16,699	\$10,599

NEW ENGLAND STATES.

Kind of Road Operated.....	City	City and Suburban	City and Interurban	City and Interurban	Interurban
Annual gross receipts per capita.....	\$4.44	\$4.96	\$4.68	\$10.66	\$5.17
Annual car mileage per capita.....	18.30	21.37	24.10	45.00	18.20
Earnings per car mile.....	0.243	0.232	0.194	0.237	0.284
Miles of track owned per capita.....	0.0009	0.0006	0.0002	0.0011	0.0008
Annual gross receipts per mile of track owned.....	\$4969	\$8036	\$8075	\$9176	\$6628

MIDDLE WESTERN STATES.

Kind of Road Operated.....	City and Suburb'n	City and Suburb'n	City and Int'b'n	City and Int'b'n	Suburban	Sub'n & Int'b'n	Interurban	Interurban	Interurban	Interurban
Annual gross receipts per capita.....	\$14.15	\$18.92	\$4.64	\$7.78	\$2.20	\$5.40	\$0.91	\$1.13	\$2.98	\$9.44
Annual car mileage per capita.....	47.77	23.85		28.60	7.70	20.08			7.10	31.20
Earnings per car mile.....	0.296	0.793		0.272	0.286	0.269			0.420	0.303
Miles of track owned per capita.....	0.0008	0.001		0.0013	0.0004	0.014			0.0006	0.0002
Annual gross receipts per mile of track owned.....	\$17,772	\$16,820	\$6959	\$6055	\$5270	\$3959	\$5073	\$4452	\$5724	\$10,975

A few simple questions were, therefore, agreed upon, which were sent to thirty-one companies.

This report is more in the nature of an expression of the opinion of the committee than as a compilation of data giving the experience of different properties. Table A is herewith submitted in which the names of the companies are withheld; the type of the property and its approximate location are given, however. This table contains the following developments: (a) Annual gross receipts per capita; (b) annual car miles operated per capita; (c) earnings per car mile; (d) miles of track owned per capita, and (e) annual gross receipts per mile of track owned.

New York State, as a result of their short summers and long winters (during which latter period many of their lines scarcely earn their operating expenses), are compelled to make a special effort during the summer season to create business, the results of which efforts are apparent in the above figures.

Character of Park and Fare.—It is evident that practically all companies agree that where the park caters to the so-called "White City" element, or "the masses," the fare should not, under any circumstances, be more than five cents, and that the park need not necessarily be a temperance park. On the other hand, where the park is located at a greater distance from the territory served and caters to a more refined element, a fare greater than five cents can readily and

*Read before the American Street and Interurban Railway Transportation and Traffic Association, Atlantic City, N. J., October 12, 13, 14, 15 and 16, 1908.

properly be charged, the general consensus of opinion being that ten cents is a maximum, although there are exceptions, and that the park should be strictly temperate and conducted in a very conservative and orderly manner. It is also evident that the railway companies in New York State and in New England are advocates of a higher fare between the territory served and the park than the roads of the West and South.

There is absolutely no question but that admission should be charged to parks of the "White City" type, or to any park where attractions are offered and where the fare from the territory served is only five cents; but on the question as to whether or not admission should be charged to parks at a distance greater than that covered by a five-cent ride, where such parks cater to the better element, there is a difference of opinion between railway managers, their opinion being governed very largely by local conditions, although the majority seem to agree that such a park should be free, at least for those coming to the park by trolley.

Ownership of Park.—Railway managers practically all agree that a railway company should not itself own and operate a so-called "White City," but that the companies are justified in owning and operating a park of the more refined character.

Financial Success of Park.—Although there are unquestionably exceptions, depending upon the territory served and local conditions, it is agreed by all interested in these matters that a park is either owned, maintained and operated or encouraged, primarily and essentially for the purpose of creating patronage, and that even though the park in itself may not be a financial success, consideration should be given the possibility that the railway company secures enough revenue, as a direct result of the park being open, to more than offset the park loss, and in such cases the operating or supporting of such a park is justified.

It is very noticeable that a number of the parks of the more refined class in New York and New England make a special effort to encourage camping parties to make use of the park property, for camps either of a tent nature or summer cottages, and those who have experienced this patronage are very enthusiastic over the results, as it has created a regular and more permanent patronage throughout the entire summer, from early spring until late fall, both in traffic on the cars and to the summer attractions.

Baseball Parks.—Street railway companies, in the matter of owning, supporting or co-operating with baseball interests, should not support a team of their own, but should co-operate only to the extent of leasing the grounds already owned, to outside parties, and furnish in all cases proper and efficient transportation facilities.

EFFECT ON REVENUE OF IRREGULARITY OF SERVICE

So far as regularity of service of cars is concerned, the large majority of patrons complain but very little as to how often cars run, but do complain bitterly if cars do not run as scheduled. There seems to be absolutely no difference of opinion among all the managers that irregularity of service is absolutely disastrous to the company's interests.

PUBLICATION OF SCHEDULE

The general consensus of opinion of the committee is that where the headway of cars to the same destination is five minutes or less, a time table is not essential, but in case the headway is anything greater than five minutes, it is not only important that such a time table be published,

but equally important that it be carefully and strictly adhered to.

THROUGH CARS

There is absolutely no question that through cars create business. With regard, however, as to how the cars should be operated, with reference particularly to their maintenance and crewing, the division of revenue, etc., there seems to be a radical difference of opinion.

Provided the city company, over whose rails the cars must operate in order to enter the center of the city, will pay to the suburban company a fair revenue for the use of the cars while on the city company's lines, some managers believe that the cars owned by the suburban company should be turned over to the city company and be manned and operated by the latter, the city company would then receive all revenue and be liable for all accidents which may occur to the car or its patrons, provided such accident is not the result of defects in the car or its equipment existing at the time the car was delivered by the suburban company to the city company.

Other managers feel that it is wiser for the foreign company to operate its own cars with its own crews into the city, dividing the revenue equally with the city company, the latter to assume the maintenance of track and overhead, and the foreign company to furnish the crew, maintain the car and be responsible for accidents, other than those resulting from defective track or overhead work.

Still another arrangement in operation in certain localities is for the suburban company to operate through cars over the city company's lines, with its own crews, cars and equipment, taking all the revenue and paying to the city company an agreed upon revenue per car mile. This latter arrangement is in some cases modified or reversed, so that the car is operated under the jurisdiction of the city company over its own rails, it to take all the revenue and pay to the suburban company an agreed upon rate per car mile for the use of the cars, equipment and crews.

The committee is not fully convinced as to which of the above arrangements is equitable to both companies, but finds upon investigation that modifications in the arrangements mentioned may be necessary, in order to bring about an arrangement which is perfectly equitable to all concerned.

The most sincere and cordial relations must exist between the suburban and metropolitan road in order to make the operation of through cars over the lines of the two companies a success.

LAND COMPANIES

The committee does not believe in the advisability of railway companies financially assisting land companies in the laying out or building up of new territory, but does think that the railway should assist such companies in every conceivable manner in advertising, through the traffic department, the properties located along its line.

So far as building new track to undeveloped territory for the purpose of building up such territory is concerned, the railway company should not build to this territory until it has been sufficiently developed to warrant at least a patronage paying the interest on the additional investment required, and the additional operating expenses made necessary as a result of the increased mileage. We believe that the railway company should confine its efforts to the transportation business and should not speculate on the possibilities of undeveloped territory.

MANNER OF LAYING OUT LINES

In considering the question as to whether the lines of a railway company should be laid out on the principle of squares, crossing at right angles, or should be laid out so as to bring the lines at some point to a common center, the committee quotes from the reply of one of the informants as follows:

"There at once appeals to me the old question of the village operation, of everything coming to the 'town pump.' It seems to me that all railways are getting away from this common center, and particularly where the business part of the city is surrounded by homes. Where the business part of the city is at one end of the city, a different proposition arises. As to the way lines should radiate or cross is another question, which, in my opinion, is entirely governed by local conditions. Where city lines are to be brought to the center of the city, it should not be done on one street if it can be avoided, but two or more parallel streets should be used, and the frequency of cars should not be greater than the highest average time it takes to load a car and get it moving again."

The experience of a number of properties has been that all of their lines radiating, more or less directly, from a common center, to the outlying districts, are successful, while the so-called cross-town lines are operating at a loss throughout the entire year. This has been very well expressed by a railroad man when he stated that: "Instead of these cross-town lines being feeders, they are suckers."

The committee advocates that all lines should radiate from a common center to the outlying district, and, in connection with this, it is often advisable to combine two lines running from one outlying district to a corresponding outlying district on the opposite side of the city, passing through the center of the city in its run.

The opinion of the committee is well expressed by stating that, in laying out lines, care should be taken to do this in such a way as to prevent the necessity of issuing transfers just as far as this is possible.

CONNECTIONS

There is absolutely no question in the minds of the committee but that it is disastrous to fail to make proper connections at crossing lines, and every effort should be made to accomplish this, not only in the laying out of the schedules, but in the operation of the cars; when either line is slightly off time, the holding of cars a reasonable length of time is not only desirable, but essential. Unquestionably, where this rule is properly observed, traffic is actually created.

SPEED

Where track, overhead and proper equipment will permit, in connection with the local conditions governing, it is unquestionably wise to run cars at as high a speed as is consistent with safety. With proper operation, and excessive lay-over time is disastrous from an operating standpoint. Provided the lines are operated properly and care is taken to so maintain all the property as to prevent unnecessary delays, snap time can be so arranged and maintained as will prevent a long lay-over at terminals.

WAITING ROOM

The committee is absolutely agreed that there is no question about the advisability of having waiting rooms at connecting points. One of the principal requirements of a successful transportation company is the good-will of its patrons, and undoubtedly there is nothing that will gain

the ill-will of patrons as quickly as having to wait at connecting points without proper accommodations. Whenever it is possible to make waiting rooms, in a measure at least, self-supporting, by renting concessions, it is desirable to do so, and it is the opinion of the committee that this is possible in a great many cases where waiting rooms to-day do not exist. The committee believes that a railway company cannot afford to neglect to establish and maintain proper waiting rooms at important connecting points.

GOOD-WILL OF THE PUBLIC AN ASSET

There is nothing which will more quickly and thoroughly create a feeling of good-will on the part of the public toward a transportation company than proper and efficient service, together with courteous treatment by officers and employees.

The interests of a transportation company and the interests of the public are absolutely identical, and the greatest asset that the railway company can possibly possess is the good-will of not only the traveling public, but of the citizens at large.

INSPECTORS

The committee is agreed that there should be a uniformed inspector on the street at all times, particularly during the congested periods, to act in the capacity of a street superintendent, or as a superintendent's assistant or aid. This inspector should be given the full authority of a superintendent as to the movement of cars on the street, and all employees should be instructed to obey his orders.

In addition to this, it is understood, of course, that the company, directly or indirectly, should make use of a service of men in plain clothes (known to no one in the company), who should make reports directly to the management. In using such plain clothes inspectors the common error is made of having these men report only the failure on the part of the conductor to register fares. The inspectors should not only report matters of irregularity in the registration of fares, but should also report anything and everything of an irregular nature which tends or may tend to interfere with efficient and proper service.

The services of both classes of inspectors are essential in order to give the best service, which without doubt results in increased traffic.

ADVERTISING

Proper advertising of every nature pays, and a manager should be influenced very largely in the extent to which he can advertise by local conditions and by the size of his company. It has even been suggested that an industrial department be established by street railway companies, which department should become a source of information and an assistance to any and all prospective patrons who may desire information, enabling them to decide upon territory in which to establish business or locate residences. In case the city or town through which the railway operates is fortunate enough to have a Chamber of Commerce or a Business Men's Association, such a department should cooperate with it, and in case the city or town does not possess such a means of assistance, an industrial department is all the more necessary in the building up of the territory served, and thereby increasing traffic.

The publishing of advertisements in the newspapers, trolley books, folders, maps, advertising on billboards, dasher signs, etc., is certainly advantageous and results beneficially, it only being necessary to exercise care in not going to excess along these lines.

CONCLUSION

It is the opinion of the committee that in the case of by

far the larger majority of street railway companies there is a great opportunity for effort on the part of the management actually to create new business. Without question, there has not been, in the past, as much effort on the part of companies to do work of this kind as there should have been. No doubt, the reason of this has been that the attention and time of the management has been wholly taken up in the construction of new lines and the smoothing out, systematizing and standardizing of operation problems.

During the past few years there has, of course, been a tremendous development in electric railway properties, but now that the majority of organizations are more or less perfected, there should be an effort on the part of the managers to create business and make a success of the properties as they exist, before stretching out into new territory.

The committee desires to express its appreciation of the co-operation of the various street and interurban railway companies in the collection of this data and other information forming the basis of this report.

The committee is indebted to the ELECTRIC RAILWAY JOURNAL and ELECTRIC TRACTION WEEKLY for the valuable indexes of articles bearing upon the subject of Passenger Traffic which have appeared in the ELECTRIC RAILWAY REVIEW, STREET RAILWAY JOURNAL, ELECTRIC RAILWAY JOURNAL and ELECTRIC TRACTION WEEKLY during the years 1907 and 1908. The ELECTRIC RAILWAY REVIEW and STREET RAILWAY JOURNAL were consolidated in June, 1908, to form the ELECTRIC RAILWAY JOURNAL.

APPENDIX

(Index to recent articles on the subject of "Promotion of Passenger Traffic" which have appeared in the Electric Railway Journal (Street Railway Journal), Electric Railway Review and the Electric Traction Weekly):

ELECTRIC RAILWAY JOURNAL (STREET RAILWAY JOURNAL)

Parks			
	Vol.	Date	Page
1907			
Souvenir Stamps for Park Advertising—Twin Cities	xxx	July 20	109
Park Advertising—Twin Cities	xxx	Aug. 24	288
Highland Park, York, Pa.	xxx	Sept. 7	346
Riverton Park, Portland, Me.	xxx	Oct. 5	503
Amusement Park Accounts	xxx	Oct. 19	701
Park Managers Organize	xxx	Oct. 19	832
Progress of Park Association	xxx	Oct. 26	897
1908			
Parks and Pleasure Resorts (Editorial)	xxxI	Jan. 25	103
Order at the Park (Editorial)	xxxI	Jan. 25	104
Twin City Parks (Warnock)	xxxI	Jan. 25	106
Hints on Creating Enthusiasm	xxxI	Jan. 25	110
England's First White City	xxxI	Jan. 25	112
Park Operation at Fort Smith, Ark.	xxxI	Jan. 25	114
Bushkill Park, Easton, Pa.	xxxI	Jan. 25	116
Operating Features of Dellwood Park	xxxI	Jan. 25	118
Evolution of Modern Amusement Park	xxxI	Jan. 25	122
Vaudeville in Electric Railway Parks (Hulse)	xxxI	Jan. 25	124
Equipment of Pleasure Resorts (Write-ups)	xxxI	Jan. 25	131
Parks and Pleasure Resorts (Editorial)	xxxI	Feb. 29	308
Park Experience of Union Electric Company, Dubuque, Ia. (Mathes)	xxxI	Feb. 29	310
Rockwood Park, St. John, N. B.	xxxI	Feb. 29	313
Forest Park, Schenectady Railway	xxxI	Feb. 29	314
Sacandaga Park	xxxI	Feb. 29	316
Preparing a Park for All Kinds of Weather (Hulse)	xxxI	Feb. 29	321
Park Circuit of N. Y., N. H. & H. R. R. Co.	xxxI	Feb. 29	321
New Rensselaer Park, Troy, N. Y.	xxxI	Feb. 29	324
Moving Picture Possibilities	xxxI	Feb. 29	325
Electric Park, Kinderhook Lake	xxxI	Feb. 29	326
Island Park, Easton, Pa.	xxxI	April 11	604
1907			
Forest Park, Pine Bluff, Ark.	xxxI	April 11	605
Manchester Traction Company's Resorts	xxxI	April 11	606
Contoocook River Park	xxxI	April 11	608
Observation Cars			
San Antonio (Tex.) Car	xxx	Aug. 10	217
Observation Car Results in Montreal	xxx	Aug. 31	320
Advertising for Traffic			
1907			
Berkshire Hills by Trolley	xxix	May 11	825
New England Trolley Guide (Boston & North-ern)	xxix	May 11	826
Land Company in Connection with Railway	xxx	July 27	144

	Vol.	Date	Page
Traffic Circulars (Editorial)	xxx	Aug. 7	337
Report Committee on Promotion of Traffic	xxx	Sept. 26	863
Interurban Fares (Stebbins)	xxx	Sept. 26	866
Street Railway Advertising (Warnock)	xxx	Sept. 26	870
Competition in Electric Railway Traffic (Editorial)	xxx	Dec. 7	1080
Trolley Service to Railroad Terminals (Editorial)	xxx	Dec. 21	1159

1908

Discussion on Traffic by Central Electric Railway Association	xxxI	Feb. 1	173
Advertising on Transfers	xxx	March 7	392
Baltimore Park Travel Guide	xxxI	May 30	910

Tickets and Fares

1908

Mileage Book, Central Electric Traffic Association	xxxI	May 30	905
Special Fare to Park	xxxI	Jan. 25	150
Changes in Interurban Fares at Rochester	xxxII	June 13	85
Traffic Arrangement, Indiana Union Traction Company with Steam Road	xxxII	July 11	281
Central Electric Traffic Association Mileage Book (Editorial)	xxxII	July 25	335
Interchangeable Mileage Ticket, Central Electric Lines	xxxII	Aug. 8	437
Organization Necessary for Interurban Lines	xxxII	Aug. 15	476

ELECTRIC RAILWAY REVIEW*

General

	Vol.	Page
Mail Service on Inland Empire System	xviii	278
Increased Facilities for Funeral Car Service in Chicago	xviii	441
Improved Interurban Sleeping Car Planned	xviii	459
Exhibit of Twin City Rapid Transit Company Report of Committee on Promotion of Traffic—American Street and Interurban Ry. Association	xviii	615
A Department of Publicity—Paper by J. Harvey White, read before American Street and Interurban Railway Association	xviii	620
Advertising from the Standpoint of the Street Railway Company—Paper by A. W. Warnock, read before American Street and Interurban Railway Association	xviii	621
Meeting of Traffic Officials at Indianapolis	xviii	816
The Proposed Traffic Association in Central Electric Territory	xviii	865, 896 & 926
The Promotion of Traffic	xviii	916
The Relation of the Interurban to the Steam Road	xviii	928
Parlor Car Service on the Inland Empire System	xviii	977
Meeting Called to Form Central Electric Traffic Association	xix	13
Advertising the Aurora, Elgin and Chicago Railroad	xix	14
Theater Train Service	xix	33
Effect of Two-cent Passenger Fare Laws on Interurban Traffic	xix	75, 124 & 176
Organization of Central Electric Traffic Association	xix	108
The Promotion of Traffic—Paper read by C. F. Pierce before Central Electric Ry. Association	xix	115
Transportation and Traffic Association Organized	xix	143
Emblems for the Utica & Mohawk Valley, Syracuse Rapid Transit and Oneida Railways	xix	182
Advertising Cards on the Inland Empire System	xix	211
Prizes for Retaining Fare Receipts	xix	268
The New Business Department of a Railway	xix	327
Monrovia Station of the Pacific Electric Railway	xix	595
Advertising the Illinois Traction System	xix	626

*Consolidated with the Street Railway Journal in June, 1908, to form the Electric Railway Journal.

ELECTRIC TRACTION WEEKLY

General

	Date	Page
Notes on Creating Fourth of July Traffic	July 4, 1907	627
One Answer to the Question, "Do Parks Pay?" (Hancock)	April 18, 1907	366
Suggestions by a Park Manager	April 25, 1907	400
Some Hints on Park Management (Wilson)	April 18, 1907	364
A Few Pointers on Park Management (Faulkner)	April 18, 1907	361
Some Lessons Learned from Norumbega (Brush)	April 18, 1907	363
Some Notes on Park Management (Nye)	March 21, 1907	271
Amusements—How Should this Feature Be Handled by Operating Companies? (Garner)	April 25, 1907	393
Promotion of Traffic (Price)—Paper and Discussion before Central Electric Ry. Association	Jan. 23, 1908	80
One Way of Creating Traffic (Long)	Feb. 14, 1907	151
Going After the Passenger Business	May 2, 1907	419
Going After the Park Business	March 19, 1908	284
Electric Railway Possibilities (Deppe)	April 2, 1908	332
Making a Park Pay for Itself	Aug. 1, 1907	725
Touring by Trolley	April 23, 1908	403
Developing Long Distance Travel on Interurban Roads	Nov. 28, 1907	1257
Developing Long Distance Travel on Interurban Roads	Dec. 5, 1907	1298
Developing Long Distance Travel on Interurban Roads	Dec. 12, 1907	1316
Traffic Associations Among Electric Railways	Aug. 15, 1908	818
Traffic Associations Among Electric Railways	Aug. 29, 1908	875

	Date	Page
Funeral Cars in Baltimore.....	Feb. 21, 1907	176
Promotiou of Baseball.....	March 26, 1908	300
Park Terminal at Norumbega.....	April 18, 1907	363
Park Terminals at Toledo, Ohio, and Lakeside, Ohio.....	March 14, 1907	244
Good Method of Showing Map.....	Dec. 12, 1907	1337
Promoting Fruit Raising on Inland Empire System.....	April 9, 1908	364
Doing the Spring Moving by Trolley.....	April 23, 1908	403
Wading Ponds and Sand Courts.....	April 25, 1907	387
Chartered and Special Cars—Methods and Rates Charged.....	March 26, 1908	295
Chartered and Special Cars—Methods and Rates Charged.....	April 9, 1908	348
Chartered and Special Cars—Methods and Rates Charged.....	April 23, 1908	404
Chartered and Special Cars—Methods and Rates Charged.....	April 30, 1908	430

Advertising and Publicity

Publicity and Promotion of Traffic.....	Oct. 31, 1907	1101
Traction Advertising in Indian Territory.....	April 18, 1907	367
Publicity Campaign, with Samples of Advertisements, at Roanoke, Va.....	Feb. 21, 1907	181
Publicity Campaign, with Samples of Advertisements, at Roanoke, Va.....	Feb. 28, 1907	204
Publicity Campaign, with Samples of Advertisements, in Baltimore.....	April 23, 1908	415
Publicity Campaign, with Samples of Advertisements, in Baltimore.....	April 30, 1908	441
Novel Advertising by Toledo Urban and Interurban.....	July 4, 1907	632
Suggestions Relative to Issuing Company Publications.....	March 7, 1907	217
Suggestions Relative to Issuing Company Publications.....	July 18, 1908	717
Trademark Designs.....	March 26, 1908	308

Freight and Express

Interurban Freight (Chapman).....	Nov. 7, 1907	1137
Freight and Express in New York State.....	July 11, 1908	678
The Expansion of Electric Freight Traffic (Atkinson).....	Aug. 15, 1907	779
Express Rates and Service—Papers and Discussions at New York State Meeting.....	Sept. 26, 1907	921
Freight and Express—Papers and Discussions at Atlantic City Convention of American Association.....	Oct. 31, 1907	1096
Some Notes on Electric Freight and Express Traffic (Miller).....	June 6, 1907	535
Some Notes on Electric Freight and Express Traffic (Miller).....	June 13, 1907	561
Some Notes on Electric Freight and Express Traffic (Miller).....	June 20, 1907	582

REPORT OF THE COMMITTEE ON WELFARE OF EMPLOYEES*

BY E. G. CONNETTE, CHAIRMAN, J. M. ROACH, W. A. HOUSE,
J. B. CRAWFORD, R. R. SMITH

Your committee forwarded data sheets to the member companies of the associations containing interrogatories relative to methods of discipline and contributing to the convenience and comfort of employees. A large number of replies has been received and analyzed. The following report is respectfully submitted for the consideration of the association:

CONVENIENCES AT CAR HOUSES AND TERMINALS

All car houses and terminals should be provided with a rendezvous for the men, equipped with wash rooms, toilets and individual lockers, kept clean and in proper condition, where the men when off duty can be comfortable, and where they can wash and care for their personal appearance; separate rooms for eating should also be provided. Many companies have at their car houses and terminals waiting rooms for the men, where periodicals, including street railway publications, are supplied and, in some cases, billiard and pool tables installed for their entertainment. These not only serve as a place of rest and diversion for regular men when off duty, but also for extra or spare men. These men are easily accessible when required for duty and are deterred from seeking other less desirable places to congregate. Your committee believes that these conveniences and amusements contribute largely to the contentment of em-

ployees and promote good feeling, and expenditures in this direction are recommended.

