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Of this issue of the ELECTRIC RAILWAY JOURNAL, DAILY EDITION, 10,000 copies are printed.

Invitation to Attend Session of American Association

The opening session of the American Street & Interurban Railway Association occurs this afternoon at 2 o'clock at the auditorium hall and Pres. James F. Shaw wishes it understood that the session is open not only to delegates, but that all associate members and all representatives of the Manufacturers' Association are invited to attend. This is the only open session of the American Association. The program for the meeting is published elsewhere in this issue.

A Collection of Advertising Literature

To be successful in increasing its business an electric railway or any other institution first must give satisfactory service, and second, must let it be known that its service is good. The problem of giving good and satisfactory service has demanded the attention of the owners and operators of electric railways since the inception of this method of transportation; methods for increasing business by advertising have lately received recognition and now are being studied closely. This year the committee on passenger traffic of the Transportation & Traffic Association devoted its report to the subject of railway folders, time tables, pamphlets, post cards and similar advertising matter, all designed to induce travel. The committee was successful in procuring samples of advertising literature from 117 companies, obtaining 278 different samples. A wide variety of expression is apparent in these pieces of advertising and no doubt their average high character will surprise many who may inspect them as exhibited.

One interested in preparing the advertising matter for his

company can well afford to study consistently the display of folders and may expect to receive some valuable hints for use in his work at home. The value of a large collection of such advertising matter, now proved to be of much worth in initiating traffic, is so well realized as to warrant the suggestion that the electric railway advertising matter collected by this year's committee be used as a nucleus for a permanent collection. The collection of blank forms built up by the Accountants' Association has been of much service to the members of that body and so, no doubt, would a collection of advertising literature be of increasing service to the many electric railways which of late have taken such interest in advertising the excellence of their train schedules.

Committees of the Transportation & Traffic Association

In his address before the Transportation & Traffic Association, President Allen discusses with strong approval the work of the standing committees and the future progress which can be made by perpetuation of the plan of organization of this association, which provides for the maintenance of such committees. The importance to the industry of the questions allotted to these respective committees is so well recognized that it may appear trite to refer to it; the fact is, however, that the existence and aims of the Transportation & Traffic Association permit the most careful, systematic study of these practical problems that has been undertaken by any organization of electric railway officials since the issues reached their present stage of importance. Permanent committee organization, with effective work, should make the amended reports each year reflect, as Mr. Allen states, "the best energy, thought and practice on all subjects."

The Exhibits

The exhibit of railway apparatus at a street railway convention is perhaps the most interesting and in many respects the most instructive feature of the gathering. It affords the railway men a fine opportunity of seeing and studying all of the latest improvements and of familiarizing themselves with the progress of the industry in all parts of the country. When Denver was selected as the convention city some fear existed in the minds of many that while there might be an excellent attendance of both railway men and supply men, the difficulties and uncertainties of transcontinental transportation and the high cost of freight would deter many manufacturers from sending elaborate exhibits of apparatus. The center of consumption of electric railway material is probably somewhere near Columbus, Ohio, and the center of production is about Pittsburg, Pa. Practically all of the exhibits which have been sent to Denver were shipped from Chicago or east of that point. For this reason it is most surprising and gratifying to find that the exhibits this year compare favorably both as to number and completeness with those of any previous year in the history of the associations. The arrangement of booths and aisles, the artistic decorative effects and the simple but uniform construction and color scheme could not be improved upon.

The route from the entrance on Curtis Street to the meeting rooms in the auditorium building carries the delegates

past practically every booth, either going in or coming out. The track exhibits form a continuation of the display within the building, and the fact that the tracks of the Denver City Tramway system enter the annex space made it easy to bring in the heavy pieces of machinery, cars and trucks, which have always been a nightmare to exhibitors. The Denver City Tramway Company has materially assisted in other ways, such as the furnishing a force of men and a derrick car in cases where they were needed, and generally has greatly assisted in accelerating the movement of the exhibits from the freight house to the auditorium building. The railway men are to be congratulated on the fine opportunity given them to study and see such a comprehensive collection of electric railway devices and the manufacturers are to be congratulated on the way in which they have risen to the occasion and assured the success of this feature of the convention week.

The Convention Program

The papers and committee reports to be presented at the Denver convention relate to some of the most important present day problems of the several branches of the electric railway industry. Each of the five associations will have before it for discussion a number of subjects on which the action taken will have a far-reaching effect. Fortunately the committees and the authors of papers have done their work thoroughly and promptly and this has made possible the advance publication of most of the reports and papers. Delegates have thus had an opportunity to study the recommendations at their leisure before going to the convention. The result cannot help but prove beneficial in accelerating the work of the conventions and in promoting full and intelligent discussions.

The American Association this year has among other subjects for discussion reports of the committees on welfare of employees and on education. These two reports consider different phases of the same problem, namely, raising the standard of the men who operate electric railways. Welfare work among the subordinate employees has an educational side as well as a humanitarian side. Clean, civil and contented employees are a valuable asset to any company. The committee on insurance has been studying the question of electric railway risks, and the other committees of the parent body have done notable work.

The Accountants' Association reflects in its program the tendency toward standardization of the details of operation and equipment of electric railways. Mr. Rogers' paper on "Interurban Statistics" reveals the wide diversity of methods which prevails in compiling the ordinary statistics of operation and traffic. The committee on interline accounting recommends a uniform practice in accounting for interchange business between electric railways. Other papers to be read will deal with general and special aspects of railway accounting.

This year for the first time the work of the Engineering Association will be confined to consideration of the reports of its five standing committees, appointed last fall in accordance with the revised constitution and by-laws. The activities of this association naturally divide themselves into matters pertaining to track and roadway, power generation, power distribution and car equipment. These four branches have each been assigned to a standing committee and a committee on standards completes the list. This arrangement of committee work has greatly simplified the three-days' program of the association meetings. Each session will be devoted to the consideration of only one report, and there will be no necessity of curtailing the discussion or passing over other papers or reports in order to complete the program within the time available. Without referring in detail to the subject matter of the committee reports, one striking feature of them as a whole is worthy of comment.

This is the number and variety of complete or outline specifications which have been recommended for adoption. Nine specifications in all are presented, each of which covers some material purchased in large quantities, usually by manufacturer's brand or grade only. The value of these specifications to large and small companies alike is obvious.

The Claim Agents' Association is also making a departure from the usual program this year in that it has no long papers or committee reports to be presented. Instead nine questions have been drafted for general discussion. Written communications on each question from a number of members have been printed in the form of an advance report, which will not be distributed, however, until the convention meets. These printed communications, together with the oral discussion, should bring out many new and helpful ideas.

Several important subjects will be discussed this year by the Transportation & Traffic Association. The committees on interurban and city rules have drafted revised codes of rules which they are prepared to recommend for final adoption. The rules as presented will be vigorously criticized in some quarters, no doubt, and as vigorously defended in others. For the traffic men who will be in attendance the reports of the committees on freight and passenger traffic will be of special interest. The old question, "Does freight and express business pay?" is considered by the committee on freight traffic. The statistics of traffic of a number of companies accompanying this report are most instructive.

Instruction for Accident Prevention

Accident prevention is a subject in which both the transportation and the claim departments are vitally interested, but the limits of each department's responsibility vary considerably on different railways. In some cases, the claim department does not come into contact with the trainmen at all except when they get into trouble. In others, the claim department takes a very active part in the instruction of the conductors and motormen on the safest methods of car operation. Between these two extremes, there are many intermediate policies, such as occasional lectures by representatives of the claim department to the men, discussions on subjects connected with accidents by managers, the issue of special suggestions by the claim department, etc.

There is a constant and commendable tendency on the part of railway companies to pay greater attention to the instruction of the men, not only of those entering the service but of the old men as well, in order to increase the safety of car operation. But the great variety of methods followed in this respect provokes the inquiry as to the department upon which the major part of this work should devolve.

No one will take issue with the theory that even the man with a large number of service stripes on his sleeve can be benefited by suggestive and inspiring talks on the subject of the prevention of accidents. In the last analysis, the motorman is the one upon whom the company must depend to prevent an accident for which it is responsible, and preliminary and continued instruction are the only steps by which this result can be attained. One argument in favor of its being within the province of the transportation department is that it is the one which engages the man, gives him his preliminary training, determines its duration, directs his work, promotes him for good behavior or enforces discipline for infractions of the rules, and in general is the one to which he is responsible. On the other hand, the legal department is of course most familiar with the causes of accidents, the points in the company's defense which are most apt to be attacked, and extent of the accident records required from a legal standpoint.

CONVENTION PROGRAM FOR TODAY

American Association.

(AUDITORIUM HALL.)

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

Registration and Badges. (Association booth, entrance to Auditorium.)

2 P. M. to 5 P. M.

(Open Session.)

Annual Address of the President.

Annual Report of the Executive Committee.

Annual Report of the Secretary-Treasurer.

Announcements.

New Business.

Reports of Committees.

(a) Subjects.

(b) Active Membership.

(c) Associate Membership.

(d) Welfare of Employees.

(e) President Goodrich's Suggestions.

Paper—"Organization, from the Standpoint of the Smaller Companies," by Ernest Gonzenbach, President and General Manager, Sheboygan Light, Power & Railway Company, Sheboygan, Wis.