MUTUAL BENEFIT ASSOCIATIONS

Some companies have a mutual benefit association to which they contribute a certain amount annually, the members paying initiation fees and monthly dues, about sufficient to meet claims for sickness and death. It is usual for these associations to provide free medical attendance and pay employees \$1 per day when disabled on account of sickness or injury and \$300 death benefits.

Some of these associations also maintain a club room, equipped with modern conveniences and means of entertainment, where members may assemble during the day and evening as is the custom at social clubs. A meeting is generally held once a month to transact the business of the association, and it is usual after such business meetings to discuss subjects or topics of mutual interest to the company and its employees, thus giving the officers of the company a splendid opportunity to get in close touch with the men.

FOSTERING THE CLUB SPIRIT

It is not always convenient or practicable to carry out this idea, especially with the smaller companies and interurban lines where the car barns are situated at distant points, but from the reports of companies which have promoted clubs, the results have been satisfactory.

According to the data sheets, some companies do not approve of fostering the club spirit among the employees, because they believe it is conducive to undesirable fraternal influences.

A few companies have permitted the Young Men's Christian Association to establish a branch among their men. In such cases, the association looks after the entertainment and social condition of the men and the companies report that the arrangement is commendable because the promotion of social intercourse, surrounded by moral influence, has a wholesome effect upon a body of men, improves their character, and has a tendency to keep them away from less desirable rendezvous.

MERIT SYSTEM*

Your committee does not believe the so-called merit system is entirely practicable, as it is impossible to obtain the necessary information to give the men all the merit and demerit marks which they deserve, because their actions which warrant merit or demerit marks are not always observed and reported. It is difficult, also, to arrange a system of marking which will be automatically correct and just. It is usually left to the judgment of the manager or superintendent, who, no matter how impartial he may be in his judgment, is liable to err one way or the other in registering merit or demerit marks in cases which are not included in a prepared schedule.

Your committee does not recommend the payment of premiums for any kind of service, because it is difficult to form a correct basis for the distribution of favors of this character, and, in the end, we believe it will cause more or less dissatisfaction. The wage schedule should be in full compensation for services rendered.

DISCIPLINE

In the matter of discipline, your committee recommends caution, suspension and dismissal, treating with each individual case separately; employees to be lectured and warned

*Paper read before the Amerlean Street and Interurban Railway Association, Atlantic City, N. J., October 12, 13, 14, 15 and 16, 1908.

*One member of the committee does not concur in this portion of the report, as his experience has been favorable to the so-called "Merit System."

for infraction of minor rules; suspended for violation of more important rules and regulations (the length of suspension to be determined by the seriousness of the charge), and dismissed in case of flagrant violation of rules, or incompetency. Length of service and character of previous record should be taken into consideration in each case, as, naturally, if discipline is applied to an employee long in the service of the company, the same as with a new man, he would feel that his previous efforts in the company's interests were not recognized.

In order that the administering of discipline may be done intelligently, a careful record should be kept of the service of each employee, showing complaints, accidents, violations of rules or instructions of any kind, with the action taken noted on the record, as well as instances of unusual service which would commend the employee as being extraordinarily diligent and faithful to the company's interests.

Discipline should be administered and maintained uniformly on all divisions of a property without prejudice or favor, and without regard to nationality, religion or politics. Superintendents, inspectors and others in charge of conductors and motormen should look after the convenient routing of crews and administer reproofs in a courteous manner. Superintendents and others in charge of men who are incapable of observing this rule or restraining their personal convictions are unfit to supervise the operation of employees.

CONCLUSION

Where a company shows interest in the welfare of its men there will be found a better class of employees, a closer observance of rules and regulations and a spirit of co-operation in matters pertaining to the company's interests, resulting in more efficient service to the public, which is an important factor in securing and fostering its goodwill—one of the company's most valuable assets.

A VIEW OF THE MAIL SERVICE

During the meeting of the Transportation & Traffic Association on Tuesday, J. T. Choate, of the Oneonta (N. Y.) & Mohawk Valley Railway Company, related some interesting experiences of his company in carrying mails. Mr. Choate said:

There is no question as to the part the electric lines are destined to play in the mail service. In the large cities the electric car, while in transit, has made the collection and prompt dispatch of mails of inestimable value for business and personal correspondence. In my opinion the interurban lines are destined to play an even greater part, for they make it possible for the merchant or manufacturer, who erects his factory outside of the crowded cities, to do business by mail with as much dispatch as those who are within the city limits. They also permit the small outlying towns and villages, that are not favored by the stopping of the fast mail trains, to be upon the same footing as the more favored cities. In the case of the Oneonta & Mohawk Valley Railroad this saving in the receipt and dispatch of mail amounts to 24 hours throughout the territory traversed, although it is approximately only 100 miles in a direct line from the city of New York.

There is no question but that the railroads themselves are benefited to some degree by the possibility of good and quick mail service because of the prosperity it gives the smaller and more remote places. For this reason it is important that the electric lines and the possibility of their mail carrying abilities shall receive much more careful investigation and better treatment at the hands of the Post Office Department than has been the case in the past. I am convinced that the department officers at Washington do not understand the situation, nor have they been ad-

vised by such careful investigation as the question warrants.

Within a year I have had a most remarkable experience with the department that would seem inconceivable to anyone except an electric railroad manager, for probably all of you have had the same difficulties to overcome in dealing with the Government that I have had. The Oneonta & Mohawk Valley Railroad Company has for a number of years carried a closed pouch service over the entire length of its line, and has been paid by the Government 3 cents per mile for performing the service. At the time it was inaugurated the company carried, as I am informed, 14 or 15 pouches. The mail matter, however, has steadily increased until now we carry from 35 to 50 pouches per day, although without any increase in the remuneration for the extra service performed, the Superintendent of Railway Mail Service having stated by letter that the pay was independent of the quantity of mail carried. While it is true that it probably costs us little or no more to carry these additional pouches, it is a curious reasoning that we should carry them without additional pay when we would not do the same for any shipper of freight, for really it costs us no more, when there is room in the car, to carry 30 barrels of flour than it does to carry 29.

But this is not the strange part of my dealing with the Government. Early last year it was proposed to put in service on our lines an apartment mail service with a mail clerk, that mails might be worked in transit, and a close connection be made with the fast trains of the New York Central, both East and West. To accommodate this service it was proposed to devote the baggage compartment of one of our large interurban cars on certain trains to this exclusive service, by putting in the full equipment required by the Post Office Department for the accommodation of the mail clerk, constructed in such a way that the racks, tables, hooks, etc., could be quickly moved from one car to another, so that we would always have the mail car promptly equipped.

When this matter was first taken up with the Superintendent of the Railway Mail Service, we were informed that the pay for the service would be based upon the lineal length of the apartment and were asked to make a formal proposition to the Government. The compartment measured 7 ft. 3 in. in length and we made a proposition to the Government to handle the mail every day in the year for 7.3 cents per mile for the service by compartment cars.

The proposition was hailed with delight by all of the post offices along our line and preparations were made by everyone interested to avail themselves of the service proposed. After numerous and very vexatious delays we were informed by the Superintendent of Railway Mail Service that the pay per lineal foot did not apply on any railroad more than 20 miles in length, and that we would have to be paid for the service on the same basis as the steam railroads. After more delays the Government issued an order for the compartment car service, and fixed our pay for this service and the closed pouch service at a rate of \$42.75 per mile, which is the minimum rate paid on a steam railroad for carrying 200 lb. per day of mail.

The total mileage of our closed pouch service under our present contract is 81,927.75 miles in closed pouches. The proposed mileage under the new contract was 35,544.28 miles in compartment cars and 59,066.23 miles in closed pouches, a total of 94,610.51 miles combined, or 12,600 miles in excess of the closed pouch service.

For the closed pouch service we received \$2,437.83 and they proposed to pay us for the combined closed pouch and apartment service \$2,611.59 under the pay per mile, or \$153.76 more than the pay for the service we were already performing. A careful estimate made by us showed that this service would cause us a loss of about \$3,000 per year, as by eliminating everything we possibly could from the charges to this account the service would cost at least 6 cents per mile.

It was well known that the quantity of mail to be carried would be far in excess of 200 lb. per day. A careful estimate indicated to us that it would be more than 500 lb. per day. We finally decided that if we could be paid on the basis of the weight to be carried, even if it showed a loss to the company for the service performed, it would be of enough value to us in building up the territory we serve, that we could afford to take it for a year on trial.

We, therefore, made a counter proposition to the department that we would take the service at a price on the actual weight of mails carried. The Government replied that it could not make a reweighing until the regular quadriennial weighing in the following February, and that our pay would then be adjusted from the first of July, or a year hence, during which time we would have to carry the mails at a loss of \$3,000 per annum. This we again refused, but made the department a proposition that we would carry the mails under the order, but that the pay should be adjusted after the weighing had taken place on the basis of the weight then determined. This the Government refused and we declined to perform the service and the order was rescinded.

It is inconceivable to the ordinary railroad man that the Government could make such an unbusiness-like proposition or should expect anyone to perform the service for them at such a loss, which it was possible for the officers of the Post Office Department to figure out as well as ourselves.

Continuing, Mr. Joyce referred to the arbitrary methods of the department in assessing fines for delays and damages. His experience with the department was that he was notified anywhere from three to six months after the delay has been reported, and that the fines are then assessed. In four times out of five in which his company had received complaints of this kind its records, which are carefully kept, had shown that the trains were on time, and that the mails were promptly delivered, but it was impossible, after the lapse of so much time, to go back to the exact occurrences of the day so as to make a positive statement in regard to whether the mails were received on time or late. If a fine is to be assessed, Mr. Joyce believed that the company should be promptly advised of it. He also cited another case where the Government assessed a small fine because a passenger had kicked a pouch on to the track and a car ran over one corner, but did not injure it. The company showed this, but the Post Office Department deducted the fine from the next payment to the company.

All the conditions, in Mr. Joyce's judgment, indicate not that the Government desires to do injustice, but that it is not informed as to the value of the service rendered by the electric roads, and that the latter are also at fault, because they have never made concerted or proper action to have the department properly investigate the services, or that legislation may be enacted by Congress to meet the situation. He also believes that the department is hampered by the enactments which do not apply to the electric service; in fact, the electric service was not considered when these laws were being framed.

Samuel E. Whitaker, the assistant secretary of the American Society of Mechanical Engineers, is attending the convention with a dual interest. He is making a close study of the methods of registration, etc., employed for delegates, guests, etc., as the problem involved is one that concerns all engineering bodies in these days; and the larger the organization grows, the more serious become the difficulties of "keeping tab." But in addition to that, Mr. Whitaker is himself an old street railway man, having been actively connected with the engineering work, etc., of properties in New England. The exhibit appeals to him as unusually fine and comprehensive.

Conviviality has been described as taking drinks you don't want with men you don't like. There is very little conviviality around this convention, but there is a lot of good fellowship and camaraderie, and once in awhile it needs the accentuation of a popping cork. A street railway man cloistered at the Chalfonte was so discomfited at not being able to get it on ice for a party of friends that he moved at once to the Dennis.

REPORT OF COMMITTEE ON RULES FOR CITY OPERATION*

BY DUNCAN M'DONALD, CHAIRMAN, E. J. RYON, G. O. NAGLE,
R. S. GOFF

Your committee recommends that the Standard Code of Rules for City Operation presented and approved by the 1906 convention of the American Street & Interurban Railway Association, held in Columbus, Ohio, be continued as the Standard Code of Rules for the government of conductors and motormen on city lines for the ensuing year.

In making this recommendation your committee feels that it is not warranted in taking up the question of any radical changes in the rules at the present time. Your committee is also of the opinion that the object to be attained in the formulation of these rules has been misunderstood by the managers of some of the city lines. This misunderstanding has arisen because of the necessity in many instances of formulating additional rules to meet local conditions.

The present committee, as well as all former committees which were appointed to consider rules for city operation, is of the opinion that the Standard Code of Rules approved by the Association should be of a general nature and should not attempt to cover local conditions. The various companies operating under these rules will, of necessity, formulate additional rules which they will incorporate in their own rule books or instructional bulletins. It is strongly recommended, however, that these companies adhere strictly to the numbering and exact wording of the Standard Code of Rules of this committee, and that any additional paragraphs incorporated in their own books of rules be placed directly after the general rule in each case and be designated not only by the rule number, but also by the letters A, B, C, etc. For example: Rule 19 relates to DISABLED CARS. If additional rules and instructions are considered necessary, they should appear directly after the paragraph in the Standard Rule Book relating to DISABLED CARS and should be designated as 19A, 19B, etc.

Your committee suggests that the wording in that part of Rule 2, entitled REPORT FOR DUTY, which now reads:

"Regular conductors and motormen must report for duty 10 minutes before leaving time for their first trip." be changed to:

"Must report in sufficient time to permit of the car being started promptly on time from the starting point of the line."

Your committee recommends that a local rule be added, defining LEAVE OF ABSENCE, SICKNESS, etc.

Your committee suggests that the wording of Rule 10, which now reads:

"10. STANDING ON STEPS. Do not permit anyone to stand on the steps or buffers. Passengers should be fully inside of car before the signal is given to start."

be changed to read as follows:

"10. STANDING ON STEPS. Endeavor to prevent anyone from standing on the steps or buffers. Passengers should be fully inside of the car or safely landed on the platform before the signal is given to start."

Your committee suggests that it would be useful for companies to include in their local books of rules, for the information of car crews, a list giving the names and locations of depots, wharves, theatres, halls, hotels, educational institutions, libraries, clubs, hospitals, markets, parks, squares and the principal office buildings and apartment houses.

*Paper read before the American Street and Interurban Railway Transportation and Traffic Association at Atlantic City, N. J., Oct. 12, 13, 14, 15 and 16, 1908.

OPERATION OF MULTIPLE-CAR TRAINS ON INTER-URBAN ROADS*

BY D. F. CARVER, RECEIVER, TRENTON & NEW BRUNSWICK RAILROAD COMPANY, TRENTON, N. J.

The interurban railway is a common carrier dealing in transportation at retail. In general, it is governed by the wishes of the local municipalities through which it operates and serves. To-day its working capital is its ability to furnish transportation frequently and cheaply from the business center of one city to the business center of the next city, and to associate itself most intimately with the development of local interests, and the traveling man, the merchant, the short rider, the suburbanite and the farmer each derive some of the benefits.

Some lines have been so fortunately located and sagaciously managed that they are fast outgrowing (if they have not already done so) the car movement and are face to face with the "train movement," as the words apply to two or more cars coupled, running as a unit. This is such a radical change from the accustomed order of things in many cities that a strong "conservative" element may appear and oppose the change.

To those of the interurban organization who are charged with the duty of educating popular thought and opinions along advanced lines and are looking for expressions of opinion and interchange of ideas, perhaps the subject would be of more interest if it read "Multiple-Car Trains in City Streets." Multiple-car trains are being operated through the streets of a number of cities, where the streets are wide and straight. There are instances where multiple-car trains are being operated around street corners. To those who are not educated to see its advantages, such use may be an innovation and one not contemplated when the streets were first dedicated to public use. They object and assert that the operation of two or more cars of the ordinary city type or the interurban type in single trains is an unusual burden upon the street and an interference with the public use of the highways.

The desired entrance, especially for the multiple-car train, is to run straight in and out of cities, and if this is not otherwise possible, it should be made so by realignment of the approach to the city; that is, by building in the country at a near approach to the suburbs or in the suburbs, on a right of way, if necessary, and where land is cheap. To use a slang expression common to-day, "There is a lot in getting in right." It can be shown, in comparison with the advantages gained by the public, that the turning of cars 50 ft. or more in length, in trains of two or three cars, around a 90 deg. corner in the heart of a city, is not necessarily an additional burden upon the public use of the street. In passing it may be commented upon that where single cars must be run into a city, the train can be cut to single cars in the suburbs. This can be done easily and quickly, as easily as locomotives are changed at division points on the railroads, but it is not in line with the spirit of progress, otherwise manifested by the comfort, convenience and luxury of the modern interurban car or train.

The interurban needs the multiple-car train when the traffic which offers itself for any regular "train" exceeds the capacity of a single car. It needs the multiple-car train that

it may offer the classes and kinds of traffic that are now being expected of it. It needs the multiple cars that it may offer these classes of traffic in small quantities and accept for such service as it offers, rates that are low enough to keep it a thoroughly democratic institution, but which are high enough to keep the net returns fair and equitable to the vested interests, that the extensions of this service may be continued. It needs the multiple car-train that certain self-evident economies within its own organization may be availed of with the growth of its business and usefulness. It needs the train because usually it is a single-track road and some part of it, at least, will be a single-track road long after its business has grown beyond the capacity of a one-car train.

Division of traffic according to class does not sound well to the American ear, but, nevertheless, it is becoming a necessity to the interurban; the only practicable way to do this is through the use of the multiple-car train—that is to say, there may be express to handle and there may be mail matter; there are always those who prefer to smoke, and there are always those who prefer that those who prefer to smoke should smoke somewhere else, and there may be those who are willing, in fact, who desire, to pay a small excess of fare for the privilege of riding with a luxury and under the restriction of the parlor-car compartment. It is not in the nature of things that all of these divisions can be made in a single car, neither is it in the nature of things that the four divisions can be successfully made in two cars separated by a mile or two of track.

It must now be admitted that it is an advantage to the business interest of average cities to permit the passage of the cars of the suburban electric railway through the streets and close to the doorways of their business centers.

Running a train in two or three "sections" on a single-track road complicates dispatching, increases the chances of accidents, slows the train movement over the road, decreases the traffic capacity of the track, causes an unavoidable and wholly annoying congestion of traffic in one section or the other, prevents a division of the kind and class of traffic which are becoming a necessity; does all these at a cost in dollars and cents which is hardly warranted by the revenue received.

The multiple-unit control of the motors of the train has been solved, and the automatic air, with the emergency features and the graduated release, has already taken the place of the straight air brake for train control. Automatic couplers to work on interurban cars and on any curve that the car can turn are approaching (they may have been already successfully applied). The vestibuling of electric coaches has been accomplished, and passage from car to car made safe and convenient. The trainman's whistle is among the newest developments, and is being used successfully. Where, for any reason, it cannot be used, or where it is not needed, the local travel and the through travel can be divided, the local travel being kept in the forward car, where the conductor can personally advise the motorman of intermediate stops to be made. It is much to be desired, but the writer has nothing to offer which will simplify the present car-to-car connections of the bus and control lines of the electric equipment and reservoir and train lines of the air-brake equipment and the whistle line of trainman's signal.

An unsolved problem, and one whose solution would most likely meet many of the arguments against multiple-car trains in city streets, is some device, developed to reli-

*Abstract of paper read before the American Street and Interurban Railway Transportation and Traffic Association, Atlantic City, N. J., October 12, 13, 14, 15 and 16, 1908.

ability and efficiency, which will insure that passengers boarding trains in city streets will be sure to get on one car or the other, and not between them.

The subject of multiple-car trains in city streets is one which is late in development and requires thought along new lines. The subject of multiple-car trains on interurban railroads is a broad one, full of specialization and technicalities. There are problems of the former which have not as yet been solved, but which the developments and requirements of progress in the art will demand shall be solved.

There has been no attempt in this paper to specialize on any features of the subject, and none was intended; every one of them has points of interest which can be brought out and emphasized in a discussion, which it is sincerely desired will follow this. For instance, they are making very interesting and notable progress in this way in and around a certain city in Iowa, and it is hoped that there may be some one here to tell of it. A road in Illinois was among the first to carry this feature to its best development, and to-day its capacity is only limited by the amount of traffic it can get; being a leader in traffic and transportation, its experiences are always interesting and instructive. A road in Maryland is running a new type of the electric motor and the experience with this, in connection with the multiple-unit train, would be very interesting. The newest road in New York State has to cut its trains to single cars to enter the cities, while in the Far West they run complete electric trains in the streets at surface grade. At that, however, this same Eastern city is not far behind the city of the West, for the fastest long-distance trains in the world run within 30 ft. measured horizontally of the curb line, in the streets in front of the City Hall of this metropolis, and the City Hall displays conspicuously the illuminated sign "Welcome."

There is another city, not 1000 miles from here, which has coming to its gates (figuratively speaking) one of the finest suburban propositions, and one which would handle much traffic and be of much use, but I am told that it is forever barred from entrance by legislation.

CONVENTION PROGRAM FOR TO-DAY

Accountants' Association

(AQUARIUM COURT HALL)

9:30 A. M. to 12:30 P. M.

Paper—"The Effect of Electrification on the Accounting Methods of Steam Railways," by A. B. Bierck, General Auditor, Long Island Consolidated Electrical Companies, Long Island City, N. Y.

Reports of Convention Committees.

Report of Nominating Committee.

Election of Officers.

Installation of Officers.

Adjournment.

Engineering Association

(GREEK TEMPLE)

9:30 A. M. to 12:30 P. M.

Report of Committee on Car and Car-House Wiring.

Report of Committee on Operating and Storage Car-House Designs.

Question Box.

2:00 P. M. to 5:00 P. M.

Report of Committee on Way Matters.

Report of Committee on Economical Maintenance.

General Business.

Report of Nominating Committee.

Election of Officers.

Installation of Officers.

Adjournment.

THE POSSIBILITIES OF A WELL-CONDUCTED PUBLICITY DEPARTMENT*

BY CHARLES WOODWARD LAMB, RAILWAY ADVERTISING EXPERT,
FORMERLY PUBLICITY MANAGER, THE MILWAUKEE ELECTRIC
RAILWAY & LIGHT COMPANY.

Publicity may be divided into two parts—the telling of the people what to buy and the telling of them what to think. The two are of equal importance, though the latter is certainly the most difficult.

The element with which the dispenser of publicity must deal is simply human nature, and human nature is not so very different in different localities, though differences do exist. It, therefore, becomes the first duty of the publicity man, if he is to become successful, to know human nature, its strengths and its weaknesses.

The first half of my definition of publicity—telling the people what to buy—is advertising pure and simple, dealing with people on concrete things. That advertising is desirable for street and interurban railways is no longer open to argument, though methods may be.

In advertising, for street and interurban work, I believe the newspapers are to be counted as the most valuable mediums, while systems of distribution through special channels, especially those controlled by the company, such as cars, waiting rooms, etc., are extremely valuable in not only tempting travel, but in disseminating information; in fact, they are more valuable for the roads than for any other line of trade.

Newspaper space is valuable for the purpose of telling the public that you exist and for making announcements. It is also valuable for direct appeals, and some companies, notably that at Council Bluffs, have proved its worth as an educator for the claim department, the company there having for some time conducted a campaign of education under the motto, "Help Us to Avoid Accidents." This campaign consisted of a series of illustrated display advertisements, mostly 4 or 5 in., double column, instructing the public in the correct method of alighting from a car and cautioning them to watch out for cars, teams and other dangers on the streets, when boarding or leaving cars. The cards were well written, plainly illustrated with cuts that bore out the text, and not alone did much to reduce the accidents from such causes, but aided business and had a good effect on public opinion. This is only one of the many possible uses of newspaper space. One of the most valuable is for such announcements as changes of time, changes of routes, opening of new lines and of parks and resorts along the line. Straight advertising to induce travel over the lines in general or to special points is also a very profitable use of this space.

However, one of the greatest values of newspaper space comes from the generous feeling a paper has toward its patrons, which makes it possible for the publicity man to secure many columns of good reading matter free. One of the very first requisites in this line of work is to understand the very narrow line between news and advertising; between the interesting special and the press notice.

Among the special mediums I have found valuable have been maps, display time tables, folder time tables, bulletins on the dash boards of cars, cards in the cars and descriptive folders and booklets. The placing of condensed time tables in display form, neatly framed, in hotels, restaurants, resorts,

*Read before the American Street and Interurban Railway Transportation and Traffic Association, Atlantic City, N. J., October 12, 13, 14, 15 and 16, 1908.

stations, drug stores and other gathering places in the cities and along and adjacent to interurban lines, each frame fitted with pockets to hold folder time tables, has, in my experience, proved valuable, and the liberal distribution of the smaller tables has probably been the greatest advertisement to my knowledge. The popular "Hi Jinks" car cards of the "Twin City Lines" earned their right to a high place. In my experience a similar idea, embracing the continuity of story and character features, but each card telling of a different resort, was as effective. In both cases verse was the medium of expression, and the catchiness of the lines made them popular ditties. And also in both cases they were displayed in the city cars to attract business for the interurban lines. One of the most effective of these cards was seen in Milwaukee this summer. On it the character used by the company there "Happy Jack, who has the knack" was saying that a certain line was a fishing line and was pictured standing at one end of the card, while his fish line lay across the face of the card, forming a map of the line mentioned, each lake being represented by a fish firmly hooked. I understand it was as profitable as it was unique.