Report of Committee on Education.

Accountants' Association.

2 P. M. to 5 P. M.

Registration and Badges.

Engineering Association.

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

(ROSE PARLOR, AUDITORIUM BUILDING.)

Registration and Badges.

2 P. M. to 5 P. M.

Annual Address of President.

Annual Report of Executive Committee.

Annual Report of Secretary-Treasurer.

Appointment of Convention Committees.

Report of Committee on Way Matters.

Claim Agents' Association.

(METROPOLE HOTEL.)

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

Discussions:

What is the best plan of having trainmen procure and report an increased number of witnesses to accidents?

Is it good practice, when statement of injured party is obtained of accident, to furnish him with copy of his statement?

Is a school of instruction for trainmen essential?

2 P. M. to 5 P. M.

Discussions:

Should information be furnished newspapers regarding the work of the claim department?

What should be the relationship of the medical and claim departments? How can the medical best serve the claim department in the handling of accidents?

The claim department and its relation to the operating department.

Appointment of Nominating Committee.

Transportation & Traffic Association.

(AUDITORIUM HALL.)

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

Report of Committee on Interurban Rules.

Report of Committee on Express and Freight Traffic.

Paper—"Express and Freight Traffic on Interurban Lines," by S. L. Vaughn, Traffic Manager Grand Rapids, Grand Haven & Muskegon Railway, Grand Rapids, Mich.

Conventionalities

Well, how do you size it up? Pretty big, eh? Also fine and dandy.

Altitude and irrigation—perhaps you'll hear these two words in Colorado.

This is the twenty-eighth annual meeting of the parent association, if anybody should ask you.

Energetic, Reliable, Just—Exhibit Space No. 1. Guess the answer. A copy of the convention daily for the first correct solution.

Perhaps the weather man was presented a pass to the exhibition. At any rate he has been strictly on his good behavior so far.

J. C. McQuiston, boss installer for the Westinghouse Companies and manager of the publishing department, was one of the first on the ground.

According to one authority the Wagner cocktails served on the New York Central special train could be classified as "transformers with 100 per cent efficiency."

Among the early Sunday visitors at the convention were George L. Radcliffe and Mrs. Radcliffe. Mr. Radcliffe is general superintendent of the Schenectady Railway Company.

W. R. W. Griffin, superintendent of the Rochester Railway Company, has again distinguished himself by being among the first to "hot-foot it" among the exhibits at the convention.

All praise to the linemen of the Denver Tramway Company, who worked far into Saturday night to decorate the main streets of Denver with gay flags and bunting in honor of the convention.

Mr. and Mrs. E. L. Clark of Chicago are registered at the Kaiserhof. Mr. Clark is president of the Valentine-Clark Company of Chicago, and also president of the Northwestern Cedarmen's Association.

Missouri has no monopoly of men who want to be "shown." One of these doubters is A. H. Armstrong of the General Electric Company, who has brought an aneroid barometer along to determine whether Denver is as far up in the world as it says it is.

The entertainment committee is distributing a neat vest-pocket booklet giving general convention information and program of the entertainment. This booklet is most convenient, and the thoughtfulness of Mr. Whipple and his fellow-committeemen is greatly appreciated.

The standard classification committee of the Accountants' Association will hold a meeting at 10 o'clock this morning at the Hotel Savoy to consider, with F. W. Sweney, special examiner of the Interstate Commerce Commission, further inquiries concerning the interstate classification of accounts.

President James F. Shaw, of the American Association, arrived early Sunday morning on the special train from Boston. Mr. Shaw, who is chairman of the board of directors of the Boston & Worcester Electric Companies, is confident that the Denver convention will be a notable success in every respect.

M. B. Lathrop, superintendent of the Colorado Springs & Interurban Railway Company, led the vanguard from Colorado Springs. Mr. Lathrop says, and truthfully, that there is only one Colorado Springs. He did not say, although he might with equal truth, that the people of that city are famed for their hospitality. At any rate a warm invitation is extended to railway men attending the convention to visit this enterprising city of 40,000. Mr. Lathrop says that Colorado Springs has the best street railway system of any city of its size in the country. Visiting conventioners who

don't believe it are asked to go and see with their own eyes. The courtesies of the system will be extended to wearers of the convention badge.

A touch of home life was given to the trip of the New York Central-Rock Island special by the presence of two delightful youngsters with their parents, Mr. and Mrs. Ernst Woltmann. These little folks endured both the long journey and the fondling of their fellow passengers with exceeding good humor.

The wonderful moralometer, justly famed as the wizardry of mechanism, is to be seen only in the exhibit of the Wagner Electric Manufacturing Company. Think of a machine that indicates character. Marvelous! Marvelous, indeed, and then some. And the best of all is, the machine has no terrors for the pure in heart.

Gen. George H. Harries of the Washington, (D. C.) Railway & Electric Company, third vice president of the American Association, arrived on Sunday. General Harries was prominent in entertaining the National Electric Light Association's convention in Washington in 1907, and he is also an officer of that association.

John H. Stedman arrived on Saturday evening from the East. Mr. Stedman is not only a writer of graceful verse and a staunch Rochesterian, but he is a loyal A. S. I. R. A., and adherent of many years' standing and one of the most popular of conventioners. Incidentally, he is secretary of the Ohmer Fare Register Company.

On the Rock Island's "Rocky Mountain Limited" train between Chicago and Denver an innovation that received approval were concerts three times a day by means of a victrola (a greatly improved phonograph) in the observation salon. The music was excellent, the familiar phonograph twang being agreeably lacking.

Frank H. Gale, in charge of advertising for the General Electric Company, is, as usual, sauntering about, as cool as a cucumber, as though his company's arbor-like exhibit sprang into existence without any exertion on his part. But neighbor Gale has great determination and resourcefulness; it's a wonder he hasn't attempted to discover the North Pole.

Captain and Adjutant Daniel W. Smith of the First Infantry, M. N. G., Detroit, Mich., who is more commonly known as "Hot-water Heater Dan," accompanied by Mr. H. C. Ebert, president of the Cincinnati Car Company, spent Sunday as the guest of Lieutenant Bishop of the First U. S. Infantry at Fort Logan, Colo. Mr. Smith says that even among the military men at the Fort Mr. Ebert loomed conspicuous for his martial bearing.

The exhibit committee of the Manufacturers' Association issues a lemon-colored folder about exhibits which is as full of useful information about exhibits as an egg is full of meat, and includes a diagram showing the general arrangement of the convention premises and exhibit spaces. Captain Hequembourg and his cohorts of the exhibit committee are to be found at the headquarters of the Manufacturers' Association at the left of the main entrance.

To-day's entertainment features consist of the sight-seeing automobile trip for ladies in the afternoon and the widely-heralded supply men's amateur vaudeville show in the evening. Particulars of these events may be found in the general entertainment program given elsewhere. Despite the secrecy thrown about the preparations, it has leaked out that the arrangements for the evening entertainment are of a character that would put professionals to shame.

An American electric railway convention is being studied at first hand by Heinrich Duschinsky, manager of the railway supply department of the Allgemeine Elektrizitäts Gesellschaft, Berlin, Germany. After the convention, Mr. Duschinsky will visit the principal American cities to study repair practice both in the shops of the railway companies

and of the supply houses. Mr. Duschinsky and his wife are under the chaperonage of W. J. Clark, manager of the foreign department of the General Electric Company.

Amid the excitement and bustle incident to arrival on Sunday the fact that it was the Sabbath day was in danger of being forgotten; but A. L. Whipple silently but eloquently reminded all beholders that it was the first day of the week. However, he demonstrated that a sabbatical appearance does not lessen a man's efficiency, and he was hard at work for the entertainment of visitors.

Col. W. E. Ludlow of Cleveland, confident and irrepressible inventor of the Ludlow track drill, shown by a working model in the exhibition, has thrown down the gauntlet as the oldest supply man at the convention. The colonel says that he is 74, but everyone who meets him must wonder if he is not stretching the figure ten or fifteen years in order to lead in the veteran class. He has a fine war record and tells thrilling experiences of '61-'65 with modesty and spirit.

Insurance men have their eye—not an unfriendly eye, let us hope—on electrical installations these days. That's why W. J. Canada and W. L. Green of the electrical department of the Rocky Mountain Fire Underwriters' Association are "among those present." These gentlemen inspect all electrical installations in Colorado, Wyoming and New Mexico, and they urge their electrical friends to visit their office in Exchange Building. "Come right in, sit down and make yourself at home," say they.

Among the many Denver men who are striving to make the visit of the street railway men pleasant, J. Keating, baggage agent at the Union Station, deserves a word of praise. Fortunately, the convention comes at a time when railroad travel is comparatively light, and Mr. Keating was enabled to pay prompt attention to incoming baggage of conventioners. He will have men at the leading hotels during the closing days of the convention who will check baggage through to destination, avoiding delay at the railroad station.

One of the early birds was George E. Armstrong of Chicago. He brought with him a miniature but acceptable "Traveler's Railway Guide," showing time of all steam railroad trains leaving Denver and other railroad and sight-seeing information. Another of Mr. Armstrong's helpful ideas was the distribution of slips about the convention premises reading "Apply for Pullman reservations and railroad schedules at Travelers' Railway Guide Booth, Number 106." At the booth there are blank forms to be filled out stating reservations required. Mr. Armstrong, that friend or man, especially traveling man, does the rest.