I believe advertisements should be written plainly, simply, but naturally. One man may use five words and create an ideal advertisement. Another may use ten and have an ideal one. But the chances are that the "five word" man would make a botch of the "ten word" man's style, and the "ten word" man would simply kill the "five word" fellow's work. All because of the difference in the personality of the writers. There is almost nothing that must be so left to the writer to secure results as advertising and literary work. Creative work is natural; copy is not.

I believe an advertisement should be written in one of two styles and illustrated in accordance with its style, so as to make an harmonious whole. One of these is what I have called a retinagraph; that is, an advertisement so written, illustrated and printed that the eye grasps it at a glance without the necessity of reading it, and not alone grasps it, but retains it, as the scene is caught and retained on the photo plate, to be developed later by thought and memory, as the photographed scene is developed and retained by the chemicals and the hypo. The other style is that which pleases by its smoothness, its catchiness, its power.

We advertise for favorable patronage; let us advertise for favorable thought! In this way we come to the great question of "How." I have found that a knowledge of human nature en masse, a knowledge of what is not only passing, but what is capable of passing through people's minds, and a knowledge of the ethics and vagaries of the genus homo as developed in a newspaper office, is of some service. I have used it thus: Knowing the narrow line that divides advertising that passes over the counter and news that goes in through the city room (I gathered, wrote and edited copy for 10 years), I have succeeded in having published quite a few stories as news specials. The news stories were such as relate to announcements, prospective openings, orders for new equipment and chit chat. I have also known where great good came from giving the papers, as tips, notice of the charters made by lodges, societies, churches and employers who gave picnics to their employees, the paper working up picnic news stories and the road getting the advertising.

As specials it is an excellent plan to get published stories with illustrations, which act as educational factors, tell the people something of the great organization (usually the greatest in and confined to the locality) and teach them that there is more needed to run a railway line than can be seen on a car platform. Some very effective specials, run in Sun-

day papers, have been on "The Dispatching System," on "The System of Selection and Instruction of Employees," on "Fighting a Snow Storm," on "The Lost Article Department," on "The Hurry-up Wagon," on "The Evolution of the Electric Railway Power House" (this one was especially effective, showing the expense to which the company was put to maintain up-to-date equipment), on "The Printing, Issuing, Collecting and Accounting of Tickets and Transfers," on "The Making and Maintaining of Time Tables" (this one showing the balance between the different lines of a big system and teaching, indirectly but effectively, the patrons of one line that there were other patrons to be considered), on "Avoiding Accidents," on "Avoiding Grade Crossings," on "Construction Work," both as a general story and a description of some particular line of work. In the interurban field some excellent work has been done and more is possible, by describing the attractions of the lines, framing the story so as to bring out the features of news value, such as isolated or historic spots. For instance, I have seen one story of a fish hatchery and another of a college of historic interest, written up with merely the mention of the railway, and have seen an article on the officers of the army and navy which a certain military academy has produced, with the name of the road left out entirely, the mention being merely of the "went there by trolley" variety. Yet all three of them brought direct traffic results. Good results have also followed my writing on "The Influence of the Interurban on City and Country Life" and similar topics.

In dealing with the papers, be liberal. I have known good results to follow giving the reporters news of the resorts, thereby getting the interurban stations mentioned in the news, to say nothing of getting the friendship of the item-hungry reporter. I have never had my confidence betrayed by a newspaper man, and I have talked to them frankly as frank can be. The one point is, tell them what is confidential and what is printable. The reason for this frankness as a publicity need is that with it the man who is to write the story can become better posted and write a better story. Put it to him so he will see the news value of the story. This is generally best done by easy conversation, in which the points leak out, and if you give the boys side tips on stories that you hear outside your bailiwiek it strengthens the bonds.

In dealing with the papers published in the interurban towns, mostly weeklies, where the editor is compositor and job printer, I have found it a good plan to be fraternally friendly. In cases I have taken a hand at make-up or desk work for an hour or so to help out and thus cemented a friendship. I have given freely of my experience to the cause of town progression and acted as metropolitan press agent for the town celebrations and thus thrown the obligation toward me, and my company, and the result has been good.

This paper expresses ideas that have come to me as a result of over ten years as a newspaper and publicity man, ideas that will aid materially a publicity department.

W. Caryl Ely, who led the trolley forces of America these many years with honor and distinction, has refused to become the next Democratic governor of New York. It was offered to him on a silver platter—no, we mean, gold—but was magnanimously declined, because Mr. Ely wished his old hero, Grover Cleveland, still to have the honor of the banner majority in the Empire State. Mr. Ely says that, after all, no office in the gift of the people can ever transcend the privilege he has enjoyed in being president of the National Street Railway Association.

REPORT OF THE COMMITTEE ON INTERURBAN RULES*

BY J. N. SHANNAHAN, CHAIRMAN, L. E. FISCHER, ROBERT S. GOFF, J. E. DUFFY, F. D. CARPENTER, CHAS. CURRIE

In the arrangement of these rules it has been the aim of the committee to facilitate the addition of such local rules as may be desirable for each individual road, and also for the inclusion of rules governing other employees than those of the transportation department. It was with the idea of keeping the numbers of standard rules the same in all cases that blank numbers were left in each sub-division, to be used for such local rules.

The book of rules adopted at the Columbus convention in 1906 has been used as a basis for the revised code submitted herewith, although the regrouping of the rules made it impossible to retain the numbers used in that code. It has been the aim of the committee to harmonize as nearly as possible the codes adopted by the various associations in the past two years. These include codes adopted

RULE BOOK NO. _____

THIS BOOK IS THE PROPERTY OF THE _____

CO.

AND IS ISSUED TO _____

NAME _____

POSITION _____

DIVISION _____

Who hereby agrees to return it to the proper officer of the Company when called for, or upon leaving the service.

Interurban Rule Book—Inside of Front Cover

Rules and Regulations for the government of employees of the _____

Company

October 1, 1908

Interurban Rule Book—Title Page

by the Central Electric Railway Association, the New York State Street Railway Association and that approved by the Indiana State Railroad Commission. In comparing these various codes the committee was considerably aided by the series of articles published on the subject by the ELECTRIC TRACTION WEEKLY.

The rules governing the use of semaphore signals have been left as adopted by the Columbus convention, although your committee feels that they are far from being in accord with present signaling practice. It is the recommendation of this committee that this Association direct the new Committee on Interurban Rules to co-operate with a committee to be appointed by the Railway Signal Association, at their annual meeting (held in Washington, D. C., during the week of Sept. 14) in formulating a new code of rules governing the use of semaphore signals.

*Paper read before the American Street and Interurban Railway Transportation and Traffic Association, Atlantic City, N. J., October 12, 13, 14, 15 and 16, 1908.

GENERAL NOTICE

To enter or remain in the service is an assurance of willingness to obey the rules. Obedience to the rules is essential to the safety of passengers and employees, and to the protection of property. The service demands the faithful, intelligent and courteous discharge of duty. To obtain promotion, capacity must be shown for greater responsibility. Employees, in accepting employment, assume its risks. The rules herein set forth are for the government of the employees of the _____ Company, and become effective _____, superseding all previous rules and instructions where they conflict with the same. Special instructions may be issued from time to time by proper authority.

General Manager.

GENERAL RULES

Have Copy of Rules

1. The head of each department must be conversant with these rules, supply copies of them to his subordinates, see that they are understood, enforce obedience to them, and report to the proper officer all violations thereof and the action taken thereon. Any employee whose duties are prescribed by these rules must have a copy of them at hand while on duty. He must render all assistance in his power in carrying them out, and immediately report any infringement of the same to the head of his department.

Special Instructions and Rules Must be Obeyed

2. In addition to these rules, bulletin orders and time tables will be issued from time to time, containing such special instructions as necessity demands. These special instructions, when issued by proper authority, shall be fully observed while in effect, whether in conflict with these rules or not. Employees must be conversant with and obey the rules and special instructions. If in doubt as to their meaning, they must apply to the proper authority for an explanation. IGNORANCE IS NO EXCUSE FOR NEGLIGENCE OF DUTY.

Importance of Enforcement of Rules

3. It is imperative that all rules for the government of employees should be strictly enforced by the heads of departments, and obeyed by employees. If in the opinion of the heads of any department any existing rule should not be enforced, they should at once bring the matter to the attention of those in authority.

Employees Governed by Rules

4. All persons authorized to transact business or engaged in performing any service at stations or on trains are subject to the rules governing the employees of the Company.

Bulletins

5. Employees are required to be familiar with the rules and with every order issued. The bulletin boards, or books, or both, must be examined daily for orders or instructions.

Correct Time Tables

6. Employees engaged in the movement of trains must provide themselves with a copy of the current time table and always have same with them when on duty. Copies for other employees will be furnished by the head of their department. When a new time table takes effect, old issues must be destroyed at once.

Examinations

7. All persons employed in any branch of the service involving the use of signals or the movement of cars or trains will be required to pass an examination by one of the authorized examiners of the Company as to hearing, sight and ability to distinguish colors, and other required examinations.

Employees Must Promote Company's Welfare

8. The reputation and success of this Company depends greatly upon the care and promptness with which its business is conducted and the manner in which its patrons are treated by its employees.

Report Whatever Affects Interests of Company

9. Whenever it shall come to the knowledge of any official or employee of the Company, by published notice or otherwise, that any work or improvement is proposed by any county, township, municipal or other authority, which in any way affects the Company all information upon the subject must at once be sent to the proper authority, together with the notice, if any served, in the matter. It is important that the earliest information should be had of any intended improvements, etc., in order that the Company's interests may be fully protected.

Anything which may affect the safe and proper operation of the railroad or the interests of the Company in any way must be promptly reported.

Protect Company's Property

10. In case of danger to the Company's property, employees must unite to protect it.

Safety of Employees

11. Each employee is expected and required to look after and be responsible for his own safety, as well as to exercise care to avoid injury to others.

Conduct Toward Public

12. In all matters not fully covered by these rules and regulations, employees must bear in mind that they are engaged in a public service, in which they are constantly called upon to exercise great patience, forbearance and self-control. Politeness and courtesy continually practiced by employees will prevent controversy and complaint, and greatly benefit the service.

Department

13. The use of boisterous, profane, or vulgar language by employees around or on the premises of the Company is strictly forbidden. Civil, gentlemanly and quiet deportment toward their fellow employees, as well as the patrons of the Company, is required.

Intoxicants

14. The use of intoxicants before reporting for, or while on duty, is prohibited. Employees known to be addicted to their use at any time, or to frequent saloons or places of low resort, will not be retained in the service.

Tobacco

15. The objectionable use of tobacco by employees when on duty in or about stations, passenger or freight cars, is prohibited. Smoking while thus on duty is absolutely prohibited.

Gambling

16. All forms of gambling, including bets, raffles, etc., are forbidden upon the premises or cars of the Company.

Reading on Duty

17. Reading newspapers, letters, or other matter when on duty, except to consult orders, rules and time tables, is prohibited.

Employees Occupying Seats

18. Employees, when passengers on a train, must not occupy seats to the exclusion of other passengers.

Uniforms

19. Employees on duty must wear the prescribed hedge and uniform, and must be neat in appearance.

Absence Without Permission

20. No employee will be allowed to absent himself from duty without special permission from the head of the department in which he is employed, nor will any employee be allowed to engage a substitute to perform his duties.

Assignment of Wages

21. Assignment of wages by an employee is prohibited, and will be cause for dismissal. The attaching of an employee's wages by garnishment process or proceedings in aid of execution, will be considered sufficient cause for dismissal unless a satisfactory explanation is given.

Resignation

22. Employees on leaving the service of the Company must sign receipt for their final pay, and return all the Company's property with which they have been entrusted.

Neatness

23. Employees are required to keep the premises in their charge in a neat and orderly condition.

Give Information to Proper Persons

24. No employee shall, under any circumstances, give any information whatever concerning any accident, delay, mishap of any kind or business of the Company, to any person except to a properly authorized representative of the Company, or except as provided by law.

Lost Articles

25. An employee finding a lost article in the cars, stations or on the property of this Company, will forward same to the proper officer.

Packages

26. Employees must not carry packages, letters or newspapers, for any one not having business with the Company, without an order from the proper authority.

Promote Safety on Trains

27. All employees should, as a first consideration, promote the safety of trains and passengers by all means in their power, reporting any defect in track, bridges or equipment to the proper official.

In case of accident to trains or roadway, employees are required to give their best efforts to clear the road, or to assist as may be required at the time, whether in the line of their usual duties or not.

Authority at Barns

28. All trainmen will be under the direction and control of the or his authorized agent when their cars are in or about the car house. Train crews must do all necessary switching in taking out cars or trains or when putting them into the houses or yards, and same must be done under the direction of the or his foreman.

Discharged Employees

29. When an employee is discharged from the Company's service he shall not be re-employed without the approval of the General Manager, or his authorized agent.

Hearing by Superintendent

30. A hearing will be given by the Superintendent to every employee who desires to complain. Reports or suggestions for the betterment of the service will always receive consideration.

Law of

31. All laws of the State of covering common carriers, and applicable to interurban operation, must be observed.

DEFINITIONS

Train

50. An engine or motor, or more than one engine or motor, coupled with or without cars, displaying marker.

Scheduled Train

51. A train represented on the time table. It may consist of sections.

Section

52. One of two or more trains running on the same schedule displaying signals, or for which signals are displayed.

Extra Train

53. A train not represented on the time table. It may be designated as:

- EXTRA—For any extra train except work extra.
- WORK EXTRA—For work train extra.

Superior Train

54. A train having precedence over other trains. A train may be made superior to another train by right or class. RIGHT is conferred by train order; CLASS by time table. RIGHT is superior to CLASS.

Train of Superior Right

55. A train given precedence by train order.

Train of Superior Class

56. A train given precedence by time table.

Time Table

57. The authority for the movement of scheduled trains subject to the rules. It contains the classified schedules of trains with special instructions relating thereto.

Schedule

58. That part of a time table which prescribes the class, direction, number and movement of a scheduled train.

Main Track

59. A principal track upon which trains are operated by time table, train orders, or block signals.

Single Track

60. A main track upon which trains are operated in both directions.

Double Track

61. Two main tracks, upon one of which the current of traffic is in a specified direction and upon the other in the opposite direction.

Current of Traffic

62. The direction in which trains will move on a main track, under the rules.

Station

63. A place designated on the time table by name or number, at which a train may stop for traffic; or to enter or leave the main track; or from which fixed signals are operated.

Siding

64. A track auxiliary to a main track for meeting or passing trains.

Meeting Point

65. A place where opposing trains, i. e., trains moving in opposite directions, meet by schedule or train order.

Passing Point

66. A place where trains moving in the same direction pass by schedule or train order.

Fixed Signal

67. A signal of fixed location, indicating a condition affecting the movement of a train.

"Fixed Signals" cover such signals as whistle boards, slow boards, stop boards, yard limits, switches, blocks, semaphores, or other means for indicating whistle, stop, caution, or proceed.

Yard

68. A system of tracks within defined limits provided for the making up of trains, storing cars, and other purposes, over which movements not authorized by time table or by train order may be made, subject to prescribed signals and regulations.

Yard Motor

69. A motor or motors consigned to yard service and working within yard limits.

Pilot

70. A person assigned to a train when the motorman or conductor, or both, are not fully acquainted with the physical characteristics, or running rules of a road, or portion of a road over which the train is to be moved. The responsibility of a pilot is the same as that of a motorman or a conductor.

Automatic Block System

71. A block system in which the signals are operated by electric, pneumatic or other agency actuated by a train, or by certain conditions affecting the use of a block.

Home Signal

72. A fixed signal controlling the entrance to a block or governing movements over switches at interlockings.

Distant Signal

73. A fixed signal used in connection with home signals to regulate the approach to the home signal.

Advance Signal

74. A fixed signal placed in advance of the home signal or switches at an interlocking to control the entrance to the block ahead.

Dwarf Signal

75. A low fixed signal with small semaphore arm.

Pot Signal

76. A revolving fixed signal.

STANDARD TIME

Standard Time

77. standard time is the standard time of this Company.

Reliable Watches

78. Watches that have been examined and certified to by a designated inspector must be used by dispatchers, station masters, conductors, motormen, flagmen, yardmen, section foremen and line foremen.

Form of Certificate

79. (Name) Company. This is to certify that on 190.. the watch of was examined by me.

It is correct and reliable, and in my judgment will, with proper care, run within a variation of thirty seconds per week.

Name of maker..... Brand.....
 No. of movement..... Metal of case.....
 Stem or key wind.....
 Open or hunting case.....
 Old or new.....
 If rejected, state reasons.....
 Signed.....

Watch Inspector.

Address.....

80. Motormen and conductors must call for and receive standard time from the train dispatcher before taking their runs, with which

standard time they must at that time compare their watches, and must register their names on the daily registration sheet provided for that purpose, stating time at which comparison was made and noting any variations. Members of a train crew must compare their watches with each other at intervals not to exceed three hours in length during the day's run.

Variation Allowed

81. If the variation be in excess of thirty (30) seconds per week, they must report the fact immediately to the Superintendent.

Station Clocks

82. When station clocks are provided, station agents must see that they show correct time; but trainmen must not take time from such clocks unless they are designated as standard clocks.

TIME TABLES

Receipt of Time Tables

83. Copies of time tables will be furnished to trainmen, yard and road masters, and all others concerned. Receipt of same must be acknowledged to the Superintendent on the prescribed form before the time table takes effect. These receipts will be filed in the Superintendent's office. Proposed change of time table will be bulletined at least twenty-four (24) hours in advance.

Superseding of Time Tables

84. Each time table, from the moment it takes effect, supersedes the preceding time table, and all special instructions relating thereto, or conflicting therewith, and trains shall be run as directed thereby subject to the rules.

Forfeiture of Right and Class

85. A train of the preceding time table thereupon loses both right and class, and can thereafter proceed only by train order.

Arriving and Leaving Times

86. Not more than two times are given for a train at any station; where one is given, it is, unless otherwise indicated, the leaving time; where two, they are the arriving and leaving times.

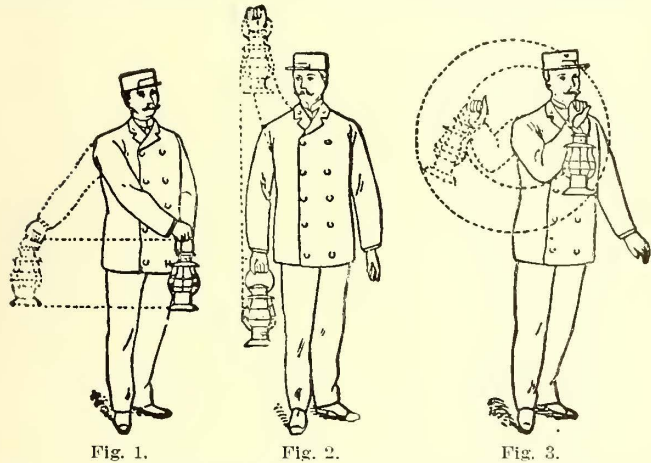


Fig. 1.

Fig. 2.

Fig. 3.

Fig. 1.—Stop.—Swung Across Track. See Rule 97 (a).
Fig. 2.—Proceed.—Raised and Lowered Vertically. See Rule 97 (b). Fig. 3.—Back.—Swung Vertically in a Circle Across the Track. See Rule 97 (c).

Where Time Applies

87. Unless otherwise indicated, the time applies to the siding; where there is no siding, it applies to the place from which fixed signals are operated; where there is neither siding nor fixed signals, it applies to the place where traffic is received or discharged.

Scheduled Meeting Points

88. Scheduled meeting points or passing points are indicated by figures in full-faced type; the number or numbers of trains they are to meet or pass are shown in small type above the full-faced type.

Indication of Meeting and Passing Times

89. Both the arriving and leaving times of a train are in full-faced type when both are meeting or passing times or when one or more trains are to meet or pass between these times.

Signs and Letters

90. The following signs, when placed before the figures of the schedule, indicate:

“S”—Regular stop. “F”—Flag stop to receive or discharge passengers or freight. “X”—Stop for meals. “L”—Leave. “A”—Arrive.

Designation of Trains

91. Trains are designated by numbers and their class is indicated on the time table.

SIGNAL RULES

Who Must Have Signals

92. Employees whose duties may require them to give signals, must provide themselves with the proper appliances, keep them in good order, and ready for immediate use.

Flags and Lamps

93. Flags of the prescribed color must be used by day, and lamps of the prescribed color by night.

Night Signals

94. Night signals are to be displayed from sunset to sunrise. When weather or other conditions obscure day signals, night signals must be used in addition.

VISIBLE SIGNALS

Color Signals

95.

COLOR	INDICATION
(a) Red.	Danger. Stop.
(b) Yellow.	Caution. Proceed under perfect control, and for other uses prescribed by the rules.
(c) Green.	Safety. Proceed, and for other uses prescribed by the rules.
(d) Blue.	See Rule 117.
(e) Green and White.	Flag stop. See Rule 126.

Fusee

96. A fusee on or near the track burning red must not be passed until burned out, and train must then proceed with caution until assured that track is clear.

Hand, Flag and Lamp Signals

97.

MANNER OF USING	INDICATION
(a) Swung across the track.	Stop.
(b) Raised and lowered vertically.	Go ahead.
(c) Swung vertically in a circle across the track when the train is standing.	Back.
(d) Swung vertically in a circle at arm's length across the track when the train is running.	Train has parted.
(e) Swung horizontally in a circle when the train is standing.	Apply air brakes.
(f) Held at arm's length above the head when train is standing.	Release air brakes.

Violent Signals

98. Any object waved violently on or near the tracks signifies danger. Motormen must bring their train under full control and proceed at slow speed until they are sure the track is clear and that it is safe to proceed.

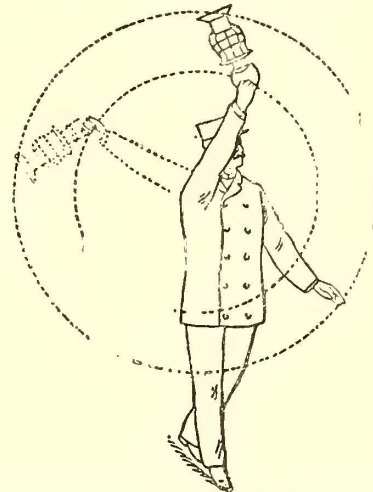


Fig. 4.—Train Has Parted.—Swung Vertically in a Circle at Arm's Length Across the Track. See Rule 97 (d).
Length Across the Track. See Rule 97 (d)

AUDIBLE SIGNALS

Whistle Signals

99. Air whistle signals must always be given at places and under the circumstances indicated below. When the blowing of the whistle is forbidden by law, ordinance or rule, the sounding of the gong must be substituted.

SOUND	INDICATION
(a) One short.	Stop. Apply brakes.
(b) Two Long.	Release brakes. Start.
(c) One Long and Three Short.	Flagman go back and protect rear of train.
(d) Four Long.	Flagman return from the west or south.
(e) Five Long.	Flagman return from the east or north.
(f) Three Long.	When running, train parted; to be repeated until answered by the signal prescribed by Rule 97 (d).
(g) Two Short.	Answer to any signal not otherwise provided for.
(h) Three Short.	When train is standing, back.
(i) Four Short.	Call for signals.
(j) One Long and Two Short.	To call attention of opposing trains, sectionmen, bridgemen, and others interested, to signals displayed for a following section. To be answered by:—
(k) Two Short and One Long.	Answer to signal of train displaying signals for a following section.
(l) Two Long and Two Short.	Approaching public road crossing and at all road crossings whistle signs.
(m) One Long.	Approaching stations, junctions, railroad crossings at grade, meeting points and dangerous or obstructed curves.

Alarm

100. A succession of short blasts of the whistle is an alarm for persons or cattle on the track, and calls the attention of trainmen to danger ahead.

Torpedo Signals

101. The explosion of one torpedo is a signal to stop; the explosion of two torpedoes not more than two hundred (200) feet apart is a signal to reduce speed and look out for danger or a danger signal.

Torpedoes must not be placed near stations or road crossings where persons are liable to be injured by them.

Torpedoes exploded by hand velocipede and gasoline cars must be at once replaced.