Those who experienced for the first time the transition from four-track railroads in the East to the single tracks on which Denver is approached naturally speculated to some extent on the future of an aspect of railroad construction which has not inspired any dreams of electrification or of electrical competition. The long stretches of prairie land where "density of traffic" is, for the present at least, a negative quantity, did not, however, "enthuse" any of the promoters so far as is known up to the time of going to press, to take immediate steps to secure private rights of way for modern, high-speed interurban lines.

Coming from the rocky, mountain passes of Easton, Pa., the brothers Hay refuse to quail before the puny hills surrounding Denver. The Hay lines are famous for fine scenery and polite conductors who make every trolley trip a veritable Cook's tour. Thomas A. H. Hay is president of the Northampton Traction Company and his brother William O. Hay is president and general manager of the Montgomery Traction Company, general manager of the Easton & Washington Traction Company and secretary of the Northampton Traction Company. The baggage of Messrs. Hay is at the Shirley, but they are circulating everywhere.

A Masonic pin has been found and handed to Secretary Swenson, to whom the owner should apply.

Maybe Secretary B. V. Swenson and Office Manager H. C. Donecker of the American Association are not onto their jobs! What?

The executive committee of the Transportation & Traffic Association held two meetings yesterday to settle the final business of the year.

The Cook Drum Corps of Denver, a famous marching musical organization, paraded the streets on Monday night in honor of the convention. Thanks!

The Westinghouse people say that they were the first to get busy in preparing an exhibit, and nobody seems to deny the claim. It's a corking big exhibit, too.

The word "popular" is somewhat overworked, but it applies truthfully to J. R. Wiley, the Chicago representative of the Standard Underground Cable Company. Mr. Wiley is at the convention and he is himself the entire delegation and exhibit of his company.

Duncan McDonald, general manager of the Montreal Street Railway Company, has just returned from Europe and so will be unable to attend this convention, although he has missed very few meetings of this kind for a number of years. The Montreal Street Railway, however, is well represented in the person of W. G. Ross, managing director of the Montreal Street Railway.

The Electric Railway Journal had representatives on each of the "specials," and at the first meeting of the staff it was noticeable that every man believed that the particular train which he favored with his patronage was the best-managed and the one that made the best time. The fact is that all the "specials" were in the hands of men who knew their business and "made good."

There will be a sight-seeing automobile trip through the parks and residential section of Denver this afternoon. Automobiles will leave the Brown Palace at 3:00 p. m. A guide and lecturer accompanies each automobile. W. J. Walsh of the Galena-Signal Oil Company, Chicago, is the chairman of the sub-committee of the entertainment committee in charge of arrangements.

The entertainment committee maintains a separate office at the main entrance on the left hand side on entering. Here there is a general railroad information bureau, which is more particularly intended to give particulars in relation to the official excursion on the Moffat Road Friday. Tickets are now on sale for this excursion. Those intending to go should purchase them early so that adequate arrangements may be made.

John J. Cummings, president of the McGuire-Cummings Manufacturing Company, extended the courtesy of an invitation for a trip over the Denver & Inter-Mountain Railroad to about 20 delegates yesterday afternoon. The controlling interest in the Denver & Inter-Mountain Railroad is owned by Mr. Cummings and the road extends from Denver to Golden. The party left by special car about 4 o'clock yesterday afternoon and returned about 6 o'clock.

The entertainment committee has distributed a booklet containing invitations to the members of several associations in which the privileges of their buildings and grounds are cordially extended for the convention week by the following prominent organizations of Denver: Denver Athletic Club, Colorado Traffic Club and the Colorado Golf Club. It is to be hoped that the delegates will not miss the chance to enjoy Western hospitality, which is certainly appreciated.

Distance had no terrors for the faithful benchmen from the Philadelphia Rapid Transit Company in the persons of F.

chief engineer; H. B. Nichols, engineer of way; James Heywood, superintendent of lines and cables; Charles Hewitt, superintendent of motive power; and H. R. Goshorn, claim agent. The party came over the Pennsylvania Limited via the Chicago & Northwestern and Union Pacific lines, which left Philadelphia on Friday, Oct. 1 at 3:55 p. m. and arrived in Denver on Sunday, Oct. 3, at 12:45 p. m.

Apart from any welcome extended in a formal manner Denver traction men made all visitors feel glad that they had come by the hearty manner in which they met the convention people at the hotels with a "welcome to our city"; likewise by the generous display of new varnish on the cars. Moreover, they threw in a literally warm welcome which was appreciated by the visitors from the chilly East. When some unappreciative souls failed to appreciate this the Denver people thoughtfully provided a cooling shower later in the day, and everybody was happy. It is perhaps needless to add that General Manager John A. Beeler, Chief Engineer John Evans and the other officers of the Denver City Tramway Company were particularly active in making the visitors feel at home.

Fred H. Lincoln, assistant general manager of the Philadelphia Rapid Transit Company, was a passenger on the Pennsylvania special train from New York. He stood on the bridge at midnight as the train was entering Omaha and looked fondly back at the towering lights of Council Bluffs. Just 21 years ago, Mr. Lincoln, who was at that time employed by the Omaha & Council Bluffs Street Railway, assisted in the opening of the first wagon bridge across the Missouri River. This bridge carried the tracks of the Omaha & Council Bluffs Street Railway and was considered a marvel of engineering skill. The cars to be used on the bridge line were built at the works of the Pullman Company, and in order to have them delivered in Council Bluffs in time for the opening they were shipped by express from Chicago.

By the courtesy of the Denver City Tramway Company the official convention badge will be honored for free transportation on all city lines during convention week, beginning Sunday night, October 3, and including the following Sunday. The badge will likewise be good for transportation during the same period on the Denver & Northwestern Railway Company's interurban line to Golden and Leyden, the Denver & Intermountain Railway Company's interurban line to Golden, and the Denver & South Platte Railway Company's interurban line from the suburb of Englewood to Littleton. The Denver & Interurban Railroad Company, operating to Boulder, will furnish transportation over its 11,000-volt line upon presentation of the official badge at its office, 711 Cooper building, Denver.

While in Omaha, Oct. 2, many of the members of the Boston party improved the occasion to call at the offices of the Omaha & Council Bluffs Street Railway Company. Those who did so were cordially greeted by President G. W. Wattle, Vice President Frank T. Hamilton, General Manager W. A. Smith and the other officers of the company. Mr. Smith has been a very regular attendant at past street railway conventions, dating back to the time when horses were used as a motive power, but will be unable to be present this year, partly on account of business and partly because he has not been very well during the summer. He sent, however, his greetings to all his friends at the meeting this year. They will also be pleased to learn that Mr. Smith's physical condition is improving and that the strike, which has been in force on the Omaha system during the past few weeks, is petering out. So far as the visitor in Omaha could see, there was no indication of a strike. The cars were running in all parts of the city and were being well patronized.

DENVER TO NEW YORK SPECIAL TRAIN

The train committee who had charge of the Pennsylvania-New York-to-Denver special has arranged with the Santa Fe to run a special train from Denver to New York, which will leave Denver Friday at 11:30 p. m., stopping all day on Saturday at Colorado Springs, leaving there at 10:30 p. m. and running through Kansas City, St. Louis and Pittsburg, arriving in New York Tuesday at 7:40 a. m. The Pullman Company is holding the necessary equipment, but it is necessary to let the Santa Fe know just how many passengers will be on the train. Those holding tickets good returning via the Santa Fe and Chicago & Alton should notify J. P. Hall, general agent, Atchison, Topeka & Santa Fe, 901 Seventeenth Street, telephone Main 280, at once and reserve Pullman accommodations on this train.

IMPORTANT CHANGE IN ENGINEERING PROGRAM

At a meeting of the executive committee of the American Street & Interurban Railway Engineering Association, held yesterday morning at the Adams Hotel, it was decided to hold sessions of the association on Thursday instead of on Friday. The program as originally published provided for no sessions of the association on Thursday, but two sessions on Friday. To enable the delegates, however, to participate in the trip over the "Moffat Road" scheduled on Friday, the meetings for that day will be advanced to Thursday, and there will be no meetings on Friday. The place of the meetings will be announced later.

The meeting at the Adams Hotel was attended by President Paul Winsor of Boston, First Vice President F. H. Lincoln of Philadelphia, Second Vice President W. H. Evans of Buffalo, Third Vice President W. J. Harvie of Utica, Secretary and Treasurer J. W. Corning of Boston, and William Roberts of Akron, E. O. Ackerman of Columbus, and Martin Schreiber of Newark, N. J., members of the executive committee.

The details of the coming sessions were considered and it was decided to hold the sessions of the association on Thursday instead of Friday, as mentioned above. It was also decided that all meetings would be called to order promptly at the appointed hour as given in the program. The association has laid out a great deal of work for itself at this convention, and it is very important not to lose any time by starting late. Members of the association and others who expect to attend the sessions will confer a great favor on the presiding officer by being in their seats before the time for starting, so that the sessions can be begun promptly.

LAST EVENING'S RECEPTION

A brilliant and thronged reception was given in the ballroom of the Brown Palace Hotel last evening in honor of the officers of the various associations and their wives. The Denver local reception committee, headed by William G. Evans, chairman, and John A. Beeler, vice-chairman, assumed entire charge of the affair, although the manufacturers' entertainment committee co-operated.

President James F. Shaw of the American Street & Interurban Railway Association stood at the head of the long receiving line, and to him Mr. Beeler introduced the guests. After Mr. Shaw were the officers of the various associations and their wives. Excellent music was furnished by an orchestra, and the scene was animated and brilliant. Refreshments were served in an adjoining room. Musical selections were given by Madam Sobrino of London and Clifford Wiley of New York City. After the reception there was informal dancing, which was greatly enjoyed by many of the younger set, who were eager to take part in the first dance of the convention.

Before the reception the visitors were given an acceptable serenade by the Cook Drum Corp and Band of 80 pieces, drawn up in a circle in the lobby of the hotel.

PURCHASING AGENTS AND COLORADO CONVENTION DELEGATES INVITED TO THE ENGINEERING MEETINGS

It will be remembered that at one of the meetings of the executive committee of the American Street & Interurban Railway Engineering Association, held during the winter, W. J. Harvie called attention to the fact that at that time the purchasing agents of the different companies had no association with which they were directly affiliated. He pointed out that the work of the purchasing agent required him to have a good knowledge of engineering, and that it would be well to invite the purchasing agents to affiliate themselves directly with the Engineering Association. In accordance with this suggestion President Winsor issued an invitation addressed to the purchasing agents of all the member companies, explaining that they were eligible to the Engineering Association and inviting them to participate in the work and the conventions of that body. This letter was published at the time in the *Electric Railway Journal*.

The registry lists at present show a considerable number of purchasing agents in attendance at the convention this year, and it is hoped that they will accept President Winsor's invitation and attend the meetings and participate in the discussions.

President Winsor has also issued an invitation to all of the delegates of the Colorado Electric Light, Power & Railway Association to attend the meetings of the Engineering Association. The letter follows:

Denver, Colorado., Oct. 4, 1909.

Mr. J. C. Lawler, Secretary, The Colorado Elec. Light Power & Ry. Ass'n., care Colorado Springs Electric Co., Colorado Springs, Colo.

Dear Sir:—At a meeting of the executive committee of the American Street & Interurban Railway Engineering Association, held this morning, the secretary was instructed to extend through you to the members of your association an invitation to attend the meetings of our association.

The sessions will be held as follows:

Tuesday, Oct. 5, 2 p. m. to 5 p. m., Rose Parlor, Auditorium Building; report of committee on way matters.

Wednesday, Oct. 6, 9:30 a. m. to 12:30 p. m., report of committee on equipment.

Wednesday, Oct. 6, 2 p. m. to 5 p. m., report of committee on power generation.

Friday, Oct. 8, 9:30 a. m. to 12:30 p. m., report on standards, and report of committee on power distribution.

Friday, Oct. 8, 9:30 a. m. to 12:30 p. m., report of committee on standards, and report of committee on power distribution.

An effort is being made to, if possible, hold the meetings that are scheduled for Friday on Thursday.

Very truly yours,

(Signed) J. W. CORNING,

Secretary-Treasurer.

Seventeenth, Curtis, Champa and Arapahoe Streets were beautifully illuminated last night by festoons of colored incandescent lamps spanning the streets. The Denver Gas & Electric Company furnished this decoration in honor of the convention.

About 200 of the ladies took advantage of the "Seeing Denver" excursion of yesterday afternoon. There were four trolley cars, and the trip extended through the residential section, boulevards and parks. F. H. Gale, R. E. Moore and B. C. Watts of the entertainment committee were in charge. The trip was given with the compliments of the Denver City Tramway Company and the "Seeing Denver" Company.

The Denver mint coined \$55,455,000 in gold and \$2,847,000 in silver in 1908.

THIS YEAR'S BADGES

As usual a lively touch of color is added to the convention by the tasteful badges designed for this occasion. The motif on this year's badge is furnished by the city and county seal of Denver in relief, on which an eagle and a key of welcome are especially prominent. Above the seal is a representation of a double truck car, the whole being surrounded by a ribbon of blue enamel bearing in golden letters the title, "American Street and Interurban Railway Ass'n," and the enameled flags of the United States, Canada and Mexico.

The ribbons beneath the badge proper are of the following shades for the several associations and purposes indicated: Blue, American Association; orange, Accountants' Association; green, Claim Agents' Association; red, Manufacturers' Association; brown, Engineering Association; gray, Transportation & Traffic Association; purple, Associate Members; white for the ladies and light blue for other guests. A feature of the badge is a button bearing the number given to the wearer on registration.

GENERAL CONVENTION ARRANGEMENTS

The 1909 conventions of the American Street & Interurban Railway Associations and its affiliated associations, with the accompanying exhibition of railway appliances, is held in the handsome auditorium at Curtis and Fourteenth Streets, Denver, to which has been added an annex more than doubling its capacity. The main entrance—indeed, the only entrance—is at the Curtis Street end of the Annex. At the right, on entering, is the headquarters of the American, Accountants, Engineering, Claim Agents and Transportation & Traffic Associations. Here is the registration office for all of the associations. At the left is the office of the Manufacturers' Association, including the executive committee, finance committee and exhibit committee of that association. The registration office for the members of that association is in this place, and here also are the postoffice facilities for the whole convention. Just beyond this space is the headquarters of the entertainment committee. A large open lobby or lounging place, with rugs, potted plants and easy chairs, separates these various offices from the first of the exhibit spaces, which fill the remainder of the Annex and the auditorium.

The administration of the executive offices is carried out with the system and detail of a large hotel. Messengers and telephones are provided to maintain communication between the administrative center and all parts of the extensive convention premises.

At the farther end of the auditorium, as one enters it from the Annex, are the meeting places. These are Auditorium Hall and Rose Parlor, immediately above. Signs point the way, so that no one need fail to attend the meetings for lack of direction. All of the meetings of the American Association and of the Transportation & Traffic Association will be held in Auditorium Hall. The Accountants will hold their Wednesday session at the Savoy hotel, and their Thursday and Friday sessions in the Rose Parlor before mentioned. The Engineers will hold their Tuesday and Wednesday sessions in the Rose Parlor, and their Friday session in Auditorium Hall. The Claim Agents will hold all of their sessions at the Metropole Hotel.

Western Union and Postal Telegraph offices are placed in the auditorium. In addition telegraph call-boxes are placed in the administrative offices. Public telephone booths are scattered through the auditorium and Annex in addition to exhibitors' private telephone facilities.

Hotel headquarters of the various associations are as follows: American Association and Manufacturers, Brown Palace; Accountants, Savoy; Engineers, Adams; Claim Agents, Metropole; Transportation & Traffic, Albany.

TO-NIGHT'S VAUDEVILLE SHOW

Great preparations have been made to make the fifth annual vaudeville and theatrical performance to be given at the Tabor Grand Opera House this evening the finest thing ever pulled off. The amateurs of the Manufacturers' Association will be assisted by the Denver City Tramway Minstrel troupe and band, and the local "boys" are said to give a really good show, so that the heavy-weights from the East will have to look to their laurels. Here is the impressive program:

- Overture Orchestra
- Opening Chorus.....Farmer Supply Men
"Don't shoot the professor; he's doing the best he knows how"
- Dutch Comedians...Mr. J. J. Kreidler and Mr. F. C. Nester
Conductor and Motorman, Denver City Tramway
- SongsMr. John H. Thomas.
Standard Paint Company, New York, N. Y.
- A Story Mr. A. V. Thompson
Relating to Modern Jurisprudence
"The Attenuated Attorney who rang in the Associated Counsel"
General Electric Company, San Francisco, Cal.
- Piano Prodigy Mr. A. J. Price
Conductor, The Denver City Tramway Company
- "L'Habitant Things and Other Things".Mr. John H. Stedman.
Secretary, Ohmer Fare Register Company
Rochester, New York

THE DENVER CITY TRAMWAY MINSTREL TROOP

- Mr. George H. McAuley (Motorman), Interlocutor
- Orchestra—
- Opening Chorus—"Sousa Girl".....Ensemble
- "Grand Old Lady".....Mr. E. F. Smith, Conductor
- "My Dream of the U.S.A.".....Mr. F. S. Nestor, Conductor
- "Chicken Frying in the Pan is Music to Me" }
"I'm Going to the Minstrel Show" }
- Mr. A. J. Price, Conductor
- "Will You Love Me in December as You Do in May"..
Mr. V. A. Thorpe, Conductor
- "Mother Hasn't Spoke to Father Since".....
Mr. J. J. Kreidler, Motorman
- "When the Birds of Georgia Sing of Tennessee.....
Mr. E. W. Neighbor, Motorman
- "The Load that Father Carries".Mr. H. O. Nelson, Conductor
- "Message from Home".....Mr. J. J. Andis, Motorman
- "Harry Brown and Eliza Jane". Mr. J. J. Foster, Motorman

OLIO

- Select'ion.....The Denver City Tramway Quartette
- Mr. W. L. Albin and Mr. V. A. Thorpe, Conductors
- Mr. Theodore Sparks and Mr. R. De Germiny, Motormen
- "A DUTCHMAN'S MISHAPS IN A HOTEL"
An Original Comedy by Mr. J. J. Kreidler, Motorman

Cast:

- Christyon Ludwic Von Winklesteinhausenblousen.....
Mr. J. J. Kreidler, Motorman
- Landlord.....Mr. Geo. H. McAuley, Motorman
- Tommy (bellboy)..... Mr. Frank Kreidler, Employee
- Celisha (The Mad Actress).....Mr. C. G. Carroll, Clerk
- Edwin Booth (The Tragedian).....
Mr. M. Montgomery, Motorman
- Jim Jeffries (The Pug).....Mr. P. T. Siebers, Motorman
- Scene—Bedroom Time—Present
- National Airt.....The Denver City Tramway Band

The highest mountain in Switzerland is the Hospice of St. Bernard, with an elevation of 8,200. Colorado's highest peak is Mount Massive, which rises 14,424 feet above sea level.