Accident on Railroad Crossing

102. In case of accident on a steam road crossing, the conductor and motorman must both attend to protecting their car, by one going in each direction at least three-quarters of a mile on the steam road tracks, and placing two torpedoes, one on each rail immediately opposite each other. Any responsible employee or other person may take the place of the motorman in flagging, in order that he may attend to getting his car off of the crossing. When car is clear of crossing the flagman may be recalled by whistle signal as provided in Rule, but the flagmen must remain at their posts and signal any approaching train to stop until recalled by whistle signal, using a red flag by day and red fusee at night, in addition to their lanterns. It is the duty of the conductor to first notify his passengers to leave the car.

Communicating Signals

103.

SOUND	CONDUCTOR TO MOTORMAN INDICATION
(a) One.	When train is running, stop at next station.
(b) Two.	When train is standing, start forward.
(c) Three.	When train is standing, back the train.
(d) Three.	When train is running, stop at once, emergency.
(e) Four.	When train is running, reduce speed to four (4) miles per hour until two (2) taps of the bell or two (2) whistle cord signals are given, when the train will proceed at scheduled speed.
(f) Five.	When train is standing, call in flagman.

104.

	MOTORMAN TO CONDUCTOR
(a) One.	Come forward.
(b) Two.	Pull trolley down to roof.
(c) Three.	By motorman is signal to conductor that he wishes to back train, and must be answered by conductor before train is backed.
(d) Four.	Set rear brakes.
(e) Five.	Watch trolley.

Starting Signals

105. Motormen must not start their trains without first receiving proper signal from the conductor and never start without the signal being correct.

Answer Signals

106. All signals originated by the conductor, and directed to the motorman must be answered by the motorman, either using the foot gong or whistle in answering the signal.

TRAIN SIGNALS

Headlights

107. Headlights will be displayed on the front of every train at night. A headlight displayed on a train standing at a siding, either on main track or sidetrack, will be regarded as a danger signal by opposing trains.

Headlights Out of Order

108. When a headlight is out of order and will not light, and another cannot be procured, a white light must be displayed in the place of the headlight.

Yard Motor Lights

109. Yard motors will display the headlight on the front and rear by night. When not provided with a headlight at the rear, two white lights must be displayed. Yard motors will not display markers.

Rear End Signals

110. Two green flags by day, and two or more red lights at night, will be displayed on the rear of every train.

Signals for Sections

111. Two green flags by day or two green lights by night, displayed on the front end of a train, denote that the train is being followed by another running on the same schedule, and entitled to the same schedule rights as the train carrying the signals.

All Sections Except Last Display Signals

112. All sections of a train, except the last, will display two green flags by day or two green lights at night on the front of the train in places provided for that purpose.

Signals for Extra Trains

113. All extra trains will display two white flags by day or two white lights at night on the front of the train in places provided for that purpose.

Leading Motor Displays Signals

114. When two or more motors are coupled, the leading motor only shall display signals as prescribed by Rules 111, 112, 113.

Proper Signals Required

115. One flag or light displayed, where in Rules 110, 111, 112 and 113 two are prescribed, will indicate the same as two; but the proper display of all train signals is required.

Cars Being Pushed

116. When cars are pushed by motor (except when shifting or making up trains in yards), a white light must be displayed on the front of the leading car by night.

Car Repairmen's Signals

117. A blue flag by day and a blue light by night, displayed at one or both ends of a car, or train, indicate that workmen are under or about it. When thus protected it must not be coupled or moved. Workmen, before placing themselves in a dangerous position in or about a car or train, must display a blue signal, and the same workmen are alone authorized to remove such signals.

Other cars must not be placed on the same track so as to intercept the view of the blue signals, without first notifying the workmen.

Communicating Signal Appliances

118. Each car on a passenger train must be connected with a motor by a communicating signal appliance.

Slow Speed Flag

119. A yellow flag by day, and in addition a yellow light by night, placed beside the track on the right hand side, indicates that the track three thousand (3000) feet distant is in condition for speed not to exceed six (6) miles per hour, and the speed of a train will be controlled accordingly. A green flag by day, and in addition a green light by night, placed on the same side, at a point beyond the slow track, indicates that full speed may be assumed.

FIXED SIGNALS

Location of Fixed Signals

120. Fixed signals are placed at drawbridges, railroad crossings, junctions, stations, and at other points, as required.

SEMAPHORE SIGNALS

Location of Semaphore Signals at Interlocking Towers

121. Semaphore signals such as at interlocking towers, except train order signals, will be supported on a separate mast for each track. So far as practicable, they will be placed either over or upon the right of and adjoining the track to which they refer and in the same order, whether supported by a signal bridge over the tracks, by putting a bracket and two or more masts on one post, or by using separate masts from the ground.

If there be more than one arm on a mast, the upper will govern the main line, or fast running route, the lower arm will govern the diverging or slow speed route.

Indications of Semaphore Signals

122. The governing arm is displayed to the right of the signal mast, as seen from an approaching train, and the indications are given by position.

(a) An arm with square end, in horizontal position, indicates STOP.

(b) An arm with forked end, in horizontal position, indicates CAUTION—PROCEED UNDER CONTROL.

(c) An arm inclined at an angle of sixty (60) degrees or more above the horizontal indicates PROCEED.

(d) At night the indication of signals will in addition be shown by colored lights:

RED—STOP.

YELLOW—CAUTION.

GREEN—PROCEED.

Dwarf Signals

123. Dwarf semaphore signals govern the slow movements only, the indications being the same as for the high signals.

Train Order Signals

124. Semaphore signals used for train orders may be located at telephone stations. The arms have square ends and are attached to the same mast for trains in both directions.

USE OF SIGNALS

Imperfect Signals

125. A signal imperfectly displayed, or the absence of a signal at a place where a signal is usually shown, must be regarded as a stop signal, and the fact reported to the

Flag Station Signals

126. A signal imperfectly green and white signal is to be used only to stop a train at flag stations where station agents are employed. When it is necessary to stop a train at a point that is not a stopping point for that train, a red signal must be used.

Answer Signals

127. When a signal (except a fixed signal) is given to stop a train, it must be acknowledged by two (2) short blasts of the whistle.

Approaching Meeting Points

128. Motormen approaching any siding used for meeting point purposes will blow one long blast of the whistle when approaching same, in all respects as required when approaching a regular station stop. The conductor shall answer such blast with one bell or whistle if a train is to be met at such siding, or if any order is to be taken at such siding, and with two bells or whistles if the train is to proceed.

Signals for Following Section Must Be Observed

129. Failure to answer a signal from trains carrying green signals must be understood to indicate that signals displayed have not been observed and the train must be stopped, and not proceed until certain that signals are observed and understood.

Signals at Switches

130. After a regular scheduled train clears the main track, and switches are properly set for main track, the conductor must step to the side of the track opposite the switch stand until after the opposing train has passed, keeping his hand lantern at night in full view of the approaching train.

Whistle at Road Crossings.

131. The regular crossing signal, must be sounded on approaching all public road crossings and at all whistling posts.

Unnecessary Use of Whistle or Gong

132. The unnecessary use of either whistle or foot gong is prohibited. They will be used as prescribed by rule or law, or to prevent accident.

Watchmen at Road Crossings

133. When watchmen are stationed at public road and street crossings, they must use red signals only when necessary to stop trains, and must use to prevent street traffic from crossing track when trains are approaching.

CLASSIFICATION OF TRAINS

Scheduled Trains

200. Scheduled trains in either direction have no superior rights over trains of the same class in opposite direction, but will meet trains as per time table, unless otherwise ordered by the Superintendent or other designated authority.

All regular trains are classified on the time table with regard to their priority of right to the track; trains of the first class being superior to those of the second and all succeeding classes, and so on indefinitely.

Sections of a Regular Train

201. Two or more sections may be run on the same schedule. Each section has equal time-table authority. A train must not display signals for a following section without orders from the.....

Extra Trains

202. Extra trains are of inferior class to all scheduled trains of whatever class, and have no rights except those conferred upon them by train order.

MOVEMENT OF TRAINS

Trains Leaving Initial Station

203. A train must not leave its initial station on any division, or a junction, or pass from double to single track, until it has ascertained whether all trains due have arrived or departed. Where train register is maintained it shall be the duty of conductor to register and to note carefully whether all trains due have arrived. If the motorman or conductor cannot reach the dispatcher, the train will proceed on time table rights, then call from all succeeding telephone stations until he has succeeded in reaching the dispatcher.

Trains Leaving Station or Siding

204. No train must leave a station or siding before the time set for it, nor without proper signal from the conductor.

Trains of Inferior Class

205. A train of inferior class must in all cases keep out of the way of trains of a superior class, and must clear the time of scheduled trains five minutes unless a meeting or passing order has been given.

Scheduled Trains Have Equal Rights to Meeting Points

206. All scheduled trains of the same class, or sections of scheduled trains, have equal rights to scheduled meeting points.

Set Switches for Opposing Trains.

207. At meeting points between trains, either by schedule or train order, should the train that is to occupy the main track arrive first, it will be the duty of the conductor of such train to promptly set the switch for the siding, so that the train to be met can take the siding with the least possible delay.

Train Failing to Clear Main Track

208. A train failing to clear the main track by the time required by rule, must be protected as prescribed by Rule 219.

Extra Trains—Clearing Time of Regular Trains

209. All extra trains must keep out of the way of regular scheduled trains and clear their time at least five minutes, unless they have been given a meeting or passing order, or other order relieving them from this necessity.

Distance Required Between Following Trains

210. Trains running in the same direction must keep not less than three thousand (3,000) feet apart, except in closing up at stations or meeting points. When the view is obscured by curves, fog, storms, or other cause, they must be kept under such control that they may be stopped within the range of vision.

Signals for Sections to Be Authorized

211. A train must not display signals for a following section, nor an extra train be run without orders from the..... except as provided for in Rules 212 and 213.

Defective Telephone

212. When unable to reach dispatcher on account of defective telephone, all extra trains will lose their rights as extra trains, and such extra trains whose movement is essential to the maintenance of the passenger service, will become sections of regular scheduled trains as provided in Rule 213. All other extras at once clearing main track and remaining clear until telephone service is restored.

Arrangements for Sections When Telephone Defective

213. When telephone line is out of order, any scheduled train when requested by conductor of any train, may carry signals for such, as a section following, without first obtaining orders from the..... Scheduled trains, after such arrangements, will immediately display signals, and extra trains must not follow the regular train until it is certain that signals are so displayed.

Taking Down Signals for Following Section

214. When signals displayed for a section are taken down at any point before that section arrives, the conductor will notify all opposing trains of the same or inferior class leaving such point, that the section for which the signals are displayed has not arrived. If impossible for the conductor to notify the opposing trains as provided herein, then the train displaying the signals shall await the arrival of the section for which signals are displayed before taking such signals down, unless relieved from such duty by order of the.....

Instructions in Writing

215. Messages or instructions respecting the movement of train or the conditions of track or bridges, must be in writing.

Working Limits—Extra Trains

216. Where extra trains are assigned working limits, such trains must move within these limits with the current of traffic unless train orders otherwise direct.

Places to Approach Under Control

217. Trains must approach the end of double track, junctions, railroad crossings at grade, and all drawbridges, prepared to stop, unless the switches and signals are right and the track is clear. Where required by law, trains must stop.

Trains Not to Stop at Obscured Points

218. If possible to avoid it, a train must not be allowed to stand on or be obstructed by a curve between stations.

Protect Train When Stopped

219. When a train stops or is delayed under circumstances under which it may be overtaken by another train the CONDUCTOR OR FLAGMAN MUST GO BACK IMMEDIATELY WITH RED SIGNALS A SUFFICIENT DISTANCE TO INSURE FULL PROTECTION, NOT LESS THAN ONE THOUSAND (1,000) FEET. When recalled he may return to his train, first placing two torpedoes on the rail when the conditions require it. The front of a train must be protected in the same way when necessary, by the motorman. The duty herein required of the conductor or motorman may be performed by the other where desirable for any reason.

Train Broken in Two

220. If a train should part while in motion, trainmen must, if possible, prevent damage to the detached portions. The signals prescribed by Rules 97 (d) to 99 (f) must be given, and the front portion of the train kept in motion until the detached portion is stopped.

Pushing Cars

221. When cars are pushed by a motor (except when shifting and making up trains in yards) the conductor or flagman must take a conspicuous position on front of leading car and signal the motorman in case of need.

Yard Limits

222. Yard limits marked by proper boards may be established and within such limit trains will run according to special instructions.

Responsibility for Switches

223. Switches must be left in proper position after having been used. Conductors are responsible for the position of switches used by them and their trainmen, except where switch tenders are stationed.

Setting Switches for Following Trains

224. A switch must not be left open for a following train unless in charge of a trainman of such train.

Responsibility for Safety of Trains

225. Both motorman and conductor are responsible for the safety of their train and the proper fulfillment of all running orders received by them, either from operators or direct from the dispatcher, governing the operation of their train, and under conditions not provided for by the rules must take every precaution for their protection.

Crossing Other Railroads at Grade

226. Every train must be brought to a full stop before crossing the tracks of any railroad at grade, at a distance of not less than fifty (50) feet from the railroad track, except when such crossing is provided with interlocking apparatus or other system of signals, and must not proceed until proper signal is received from the conductor, and crossing is seen to be clear, and no train approaching and about to pass over the crossing. The conductor shall be responsible for the motorman leaving in front vestibule, for immediate use in case of necessity, a red flag by day and a red light by night. This order strictly prohibits the motorman from taking a signal or order from any one else but his own conductor, and conductors must not permit any one else to perform their duties at these crossings unless authority has been conferred upon another employee by the.....

Entering or Leaving Siding

227. A train about to enter or leave a siding must approach the switch under full control.

Trains Meeting at Double End Sidings

228. A train meeting another train at a siding open at both ends must enter at the nearest end, and under no circumstances run by and back in without special orders from the.....

Running Over Tongue Switches

229. Tongue switches, wherever located, must be approached with train under full control, and must not be run over unless the tongue is known to be properly set. Motormen and conductors will be held equally responsible for the proper setting of switches used by them, and they must take every precaution for the protection of their trains, even if not provided by the rules.

Delayed Trains

230. All regular trains, or sections of a regular train, when becoming..... minutes late, must report to the dispatcher, and will also report for each successive..... minutes lost. After they have become..... minutes late, such trains will lose their time card rights.

Rights of Delayed Trains

231. A train which is delayed and falls back on the time of another train of the same class, does not thereby lose its rights.

Care Passing Other Trains at Stations

232. Every care must be taken by trainmen in passing a station where any train is taking on or letting off passengers. Both motorman and conductor are responsible for the safety of their train and passengers, and must use every precaution at all times.

Approaching Meeting Points

233. All trains must approach meeting or passing points under full control, and must not attempt to pass until switches and signals are seen to be right and the train to be met or passed is clear of the main track.

Cases of Doubt

234. IN ALL CASES OF DOUBT OR UNCERTAINTY, TAKE THE SAFE COURSE AND RUN NO RISKS.

RULES FOR MOVEMENT BY TRAIN ORDERS

Train Orders

250. For movement of trains not provided for by time table, train orders will be issued by authority and over the signature of the Superintendent or other designated authority. Train orders must contain neither information nor instructions not essential to such movements.

Train orders must be brief and clear, and in the prescribed form, when applicable, without erasure, alteration, or interlineation.

Must Be Same Words

251. Each train order must be given in the same words to all persons or trains addressed.

How Addressed

252. Train orders must be addressed to those who are to execute them, designating the place at which each is to receive his copy. They must be addressed to the conductor and motorman, and also to any one who acts as pilot. A copy for each person addressed must be supplied by the person taking the order.

Dispatchers Record of Orders

253. Each train order must be written in full by the dispatcher, in a book or record provided for the purpose, before or at the time of giving the order to the train crews. With it must be recorded

Rights to Be Restricted First

268. When trains running in opposite directions are to be moved toward each other by train orders, the train whose rights are to be restricted must first receive the order and the complete before the order is given to the train to be moved against it or toward it.

Time of Trains to Be Reported

269. Agents or operators when so directed will promptly record and report to the train dispatcher the time of departure of all trains and the direction of extra trains. Agents and operators in such cases must have the proper appliances for signalling for immediate use, if required.

Use of Telephone for Train Orders Has Precedence

270. Trainmen wanting the telephone line to get the dispatcher for train orders must be given precedence. Any other use of the line for conversation must be stopped immediately when it is necessary to ask for train orders, except for business of the power department.

When desiring to use the telephone, first put the receiver to your ear and listen to find out if others are using the line. If the line is not occupied it may be used, under proper restriction, for company business only.

Meeting Orders Not to Be Given at Meeting Point

271. Meeting orders must not be sent for delivery to trains at the meeting point if it can be avoided. When it cannot be avoided, special precaution must be taken by the train dispatcher and operators to insure safety. There should be, if possible, at least one siding between the points at which opposing trains receive meeting orders.

Trains Governed Strictly by Orders

272. A train, or any section of a train, must be governed strictly by the terms of orders addressed to it and must not assume rights not conferred by such order. In all other respects it must be governed by the trainrules and time table.

Second Sections Must Have Orders

273. Trains running as sections of any train must report when the opposing train is to be met at a point other than the scheduled meeting point, or a meeting point made by order, and must not attempt to follow preceding section without an order from the dispatcher to do so.

Clearance Card

274. (See)

FORM OF TRAIN ORDER BLANK

Form of Train Order Blank

275. (See)

Signs and Abbreviations

276. The following signs and abbreviations must be used:
 C & M—for conductor and motorman. O K—as provided in these rules. Min—for minute. Jun—for junction. Frt—for freight. No—for number. Eng—for engine. Sec—for section. Opr—for operator. 9—to clear the line for train orders and for motormen and conductors to ask for train order.
 The usual abbreviations for the names of the months.

FORMS OF TRAIN ORDERS

Form A.—Fixing Meeting Point for Opposing Trains

277. (1) Train No. Car. and. Train No. Car will meet at.
 (2) Train No. Car. will meet. Train No. Car. at. and. and. at.

EXAMPLES

Train No. 1, Car 201 and Train No. 2, Car 202, will meet at "A."

Train No. 3, Car 203 and 2nd No. 4, Car 204, will meet at "B."

Train No. 5, Car 205, and Extra 65 east, will meet at "C."

Extra 29, north, and extra 72 south, will meet at "D."

Train No. 1, Car 29, will meet 1st No. 2, Car 33 at "B," 2nd No. 2, Car 38 at "C" and Extra 73 west, at "D."

Train receiving this order will, with respect to each other, run to the designated point, and having arrived there will meet in the manner provided by the rules.

Form B.—Authorizing a Train to Run Ahead of or Pass Another Train Running in the Same Direction

278. (1) Train No. Car. will pas Train No. Car. at.
 (2) Train No. Car. will run ahead of Train No. Car. to.

EXAMPLES

(1) Train No. 1, Car 201, will pass Train No. 3, Car 203, at "D."

(2) Train No. 4, Car 204, will run ahead of Train No. 6, Car 206, "D" to "E."

When under this order a train is to pass another both trains will run according to rule to the designated point and there arrange for the rear train to pass promptly.

Form E.—Time Orders

279. (1) will run. late. to.
 (2) wait at. until. for.

EXAMPLES

(1) Train No. 1, Car 25, will run twenty (20) minutes late "A" to "C."

(2) Train No. 1, Car 25, will wait at "H" until 10 a.m. for Train No. 2, Car 53.

(1) Makes the schedule time of the train named between the stations mentioned as much later as stated in the order, and any other train receiving the order is required to run with respect to this later time, as before required to run with respect to the regular scheduled time.

The time in the order should be such as can be easily added to the schedule time.

Under (2) the train first named must not pass the designated point before the time given, unless the other train has arrived. The

train last named is required to run with respect to the time specified, at the designated point or any intermediate station, where scheduled time is earlier than the time specified in the order, as before required to run with respect to the schedule time of the train first named.

Form F.—For Sections of Scheduled Trains

280. (1) Car. will display signals and run as. to.
 (2) Car. will run as. to.
 (3) Train No. Car. will display signals. to. for Car.

EXAMPLES

(1) Car 25 will display signals and run as 1st No. 1, "A" to "C."

(2) Car 31 will run as 2nd No. 1, "C" to "D."

(3) Train No. 1, Car 31, will display signals "G" to "H" for Car 50.

These examples may be modified as follows:

(4) Cars 50, 55 and 60 will run as 1st, 2nd and 3rd No. 1, "A" to "D."

Example No. 1 is to be used when the number of the car or motor for which signals are displayed is not known, and is to be followed by Example No. 2, both being single order examples.

Under Example No. 2 the car or motor named will not display signals.

Under Examples 3 and 4 the car or motor named will not display signals.

For annulling a section.

(5) Car 55 is annulled as 2nd No. 1, "B" to "C."

If there are any other sections following, add:

Following sections will change numbers accordingly.

Each section affected by the order must have copies, and must arrange signals accordingly.

Form G.—Extra Trains.

281. (1) will run extra. to.
 (2) Car. will run extra. to. and return to.

EXAMPLES

(1) Car 20 will run extra "A" to "F."

(2) Car 20 will run extra "A" to "F" and return to "C."

Under No. 2 the extra must go to "F" before returning to "C."

A train receiving an order to run extra is not required to protect itself against opposing extra trains unless directed by order to do so, but must keep clear of all scheduled trains, as required by rule.

(3) Car. will run extra, leaving. on. on the following schedule, and will have right of track over all trains.

Leave.

Leave.

Arrive.

EXAMPLES

Car 53 will run extra, leaving "A" on Thursday, February 17th, on the following schedule, and will have the right of track over all trains.

Leave "A" 11:30 p.m.

Leave "B" 12:25 a.m.

Arrive "C" 2:30 a.m.

This order may be varied by specifying the kind of extra and the particular trains over which the extra shall or shall not have right of track.

Trains over which the extra is thus given the right of track must clear the time of the extra train minutes.

Form H.—Work Extra

282. (1) Work extra. will work. to. between. and.

EXAMPLE

(1) Work extra 20 will work 7 a.m. to 6 p.m. between "D" and "E."

The working limits should be as short as practicable: to be changed as the progress of the work may require.

The above may be combined with Example 1, Form "G" thus:

(a) Work Extra 20 will run "A" to "D" and work 7 a.m. until 6 p.m. between "A" and "B."

When an order has been given to work between designated points no other extra shall be authorized to run over that part of the track without provision for passing the Work Extra.

When it is anticipated that a Work Extra may be where it cannot be reached for orders, it may be directed to report for orders at a given time or place, or an order may be given that it shall clear the track for (or protect itself after a certain time against) a designated extra by adding to (1) the following words:

(b) And will keep clear of (or protect against) Extra. south between. and. after 2:10 p.m.

In this case Extra must not pass the northernmost point before 2:10 p.m. at which time the Work Extra must be out of the way, or protected (as the order may require) between those points.

When the movements of an extra over the working limits cannot be anticipated by these or other orders to the Work Extra, an order must be given to such extra, to protect itself against the Work Extra, in the following form:

(c) Extra. will protect against Work Extra. between and. This may be added to the order to run extra.

A Work Extra, when met or overtaken by an extra must allow it to pass.

When it is desirable that a Work Extra shall at all times protect itself while on working limits, it may be done by adding to (1) the following words:

(d) Protecting itself.

A train receiving this order must whether standing or moving, protect itself within the working limits in both directions in the manner prescribed by Rule

Whenever an extra is given orders to run over working limits, it must at the same time be given a copy of the order sent to the Work Extra.

To enable a Work Extra to work upon the time of a regular train, the following form may be used:

(e) Work Extra 202 will protect against No. 55 between "A" and "B."

A train receiving this order will work upon the time of the train mentioned in the order, and protect itself against it as prescribed in Rule.

The regular train receiving this order must run, expecting to find the Work Extra protecting itself within the limits named.

Form J.—Holding or Reporting Order.

283. (1) Hold at
 (2) Hold all..... bound trains at.....
 (3) will report for orders at.....

EXAMPLES

- (1) Hold Train No. 2, Car 202, at "A."
 (2) Hold all eastbound trains at "B."
 Train No. 2, Car 202, will report for orders at "C."

Whenever an order is transmitted in either of the above forms it must be completed in the same manner as in other telephone train orders.

When a train has been so held or ordered to report for orders at any specified place, it must not proceed until the order "Hold" or "Report" is annulled, or an order given in the form:

..... may go.
 Form J will only be used when necessary to hold trains until orders can be given, or in case of emergency. The reason for holding may be added, as:

For orders.
 If in case train is ordered to report for orders at any specified place, and train cannot get in communication with the dispatcher, it must stay until communication is establishing or orders are sent to them.

Form K.—Annulling a Scheduled Train or a Section.