ENTERTAINMENTS OF THE WEEK

Following the sight-seeing trolley trip of yesterday and the annual reception of last evening, to which references are made elsewhere, the entertainment committee announces the following program:

Tuesday Afternoon—Automobile trip to see the parks and other interesting features of Denver, for ladies only, from 3:00 to 5:30 p. m. The automobiles will leave the Brown Palace hotel at the former hour and it is requested that ladies make the Brown Palace their rendezvous for this trip, as by doing so it will enable the committee to provide comfortable accommodations for all. However, parties of 12 to 20 ladies can arrange to have an automobile call for them at their hotels by giving sufficient notice to the entertainment committee. The official badge is required for identification. Those taking part in this and all other entertainment features are requested to wear their badges in plain sight.

Tuesday Evening—Fifth annual supply men's amateur vaudeville and theatrical performance at the Tabor Grand opera house, Sixteenth and Curtis streets, beginning at 8:45 p. m. sharp. The Denver City Tramway minstrel troupe and band will assist in this entertainment. There will be no reserved seats, except for officers of the associations, and admission will be by badge only.

Tuesday Night—From about 11 until 12 o'clock there will be informal dancing in the ballroom of the Brown Palace hotel.

Wednesday Afternoon—From 2:00 to 5:30 p. m. a trip of 51 miles, "seeing the foothills," has been arranged, for ladies only. Special trolley cars will leave the Brown Palace hotel at 2:00 p. m., and ladies are requested to meet at that hotel as on Tuesday afternoon. This affords the best short trip around Denver. A stop will be made at Golden, and the return trip will terminate at the "White City," where the barbecue will be held in the evening. This trip is complimentary by courtesy of the Denver City Tramway Company and the "Seeing Denver" Company. Badges only are required for admission.

Wednesday Evening—A wild-game barbecue will be held at "White City" at 6:30 p. m. Three elk, 25 deer and bear, and 250 sage hens and grouse will be served on the grounds. The Denver City Tramway Company is the generous host of this occasion, and a number of special cars will leave the Brown Palace at 6:00 p. m., stopping at other hotels. Regular cars on the "Berkeley Line" will leave Arapahoe and Thirteenth streets every five minutes. The Denver City Tramway band and orchestra will furnish music, and there will be dancing. Official badges should be worn in plain sight.

Thursday Afternoon—This is "ladies' afternoon" at the Denver Country Club. From 2:30 to 5:00 p. m. there will be golf, tennis and an afternoon tea with music. Prizes will be offered in a ladies' clock-golf contest. Automobiles will leave the Brown Palace at 2:00 p. m., and regular street cars (Fourth Avenue and Washington lines) leave Arapahoe and Thirteenth streets every 15 minutes.

Thursday Evening—Theater party at the Broadway theater, opposite the Brown Palace hotel. Performance begins at 8:30 p. m. The committee has secured the entire house, and the attraction is Mrs. Leslie Carter in "Vasta Herne." There will be no reserved seats, except for association officers, and admission will be by badge only.

Thursday Night—From about 11 until 12 o'clock there will be informal dancing in the ballroom at the Brown Palace hotel.

Friday—The official excursion over the "Moffat Road," which affords some of the finest scenery in the country, is arranged for this day. Special trains will leave the railroad station, at Fifteenth and Basset streets, at 8:30 a. m. road station, at Fifteen and Basset streets, at 8:30 a. m.

Corona and return. All cars running from the central loop transfer to the Moffat station. The fare for the round trip including lunch, is \$3.00, and it is important to remember that tickets must be secured from the entertainment committee not later than noon on Thursday, and as much earlier as possible, in order that satisfactory arrangements may be made for extra trains and lunches. The entertainment committee makes a particular request that tickets be secured early.

Saturday—There is no regular entertainment scheduled for Saturday, but it has been arranged that those desiring to take the excursion over the "Moffat Road" and who were unable to go on Friday, may use the regular trains on Saturday for the privilege at the \$3.00 rate, provided that tickets are secured from the committee by Thursday night.

Golf—During the convention the Denver Country Club will issue visitors' cards to delegates and guests, permitting the use of all the ordinary privileges of the club, including the use of the golf links. This is a most acceptable courtesy, and it is hoped that the many golfers attending the convention will avail themselves of this pleasant opportunity, applying for visitors' cards to the chairman of the entertainment committee. The club is reached by the Fourth Avenue and Washington Park car lines. On Wednesday and Thursday afternoons there will be held an "Asirma" golf tournament, giving an opportunity to play over one of the finest links in the country. The tournament will be an open one, without handicaps.

Committee—All entertainments are in charge of the American Street & Interurban Railway Manufacturers' Association under the general direction of Vice President Charles C. Peirce, General Electric Company, Boston. The active preparations have devolved on the official entertainment committee, consisting of A. L. Whipple, chairman, Forsyth Brothers Company, New York; Ross F. Hayes, Curtain Supply Company New York; Charles R. Ellicott, Westinghouse Traction Brake Company, New York; W. K. Beard, Electric Railway Journal, Philadelphia; John A. Thomas, Standard Paint Company, New York; W. H. Wilkinson, Pressed Steel Car Company, New York; N. M. Garland, Ohio Brass Company, New York; L. B. Sherman, Railway Age-Gazette, Chicago; W. J. Walsh, Galena-Signal Oil Company, Chicago; F. A. Elmquist, Sherwin-Williams Company, New York; F. H. Gale, General Electric Company, New York; William Wampler, American Locomotive Company, New York; Fred L. Olds, Chicago Varnish Company, Chicago; R. E. Moore, General Electric Company, Philadelphia; Alfred Green, Galena-Signal Oil Company, New York; H. M. Frantz, H. W. Johns-Manville Company, Chicago; F. L. Gordon, American Brake Shoe & Foundry Company, Chicago; A. V. Thompson, General Electric Company, San Francisco; C. W. Laskay, Hale & Kilburn Manufacturing Company, New York; F. J. Drake, Lorain Steel Company, Philadelphia; B. C. Watts, Dayton Manufacturing Company, Denver.

A fully attended meeting of the entertainment committee was held on Sunday evening at the Brown Palace. Mr. Whipple presided and many matters of business were attended to. Chairmen of subcommittees to attend to future events of the week's program were appointed as follows: Sight-seeing automobile trip of this afternoon, Mr. Walsh; vaudeville show of this evening, Mr. Thomas; sight-seeing trip of Wednesday afternoon, Mr. Beard; ladies' afternoon at the Denver Country Club, Thursday afternoon, Charles R. Ellicott; theater party of Thursday evening, Mr. Hayes. Mr. Garland was put in charge of the arrangements for the golf tournament for men, and it was announced that Mrs. W. H. Evans of Denver would head the ladies' reception committee. The entire committee will look after the barbecue of Wednesday evening and the official excursion of Friday on the Moffat road.

MONDAY MEETING OF THE TRANSPORTATION & TRAFFIC ASSOCIATION

The second annual meeting of the Transportation & Traffic Association was called to order in Auditorium Hall by President C. Loomis Allen of Utica, N. Y., at 2:45 p. m. on Monday. After calling the meeting to order Mr. Allen introduced John A. Beeler, vice-president and general manager, Denver City Tramway, who welcomed the members.

Mr. Beeler spoke about the development and the greatness of Colorado. It started as a silver mining State and then gold was found and now gold to the value of \$25,000,000 to \$30,000,000 was produced; the value of the gold produced was already outstripped several times by the production of coal and other minerals and the value of the agricultural products of the State this year was about \$150,000,000.

The city had about 200 miles of street railway, the system of the Denver City Tramway Company, and there were about 75 miles of interurban road outside of the city. The city system carried every day the equal of the entire population of the city or even more.

President Allen then read his annual address, which is published elsewhere in this issue.

The report of the executive committee was then read by Secretary B. V. Swenson. The report as read was approved and ordered printed in the minutes.

Secretary Swenson read the report of the secretary-treasurer, saying that although this association was only organized in January, 1908, the 1908 convention held in Atlantic City last October was most successful and compared favorably with the meetings of the American Association and the other affiliated associations which had the advantage of a full year of preparation and the experience of preceding conventions. No change had been made in the personnel of the executive committee at the 1908 convention, as it was the general sentiment of those present that the association should show its appreciation of the work done by the officials, elected at the organization meeting, by re-electing all of them for a full year after the first convention. Shortly after the close of the 1908 convention, the president appointed various standing committees and requested the chairman of each to be prepared to report progress at the executive committee meeting.

In closing the report Secretary Swenson said it was fitting that attention should be called to the large amount of time which the various committee men had devoted to the work of the association, often at a considerable sacrifice of their own duty and to their personal inconvenience, and to the most excellent results they had obtained, as evidenced by the valuable reports which would be presented.

The expenses of the Transportation & Traffic Association, upon the presentation of proper vouchers approved by its president, were paid by the treasurer of the American Association. The expenses for the fiscal year aggregated \$3,105, of which \$253 was for expenses in connection with committee work done previous to Sept. 30, 1908, for which bills were not presented at the 1908 convention. This reduced the actual expenditures for committee work for the year just closed to \$1,272. The report of the secretary-treasurer was approved and ordered printed in the proceedings.

President Allen, in introducing the subject of the report of the committee on passenger traffic, asked Matthew C. Brush, Buffalo & Lake Erie Traction Company, to take the chair and present the report. Mr. Brush then read the report, which is published elsewhere in this issue. After reading the report Mr. Brush said the members of the committee were scattered all over the United States, and regardless of their best efforts it was found impossible to have a meeting. The work was done, therefore, entirely by correspondence. All of the members of the committee had done extremely efficient work in gathering together printed matter from the territory immediately surrounding their homes.

They felt, whether justly or otherwise, that the policy of sending out circulars asking for information had resulted in entire disregard of these circulars by a great many of the officers of the various member companies. The circulars were referred to someone who was not particularly interested and the information secured was oftentimes incomplete and of no practical value. Since the report had been forwarded to the secretary printed matter had been received from 20 to 25 companies, including 80 to 90 additional pieces of advertising material. Mr. Woodman, Mr. Whitney and Mr. Flagg also were unable to attend the convention, and only three members of the committee were present.

E. F. Peck, Schenectady Railway, stated that all interurban roads appreciated that they must advertise. Whether time tables should be of an elaborate nature or be printed without illustrations and of a simple nature was a question. The amount of money that should be spent on advertising was a problem which he had not altogether settled for the Schenectady road. Newspaper advertising was essential. He believed it was necessary for every company to publish its time tables in the local newspapers, and to call attention to important features, such as excursions. The next type of advertising was well illustrated by the display of folders, time tables and other advertising material presented by the committee, of which the most elaborate was published by the Fonda, Johnstown & Gloversville Railroad, of Gloversville, N. Y., and advertised a residential park. Some of the folders exhibited were merely time tables, and others were devoted to scenic places. Mr. Peck's experience had been that if a large amount of money was to be spent in advertising of that nature, the very best was none too good. His company had recently issued a folder called "Trolley Trips in the Mohawk and Hudson Valleys," calling attention to the important places of scenic and historic interest. In issuing that folder no time table was printed, and all the information contained would be as interesting next year as this year, the idea being to get out an elaborate folder every two or three years.

A folder published in 1907 was called "The Gateway of the Mohawk," and when the edition was first issued copies were sent to 52 newspapers within 50 miles of Schenectady, asking them to notice it. Flattering notices were received and a demand from the entire section for copies of the folder followed.

F. W. Coen, Lake Shore Electric Railway, said that he was a firm believer in advertising. He noticed that in this territory the steam roads were carrying their advertisements in the newspapers as well as doing a great deal of pictorial advertising. In northern Ohio the steam railroads had discontinued the publication of time tables in the newspapers. One of the larger interurban roads in that territory had discontinued newspaper advertising in the smaller cities. His company had continued that kind of advertising and, he believed, was doing more than ever before. It was also issuing now a time table folder only. He believed that in a great many cases the small leaflet of certain attractions—for instance, along the lake—was very valuable. This season, if he remembered correctly, his company issued 10 of these small pamphlets of two and four pages each, and they were well received by the public, and were, he believed, of considerable benefit to the road. Two or three years ago a pictorial map was issued and 100,000 copies lasted only for 90 days.

H. C. Page, Worcester Consolidated Street Railway, said he was a thorough believer in advertising his wares. There was no reason why the roads should not advertise their business, if they had something to sell, and they had something to sell in the way of a ride. He believed that business was to be secured by advertising in a reasonable and intelligent way. In the horse railroad days, and in the early days of the electric railway, a manager who talked advertising usually lost his job. Most of the directors of the road thought

that money spent for advertising was money wasted. He felt that that idea was a poor business policy in every way. On the roads in Worcester and vicinity, and also Springfield and vicinity, a small amount of advertising was done by a time table, and also a descriptive illustrated pamphlet, with a map showing the territory served, and he felt that it was money well spent, especially for the illustrated pamphlet. Announcement was made that these pamphlets were at the different divisions and different offices along the line, and the call for them was a surprise. Letters were received continually from all over the State and outside of the State.

Chairman Brush said that perhaps some members of the association could give some information in regard to the amount of money spent for advertising literature of different character. The committee was reluctant to request this information in circular form, feeling that better results could be secured by discussion.

F. D. Hunt, traffic manager Portland (Ore.) Railway, Light & Power Company, said that he was greatly interested in handling passenger traffic this year, especially on account of the Seattle exposition, and that during the early part of the year he prepared a pictorial folder and ordered 20,000 copies, which cost \$850. He found that the supply was exhausted long before the fair was really started, and 10,000 copies more were ordered. The Portland Company used several methods of advertising; one was to carry an advertisement in the newspapers giving the time tables, another was to issue a pamphlet giving information as to any particular event in the city, and display advertisements were carried in the daily papers on Thursday, Friday and Saturday, and sometimes on Sunday, giving information as to rates to a resort. That advertising had been very beneficial. Another plan of advertising that had proved good was to string banners across the intersecting streets where a great number of people passed each day, calling attention to any special excursion on the interurban line. An advertisement was carried on the front end of the cars announcing any particular attraction. The more these opportunities were put before the public, the greater were the chances of reaching those who would not ordinarily take these trips.

P. P. Crafts, general manager, Iowa & Illinois Railway, said that company had allowed an annual expenditure of approximately \$4000 for advertising and conducting pleasure parks. Of that sum approximately \$1000 was appropriated for making up losses on the park. He believed that fairly effective results had been obtained from the expenditure of that amount of money, but just how to spend it, through what channels to expend it, had always been a puzzle. The company started originally by issuing large card time tables, approximately 18 in. wide by 2 ft. long, which were distributed at the hotels and some business houses, railroad depots, etc., within a radius of approximately 200 miles of headquarters. In addition to this a large number of circular letters were sent to various business houses whose travelling representatives went through the territory, reaching in this way Chicago, Minneapolis, St. Paul, St. Louis, Omaha and Kansas City. These letters had done a great deal of good. Often travelling men had advised the company that their houses sent these letters direct to them on the road.

As to newspaper advertising Mr. Crafts said a slight change was made from the first method tried, when transportation was issued in exchange for the advertising. Now that could not be done, and in order to economize, special days or special attractions were advertised in the newspapers, but the advertising was confined to dash signs to a great extent, and to personal letters, particularly in advertising the park. Circular letters sent to the wives did more good than if sent to the men themselves.

J. W. Brown, superintendent of transportation, West Penn Railways, said that the company's advertising expenditure was about \$10,000 a year. Time tables costing about \$8 a

thousand were issued. Ordinary hotel blotters in bright colors were used, containing the schedule of the particular line of cars running into the town. These cost about \$3 a thousand. A wall schedule was used for the interurban lines, with the West Penn monogram and the schedule for that particular section; these cost about \$3 per hundred. In the better class of hotels, in the larger towns, frames were furnished for these. This year, at a prominent point, on top of the county bridge, which was used by three steam railroads as well as by the trolley lines, a large electric sign, which had about 600 lights, had been put up. This sign cost about \$550. On the rear of some large buildings, the shops for instance, signs had been painted in plain black and white 6-foot letters; those cost 6 cents a square foot. Along the main line of the Pennsylvania Railroad travellers were told that the West Penn way was the popular way, by a sign on one of the sub-stations affording this opportunity. This advertising in the past year had cost about \$2,000. The electric sign, however, and the signs upon the back of the buildings could be considered an investment good for several years to come.

T. C. Cherry, superintendent, Utica & Mohawk Valley Railway, said it seemed to be the consensus of opinion that pictorial literature, time tables, etc., afforded good advertising, but he thought the roads should go further than this, and a good deal of the work was up to the passenger agent. Distribution of literature should be followed by the passenger agent.

J. H. Pardee, operating manager, J. G. White & Company, New York, said it should be born in mind that there were two reasons for advertising, or rather two classes of people to be reached by advertising. One was composed of those who knew about the road and a certain kind of advertising had to be used to induce them to ride more, and the other class was composed of those who would not ride on the road unless they were informed that there was such a road. He had adopted a plan which he thought brought good results at very slight expense. The steam railroads did not propose to advertise the electric line, so he mailed under personal cover to each one of the ticket agents of the steam railroads in the vicinity a complete time table and folder of the electric line and he was told by various ticket agents, and also by people who had asked for information concerning the electric road, that the ticket agents were able to give this information only because they had been sent a copy of the time table.