284. of is annulled, to

EXAMPLE

- (1) No. 1, of February 29th, is annulled "A" to "Z."
 (2) 2d No. 6 of February 29th, is annulled "E" to "G."
 A train or section annulled becomes void between the points named and cannot be restored.

Form L.—Annulling an Order

285. Order No. is annulled.

EXAMPLE

Order No. 10 is annulled
 The order which has been annulled must not be re-issued under its original number.

Form P.—Superseding an Order or Part of an Order

286. This order will be given by adding to prescribed forms the words "instead of."

- (1) Train No. Car and Train No. Car will meet at instead of at
 (2) Train No. Car will display signals for to

EXAMPLES

- (1) Train No. 1, Car 201 will meet Train No. 2, Car 202, at "B" instead of "C."
 (2) Train No. 1, Car 201, will display signals for Car 85, "D" to "E" instead of "F."

An order which has been superseded must not be re-issued under its original number.

Form R.—Providing for a Movement Against the Current of Traffic

287. has right over opposing trains on track to

EXAMPLE

- (1) Train No. 1 Car 201, has right over opposing trains on No. 2 (or eastward) track "A" to "B."

A train must not be moved against the current of traffic until the track on which it is to run has been cleared of opposing trains.

Under this order the first-named train must use the track specified between the two points named and has the right over opposing trains on that track between these points. Opposing trains must not leave the point last named until the first-named train arrives.

An inferior train between the points named, moving with the current of traffic in the same direction as the first named train, must receive a copy of the order, and may then proceed on its schedule, or right.

- (2) This order may be modified as follows:
 After arrives at has right over opposing trains on track to

After Train No. 4, Car 204, arrives at "A" Train No. 1, Car 201 has right over opposing trains on No. 2 (or eastward) track, "A" to "B."

Under (2) the train to be moved against the current of traffic must not leave the first-named point until the arrival of the first-named train.

Form S.—Providing for the Use of a Section of Double Track as Single Track.

288. track will be used as single track between..... and.....
 If it is desired to limit the time for such use, add (from until).

EXAMPLE

No. 1 (or westward) track will be used as single track between "A" and "B."

Adding if desired: From 1 p.m. until 3 p.m.

Under this order all trains must use the track specified between the stations named and will be governed by rules for single track.
 Trains running against the current of traffic on the track named must be clear of the track at the expiration of the time named, or protected as prescribed by Rule 159.

DUTIES OF EMPLOYEES

TRAIN DISPATCHERS

Train Dispatchers Report To

300. Train dispatchers report to and receive their instructions from the Superintendent.

Duties of Dispatchers

301. They will issue orders in the name of the superintendent or other designated authority for the movement of trains; see that they are transmitted and recorded in the manner prescribed in the rules; keep a record showing the time of arrival and departure of trains at specified points and such other records as may be required, and record all important incidents which occur while on duty.

Care in Sending Orders

302. They must use great care in sending orders, and not transmit an order faster than the person receiving can take and plainly write it. They will anticipate the necessity for orders as far as possible and have them ready for trains; compel a prompt performance of duty on the part of the trainmen, with a view to preventing delay.

Enforce Rules

303. They must see that unnecessary business is excluded from the wires; that the rules for the movement of trains by train order are complied with; and that every motorman and conductor has signed for a copy of each new timetable issued before he is permitted to go on the road.

Record Orders

304. They must see that the train dispatcher going off duty makes, in a book provided for that purpose exclusively, a written memorandum of all orders by number that may be on hand not fully executed, and must see that such orders and all business pertaining thereto are fully understood by the relieving dispatcher.

Report Condition of Telephone Lines

305. They must see that the telephone lines are kept in good working order and report every morning to the chief lineman the conditions of the wires upon their division.

Not Allow Unauthorized Persons in Office

306. They must not permit any unauthorized person to enter the Train Dispatcher's office.

MOTORMEN, CONDUCTORS AND OTHER TRAINMEN

Report to

310. Motormen and conductors report to and receive their instructions from the superintendent.

To Be Fully Informed—Time Tables, Bulletins, Etc.

311. Before going out on the road they must have a copy of the latest time table, and must examine the bulletin board and be fully informed as to all notices posted for their guidance.

Reporting for Duty

312. Motormen and conductors must report for duty at the appointed time, unless prevented by sickness, in which event they must give notice to the minutes before the designated time for reporting; and motormen and conductors must, when necessary, assist in switching and making up their trains.

Obtain Permission for Absence from Duty

313. No motorman or conductor, or other employee, will be permitted to absent himself from duty or to change off with another for a trip or part of a trip or day, without first obtaining permission from his superior officer.

Duties Before Leaving Car in House or Yard

314. When a train is run into the yard or car house, either day or night, it is the duty of the motorman and conductor to see that all lights are turned off; that the trolley is removed from the wire; that the stoves and heaters are left in safe condition, the dampers properly adjusted and all signals are taken down and put in their proper places before leaving the train.

Report Defects in Car

315. On arrival at a terminal station, or where there is an inspector or foreman of repairs, they must report to him any defects in the condition of the cars, or any imperfect action on the part of the brakes during the trip.

Report Defective Switches, Etc.

316. They will report promptly by telephone, to the train dispatcher, any defective switch or target lights, switch locks, defective wires or track, etc., noticed by them. If defect is serious or considered dangerous, train crews must not leave the point unless relieved by order of the Superintendent.

Daily Defect Report

317. Conductors and motormen will make a written report at the end of each day's run of any defects in their car, so that repairs or alterations may be made before the car is again placed in service.

Train Orders to Be Sent Daily to Superintendent

318. Train orders received by motormen and conductors must be sent by them daily to the superintendent, unless otherwise directed

Trains Not to Be Left Unprotected

319. Trains in commission must not be left unprotected. Either motorman or conductor always remaining in charge, unless necessary to leave momentarily for orders, or to carry out provisions of rules or for safety of trains.

Remain with Disabled Car

320. The motorman or conductor of any disabled car, withdrawn from the service temporarily, must remain with car until relieved by proper authority or until car reaches car house.

Fire in Car

321. When there is evidence of car being on fire, motormen will immediately throw overhead switch to OFF, both motorman and conductor using every effort to prevent passengers becoming panic-stricken or leaving car before it is brought to a stop.

Not Cause Arrests Without Instructions

322. Motormen or conductors must not, except in cases of extreme emergency, or for a violent or criminal act, cause the arrest of any passenger, truck driver or other person, without an order from the Superintendent.

Joint Responsibility

323. Motormen and conductors will be held equally responsible for the violation of any of the rules governing the safety of their trains, and must take every precaution for their protection, even if not provided for by the rules. IN CASE OF DOUBT OR UNCERTAINTY, TAKE THE SAFE COURSE AND RUN NO RISKS.

MOTORMEN

Observe Position of Switches

320. Motormen are required to observe the position of all switches, and must know that such switches are right before passing over

them, and that no portion of their train or car is allowed to stand where it will obstruct other tracks improperly.

Interpretation of Signals

351. They will be held responsible for detection and careful interpretation of all signals while on the road.

Conversation Forbidden

352. Motormen while operating cars are permitted to answer questions of superior officers and to give proper instructions to students only. All other conversation with motormen while car is in motion is forbidden.

Do Not Allow Others to Operate Car

353. Motormen will, under no circumstances, allow anyone, no matter what rank, to operate any of the machinery on the car, unless they have a letter directed to them personally and signed by the Manager, in which case they will be held accountable for the safety of the train.

Conductor Must Not Stay in Motorman's Vestibule

354. Under no circumstances shall any person be permitted to ride in motorman's vestibule without authority of the General Manager, nor shall the conductor remain in the motorman's vestibule longer than is necessary to properly receive or deliver train orders, or attend to any other business requiring his presence there.

Motorman to be Present When Apprentices Operate Car

355. Motormen will not permit apprentices to operate their car except in their presence.

Passing Cars

356. When passing cars on double track in cities or towns the gong must be sounded and car brought under full control.

Passing Cars at Tongue Switches

357. Never run against a facing switch point or crossover when meeting a train or car, but slacken speed sufficiently to allow the train moving in the opposite direction to pass before striking switch point.

Passing Vehicles

358. Motormen are cautioned to exercise great care when a vehicle is being driven ahead of car. Sound the alarm vigorously and run cautiously until the vehicle is passed.

Passing School Houses

359. Motormen should use the utmost precaution when passing school houses during recess, or when assembling, or leaving school. The car should be under perfect control.

Care in Coupling Cars

360. Motormen must exercise caution and good judgment in moving and coupling cars, and in stopping and starting trains, and must avoid all unnecessary jerking, so as to prevent disturbances to passengers or injury to persons or property.

Backing Train

361. When a passenger train runs by a station or other stopping place, they must always give the back-up signal (See Rule 103-C) and receive the response from the conductor before starting back. Great care must be exercised in backing a train to avoid injury to passengers or others by sudden or unexpected movement.

Do Not Move Train at Night Without Lights

362. Motormen must not move any train or car at night without a light in front and rear.

Examine Car Before Leaving Initial Terminal

363. Before leaving initial terminal on first trip, motormen must examine their car and see that it is fully equipped and in good condition for safe operation. They must make further examinations while waiting on sidings and during lay-overs at terminals.

Testing Air Brakes

364. Motormen on passenger and freight trains must test air brakes by applying and releasing brakes before starting from terminal station, or at any point where the make-up of their train had been changed and after starting and before running one thousand (1,000) feet, and also before approaching railroad crossings, apply the air brake sufficiently to know that it is in good working order.

When Brakes Are Not Working Properly

365. Motormen will not be expected to maintain schedule speed unless the brakes on their cars are in thorough working order, and the trucks and wheels are in safe condition.

When brakes are in working order, but not in such condition that a service stop at schedule speed can be made in the usual distance, then the speed of the car must be reduced to such an extent that a stop can be made in the usual distance should emergency arise, and for ordinary stops the application of the brakes must be commenced far enough back to make the stop at the proper place without reversing.

It must be thoroughly understood that the speed maintained must be graduated according to the braking capacity of the car.

Should the air brakes fail totally, but the hand brakes be in good working order, then, upon instruction from the dispatcher, the run may be continued, the car being kept under perfect control and not permitted to exceed a speed of ten (10) miles per hour.

No car with bad order brakes must leave a terminal or pass a repair shop where there are facilities for repairing or adjusting brakes, but will remain until the repairs are made.

Reversing Car

366. Never use the reversing lever to stop car, except to avoid a collision or injury to a person or animal, or when the brake rigging is disabled.

Descending Grades

367. In descending heavy grades, motormen must shut off the power and allow car to coast, being careful to keep it under control.

Economical Use of Current

368. In order to effect an economical use of the electric current, it is necessary that the continuous movement of starting and increasing speed should be made gradually. An economical start does not jerk a car or train.

In starting a car or train, let it run until the maximum speed of each notch has been obtained before moving the handle to the next notch.

Do not apply brakes when the current is on.

Do not apply current when the brakes are applied.

A great amount of power can be saved by using judgment and discretion in approaching stopping places and switches, by shutting off the power so as to allow the train to drift to the stopping place or switch without a too vigorous use of the brake; but time must not be sacrificed to save power.

Sanded Rails

369. Never run on freshly sanded rails with brakes full on, except to prevent an accident.

Do Not Slide Wheels

370. On a slippery rail do not allow wheels to slide; as soon as wheels commence to slide the brakes must be released and reset.

Spinning of Wheels

371. Care must be taken, particularly during snow storms, to avoid "spinning" of the wheels, with no forward or backward motion of the car. As often as wheels begin to "spin" throw off the power and build up again one notch at a time.

Water on Track

372. When there is water on the track, run the car very slowly, drifting without the use of power whenever possible.

Power Off Line

373. When the power leaves the line, the controller must be shut off, the light switch turned on and the car started only when the lamp burns brightly. When off for five minutes all trains affected must report to train dispatcher from nearest telephone connection.

Cars Blockaded

374. In the event of a blockade of cars from any cause, cars in such blockade must not all attempt to start at one time, but at such intervals as will not overload the power.

Thunder Storms

375. During thunder storms turn on the light circuit.

Fire Apparatus

376. When any fire department vehicles are observed approaching from any direction, cars must be stopped until such vehicles have passed.

Ambulance and Police Patrol

377. Ambulances and police patrol must be allowed the right of way, and when approaching or passing, cars must be kept under control to avoid collision.

Destination Signs

378. It is the duty of the motorman to see that all cars are equipped with the necessary destination signs, and that same are properly displayed.

Motormen of Work Trains

379. Motormen of work trains located at other than terminal stations, must in all cases obtain permission of the Train Dispatcher before absenting themselves from the vicinity in which they are stationed, as they are likely to be called upon at unusual hours.

CONDUCTORS

Comply with Instructions

390. Passenger conductors must comply with instructions issued by passenger and accounting departments.

Familiarity with Duties

391. Conductors must know that the men employed on their train are familiar with their duties.

Two or More Cars in Train

392. When there are two or more cars in a train, the conductor of the leading car will be in charge of the operations.

Changing Off Before Completion of Trip

393. In case conductors change off before the completion of their trip, they must carefully exchange all orders which they may have, and each must know that his orders are perfectly understood by the other. They must then carefully compare the orders they receive with those in the hands of the motorman of the train to which they have transferred before proceeding on the trip. Changes of this kind must never be made without permission from the proper officers.

Care to Report Accidents

394. In case of accident resulting in the loss of life, injuries to persons, or damage to property, conductors must use the utmost care in making reports, and such records as will enable them to furnish a full and complete statement of all the facts, with the names and addresses of all persons who witnessed or may have information concerning the accident. See Rule No. 423.

Render Aid and Information

395. Conductors are expected to render all travelers such information as they may need, bearing in mind that many matters plain to the experienced need explanation to those who are inexperienced, especially to the humbler classes, many of whom are ignorant of our customs and language. Such should command the sympathy of every one.

Disorderly Persons

396. Conductors will not permit disorderly persons to get on the train; nor allow disorderly conduct on the part of any passenger; promptly repress all disturbances, threatened violence, profane or offensive language.

Train to be Supplied with Proper Signals

397. Each conductor must know that his train is supplied with proper signals.

Signal to Start

398. Conductors must never get a signal to start unless they can see the rear steps and know that passengers leaving the train are clear of same, or that passengers boarding the train are safely on the car. They must be careful not to give a starting signal when passengers are approaching, or close to a train and about to board it. When flagging railroad crossings, conductors will keep the rear door closed, opposite to the side of the car from which they will flag crossing.

Display of Signals

399. Display proper signals at rear of train and have all appliances ready for use.

Collect Fares Promptly

400. Conductors of passenger trains will pass entirely through their train after leaving each station where their train stops, for the purpose of collecting tickets and fares; and where stops are made at long intervals, they shall frequently pass through to look after the comfort of the passengers.

Require Transportation

401. Conductors must require transportation from every person on the train, except such officers and employees of the company as the rules governing free transportation permit to ride without presenting transportation and employees on duty on the train.

Time of Trains at Junction Points

402. Conductors will keep themselves thoroughly posted as to the time of arrival and departure of trains on connecting roads at junction stations.

Provide Seats for Passengers

403. They will, if possible, provide all passengers with seats, not permitting any one to occupy more seats than tickets entitle, unless there is room for all.

Passengers to Ride Inside of Cars

404. Conductors must not permit passengers to ride on rear platform when there is room inside the car. The rear platform must be kept clear whenever it is possible to do so, except on cars provided with observation platforms.

Conduct of Passengers

405. Conductors must not allow persons to put their feet on the cushions of the car or allow them to spit on the floor. They will see that smoking room door is not left open.

Call Stations

406. Conductors will see that stations are promptly and properly called in each car in his train; at stations and crossings, where trains leave in different directions, the conductor of each train must announce distinctly in each car before starting the principal stations on the route.

Call Streets

407. Conductors will announce distinctly the names of streets at which the cars will stop in the principal towns when approaching same.

Conductor on Rear Platform

408. When a train is standing, the conductor must be on the ground at the rear of his train, or on the rear platform, unless compelled to be elsewhere in the discharge of his duty.

When stops are made at principal streets, places of amusement, or at any point where a considerable number of passengers enter or leave the train, the conductor must be on the rear platform until such point is passed.

Removing Trolley at Night

409. Conductors will not remove trolley from wire at end of run or elsewhere at night until after passengers have alighted from the car.

Cars Left on Sidings

410. When leaving cars on sidings, conductors must know that they are properly secured against running or the possibility of their being blown out on the main track, and that they are left far enough from the main track to safely clear all trains.

Cars Left at Stations or Yards

411. When leaving cars at stations or yards, they must in all cases be put on storage tracks, and under no circumstances left on passing tracks without permission from the Superintendent. If brakes are inoperative wheels must be blocked.

Reports

412. At the end of each trip make out all reports required, observing all special instructions, and deposit such reports in the prescribed places.

ACCIDENT AND PERSONAL INJURY**Employees to Render Assistance**

420. In case of accident, however slight, to persons or property in connection with or caused by any train, the trainmen in charge of same will render all assistance necessary and practicable. In no case will they go away leaving injured persons without first having seen that they are cared for.

Immediate Report

421. Conductors and motormen will make immediate verbal report to the dispatcher of any accident, blockade or serious mishap of any kind.

Medical Assistance

422. Trainmen will not authorize medical assistance except for the first visit in severe cases of personal injury, nor will they visit injured persons at any time afterward, unless specially instructed so to do by the Superintendent.

Complete Report

423. A full and complete report of every accident, no matter how trivial, apparent, and whether on or near the train, will be made by the conductor upon the prescribed forms. In all cases full data must be obtained and stated in the report.

Extent of Injuries

424. Ascertain carefully the extent of injuries or damages, if any, before leaving the place of accident.

Accidents Caused by Passing the Rear of Standing Car

425. In case a person is struck by a train or car after passing around the rear of standing train or car, the numbers of both trains or cars must be obtained.

Accidents Caused by Defective Equipment

426. If accident is caused by any defect or damaged condition of car, the conductor must report same.

Accidents to Employees

427. Accidents to employees will be reported the same as accidents to passengers.

Obtain Witnesses

428. The conductor will obtain the names and residences in full of all witnesses on or near the train. The motorman will assist the conductor in securing the names of witnesses whenever practicable.

Other Troubles to Be Reported as Accidents

429. Any trouble or disturbance of a boisterous or quarrelsome character which occurs on a train, or the ejection of a person from a train, will be reported as an accident.

Giving Information

430. No employee shall, under any circumstances, give any information whatever concerning any accident, delay, blockade, or mishap of any kind, to any person other than a properly authorized representative of the company, except as provided by law.

EJECTIONS**Ejections—When Authorized and How to Be Made**

440. Should a person be found upon the train without a ticket or pass or some form of authorized transportation, he must be required to pay fare, and in case he refuses to do so, he should be ejected from the train, only such force being used as is sufficient for his removal, and in no case use unnecessary violence, harsh language, or display of ill temper, or while the train is in motion. The ejection must be made by the conductor and trainmen as an act of legal duty and only in a reasonable manner and at a proper place. It should not be in such a place, in such weather, or at such unreasonable hours of the night as might easily endanger the life or safety of the person ejected. The person ejected must not be a child of tender years, a person of unsound mind, or a person in such feeble and helpless condition as to be unable to take care of himself at the point of ejection.

Conductors to Protect Passengers

441. Conductors must attend to the safety and comfort of passengers on their trains and protect them against rudeness, threatened violence, abusive or obscene language. Any passenger acting thus on a train, after having been requested to desist, whether provided with a ticket or not, should be ejected from the train promptly, but not at such place as will endanger his life or personal safety, and with only sufficient force for the purpose.

Defective Transfers

442. Whenever a passenger presents a defective transfer, conductors will notify the passenger that transfer is not good, explaining why. If the passenger refuses to pay fare, lift the transfer, enclose it in an envelope, giving time, place, name of passenger, and all facts relating to the incident, and deliver the report to the Superintendent as soon as possible. Do not in case of doubt eject a passenger on a defective transfer.

Persons Stealing Rides

443. Any person caught stealing a ride on a car must never be pushed from the car, or so frightened that he will jump while the car is in motion.

Witnesses in Case of Ejection

444. In case of ejection always get name of witnesses and make full report, the same as in case of accident.

Use Persuasion Before Ejecting

445. When ejecting a passenger all means to persuade him to leave the car without assistance should be used before taking hold of the passenger.

Intoxication

446. No passenger will be ejected from a car for mere intoxication, unless said passenger becomes dangerous or offensive; such passenger must then be ejected with great care and must be guided until free from probable injury.

NEW TRANSFERS IN TACOMA

The Tacoma Railway & Power Company inaugurated a new transfer system on Oct. 1. Under the new system a different colored paper will be used for the transfers each month, and only the officials of the company will know in advance what color will be used. The day of the month is printed on each transfer in large red letters, and a supply is given the conductors daily. To each transfer is attached a coupon indicating whether the transfer is issued before or after noon. If before noon, the coupons are detached, and if after noon, they remain a part of the transfer. The advertising formerly carried by the company on the reverse of the transfers has been eliminated, the rules governing transfers taking its place. A new rule provides that if the conductor refuses to accept the transfer, the passenger may present the transfer to the superintendent who will reimburse him or her to the extent of \$2 if the transfer was improperly refused. Transfers are issued at transfer points when passengers are leaving the cars, and are good only on the next connecting car.

S. A. Wood, treasurer of the United Electric Signal Company, Providence, R. I., is attending the convention in the interest of his company.

INTERLINE ACCOUNTING OF INTERURBAN RAILWAYS*

BY WM. H. FORSE, JR., SECRETARY AND TREASURER, INDIANA UNION TRACTION CO., ANDERSON, IND.

The title of this paper is one that will not appeal to all the members of the association, for the reason that accountants of those railways which do not extend beyond the confines of a particular city, and its environs, have not yet had the problem of interline accounting to deal with, and all

provided for each road participating in the haul; as the passenger journeys a coupon is detached by the conductor of each line en route.

Mileage or coupon books containing a quantity of mile or 5-cent coupons are also used interchangeably, and for the purpose of this discussion may be considered interline tickets.

When two or more roads in the same territory desire to facilitate long-distance travel by affording through travelers the convenience of a single ticket purchase for a

CENTRAL TRACTION COMPANY
REPORT OF INTERLINE TICKETS SOLD

At.....Station By.....Agent Date.....190....

DESTINATION	Form	Com'g No.	Closing No.	No. Sold	Rate	Amount	This Co.'s Prop'n	Prop'n	Prop'n	Prop'n	Prop'n	Prop'n
.....												
.....												
.....												
.....												

Interline Accounting—Form 1, Agent's Report of Interline Tickets Sold

interurban railways have not participated in this class of business. The subject will, therefore, be treated in as condensed a form as the scope of the title will permit.

Interline accounting, as its name signifies, is the accounting for transactions between railway lines; in the railway vernacular, however, the term embraces only accounting resulting from transportation agreements between lines, and does not refer to other inter-corporate transactions.

The subject, when thus confined to transportation, naturally divides itself into two heads, namely, passenger traffic

and the methods governing settlements.

The system that has been adopted by a score or more of electric railways in the Central States will be outlined. The basic plan is the same as the steam roads have used for a number of years, but the system has been modified somewhat, in order to secure greater economy and simplicity, required by the usual lower rate and shorter haul of the electric railway.

Tickets used for one or two way trips have printed there-

CENTRAL TRACTION COMPANY
ACCOUNTING DEPARTMENT

Liverpool, Ind.....190....

STATEMENT OF INTERLINE TICKET SALES

On Account of.....

Month of.....190....

Please make no alterations on this sheet. If any discrepancies are found, advise by letter and corrections will be made in subsequent statement.
JOHN SMITH, Auditor.

Line	FROM	To	Form	CONSECUTIVE NUMBERS		No. Sold	Class	Through Rate	Proportion	Amount	Remarks
				Opening	Closing						
1											
2											
3											

Interline Accounting—Form 2, Statement of Interline Ticket Sales

and freight traffic. These will be treated briefly in the order that is warranted by their present importance to the electric railways.

INTERLINE PASSENGER ACCOUNTS

An interline passage ticket is a ticket which is good for transportation over one or more lines in addition to the selling road. Usually it is in coupon form, a coupon being

on a uniform contract relating to time limit, stop-over regulations, baggage liability, etc. A coupon is provided for each road participating, and these coupons are arranged so that they may be detached consecutively by the conductors to whom the ticket is presented, commencing with the bottom coupon for the first conductor. The tickets are printed upon safety paper and agents are instructed to use ink in filling them out and to never scratch or alter a ticket, but to send to the auditor for credit all tickets spoiled in handling.

*Read before the American Street and Interurban Railway Accountants' Association, Atlantic City, N. J., October 12, 13, 14, 15 and 16, 1908.

times saves a certain amount of delay in handling freight at terminals. The traffic official is thus enabled to promise

sisted upon. Another item usually taken into consideration when deciding upon the method of settlement, is the relative

CAR NUMBER..... FOREIGN WAY-BILL WAY-BILL No. A.....
DATE.....190.....

CENTRAL TRACTION CO.—WESTERN TRACTION CO.
This W-B of freight must go with shipment, to be held by delivering agent

From..... Consignor..... Original Point of Shipment.....
To..... Via Junction.....
Consignee..... Destination.....

No. Packages	DESCRIPTION OF ARTICLES	Weight Subject to Correction	Rate	Freight Revenue	Advances	Prepaid
.....
.....
Totals,	

Amount Prepaid..... SHEET No. 1 Received Shipment as above.
Collected by..... Agent Consignee

This blank used only in billing freight between stations on C. T. Co. and W. T. Co.
Interline Accounting—Form 5A, Five Part Way-Bill. (Original)

CAR NUMBER..... FOREIGN WAY-BILL WAY-BILL No. A.....
DATE.....190.....

CENTRAL TRACTION CO.—WESTERN TRACTION CO.
When Consignee pays freight charges delivering agent will sign and give this expense bill to Consignee

From..... Consignor..... Original Point of Shipment.....
To..... Via Junction.....
Consignee..... Destination.....

No. Packages	DESCRIPTION OF ARTICLES	Weight Subject to Correction	Rate	Freight Rev. nu.	Advances	Prepaid
.....
.....
Totals,	

Amount Prepaid..... SHEET No. 2 Received payment.
Collected by..... Agent Agent

Original freight bill should accompany all claims for over-charge, loss or damage and be presented within 5 days from date of shipment

Interline Accounting—Form 5B, Five Part Way-Bill. (Expense Bill)

CAR NUMBER..... FOREIGN WAY-BILL WAY-BILL No. A.....
DATE.....190.....

CENTRAL TRACTION CO.—WESTERN TRACTION CO.
Billing Agent must forward this copy with Sheet No. 4 to Auditor Central Traction Company, Liverpool, Ind.

From..... Consignor..... Original Point of Shipment.....
To..... Via Junction.....
Consignee..... Destination.....

No. Packages	DESCRIPTION OF ARTICLES	Weight Subject to Correction	Rate	Freight Revenue	Advances	Prepaid
.....
.....
Totals,	

Amount Prepaid..... SHEET No. 3
Collected by..... Agent

Interline Accounting—Form 5C, Five Part Way-Bill. (Forwarding Line's File Copy)

prompt delivery to final destination. On the other hand, the road may not wish to extent credit to a connection financially weak, and the junction settlement plan will be in-

amount of work that will devolve upon junction agents and the auditor. Both plans, as used by electric railways in the Central States, will be outlined.

The audit office system of accounting for freight traveling over two lines will be first described, based upon the use of a five-part waybill, Forms 5a, 5b, 5c, 5d and 5e, for each shipment. All of the parts are written simultaneously by the forwarding agent, and thus considerable labor and expense are saved to the lines handling the shipment.

In addition to the four parts used as original waybill, expense bill, forwarding agent's file copy and forwarding

charges collected on interline shipments are made on the basis of agents' abstracts, supported by the copies of waybills. The auditor of the line upon which the point of final destination is located renders a monthly report to the forwarding lines and to the intermediate lines handling shipments received. These reports are prepared by combining the abstracts, Form 6, made by agents at destinations.

Sometimes it is found practicable to have station agents

CAR NUMBER..... FOREIGN WAY-BILL WAY-BILL No. A.....
 CENTRAL TRACTION CO.—WESTERN TRACTION CO.
 Billing Agent must forward this copy with Sheet No. 3 to the Auditor Central Traction Company, Liverpool, Ind.
 DATE.....190....

From..... Consignor..... Original Point of Shipment.....
 To..... Via Junction.....
 Consignee..... Destination.....

No. Pack-ages	DESCRIPTION OF ARTICLES	Weight Subject to Correction	Rate	Freight Revenue	Advances	Prepaid
Totals,						

Amount Prepaid..... SHEET No. 4
 Collected by..... Agent

Interline Accounting—Form 5D, Five Part Way-Bill. (Receiving Line's Auditor's Copy)

line's audit copy, there is an additional copy which is furnished to the auditor of the line receiving the shipment. This may be sent to him by the forwarding agent, or the two audit copies may be sent to the "home" auditor, who will in turn forward the extra copy to the auditor of the "foreign" line.

If the shipment moves over three or more lines the intermediate lines handling it should be furnished by the

make extra impression copies of the "foreign line abstract" (or list of waybills received from foreign lines). The waybills from different roads are listed on separate sheets. If these copies are properly made the auditor is not required to rewrite the detail in his office, but sends the extra copies prepared by his agents to the foreign lines interested.

Accompanying the report made by the receiving line is a recapitulation or division sheet, Form 7. This sheet is pro-

CAR NUMBER..... FOREIGN WAY-BILL WAY-BILL No. A.....
 CENTRAL TRACTION CO.—WESTERN TRACTION CO.
 This copy to be held by forwarding agent for his file
 DATE.....190....

From..... Consignor..... Original Point of Shipment.....
 To..... Via Junction.....
 Consignee..... Destination.....

No. Pack-ages	DESCRIPTION OF ARTICLES	Weight Subject to Correction	Rate	Freight Revenue	Advances	Prepaid
Totals,						

Amount Prepaid..... SHEET No. 5
 Collected by..... Agent

Interline Accounting—Form 5E, Five Part Way-Bill. (Forwarding Agent's File Copy)

forwarding line with a record of the shipments. This record may consist of an extra impression copy of the waybill, or a daily abstract of shipments forwarded. The information should be furnished promptly, in order that intermediate lines may have a basis for computing daily earnings, including their pro rata proportion of revenue earned on interline freight.

The audit office settlements between companies for freight

vided with columns for indicating the rateable proportion due each line that has handled the shipment. The division sheets are made up in the auditor's office; the amount of revenue due each line is usually fixed upon a percentage basis, each road receiving the proportion to which it is entitled by reason of the mileage traversed by shipments. The division of revenue is sometimes further influenced by the inclusion of arbitrary terminal charges, etc.

auditor of the Central line has the passing record from the agents at his two termini, as well as the abstract of bills received, furnished by the auditor of the Western line, to check against each other for use in making settlements. The auditor of the Eastern line has the reports of his agent at the point of origin and the passing record of the station connecting with the Central. The Western line auditor has the report of the agents at destination and at the junction with the Central line. Thus, in no instance is there lack of the means wherewith to test the accuracy of the reports. In addition thereto, the copy of the passing record received from the agent at the terminus of the connecting line is on file to be used in locating responsibility for loss or damage if claim is subsequently filed against the carrier that issued bill of lading for the shipment.

The junction plan of settlement simplifies the accounting in the auditor's office and places more of the burden upon agents at junction points. The plan was formerly used to a considerable extent by steam railroads and is still used by many interurban railroads, but the modern tendency to rush freight to destination has brought about the closer relationship of connecting lines; the consideration of mutual interests has been instrumental in extending the use of the audit plan of settlement.

When the junction plan of settlement is followed the freight is not sent through to destination accompanied by the way-bill made at its point of origin, but it is billed only to the station at junction with the connecting line. In some respects, therefore, it resembles local way-billing, and is such. If a through rate has been made it will be shown on the way-bill; but the amount charged for the line first handling it will be shown separately, and this amount will be considered by the local agents in reporting. If the shipment is such a one as illustrated in the preceding paragraph, it will be billed by the Eastern agent at originating point, only to the station where the Eastern connects with the Central. The Central line agent will in turn bill it to the station connecting with the Western, and the Western agent will bill to destination. Settlement is effected between the junction agents of the lines. If the shipment has been prepaid through, the Eastern line agent at the junction pays the Central line agent the amount due for transportation beyond the Eastern line; the Central line agent at connection with Western line pays that agent the amount due for carriage over the Western line. If, on the other hand, the shipment is forwarded "collect," the process is reversed, and the Eastern agent at junction collects the amount due his road when he delivers the shipment to the Central line agent. The agents' accounts are cleared through the monthly account current in the same manner as local charges are disposed of, the routine being similar. If one person acts as joint agent for two connecting lines, he handles the accounts and cash separately for each road and conducts the junction settlements as if he were in reality two separate agents.

Some features of interline accounting not touched upon in this paper are exchange ticket orders, loss and damage claims, switching and car service, some of which develop co-extensively with the interchange of business between steam and electric railways. The time is probably coming when this association will find it desirable to have standing committees to handle the problems that arise in connection with this subject, so rapidly growing in importance.

Although the permanent population of Atlantic City is only 40,000 inhabitants, the crowds of summer visitors swell it during July and August to more than 300,000.

WESTERN TRACTION CO.
ACCOUNTING DEPARTMENT

STATEMENT OF DIFFERENCES No.
BERLIN, OHIO.....190....

COMPANY.

Dear Sir.—Below you will find Statement of Differences in INTER-LINE FREIGHT Account for Month of.....190.... If accepted, please issue correction account if there are any items you cannot accept, please return this statement with your objections noted; the correction account not to be made for items objected to until the amounts have been agreed upon.

WAY-BILL Date	No.	From	To	Via	WEIGHT AND CHARGES AS SETTLED		WEIGHT AND CHARGES SHOULD BE		PROPORTIONS AS SETTLED		PROPORTIONS SHOULD BE		W. T. Co.		Re- marks	
					Wght Freight	Al- vances	Pre- paid	Wght Freight	Ad- vances	Pre- paid	Per Cent.	Per Cent.	Debit	Credit		

WESTERN TRACTION CO.
ACCOUNTING DEPARTMENT

Berlin, Ohio.....190....

DIVISION OF REVENUE AS SHOWN ON INTER-LINE WAY-BILLS FROM STATIONS ON THE LINE OF

.....Co. Month of.....190

FROM	To	Via	Weight	Freight	Advances	Prepaid	PROPORTIONS		PROPORTIONS							
							Per Ct.	W. T. Co.	Per Ct.	Co.	Per Ct.	Co.				

Interline Accounting—Form 7, Recapitulation or Division Sheet, and Form 8, Statement of Difference

ACCOUNTING METHODS OF A HOLDING COMPANY*

BY P. S. YOUNG, COMPTROLLER, PUBLIC SERVICE RAILWAY,
NEWARK, N. J.

A holding company is legally the holder of stock of other companies. In the ordinary acceptance of the term it is a corporation controlling, through ownership of stock, the operations of other corporations. Its organization is of the simplest. It differs from an investment company only in the control which it may exercise over the properties of the companies whose stock it owns. This control is usually exercised through the directors of the parent organization serving in a similar capacity on the boards of the subsidiary companies. The liberality of the corporation laws of certain States substantially permits the holding company to bring about consolidation of kindred concerns where technical consolidation is not advisable.

Modern conditions require organized means of production. The realization of this fact led to the formation of the so-called trusts. The Standard Oil Company, formed in 1882, was the earliest example. This was simply a union of control of several oil companies brought about by means of the deposit of their stocks with trustees, which issued certificates in exchange, the trustees managing the properties and distributing the profits among the certificate holders. Similar organizations were effected by the sugar and whiskey concerns in 1887. Technically, only such organizations are trusts, but the name has come to embrace all corporations which control a large proportion of the output in their respective fields.

In 1880 the Supreme Court of the State of New York declared the form of organization adopted by the sugar trust illegal and in 1892 the Supreme Court of Ohio declared the Standard Oil trust illegal on similar grounds. In 1893 the State of New Jersey amended its corporation laws so as to allow corporations to hold stock of other corporations. This action permitted the formation of holding companies. Probably the most notable instance of the holding company being utilized for the purpose of railroad combination was that of the Northern Securities Company, formed in 1901, to acquire the stock of the Northern Pacific and Great Northern Railways and the Chicago, Burlington & Quincy Railroad, owned severally by those two companies. In 1904 the Supreme Court of the United States decided against the legality of that company's holding the stock of the Northern Pacific and Great Northern Railway companies, and so those stocks were redistributed to the holders of stock of the Northern Securities Company and the latter company was put in process of liquidation.

The many consolidations of railroads which have taken place in the last 10 or 12 years have been hastened by the laws passed against pooling and rate agreements. The railroads have been spurred on to consolidation by the fear of unbridled and ruinous competition. A railroad cannot suspend business when competition forces the rates down, although the earnings show no profit on its capital investment. Capital once invested in a railroad cannot be withdrawn and, if the railroad stops doing business, its expenses for maintenance must still continue. The weaker roads are forced to reduce rates, because all that they earn over bare transportation expenses goes to reduce the remaining fixed expenses, which are three-fourths of the total cost, including

capital charges. The stronger roads are, therefore, menaced by the weaker ones, and if some co-operation between the roads could never be effected, disaster to them and great injury to the public would result.

Current discussion indicates a tendency to place a less rigid construction on the Sherman anti-trust act of 1890 and to construe the intent of the act as against contracts in unreasonable restraint of trade and contrary to public policy and not against contracts in reasonable restraint of trade. This is an important advance, for the casual reading of the several anti-trust acts would show that, if interpreted to the letter, they would interfere with the conduct of business of the most ordinary sort.

The Ohio act of 1898 has various provisions defining trusts.

The Sherman anti-trust act declares that "every contract, combination in the form of a trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States or with foreign nations," is illegal, and that "every person who shall monopolize, or attempt to monopolize, or combine, or conspire with any other person or persons to monopolize any part of the trade or commerce among the several States or with foreign nations, shall be deemed guilty of a misdemeanor."

The present political campaign hinges largely on the attitude of both parties toward combinations of capital invested in productive enterprises. One great party believes in the necessity, or great economic advantage of its existence, but counsels control through governmental supervision and regulation; the other advocates forced competition by limiting combinations, which are of an industrial nature, to the production of a certain percentage of the whole product in which they deal consumed in the United States. No matter what party triumphs temporarily, the result in the end will be the same. Production on a large scale must continue, and the simplest plan found to accomplish that object is the holding company.

The method of accounting to be followed by the holding company is somewhat complex. Numerous companies of this character are both operating and holding companies. As operating companies they have the customary revenue accounts and expense accounts adapted to their particular business. It is only when we consider them as holding companies in their relation to their controlled companies that we find a variance of opinion as to the method of treatment in the accounts. From a legal point of view, if we take up the profits of an operating company on the books and to those add such dividends as have been declared on the stocks of the controlled companies, we seem to have done all that is necessary, but, bearing in mind that, in reality, the companies are virtually a consolidated group of companies, the profits and losses of the controlled companies should be shown in the profit and loss account of the dominant organization. Frequently the controlling corporation does not hold all the stock of the companies it controls; in that case, where a profit is shown by the controlled company, the holding company should take up only a percentage of the profits equal to the percentage of the total stock which it owns, for, in the event of a dividend being declared, the minority stockholders would share and share alike with the holding company; but, where a loss is shown, as the minority stockholders in all likelihood cannot be called upon to bear their share, the total loss should be taken up on the books of the controlling company, though it would be permissible to carry an amount equal to the minority share of the loss in a reserve account.

*Abstract of paper read before the American Street and Interurban Railway Accountants' Association, at its Convention, at Atlantic City, N. J., October 12, 13, 14, 15 and 16, 1908.

Many holding companies make up their profit and loss account by a revaluation of their assets. This is permissible, but is open to the objection of difficulty in determining what is a reasonable valuation since market value or quotation value at any given time may be subject to so many influences that it would not be a safe guide to follow. The method advocated would take into profit and loss account the losses of such companies as show them, by crediting or deducting such losses from the investment account and the profits of such controlled companies as show profits by charging or adding such profits to the investment account.

It is usual to make up for holding companies consolidated balance sheets, showing all the assets and liabilities combined. By so doing, an accurate statement of the condition of the consolidated companies is shown. It is frequently necessary, in making up such a statement, to offset accounts appearing on the books of both the dominant and the controlled companies in order to simplify the statement. Similarly, a combined profit and loss statement is effectual in showing the operations of such companies considered as a whole.

In conclusion, as a holding company is a practical consolidation of companies whose corporate existence, for one reason or another, it is desirable to retain, its accounts should be kept in such manner as to show the condition of the properties as a whole.

REPORT OF COMMITTEE ON STANDARD CLASSIFICATION OF ACCOUNTS AND FORM OF REPORT*

BY W. F. HAM, CHAIRMAN; C. N. DUFFY, W. B. BROCKWAY, H. L. WILSON AND W. H. FORSE, JR.

During the past year the classification of accounts for electric railways has been a very active subject. Both the Interstate Commerce Commission and the Public Service Commissions of the First and Second Districts of New York have issued tentative classifications which have kept the question prominently before the attention of electric railroad interests as a whole. It is safe to say that at no time in the history of the industry has the question of accounting been considered of such vital moment and so occupied the attention of accounting officers, managers and presidents.

In order that there may be a clear understanding of the situation, let us refer briefly to matters occurring in the early days of this association.

The Street Railway Accountants' Association was organized at Cleveland, Ohio, in March, 1897. At that time a paper, entitled "Suggestions for a Standard System of Accounts, Classification of Operating Expense Accounts and Form of Report that will Admit of Comparison and Diffuse Information Between Companies," was presented to the convention by C. N. Duffy, then secretary and treasurer of the Citizens' Street Railway Company of St. Louis. One quotation alone from that paper is suggestive, in view of recent developments:

The one object that should be uppermost in the mind of the accounting officer of a street railway is to keep his operating expense accounts in such a way that the management of the road will profit by the information. In order to have a classification of operating expense accounts that will admit of this there is great danger of having too much subdivision and itemization. This necessitates not only a mass of figures, but a corresponding amount of detail work that sometimes proves unwieldy.

At this convention, there was appointed a Standing Committee for the Standard Classification of Operating Expense Accounts, etc. This committee was active in its work and submitted a report to the first annual convention at Niagara Falls in October, 1897, which was the subject of animated discussion by the convention. Again, at the second annual convention of the association at Boston in September, 1898, the committee submitted a revised report which was adopted and the classification recommended for general adoption by the members of the association.

That classification called for 39 operating expense accounts and, with some minor alterations, has remained the standard of this association up to the present time. Its simplicity was its chief recommendation, making it possible for the smallest companies to keep their accounts in accordance with the classification without undue trouble or expense. Yet it was capable of indefinite expansion and its elasticity and flexibility made it entirely possible and practicable for the largest companies in the country to keep their accounts in accordance with the classification and yet have for their own purposes such detail information as they desired. In the discussions of the past year, it has been gratifying to the members of this committee, and we believe a compliment to this association, that out of the chaos that existed in street railway accounting up to the time of the organization of this association there evolved a classification which has stood the test of nearly 10 years actual use, and which, we believe, if the wishes of electric railway interests were alone consulted would be continued in use for many years to come.

That classification, however, was prepared before the advent of the interurban road. Realizing that the nature of the business conducted by the interurban road was considerably different from that of the strictly urban road, and desiring to have a classification which would meet the requirements of all classes of electric roads, a committee of three—W. H. Forse, Jr., A. B. Bierck and A. C. Henry, representing large interurban roads—was appointed to approach the subject from a strictly interurban standpoint and to prepare a classification which would meet the requirements of roads of that character, without regard to the classification then in use by electric roads. This committee devoted much time and thought to the work and submitted a classification which later on was the basis of a joint conference between the classification committee and the committee representing interurban roads. Subsequent to this conference, a classification was prepared and submitted at the last convention of this association at Atlantic City, in October, 1907, was fully discussed by the association and finally adopted in accordance with the following resolution:

Resolved, That the tentative classification of operating expense accounts submitted by the Committee on Standard Classification of Accounts and Form of Report be approved as amended and referred back to said committee for final revision, with power to act.

Since then, your committee has had many conferences with representatives of the Interstate Commerce Commission, and has also been twice present at hearings before the Public Service Commission of New York, Second District. It is unnecessary at this time to refer in detail to all that has happened. We refer particularly to the circular letter of the American Street & Interurban Railway Association dated Feb. 26, 1908 mailed to general managers and auditors of member companies, and containing a brief statement of the situation up to that date. Circular No. 20 of the In-

*Read before the American Street & Interurban Railway Accountants' Association, Atlantic City, N. J., Oct. 12 to 16, 1908.

terstate Commerce Commission was sent out by said commission the last of February and every railroad company in the country was given an opportunity to express its views. The time for reply, originally placed as March 28, was afterwards extended to May 5. As you all know, the subject was thoroughly discussed and general dissatisfaction was manifested by all companies concerned.

On May 11, the replies to Circular No. 20 having been all received and copies having been furnished to our association, a meeting of this committee was held in Washington in conference with a committee of the American association to go over the replies and to consider the question generally. On May 12 and 13 we were in conference with the representatives of the Interstate Commerce Commission and agreed upon a modified classification from which were eliminated all of the features most objectionable to the electric railway interests. These objectionable features were primarily the treatment of depreciation, the joint facilities accounts and the division of such accounts as "printing and stationery," "injuries and damages" and "insurance" among all accounts affected. It was also agreed that there should be three classifications, based upon the size of the companies, thereby reducing the burden upon the smaller companies.

In regard to depreciation, the proposed classification provides an alternative method for the treatment of depreciation of way and structures and of equipment. The position of the Interstate Commerce Commission is that in view of the fact that the responsibility for the administration of accounting rules relative to electric railways rests largely upon the railway commissions of the different States the orders of the respective State commissions should be accepted as controlling orders rather than the order of the Interstate Commerce Commission. It is understood that the reports of electric railways subject to the jurisdiction of the Interstate Commerce Commission will conform, so far as the treatment of depreciation is concerned, to the order of the State in which the larger portion of the railway is situated.

It was agreed that the text should be prepared by this committee and submitted to the Interstate Commerce Commission for its criticism and final action. Your committee met in Atlantic City the following week and prepared a text which was submitted to the Interstate Commerce Commission for its approval. This text has not yet been published, owing to the fact that the Interstate Commerce Commission has postponed the date of the new classification being effective until Jan. 1, 1909.

The classifications as finally agreed upon are set forth in the following exhibit [Further reference to the classifications will be published in a later issue—Eds.], and in view of the trying and confused conditions that have prevailed during the past year we feel that they should be generally acceptable to electric railway interests. A comparison of this classification with the Atlantic City classification will show that there are no vital differences between the two classifications. We, therefore, recommend that these classifications be adopted as a standard of the association. This association has from the outset urged the importance of uniformity, and inasmuch as these classifications have been adopted by the Interstate Commerce Commission and will doubtless be adopted by many State commissions it seems most desirable that the members of this association should use this classification whether or not they are subject to federal or State supervision.

The committee is unanimously of the opinion, however, that discounts and commissions on securities issued for construction purposes, or to raise funds for construction, should

be considered a proper capital expenditure and therefore be charged to expenditures for road and equipment.

In order to insure uniform treatment of these classifications it is strongly recommended that member companies that may be in doubt as to the correct interpretation of any of the instructions communicate with the chairman of the committee for a ruling by the committee. In this way we feel that the committee can, in the future as in the past, render valuable assistance in securing that uniformity which is essential to the proper carrying out of the classification of accounts.

In this connection, we submit herewith a copy of the report of the Committee on Construction and Operating Expenses of Electric Railways submitted to the nineteenth annual convention of the National Association of Railway Commissioners, held on Oct. 6 to 8, 1908, in Washington, T. C. [This report was published in the DAILY ELECTRIC RAILWAY JOURNAL for Oct. 13, 1908.—Eds.]

During the year two vacancies have occurred in the membership of this committee, Frank R. Henry and W. G. McDole. Both of these gentlemen had been for many years active in the work of the association and of this committee, and we desire that our sense of appreciation of their valuable service be made a matter of record in this report. The vacancies so occurring have been filled by the appointment of W. B. Brockway and W. H. Forse, Jr.

We desire to thank many individual members of the association for the assistance they have cheerfully rendered the committee. It has often been necessary to call upon them for help and advice and none has been found wanting.

As the week advanced, the weather got warmer, and the number of those taking a daily dip in the briny ran up rapidly. Thursday saw a large proportion of the members in the surf—the athletes—men who slap their chests, swing their arms, and incline to muscular development. They buffeted the waves, lay around the beach in porpii attitudes—plural of porpoises—and looked back pityingly on the weaklings sheltered from the sun in roller chairs, Gouverneur Morris, writing the other day about Newport, wondered why it was that when men went in bathing they nearly always looked as though they had just swallowed a melon. But that wasn't at Atlantic City. Oh! No!