W. H. Collins, Fonda, Johnstown & Gloversville Railroad, said a large part of the traffic on that road was derived from hauling people to pleasure resorts, and a travelling passenger agent looked particularly after that business. It was his duty to go through the surrounding country, to a distance even as great as 100 miles, and book picnics; and at the park, to which Mr. Feck referred, there was a summer population of perhaps 3,000, possibly upwards of 200 cottages, several hotels, and a larger number of boarding houses. Most of the usual attractions were to be found there, such as boating, tobogganing and other "midway" attractions. In addition to that the road catered to the summer boarder. To attract the popular 1-day travel poster advertising was used. In addition display advertising was used in the newspapers. Time tables were advertised in the newspapers, and all of the important features at the park were described in display advertisements in the papers.

J. C. Calisch, Buffalo & Lake Erie Traction Company, stated that it had been found that a folder was best for the general information of the public. The company put out 50,000 folders and they cost \$2,500. A fan was issued, which was very popular. The boat and steam railroad were separated from the electric railway, separate folders being issued. In addition advertisements were placed in all of the daily city papers. No trouble at all was experienced in getting the people along the line, but the traffic at the ter-

minals was different. Another help was the advertising on the cars. In the new cars, inside advertising had been prohibited. Trolley travel had reached a point now where it could be compared with steam railroad travel, and it seemed a pity to buy \$12,000 or \$15,000 car, mahogany finished, and litter it up with sign board advertisements.

George W. Parker, Detroit United Railway, was not in the passenger end of the road, but he took an interest in that feature. The folder the company now had was issued by outside parties on an advertising basis. In a measure this had been satisfactory, and yet in his judgment it did not meet the need.

Mr. Coen said there was another side of the advertising business of which it seemed to him sight had been lost. A pleased patron was the best advertising medium. It had been his good fortune to spend a few days in and about this city, and he had been surprised to find that in almost every line of business everybody was a "booster."

Chairman Brush suggested that there was no advertisement like a living advertisement. That had been his experience, particularly in connection with the park business. The biggest advertisement was the patron of the park who went away from it thoroughly satisfied. The instructions to the park manager were that he was to go to almost any extreme, leaving the matter largely in his judgment, to see that any patron who made any complaint or had any ill feeling at all should leave the park thoroughly satisfied.

Mr. Coen cited an experience of the last summer. A large manufacturing plant in Cleveland had arranged with one of the steam railroads to carry its employees to a park about 40 miles distant. The date fixed was a Saturday, and when it came near that date a representative of the steam railroad advised the people that they were short of cars and could not handle the picnic. Someone suggested an arrangement with the Lake Shore Electric Railway and the 1200 people were handled from Cleveland in an hour, carried the 40 miles and taken back nicely. These people were now among the best friends the road had in Cleveland.

Ernest Gonzenbach, president Sheboygan Railway, Light & Power Company, had had no idea that so much was done to attract passenger traffic. On the Sheboygan lines a summer resort was a favorite 1-day outing, and he found that certain cars during the day were heavily overcrowded, while other cars were underloaded. An advertising campaign was started this summer to instruct the public when to take cars and how to avoid the crowded cars. It was advertised deliberately that certain cars leaving the terminal station at certain times were overcrowded, and those who could do so were requested to take other cars. As good returns had not been received from any other class of advertising that had been attempted as out of that one feature. The company was enabled to handle the public with fewer cars; people naturally did not like to travel in crowded cars, and arranged their outings so as to leave and return at times when cars could be taken which gave them the greatest accommodation.

A. H. Mackay, general traffic manager Puget Sound Electric Railway, thought that conditions had a great deal to do with the amount of advertising. If there were parks or summer resorts or anything to which the public notice could be called, he believed strongly in advertising. The Puget Sound Electric Railway, a purely commercial line, issued an 8-page folder, as simple as possible, giving the time card and showing the saving which might be made in fare by travelling a part of the journey over the line. The attention of the surrounding cities was also called to these facts. It was found that the best form of advertising was keeping cars up to date and giving the public the best possible service. Trains were operated every hour from each end of the line, with parlor cars attached. When the parlor cars were first put on the general impression was that they would not pay. However, these cars had paid. He thought

that advertising did not do much good unless it was borne out by the service.

J. E. Dozier, general manager Nahant & Lynn Street Railway, gave two years ago to an organization of Lynn, Mass., free transportation to a Rhode Island clam bake, which was prepared at the railway terminal. Round trip tickets to the terminal were sold for 15 cents, the regular fare, and the clam bake was free. Better results were received from that clam bake as a medium of advertising than anything else he had ever attempted. He sent personal letters to secretaries of different lodges, giving rates and information pertaining to various locations, as to what facilities there were, and found it to be a good investment.

President Allen belonged to that class of men who were doubtful about the wisdom of distributing large sums of money in advertising for the sake of increasing passenger traffic, and particularly so when that increase occurred during the summer months, in other words when it was what might be called purely pleasure business. The discussion had wandered somewhat from the question of folders, and opened up the whole subject of advertising. Probably, however, it would be impossible to discuss folders and the results obtained from them without taking the whole question into account. His statements should be prefaced by the remark that upon the roads which they concerned what was known as a pleasure or a park business was not done to any great extent. The business that was done was business which they were trying to make good 365 days in the year. The only thing that had shaken the opinion that the right course had been pursued had been the array of trolley folders which the committee had assembled and placed on exhibition. He had been made to wonder whether they were wise within their own lives, and that perhaps they did not know of the benefits to be obtained by trolley folders and time tables properly used. They had believed that the best results in creating traffic that was good 365 days in the year were secured by placing the time tables in the daily, bi-weekly and tri-weekly papers. He had put down since this discussion started, and particularly since Mr. Craft's talk, some figures about costs, which were approximate.

The gross earnings of the electric railways was approximately \$3,000,000 per annum. They spent last year, Mr. Allen continued, in 28 papers scattered over a territory of 75 miles, advertising time tables giving the leaving and arriving time of electric trains, \$2,500. On June 1, 1908, a limited service was inaugurated on one of the lines which was placed in direct competition as to running time with the main line of the New York Central road with the desire of getting a share of the through business. The business did not come with advertisement in the newspapers. A folder, purely a time table of 16 pages, was tried. At first 50,000 were printed, at a cost of \$3,000. These were distributed in the advertising racks of the Middle States and New England Street Railway Club, which cost \$300 per annum. It was found that in most of the racks the folders were entirely exhausted, and apparently if any criticism was to be made upon the advertising racks it was that they were not refilled at frequent intervals. But the efforts from which the best results were obtained were the distribution of 35,000 copies of the time table in the cities and villages and hamlets, where they were placed in houses through distribution agents. The method of distribution was not the old way of scattering circus folders, throwing them over the fence, but by the agent going to the door and rapping or ringing the bell, and handing the folder. In the last two years 70,000 of these time tables had been distributed each year in this way. The cost of that distribution had been \$6,300 per annum, and such good results were obtained in that way that a little more money was spent. The Matthews-Northrup Company prepared a 40-page folder which contained no information whatever in relation to the op-

eration of the road. It contained some information about the type of equipment, but most of the space was taken up with descriptive matter and pictures of important places and points of interest in the territory. Fifty thousand of those folders were purchased at a cost of \$2,500, and it was thought that the supply would last three years, making a cost of \$833 per annum. The distribution had been confined to placing them in the racks of the interurban cars, he thought three days a week, and in the advertising racks of all the stations and at the hotels. There had been no general distribution of them, and they would last longer even than three years unless some efficient method of distributing them was found. In a great many of the racks folders were found containing time tables with advertisements. There were no advertisements in the time table which Mr. Allen showed. It was found that while advertising cheapened the cost to the railroad company it cheapened to a greater extent the usefulness of the time table. Combination folders were also found which included descriptive matter and time tables and advertising.

President Allen thought it would be a good plan to know how much money had been spent on folders, time tables and advertising in the daily papers, based on so many dollars per thousand dollars of gross receipts. That would be valuable information and would furnish enlightenment as to whether advertising was overdone or underdone.

R. P. Stevens, president, Lehigh Valley Transit Company, said that when he went to the property two years ago he inquired what method of advertising was used and how much was spent. He found that no advertising of any nature was done. He inquired a little further, and was informed that there was nothing to advertise. So he saw it was up to him to get busy. After some investigation he found that the line of the Philadelphia-Allentown road, about 50 miles, followed the route of the liberty bell when it was taken from Independence Hall, Philadelphia, and hidden in the church in Allentown during the time the British occupied Philadelphia, and this was decided upon as an advertising feature of the road. The road was forthwith named the "Liberty Bell Route," and the liberty bell adopted as the trademark. It was found that the liberty bell bore so much resemblance to the Bell telephone that a picture of the liberty bell was taken as it now existed in Independence Hall. The cuts were carried through all the advertising. As to results, almost all kinds of advertising were done, but in particular the line on which he had the figures was the Liberty Bell route, which catered to the Delaware Water Gap travel, from Philadelphia to the Delaware Water Gap mountain resorts. Although this business was not nearly as large in winter as in summer, it was to a certain extent all the year around business. This year \$3,000 was appropriated for advertising in Philadelphia papers. To find out who wanted the time table, who was interested enough to ask for it, all the advertising stated that beautifully illustrated folders could be had on inquiry at certain department stores in Philadelphia or by application by postal card, requesting mention of the paper in which the advertisement was found. It was surprising to see the results from that newspaper advertising. Some days 300 and 400 postal cards were received.