Dan. M. Brady did a graceful and characteristic thing in the charming little after-the-theatre supper given in the grill room of the Windsor, last Wednesday night. It was a choice gathering of all the talents, given in honor of J. F. Shaw and friends. Among those present at this "petit souper" were J. F. Shaw, D. M. Brady, Paul Winsor, J. W. Porter, W. W. Wheatley, J. T. Cunningham, James H. McGraw, E. J. Connette, G. C. Morse, E. P. Shaw, Jr., H. H. Adams, W. Caryl Ely, T. M. May, E. F. Baker, C. G. Peirce, A. W. Brady, J. W. Gannon, Billy Heulings, Sam Curwen, Jacob Wendell, E. S. Fassett, E. E. Potter. It was wholly informal, but the off-hand speeches were just right, and Jake Wendell excelled himself as a raconteur.

J. B. Olson, sales manager of the Habirshaw Wire Company, although kept back by illness in his family, got through to Atlantic City on Thursday and put up at the Chalfonte. A recent entry of the concern into the electric railway field, for heavy work, proved that the good reputation of earlier products had more than paved the way.

Among the Exhibits

Souvenirs—oh, yes. Let us see! Modesty compels us to omit reference to our own, but in addition there are pencils, pipes and stick pins, key rings and ash trays, tape measures, bill folders, pocketbooks, bottles of perfume, toy whistles, miniature lamps and lanterns—and from these up to suites of mission furniture, grand pianos, and building lots in front of the Marlborough-Blenheim. Even now we have overlooked some, but we shall be glad to mention them in the Daily next year, if the samples brought to the Conventionalities editorial desk during Friday are satisfactory.

"It is wonderful what a lot of good fellows there are in the world," said a street railway man yesterday, attending his first convention. That is what conventions are for—to develop the get-together instinct which we call civilization. He who would have friends must show himself friendly; or he doesn't belong in this field. The street railway art is based wholly on bringing people in closer relationship, and the association is the keynote of social union.

One of the convention secrets is out. The Elmer Morris dummies were loaned for this occasion only by the New York Public Service Commission, to which they belong! For a first effort, Morris flatters himself they were fine. He hopes to get even more expression into the next batch, a little more twinkle in the eye, a little more humorous twist to the knee. He also proposes to enlarge his costumier department, and add laces, jewelry, etc., to the adornment of these favorites of the fender—no, we mean footlights! There is a great deal of undeveloped histrionic ability about those dummies, but enough has been seen of their talent to make them very popular.

John G. Buehler, whose wild automobile trip from the north and rescue by W. C. Gowan held the excited interest of the convention for the first part of the week, got away last night, it is whispered, in one of the fast blockade runners of the Ohio Brass King. These yachts were employed in taking out sailing parties, and then Buehler made a secret charter with King to let him have one. Buehler said privately to his friends that he was encountering a quite unknown element, but must brave its perils to get home. The denouement of the trip is anxiously awaited.

The Lumen Bearing Company, Buffalo, N. Y., is showing in space 428 a complete line of bearings, check plates and trolley wheels for street railway service. The Ideal wheel is shown in 4½ in. and 6 in. sizes, and the company is distributing copies of a letter recently received from a large consulting engineering company, stating that it had derived 50 per cent more mileage from the Ideal wheels in use than from any other make. Included in the exhibit is a new trolley harp which is being shown for the first time. The special feature of this harp is the simple method employed in detaching it from the pole so as to facilitate making all wheel adjustments at the bench, where they can be properly done.

The Norton Grinding Company, Worcester, Mass., has on exhibition two cabinets, one of which contains a com-

plete set of Alundum grinding wheels and the other a large assortment of India oil stones. The company also shows a pair of car wheels dressed on the Norton car-wheel grinder. H. N. Cudworth and George C. Montague are in attendance.

The exhibit of Hunter Illuminated Car Sign Company, New York, in booth 434, includes seven of the standard signs made by this company. During the past year several notable improvements have been made in the controlling devices of these signs. The company has just brought out a special vestibule sign for use in interurban service. The sign is so equipped that the number of the train, its class, etc., can be shown clearly from a conspicuous position on the car. This sign is so constructed that the car number can be changed with ease. It has the same general design as the other signs. Lytle D. Hunter is representing the company at the convention.

Elmer P. Morris is exhibiting opposite the entrance to Aquarium Hall a new line of car and register fittings and trimmings of a new composition metal called "Adamite," which closely resembles aluminum in color, finish and weight. Its tensile strength, however, is from two to four times greater than brass or bronze, making it particularly useful in the manufacture of small car hardware, which it is necessary to put in confined places and which must be capable of withstanding severe strains.

Among the late arrivals at the convention were Fred C. Bartels, Southern representative, and Edwin Scheftels, New England representative, of the Carbolineum Wood Preserving Company, New York.

The Eureka Tempered Copper Works, North East, Pa., is making a complete display of trolley wheels, commutators, and copper and brass line material. One of their specialties is motor-bushings, which it makes and carries in all the standard types and sizes. The specimens which are exhibited are eliciting much favorable comment, as are also a number of samples of steel drop forgings shown.

Edwin R. Kent Company is exhibiting Allen "Stag" manganese frogs and crossings and other track special work. This material is being used by a number of large steam and interurban electric roads, it is said, with excellent results. The company is represented by E. R. Kent, J. T. Stafford and George H. Brown, who are greeting their many friends at their booths, spaces 602-606.

The Taylor Electric Truck Company, Troy, N. Y., has several new and interesting types of trucks and truck fixtures on exhibition at its booth in Machinery Hall. The company has recently brought out and is showing as part of its exhibit a single truck with very long wheel base which is designed to overcome the end-teetering of the car body and to be operated at the same speed as double truck cars. This truck is equipped with a new safety brake which is strong and heavy and is so hung that the shoes are evenly and economically worn. The company is also showing its SB type of truck with its unusual one-piece brake hanger, which is claimed to be non-chattering. The design of this truck is that no part of it can drop on the rail in case of fracture. The company's MCB type of truck which is shown is designed for high speed service. It is equipped

with the company's self-lubricating center plate which, it is claimed, will save 25 per cent. of the usual wear on the wheel flanges. Other apparatus on exhibition is the Taylor malleable center, steel-tired wheel of which more than 1000 are now in use. They are said to be noiseless even when operated under trying conditions. The steel tire is constructed of hardened crucible steel and has an intervening flange which is shrunk and bolted to the center to prevent it from loosening when brakes are applied. The exhibit is in charge of John Taylor, G. A. Tupper, Thomas Thornes, and Walter E. Taylor.

The Speer Carbon Company, St. Mary's, Pa., has on exhibition at its booth on the right of Aquarium Court Hall one of the vibrating test machines and one of the slip ring test machines recommended by the Standardization Committee for testing carbon motor brushes. The vibrating machine is too noisy to operate, but the principle of it can be understood without an actual demonstration. The company's representatives are on hand to explain the use of the machine and to say a good word for Speer carbon brushes.

One of the most interesting exhibits on the pier is the extensive line of air-brake apparatus shown by the National Brake & Electric Company, Milwaukee. The exhibit comprises the new MSA and TSA emergency air-brake equipments for motors and trail cars. These equipments are mounted as a working exhibit. A type 3BS air compressor with a capacity of 100 cubic feet is driven by a d. e. motor and its output is governed with a new combined automatic control which embodies an automatic starter, unloading device and water governor. A portable air-compressor outfit, which is used for demonstrating purposes, is equipped with straight air-brake equipments on one side and with emergency air-brake equipments on the other side. There is also shown an a. c.-d. e. motor compressor and relay, such as are furnished to The Milwaukee Electric Railway & Light Company for use on combined single-phase direct-current lines. A new type of motorman's brake valve which has no ground seats is shown, together with a full line of compressor governors consisting of a Type N oil-pneumatic, Type R electro-pneumatic, Type A pneumatic and the new Type AB pneumatic governor. This AB governor embodies many new features. The company is represented at the convention by the following gentlemen: R. P. Tell, S. I. Wailes, C. N. Leet, J. J. Nef, W. M. Bisel, W. H. Goble, Bert Aikman and George C. Anthon.

Cox's safety fare-collecting device is exhibited by the inventor, William Cox, at the booth of Elmer P. Morris. The fares pass into a strong box after being automatically registered. The box is received from the auditor, locked, and is returned to him in the same condition, without there being any possibility of the conductor having access to the interior in the meantime. The device is particularly adapted for use on pay-as-you-enter cars. Mr. Cox has some very complimentary letters from The Toronto Railway Company, which has adopted his device.

One of the new devices shown in the booth of the Laekawanna Steel Company, in Machinery Hall, is the new Abbott rail joint plate. This plate is a device designed to strengthen and in other ways improve the efficiency of the ordinary angle bar joint. It consists of one piece of flat plate 7-16-in. thick and of any required width. The center of the plate is turned down at the flange and is so formed that the thickest

part is at the center, where the greatest strain occurs when installed in the track. With this plate an ordinary angle bar joint can be insulated by the use of pressed fibre. The company's new steel sheet piling is also shown. In addition to the above there are shown in the booth samples of many of the rail sections, structural steel bars, axles, plates and other products of the company's plants. Those looking after the company's interests at the convention are R. L. McDuffie, Frank Abbott, H. Sanborn Smith, Guy Hagar and D. H. Van Pelt.

Meyer Safety Guard Company, Omaha, Neb., is showing, in booth 737, its safety guard applied to models of open and closed cars. This guard was devised to prevent accidents from boarding and alighting from cars while running. The guard for open cars consists of a light and flexible steel barrier which is hinged to lift upward and outward to the top of the car under control of the conductor or motorman. The guard in no wise prevents passengers from standing on the running board or the conductor from collecting fares, but does provide a means for reminding passengers of the danger that exists in jumping on or off a moving car. The guards on closed cars extend separately across each platform, but they are connected by a through rod to allow simultaneous operation from both ends. The construction of the guard permits the insertion of advertising cards if desirable. As evidence of the interest taken in this device, it may be stated that of the traction men who called, 136 had instructions from their management to investigate the models on exhibition.

For the benefit of the delegates attending the convention who may be interested in the exhibit of the Westinghouse Electric & Manufacturing Company, a small booklet has been prepared for distribution at the convention, in which are illustrated and briefly described all of the products displayed in this company's booth in the main building.

In addition to the standard fare box shown by the Coleman Fare Box Company, Buffalo, N. Y., in its booth in building No. 1, are two smaller boxes made to meet special requirements. This company announces that it is prepared to furnish fare boxes to suit any condition. Its boxes are fully protected by patents.

The United Copper Foundry Company, Boston, Mass., has its exhibit of trolley wheels and high-speed trolley bushings in space 84. The wheels are highly finished and polished and have a color as bright as gold which attracts immediate attention. A journal bearing made by this company of special metal, which has been in service for 11 months without showing any perceptible wear, is also exhibited. Albert W. Mullen and Harry Seavey are looking after this company's interests.

An interesting part of the exhibit of the U. S. Metal & Manufacturing Company, New York, is the Wright monkey wrench. This wrench has an instantaneous adjusting feature by means of which the opening of the jaws can be adjusted to fit any nut simply by the pressure of the thumb on the ratchet spring or pawl. The rack with which the ratchet pawl engages is entirely enclosed within the head of the wrench and is thus protected against damage.

The W. T. Van Dorn Company, Chicago, in addition to its regular types of Van Dorn car couplers and draft rigging, is exhibiting a standard M. C. B. type of coupler, which, however, has some new features embodied in it. These consist of guides underneath the coupler head which line up the couplers when off center an amount not more than 7 in. It is said that these guides enable two couplers to be coupled on any curve, and when so coupled the heads are as rigidly interlocked as with the ordinary type of M. C. B. coupler on straight track. The guides do not interfere with the free vertical movement of the couplers with relation to each other, which is necessary in order to have them operate successfully on sharp grades. The new type of coupler is made in two sizes, with contour lines of the full M. C. B. standard size, and contour lines of two-thirds size.

Jelson J. Coleman is meeting his old time associates and friends at the convention. He is attending in the interest of the Bridgeport Brass Company.

The Eclipse Railway Supply Company, Cleveland, Ohio, is exhibiting, in spaces 420-22 in the main hall, the well-known Eclipse life guard. The Eclipse life guard is said to be the only street car fender which has been given a practical demonstration of its ability to save life and prevent injuries by having representatives of its manufacturers actually run down by fast moving cars equipped with the device. In the booth of the company is a machine displaying mutoscope pictures of one of these spectacular demonstrations. The Eclipse life guard consists of a tilting lattice platform, across the front of which is stretched a piece of rubber hose designed to break the first shock of contact. At the back of the guard a spring cushion prevents the body from striking the bumper of the car. The tilting platform is carried at an angle of 45 deg., and when it strikes a person it drops back automatically and assumes a basket shape, thus securely retaining the body from possible rebound or injury. For this reason this type of fender is generally known as the basket fender. The exhibit of this company is in charge of Ross Forward.

The gear and pinion department of the E. W. Bliss Company, Brooklyn, N. Y., is represented at the convention by Mr. Stone of the sales department of the company.

The most interesting features of the exhibit of the Electric Storage Battery Company, of Philadelphia, are the diagrammatic sheets showing this company's method of regulating alternating currents and a switchboard on which is mounted the Automatic Average Adjuster. Two systems of a.c. regulation are shown, one using a 3-phase split pole rotary with batteries, and the other being typical of the single-phase regulating system as used by the Spokane & Inland Empire. In each system the diagrams show the regulation to be within 5 per cent. of the average load. The Automatic Average Adjuster is shown connected to the carbon regulator. It consists of a small motor which actuates the spring of the carbon regulator, the speed of the armature of the motor being controlled by battery current. The gear reduction between motor and spring is such that the action of the adjuster is comparatively slow. In this way the battery is made to handle the rapid fluctuations of load while the generators follow the changes in average load.

The R. D. Nuttall Company shows in its exhibit one of its XX Pinions, as an evidence of durability. This pinion was subjected to 150 blows from a 12-lb. sledge hammer and shows two teeth bent, but without any break whatsoever.

The Atha Steel Casting Company, Newark, N. J., is represented at the convention by Louis A. Shepard.

Stromberg-Carlson Telephone Manufacturing Company, Rochester, N. Y., is located in booths 894-895, directly in front of the Greek Temple. The company is showing telephone apparatus especially designed for street and inter-urban railways, such as portable telephones for cars with emergency extension poles, iron case telephones for mounting on poles in the open, wall and desk telephones for station use, and a telephone switchboard for train dispatchers. In addition to this equipment, the company is showing the semaphore signal apparatus made by the Telegraph Signal Company of Rochester, N. Y. The representatives are Harry W. Lucia, H. C. Sleming, J. O. Oliver, and E. O. Munson. Mr. Oliver is the Philadelphia representative, and the others are from the home office. They report many good inquiries from both this country and abroad.

The Groff Drill & Machine Tool Company and its selling agents, the Standard Supply & Equipment Company, Philadelphia, are exhibiting in the Annex Building a new and novel type of friction feed track drill. The principal advantages claimed for this drill are that it has a continuous motion of the drill for both directions of motion of the operating handle, has an automatic adjustable friction feed, does not require any lubrication and can be attached or detached from the rail to allow a car to pass in an instant's time. It is made in a number of sizes to take drills from $\frac{1}{4}$ in. to $\frac{1}{2}$ in. in diameter. The manufacturers state that on account of the friction feed, which prevents the drill from jamming in the hole, that it is impossible to break the drill. In a recent test with one of these track drills, 500 11-16-in. holes were drilled with three carbon steel bits without oil or lubrication of any kind and without breaking any of the drills. The company is distributing a catalogue which illustrates and describes the sizes in which this drill is made and shows the details of its construction.

The object of the Brown expansion rail joint, which is being shown in the booth of Elmer P. Morris, is to provide suitable allowance for expansion and contraction in the joint. The joint consists of two special angle bars having wide horizontal flanges and a bottom supporting plate or chair under the rail and on which the two rails ends are carried. The angle bars extend out beyond the edges of the base of the rail and are drilled through the horizontal leg for three bolts. The end bolts through the angle bars clear the flange of the rail but the holes for the center bolts are drilled partly through the flange at the center of the joint, so that the bolts form a stop to prevent the rail ends traveling past the center of the chair. The bottom plate is formed with shoulders along each edge which engage with a wedge action the edges of the angle bars. The joint is assembled by placing the angle bars in position and driving the base plate on until the bolt holes in the angle bars and the base plate come opposite each other. This tightens the angle bars against the rail. The bolts are then put in to hold the joint parts together. A superior electrical contact over other types of joints is claimed for this joint, owing to the fact that it has a continuous contact over almost the entire interior surface.

Probably few delegates to the convention realize that practically every freight and passenger car which they passed on their journey and every signal lamp which guided the engineer of their train was supplied with lubricating or illuminating oil furnished by the Galena Signal Oil Company. The products of this company are used by 97 per cent. of the steam railway companies in the United States and by more than 40 per cent. of the electric railways.

Harry De Steese, of New York, has on exhibition in the space of Elmer P. Morris Company, a new controller regulator designed on original lines. Mr. De Steese is also representing the Frank Ridlon Company, Boston, Mass., although this company has no exhibit.

The R. W. Marshall Company, New York, is showing a field tester with which it is possible to quickly ascertain whether a field coil is short-circuited by placing the coil over one pole piece of the tester. With this device the operator can immediately determine whether a field coil is in condition to be kept in service or consigned to the scrap heap. In the latter event, the R. W. Marshall Company has shown that it can save 85 per cent of condemned coils by applying its method of vacuum impregnating.

The Electrose Manufacturing Company of Brooklyn, N. Y., manufacturers of Electrose overhead line material and high-tension insulators of all types is represented at the convention by its executive head, Louis Steinberger.

C. N. Wood, of the Wilson Trolley Catcher Company, Boston, is exhibiting an old "stand by," the Wilson trolley catcher. An order for 1400 of these catchers has recently been completed and shipped to the Chicago City Railway Company.

The wheel guard and the fender shown by the Parmenter Fender & Wheel Guard Company, Boston, Mass., are the original devices used in the Public Service Commission's tests at Schenectady, N. Y. As shown by the good condition of the devices, they successfully withstood the severe tests given them. The company is also showing photographs of the fender and wheel guard taken during the progress of the tests. To make the exhibit more impressive the dummies used in the tests are also on exhibition. The company's booth is jointly occupied with Elmer P. Morris, New York.

The H. Holland Trolley Supplies Manufacturing Company is exhibiting trolley harps and trolley wheels and its ball-bearing trolley base. This company makes a specialty of interurban trolley supplies and its product is in use on a number of prominent roads. The exhibit is in charge of H. Holland.

I. R. Nelson and E. Monnt, of I. R. Nelson & Co., Newark, N. J., are attending the convention, thus meeting their many customers and friends who are present.

A number of coils impregnated by the Devine vacuum impregnating and drying process are exhibited at the booth of the Standard Varnish Company. Railway delegates and others attending the convention are being cordially entertained by representatives of the Standard Varnish Company in an attractively decorated booth.

Fred. J. Gleason, vice-president of the Massachusetts Chemical Company, received a telegram Tuesday morning while attending the convention, from the Electrical Testing Laboratories in New York. The Massachusetts Chemical Company has recently produced a new form of solid insulation which it calls the Walpole Insulating Board. A sample of this material, 1 ft. square and $\frac{3}{8}$ in. thick, was given the Laboratories for test. The telegram referred to read as follows: "Sample insulating board areed over 90,000 volts. Letter follows." Mr. Gleason states that it is his intention to have a larger piece of the material sent immediately for test so that its dielectric strength can be determined. The Walpole insulating board is made in sheets for use where ordinary fibre board has heretofore been applied, but as indicated above it has a much higher dielectric strength. It is also impervious to moisture, acids, alkalis and oil, can be machined, takes wood or machine screws and is susceptible of a high polish, resembling hard rubber when finished.

There has arisen a demand for an express and baggage car for electric railway service with doors large enough and so located as to admit large touring automobiles. Side doors have been made wide enough but it is impossible to turn long wheel base automobiles into the interior of the car. The Niles Car & Manufacturing Company is now building for the Chicago & Southern Traction Company a 52-ft. express car in which the entire rear end is fitted with two large doors which swung outward and through which the largest touring cars can be admitted. The rear corner posts are reinforced with heavy steel plates from end sills to end plates to strengthen the car transversely and prevent "working." The rear buffer is fitted with a large iron roller to assist in handling poles, rails and other long material through the rear doors. It is believed this type of car will prove very serviceable and be adopted by other interurban railways also.

One of the most unique and attractive pamphlets which is being distributed at the convention is entitled "Our Trolley," and is issued by The McConway & Torley Company, Pittsburgh, Pa. It contains an invitation to the street railway people to inspect the exhibit of this company, spaces 707-713, Marine Hall, and also describes the Janney radial coupler equipment which is on exhibition, and is a souvenir well worth preserving for future reference.

The Standard Paint Company calls particular attention to the merits of Ruberoid roofing for railway buildings. Its moderate price, ease of application, durability and low cost of maintenance make it especially desirable for such structures as car barns, sheds and freight houses. Samples, testimonials from satisfied users and other information can be inspected at the company's booth, space 735.

A complete collection of city and interurban railway tickets of every kind can be seen in spaces 718-22, in Marine Hall, occupied by the Globe Ticket Company. This company is showing for the first time improved forms of mileage books and cash fare receipts of interest to every interurban company. The Denham system of checking receipts offered by the Globe Ticket Company is interesting on account of the new and improved method of accounting for all cash fares. It is claimed that with this system more cash is obtained, riding on transfers is decreased and cash fare is increased.

The Lord Electric Company wishes to call the attention of visiting railway managers and others interested in retrievers and catchers to the fact that the W. J. & S. electric cars entering Atlantic City Terminal, Tennessee Avenue, which run between Camden and Atlantic City, Camden and Millville and Camden and Glassboro, are equipped with Earll trolley retrievers.

The Ohio Brass Company, Mansfield, O., has an attractive and instructive exhibit in its booth, located to the right of the entrance to Building No. 2. The exhibit includes samples of stock taken from its extensive line of railway supplies. Besides the standard materials the company is showing the apparatus used in its system of entry construction. One of the new devices exhibited is a Universal sander valve and sand trap. The valve is designed to be operated by compressed air from the air-brake reservoir. It is connected with a trip in the train brake pipe which is automatically opened when the emergency brakes are applied. A second valve is provided for separate application for use on slippery tracks. The trap of this sander is so constructed that it can be dis-assembled when it is necessary to clean out the sand pipes. Another new device shown is a Collin steam pressure regulating valve, for which are claimed simplicity of design, accessibility of parts and reliability of operation and maintenance of a uniform service pressure regardless of variations in the initial pressure. The valve is intended for use in reducing the boiler pressure to any required pressure for heating, cooking, drying or other like service. The representatives of the company attending the convention are C. K. King, A. L. Wilkinson, G. A. Mead, E. F. Wickwire, A. L. Price, C. H. Tomlinson, N. M. Garland, R. M. Campbell, Nathan Shute, W. H. Bloss, F. E. Johnson, E. C. Brown, J. E. Slimp.

The Gold Car Heating & Lighting Company, New York, is exhibiting a new electric heater which is simple in its construction and can be attached and detached as easily as an electric bulb.

The Duff Manufacturing Company has on exhibition in spaces 817 and 819, Annex Building, a varied assortment of lifting jacks, including samples of both the Barrett ratchet type and the Duff ball-bearing geared screw type jacks. These jacks are manufactured for a variety of purposes, including car and track work, journal box lifting, motor armature pit jacks and other purposes. They range in capacities from 1 to 70 tons. A number of new light-capacity jacks are shown for the first time as well as a light traversing jack base which is illustrated in the last edition of this company's catalogue, a copy of which will be sent upon application to anyone interested.

John W. Rapp, New York, is showing in booth 845, near the Greek Temple, metal doors and mouldings enameled in imitation of any wood or finished to appear as bronze or other metals. Carl Leonardi is assisting Mr. Rapp.

The National Railroad Trolley Guard Company, Buffalo, N. Y., explains the excellent features of its guard for protecting electric cars at steam crossings in a neat booklet distributed at the booth of the Electric Service Supplies Company.

Walker & Bennett Manufacturing Company, New York, has a handsome booth in front of "Dearborn Park," in

charge of S. A. Walker and K. D. Hequembourg. The company makes all classes of steam and electric railway car seats of which it is showing various types.

Linduro, a new product of the Lowe Brothers Company, Dayton, O., is a high-class enamel paint with a hard durable surface and the manufacturers claim that it will not check, crack, peel or fail in other ways with long-continued usage. It is designed for use on wood, brick, stone, cement, porcelain, glass or metallic surfaces, and is ordinarily furnished in two standard colors, white and ivory. Either of these may be tinted, however, to give any desired color in carrying out a decorative scheme.

The booth of Heywood Brothers & Wakefield Company in the Main Building has proven a mecca for the weary this year. The exhibit consists of five full-sized car seats and three rattan chairs such as are manufactured by this well-known company. Other things shown at the booth are rattan for snow sweepers and canvas-lined rattan webbing for seat coverings. The company has made few changes in its supplies, which have long been considered standard by railway men. The company is represented by A. R. Foley, H. M. Royal and C. E. Stokes.

The Flake Graphite Lubricating Company, New York, has no exhibit, but is represented by C. H. Spotts, who is circulating among his many friends at the convention.

The O. M. Edwards Company, Syracuse, N. Y., is exhibiting a complete line of car window fixtures suitable for use with either metal or wooden sash. Ease of operation and anti-rattling are the features of these fixtures, which form the chief talking points for the representatives of this company. There is also being shown an all-steel platform trap door which is being ordered in large numbers. Among other apparatus shown in the booth of this company, space 739, Marine Hall, may be mentioned metal sash, twin barrel spring rollers and standard car hardware specialties.

The Van Dorn Electric Manufacturing Company, Cleveland, is exhibiting at its booth field and armature coils, commutators and portable electric drills, these being shown in three sizes. Special attention is being attracted by the new coils made of wire covered with Green's Q.A. insulation, which this company has just placed on the market and is exhibiting for the first time. The basis of this insulation is asbestos which is treated by the process known as Green's Formula. The result is a non-carbonizing fiber, from which all the metallic oxides have been removed. This insulation has been pronounced by experts electrically indistructible, and is especially adopted for use in coils. The wire covered with this insulation is furnished by the Electric Cable Company.

The Chisholm & Moore Manufacturing Company, Cleveland, O., has its exhibit in space 532, Marine Hall, where it is represented by H. E. Dickerman. The exhibit comprises a full line of Cyclone chain hoists and trolleys, including a new 1-beam trolley shown for the first time. In place of flanges on the wheels of this device four vertical rollers having graphite bronze bushings are used. The rollers in the wheels run in hardened steel bushings on hardened studs. This construction reduces the friction to such an extent that a 3-ton hoist can be run around a 14-in. radius curve as freely as on straight track. The Cyclone hoist is claimed to

have the highest efficiency and speed of any hoist manufactured. The sprocket wheel which carries the lift chain is cast in one piece with the spur wheel which drives it. This double wheel turns on a hollow shaft supported at both ends by the frame. The spur wheel is encircled by a yoke having internal teeth meshing into the spur-wheel teeth and driven with a gyrating motion about it by two eccentrics placed diametrically opposite. All gear teeth are cut from solid blanks; the main bearings and rollers run in hardened steel bushings; there are no overhung bearings. The smaller bearings are graphite bronze, so that the hoist will run indefinitely without lubrication. The friction loss of the movement is very slight, so that it has been practical to gear these hoists to a very high speed without increasing unduly the hand chain pull above that of the slower hoists. The hoists are made in sizes from $\frac{1}{2}$ ton capacity to 20 tons capacity.

The Columbia Machine & Malleable Iron Company, Brooklyn N. Y., has been well represented during the first days of the convention by Mr. Buehler and Mr. Kerschner, but they were reinforced on Thursday by James Grady, secretary and superintendent of the company, who made up his mind to come down to the convention to see what is going on.

The National Roofing Company, Tonawanda, N. Y., is exhibiting in space 857, in Building No. 3, a special line of mineral asphalt roofing and siding adapted for use on power houses, car barns and other concrete structures. A large foot mat 10 ft. by 26 ft. placed on the runway between Marine Hall and the Annex Building, is a piece of this company's "Security" brand 6-in. patent-lap gravel-surface roofing. The name of the brand is painted in prominent letters on the surface. The company's booth exhibit also includes samples of metal preserving paints which it manufactures.

One of the products of the Samson Cordage Works, Boston, Mass., which is made especially for electric railway work, is a solid braided cord intended for a variety of uses in connection with armature and field coil winding. It comes in a number of sizes and is made of the same quality of yarn as the well-known Samson spot trolley cord. By virtue of its solid braided construction it is claimed that it will not kink or ravel and will last indefinitely.

J. B. Davidson, general manager of the Cameron Electrical Manufacturing Company, Ansonia, Conn., is attending the convention in the interest of his company, and is meeting its customers and friends.

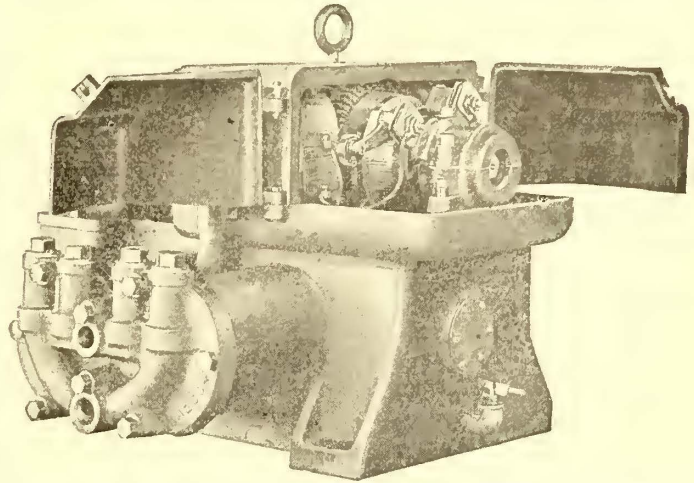
The Pennsylvania Railroad in designing the new steel passenger cars which are to be its standard rolling stock in the future has made an effort to reduce the weight to a minimum. To this end some experiments are now being made at Wilmington, Del., to determine the minimum weight of Karbolith flooring which can be used consistent with the required stiffness and durability of the completed floor. It is expected that some interesting results will be obtained. Karbolith floor is made exclusively by the American Mason Safety Tread Company.

Delegates to the convention who have not visited the booth of the Speer Carbon Company, space 611, may profitably do so before leaving Atlantic City. This company has on exhibition a large number of high grade motor and generator brushes such as are made in its plant at St. Marys, Pa.

ALLIS-CHALMERS STRAIGHT-AIR EMERGENCY MULTIPLE-UNIT BRAKE EQUIPMENT

A part of the exhibit of electric traction equipment made by Allis-Chalmers Company is a complete air-brake equipment placed in a series of frames convenient for demonstration and representing two cars, one motor and one trailer. The motor cars of a train equipped with the apparatus shown are connected by a balancing wire so as to run the air compressors in multiple. Such a train can be composed of all motor cars, or motor cars with trailer cars between. The use of the company's new type "J" straight-air emergency valve gives the same automatic application of the brakes in case the train breaks in two as is obtained with automatic air-brakes. This type of equipment is recommended for trains of from two to four cars. The emergency device can be arranged, if desired, for semi-automatic service by placing the valve under the control of the motorman.

One of the important features of this equipment is the new type AA-6, enclosed, motor-driven compressor, with capacity of 16 cu. ft. per minute. A number of advantages are put forward for this compressor, among which are the following: Its over-all height of 19 in., making it a compact machine, and its light weight of 595 lb.; large, tight-fitting



Allis-Chalmers AA-6 Motor-Driven Air Brake Compressor

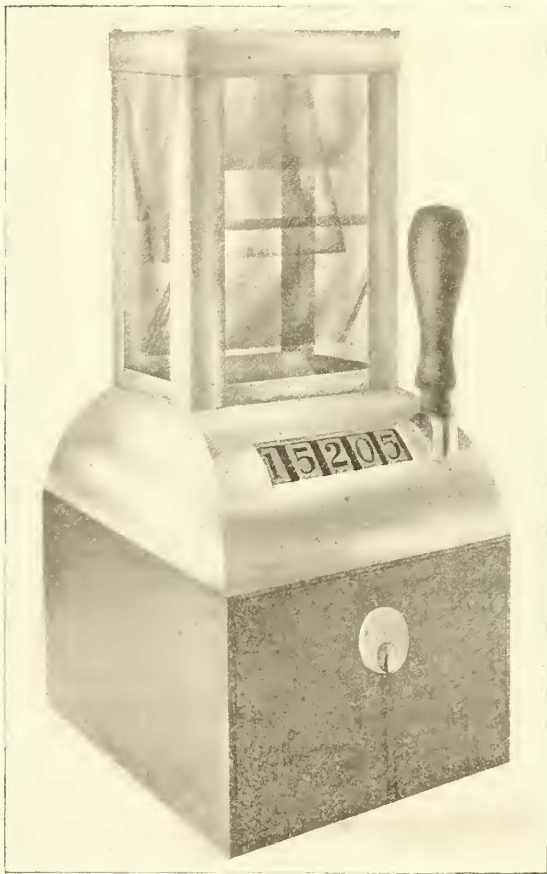
doors, which render it accessible for adjusting brushes and inspecting commutators; improved cylinder heads, and drop forged crank shafts and phosphor bronze bearings throughout. This compressor is capable of furnishing braking power to cars of 30 to 35 tons weight, or operating singly with trailers.

Some interesting printed matter descriptive of the Jones stoker is being distributed by the manufacturers. The Under-Feed Stoker Company of America, Chicago, which is located in space 860. Special mention should be made of a concise and complete description of the stoker comprised in a convenient pocket catalog. A new booklet illustrating or referring to a number of large installations of these stokers in electric railway and industrial plants is also being distributed.

The Massachusetts Chemical Company is displaying, in space 650, a complete line of various insulating and rubber goods specialties which it makes, including Armalac, Enamelac, insulating varnishes, all types of rubber ear-seat bumpers, field-coil cushions, strap mats, rubber matting and a new product recently placed on the market, which is called Walpole insulating board.

THE BRILL FARE BOX

In connection with the pay-as-you-enter car for the Third Avenue Railroad, which is shown on the temporary trestle by the J. G. Brill Company, an entirely new type of fare box is being exhibited. The box is all metal and instead of standing on the platform it is so compact that it is mounted directly on the platform rail behind which the conductor stands, at a convenient height for passengers to drop their fares. The dimensions of the box at the base are $9\frac{1}{4}$ in. x $6\frac{1}{2}$ in., and it stands 14 in. high. The base is a solid casting in which the drawer, which is another casting, slides. The drawer is made to receive interchangeable cash boxes. The construction of the drawer and cash



The Brill Fare Box

box locking mechanism is such that the drawer must contain the cash box, open ready for the reception of fares, before the drawer can be locked. Before the drawer can be unlocked and withdrawn to obtain access to the cash box, however, the lever which operates the change table above must be pulled to completely clear the table of change, and the cash box must be securely locked. This is accomplished by a simple combination of two spring locks of the Yale type, one of which locks the drawer and the other the cash box. Though the fare box is unusually small and compact, the cash box is amply large to hold all the change which would be received from considerable traffic. In addition the box includes a fare totalizer, which is operated by the lever which dumps the change from the change table into the cash box. With the fare register the fare box furnishes complete equipment for fare collection.

In space 768, Marine Hall, the Dispatching Signal Company, Fall River, Mass., is showing a system of signals for dispatching trains by means of train orders, without using telegraph or telephone operators at stations. The system fulfills every condition involved in the usual method of dispatching trains through agents at stations, except reporting the arrival and departure of trains at the signal station. All the apparatus is operated on a multiple circuit, thus making each signal independent of the others. The transmitter is a remarkable piece of electrical machinery.

Charles S. Ayres, of the Electric Railway Equipment Company, Philadelphia, accompanied by Mrs. Ayres, is attending the convention.

Manganese steel rails which have undergone extraordinarily severe tests form the Ramapo Iron Works exhibit, space 810, and claim the attention of all engineers interested in track maintenance. The tests were made by R. W. Hunt & Company, Chicago, and complete records of these tests can be inspected here at the convention. The test bars of rail are taken from a rolling of about 125 tons and are cut from bars about 40 ft. long. The extreme toughness of Manganese steel rail is shown very clearly by these tests; and this, combined with its remarkable wearing qualities, make it ideal for hard service.

The Cleveland Frog & Crossing Company, Cleveland, Ohio, has an extensive exhibit of sample manganese tongue switches, mates and frogs, manganese crossings and the Porter derailing switch.

The Southern Exchange Company, New York, dealers in railway ties, poles and timber, are represented at the convention by E. G. Chamberlain, president, and W. E. Mitchell, sales manager. These gentlemen are in attendance at the company's booth, spaces 721-23, where it is exhibiting sections cut from long-leaf yellow pine poles, both octagonal and square, white cedar poles and long-leaf pine cross arms. The exhibit also includes a number of photographs of this company's many lumber mills and yards in the South. In keeping with the name of the company, the booth is decorated with young Southern pine trees and cotton plants.

Charles F. Etter, of Harrisburg, Pa., the well-known manufacturer of Etter's rapid ready change carrier, is in evidence at the convention.

The only hot water heaters displayed on cars this year are those of the Peter Smith Heater Company in the cars exhibited by the Niles Car & Manufacturing Company and by the Jewett Car Company. Daniel W. Smith, president of the company, says Smith heaters have been adopted as standard by 200 railways and that upwards of 10,000 are now in use.

The Lord Electric Company has been fortunate enough to close some very substantial contracts for Earll trolley retrievers and is just in receipt of a large order for Shaw lightning arresters. Mr. Garton says that the results which his company has secured from the exhibit this year have more than repaid for the expenditure. The Garton Multi-Vapo gap lightning arrester and the Hydro ground have attracted merited attention.

EXHIBITION OF RAILWAY TRACK APPLIANCES

The Road & Track Supply Association, which is composed of the manufacturers of railway appliances used in the construction and maintenance of both steam and electric railways, will hold a national exhibition of such appliances in the Coliseum Building, Chicago, March 15-20, 1909, during the week of the annual meeting of the American Railway Engineering & Maintenance of Way Association. In previous years a small exhibit of track apparatus has been made at the time of this convention, but it is proposed next year to have an exhibition on a scale never before attempted in the West. The main floor of the Coliseum Building, which is especially adapted to exhibits of this nature, contains 45,317 sq. ft. of space. Allowing 12,800 sq. ft. for aisles, there would be available for exhibits 32,517 sq. ft. In addition, the annex is available with 6,138 sq. ft. and also the galleries of the main building. Booths will be erected somewhat similar to those adopted by the Manufacturers' Association at Atlantic City during the conventions of the Master Mechanics' and Master Car Builders' Associations in June and the American Street & Interurban Railway Association in October. Fully one-half of the space on the main floor has already been reserved and many heavy track exhibits are being arranged for. The rail-wear testing machine of the Pennsylvania Steel Company, which is in operation on the Pier this week, will be shipped to Chicago as a part of the exhibit of the Pennsylvania Steel Company at that time. The prospects are favorable for having the entire space reserved within a short time and applications should be made immediately to John N. Reynolds, secretary, 160 Harrison Street, Chicago, who will furnish diagrams and other information. The exhibition will be conducted under the auspices of the Road & Track Supply Association, of which George Stanton, of the Cleveland Frog & Crossing Company, is president.

WESTERN ELECTRIC COMPANY'S EXHIBIT

The Western Electric Company is showing several operating telephonic exhibits. One of these is the company's composite telephone system, which permits telephone and telegraph messages to be transmitted simultaneously over grounded telegraph lines without interference. It is intended primarily for simple Morse circuits, but with the addition of auxiliary apparatus can be adapted to duplex and quad wires. The composite telephone sets used are of two types, stationary and portable. With the latter a bamboo pole with a metallic clip is furnished for connecting in the instruments to the telegraph wire at any point along the line.

The company also sells the Gill selector made by the United States Electric Company, of New York, for use on party lines and train dispatching circuits. The dispatcher is furnished with a keyboard having as many keys as there are stations on the system. The way station is of the step-up type. With this apparatus he is enabled not only to call a particular station, but even to signal any one of several persons there by the number and length of the rings. The telephone in the receiving station is of the usual type, except that the standard bells are disconnected and replaced by a vibratory bell mounted on the side of the telephone or at some other convenient point. The United States Signal Company is showing an operating exhibit of the Gill selector with the "answer back" feature and provision for talking and signaling simultaneously included.

The Western Electric Company's signal exhibit also includes the Wray & Cummings system. This has a master selector with a separate button for each station on the line and a clock which is released and stopped electrically. On the arbor of the second hand there is a revolving wiper, which makes 60 contacts in a minute, each contact representing a station. Pressing any button puts the battery to the contact and thence to the line. The impulses thus sent out go to the way stations where there are synchronized clocks, the arbor of the second hand having a fiber block carrying two diametrically opposite contacts designed to complete the circuit through a stationary contact. This block is adjusted differently at each station. When the dispatcher desires to call a particular station, he depresses the corresponding button in the master selector, and a starting button, thereby releasing all the clocks on the system. When the arm on the second hand arbor of the master selector makes contact with the pin on the stationary dial corresponding to the button depressed, a battery impulse is sent out which completes the circuit at that particular station, where the fibre block (previously referred to) is then making contact. This impulse operates relays which in turn close a battery through the local vibratory bell, which continues to ring until the operator at the way station depresses a button, thereby stopping it.

CINCINNATI CAR COMPANY'S EXHIBIT

The Cincinnati Car Company is exhibiting a car of the "pay-enter" type, which has been built for the Municipal Traction Company, of Cleveland, Ohio. This car embodies a number of features which have attracted much attention, among which are the unusual length of body and platform and the light weight per seat. The exterior and interior is plainly finished but with good lines. The method of supporting the long platform is entirely new and embodies the principle of the cantilever. The underframe is entirely of wood; on the side sills are 5x8 in. timbers, and cross bearers are 3½x6½ in. timbers stiffened with truss rods. A number of sill tie-rods are used and in addition the underframe is held square by substantial diagonal braces. The sides of the car are straight, vertically, with upper and lower panels divided by a fender rail, as is the practice on concave and convex panel construction. The car body is strengthened vertically by truss rods placed both above and below the side sills, the top truss rods being anchored to the platform knees instead of to the end sill or to the side sill, as is the usual practice. The windows are arranged to drop into side pockets the openings of which are provided with hinged covers. The interior finish of the car is light-colored cherry, and the head lining is of Agasote, painted Nile green. The following are some of the principal dimensions of this car: Length over panels, 52 ft.; length over corner posts, 36 ft.; width over fender rails, 8 ft. 6 in.; height from bottom of sill to top of roof, 8 ft. 6 in.; length of vestibule, 8 ft.; truck centers, 24 ft.; seating capacity, 50 persons; weight of car body, 17,676 lb.; car body weight per seated passenger, 354 lb.; weight of body electrical apparatus, 1,500 lb.; weight of trucks, 11,800 lb.; weight of motors and brake rigging, 10,680 lb.; total weight, 51,656 lb. The miscellaneous equipment includes Hale & Kilburn No. 11 A stationary cross seats; Nichols-Lintern air sanders, Tomlinson radial couplers, "pay-enter" fare box, "duPont" forced circulation heater, Standard Motor Truck Company's type O-50 trucks with 4 ft. 6 in. wheel base, Allis-Chalmers 4-motor equipment, type R 36, 40 hp with type S 1 control.

The merits of "Le Carbone," the brush which has made such a great record in the service of the Interborough Rapid Transit Company, New York, are explained by W. J. Jeandron, at booth 550, who represents Le Carbone Company, of Paris, France. Mr. Jeandron is showing an extensive assortment of these brushes, the remarkable grain of which is best illustrated in the unique souvenir he will give or mail to interested parties. This souvenir is a carbon brush on which are engraved the Liberty Statue on one side and the Paris coat-of-arms on the other, but the impression are as distinct as the work on a silver dollar. This little reminder is characteristic of the company's thoughtfulness in the manufacture of carbon brushes.

The Oct. 15 issue of "Brill's Magazine" is devoted largely to the convention exhibit of the J. G. Brill Company. It is handsomely bound in a white paper cover on which is embossed a reproduction of the convention delegates' badge. The introductory article describes the interurban system and the cars of the Lewiston, Augusta & Waterville Street Railway, which extends from Bath, Me., to Waterville. Semi-convertible cars for the Lacroze Tramways, of Buenos Ayres, Argentine Republic, are also illustrated and described in a subsequent article, as well as twenty pay-as-you-enter cars which have recently been delivered to the Portland, Ore., Railway, Light & Power Company. The center piece of the magazine is a double-page illustration from a photograph taken at night of the large illuminated sign of the Brill Company mounted on the east side of the Million Dollar Pier. The lettering of this sign stands out prominently on the black background. The description of the exhibit of the Brill Company is illustrated with photographs of the exhibit trestle outside of the pier and of the Brill truck exhibit in the main building.

A plastic rail bond and angle plate that has had ten years' severe service at Paterson, N. J., is on exhibition in spaces 568, 570 and 572. It is one of a number placed in the track in 1896, and at the time of installation showed a conductivity 31 times greater than new No. 0000 copper bonds. This summer they were again tested for conductivity and showed practically no depreciation although the rail ends were badly worn from constant heavy traffic. Harold P. Brown, of New York, the manufacturer of these bonds, is also showing one that was recently removed from a rail joint at Hingham, Mass., at which place it was installed on exposed T-rail 12 years ago by Pepper & Register, engineers of Philadelphia. Previous to its removal it was tested by engineers of the Massachusetts Electric Company, and 3 ft. of joint showed a drop equal to 3 ft. of rail. The alloy is bright and plastic and the bond appears to be still in good condition for another 12 years' service.

The Lord Electric Company is exhibiting, in space 879, a new device for controlling the acceleration of street railway motors, which has been given the distinctive and apt trade name of Controlator. It is said to make use of an entirely new principle for introducing a time element in the movement of the controller handle which requires only a simple mechanism. It has been designed to be amply strong for the hard usage apparatus of this kind receives. The company states that it has received a large number of orders for this device and expects to have it meet with the same success in service which has attended its devices for lightning protection, trolley retrievers and other specialties which it makes.

WESTINGHOUSE RAILWAY MOTORS AND CONTROL APPARATUS

In the exhibit of the Westinghouse Electric & Manufacturing Company the different types of motors manufactured by this company for railway work are displayed. A standard direct current No. 101-B, 40-hp motor shows the standard type used on a large number of railways. A No. 306, 50-hp motor illustrates the interpole type of railway motor for direct current service, and is one of a series varying from 40 hp to 75 hp, all of which have the rugged operating characteristics of standard direct current motors. The interpole prevents sparking or flashing of the brushes and thereby materially increases the length of life of both the brushes and commutator. A single-phase 150 hp, No. 156 motor represents the latest development in alternating current motors. Sixteen of this type are being built for the New York, New Haven & Hartford Railroad to be used under 85-ton motor cars which will be the largest cars in existence. They will be used for local service between the Grand Central Station, New York, and Stamford, Conn. This type of motors is made in sizes from 75 hp to 240 hp, besides which this company makes other single-phase motors for locomotive service.

The unit-switch system of control for single cars and multiple car trains, and which may be applied to either direct or alternating current system cars, is also on exhibition. A storage battery supplies current to the unit magnetic switches, which make the changes in the motor circuits. This storage battery current is small and is all that is used in the master controller, which results in extreme simplicity of the controller and car wiring. This system of control is being adopted not only on trains, but on large single cars where the ordinary drum controllers would be much too cumbersome.

The T. H. Symington Company of Baltimore and Chicago, manufacturer of Symington journal boxes, has among other specialties on exhibition, four boxes conforming in all general dimensions to the four sizes adopted as standard by the American Street & Interurban Railway Engineering Association at last year's convention. These boxes are fitted with the Symington central-pressure spring lid which, it is said, has given universal satisfaction in interurban service, and are good examples of modern high-class foundry production. One of the strongest points of superiority claimed for these boxes over those commonly used is a machined pedestal fit and a machined face of the interior guide lugs for the brass and wedge, thus ensuring a perfect fit between the box and the truck pedestal on the outside and between the box and brass and wedge on the inside. The company is making its journal boxes of a special alloy metal, termed by it "Symington Iron," which it is prepared to demonstrate by test to show a minimum tensile strength of 40,000 lb. and wearing qualities superior to the best grade of cast iron.

Railroad men who control electric railway advertising are being attracted by the display of the National Advertising Company of America, building 3, booths 836 and 838, where they can talk over advertising matters. The Auto-Scope advertising device, controlled by this company, which is designed to double the revenue derived from card displays inside of cars, is proving interesting. The device is shown in working order.