That experience showed that the folder was not good enough. The start was made a little too cheaply, and advertising was included. The advertising paid for the folder. It had been found from this experience, but Mr. Stevens would not attempt to say that it was the experience of all other roads, as local conditions of course govern—that the better folder issued the better would be the results; he had made arrangements with the photographer of the Pennsylvania Railroad, and a Philadelphia artist to prepare a folder similar to the best class of folders seen around Denver advertising various trips. That folder issued cost somewhere about 8 cents. For this year's advertising a feature was made of a

personally conducted trolley trip. A young college student was willing to work during his vacation at \$1.50 a day, and being fortunate in having historically interesting places along the line, he was able to start in at Philadelphia and give through his megaphone a very interesting talk the entire length of the line, and incidentally help the passengers in handling their baggage and directing them to their hotels.

A time table which people would take into their homes and preserve for future reference was the one to be issued.

Regarding the historical talk, mentioned last year, Mr. Stevens again took advantage of that feature and wrote personal letters to 5000 school teachers in Philadelphia, enclosing the folder, and suggesting that a talk with the pupils about the historical features of this trip would be of great benefit to the students and of interest to them, and offering the school teachers complimentary transportation.

Chairman Brush called attention to one folder sent to the committee, reading "Free Trips to Evansville and Return Every Day in the Year." On the back of it was the following: "The following merchants, all members of the Evansville Rebate Association, have combined, and under their plan your fares will be refunded on your purchases. Particulars at every store." Regardless of the amount of folders issued, Mr. Brush still felt that unless service was given that could be depended upon absolutely, the money spent on folders was wasted.

President Allen then took the chair again and the meeting was adjourned until 9:30 o'clock on Tuesday morning.

The Hudson-Fulton celebration in New York City and in other cities on the Hudson River is preventing the attendance at the convention of many railway managers who would otherwise be present. The celebration in New York City ended Oct. 2, although the "Clermont" and the "Half Moon" started on their trip up the river to Albany and Troy on Sept. 29. There was a celebration at Newburgh on Oct. 1, and one at Poughkeepsie on Oct. 4. Others will be held at Kingston on Oct. 5, at Catskill on Oct. 6, at Hudson on Oct. 7, at Albany on Oct. 8, and at Troy on Oct. 9. This is the reason which prevents the attendance at the convention of R. E. Danforth of the Public Service Railway, F. W. Bacon of the New Jersey & Hudson River Railway & Ferry Company, C. Gordon Reel of Kingston, Edgar S. Fassett of Albany, and several others. Their presence will be missed. Mr. Fassett showed his great interest in the Denver convention, however, by being at the Albany station when the New York special train passed through that city. Although the time of stop was short, many of those on the train had a chance to exchange greetings with him.

Eastern New York is not the only section of the country at which celebrations are being held this week. St. Louis is also having an anniversary, in its case the centennial of its incorporation. A series of parades and displays have been arranged for the entire week, and as in New York a large amount of extra work is devolving on the railway officers. Capt. Robert McCulloch, president and general manager of the United Railways Company of St. Louis, is chairman of the centennial committee.

The Badger Fire Extinguisher Company of Boston, Mass., has a large and attractive display of various types of chemical fire extinguishers and 40-gal. chemical engines for use in trolley cars and car houses. This company has equipped all the car houses of the New York City Railway Company with 40-gal. chemical engines, having installed a total of 33 machines of this type. Its exhibit is in charge of Charles R. Edwards, general manager, Boston, Mass., and A. E. Stone, New York manager.

Denver has 29 parks, covering 1100 acres. A boulevard system connecting all the parks and encircling the city is now under construction.

ADDRESS OF PRESIDENT ALLEN OF TRANSPORTATION & TRAFFIC ASSOCIATION

It is a source of great pleasure to your president that he is present and able to greet the delegates of the Transportation & Traffic Association assembled in this fair city—Denver. Those who have traveled from the far Western country and the Pacific Coast, and those who have come from the far East and the Atlantic Coast are glad indeed to assemble in convention with the delegates from the middle and central West. Again repeating, it is a great pleasure to be here and call this meeting to order, knowing that Denver has importuned this visit and that she has welcomed us with the warmest hospitality. Denver has shown a desire to impress upon us the greatness of the city, the business ability and hustle of her people. We should be duly appreciative of the hearty welcome extended to us. We will remember for many years the Denver convention of 1909, and will cherish in our memories the new acquaintances we will have formed, as well as the fact that we came here, assembled in convention, transacted the work in a business-like manner, and departed for our homes with a knowledge of having performed our duty to the Transportation & Traffic Association to the fullest degree. Your president will not tire you with a lengthy address, but will confine these remarks to calling attention again to the work of this association.

At the close of the 1908 convention held in Atlantic City, it was the firm conviction of the officers and executive committee of this association that the work during this year should be wholly confined to the standing committees and that the sessions of the 1909 convention would be devoted to the consideration of the reports submitted by these committees.

The standing committees of our association are, the committee on passenger traffic, committee on interurban rules, committee on express and freight traffic, committee on city rules, committee on transfers and transfer information and the committee on the training of transportation employees. The reports from these standing committees will be received in the order above outlined, precedence being given to the committee on passenger traffic for the reason that at the Atlantic City convention its report was not read, owing to the shortness of time allotted to the sessions. The report submitted at Atlantic City was received, printed, and contains information compiled by the committee that is valuable to the superintendent or manager who may be desirous of stimulating passenger traffic. This report with its references and catalogued index will supply detailed information to those desiring information upon the subject that has never before been assembled.

The work of all the standing committees since the 1908 convention and during the year 1909 has been pursued with great energy. The chairman of these various committees will report the number of sessions of their respective committee, and will outline briefly the work they have undertaken to accomplish. Having kept in close touch with the chairmen of these committees, I know that a large amount of detail work has been performed by the members of these committees. The committees are entitled to great credit and the thanks of this convention for the labor they have performed.

The Transportation & Traffic Association has not as yet accomplished or produced any one definite thing. It has not recommended the adoption of, or given the stamp of its approval upon, any of the reports of its committees. At the last convention it was not deemed wise to recommend, approve or promulgate the work of its various committees, as the members of the association at that time had no opportunity of considering and voting intelligently upon the reports that had been submitted. Since that convention, however, the work of the various committees has been in

the hands of the member companies and their representatives through the medium of the proceedings of this association in all cases, and in special reports which have been promulgated by the committee on interurban rules, and the committee on city rules, in a special circular sent out by the secretary, so that there does not now exist the excuse that the member companies and the delegates in attendance at this convention have not had time to carefully consider the subjects that have been presented. The mile-stones of progress in this association will be marked by the work we have performed and accomplished.

The work performed by this association for the past year has been the work of its standing committees. The things we will accomplish will be the adoption of the reports of standing committees. This convention must not adjourn until it has, after careful consideration and due deliberation, adopted by suitable resolutions the reports of the committees. The adoption of a committee's report by this association should receive the complete approval of the parent association at its final session on Thursday afternoon.

If this association, after receiving the reports of the committee on interurban rules and the committee on city rules, after the fullest discussion and making such amendments as it may deem proper and wise to make, shall adopt them and in adopting them show by that stamp of approval that these rules are the best up to the present time for the government of employees on both interurban and city railways, I shall feel that we have given not only to the members of the American Street & Interurban Railway Association, but the transportation world at large, recommendations that will be conducive to better transportation methods, both as to safety and convenience of the traveling public and that transportation conditions in general will be bettered by the adoption and general use of these bodies. We can all feel that if the adoption and general use of these two reports are accomplished at this convention that we have performed a duty well.

The adoption of the reports of our standing committees will not mean that we have accomplished the end in these matters, or that we have attained perfection in them. The reports should be referred to the incoming standing committees for further consideration, suggestions and improvements. The work during 1910 will without doubt produce amendments which should be presented at the 1910 convention and if accepted by the association will bring the reports up to date, so that at the close of each annual convention the amended reports will reflect the best energy, thought and practice on all subjects.

In some of the older steam railway associations the standing committees have been considering the work allotted to them for 25 years and amendments made at each annual convention by the committees have shown changes in railway practice, the amendments being based upon the results obtained by a careful study of the subject as changing conditions are presented. Electric railway practice in the transportation field will change as conditions change, and as these changes occur so should amendments to the reports of our standing committees be made.

In concluding this short address I cannot refrain from expressing to the officers and members of the executive committee and to the members of this association my heartfelt thanks for their assistance and co-operation during my term of office as your president. Without co-operation on your part the successful sessions of 1908 could not have been produced, and the splendid program of the 1909 convention prepared. To the chairmen and members of the standing committees I wish to express my thanks for the work that has been done. The association will more formally do this when it has considered the work which you have undertaken and so admirably performed.

I am pleased to see so many members in attendance at

this convention. Let me urge those present to-day to be prompt at the meetings and to assist in bringing others to attend the meetings and to remember that you have come here to give freely all the experience gained in the reports and papers under discussion and that the most good will be accomplished to all when there is a full and free discussion.

INSTALLATION OF EXHIBITS

The exhibit committee of the American Street & Interurban Railway Manufacturers' Association is entitled to great credit for the thoroughness and efficiency of its work in installing exhibits in the Auditorium and Annex. The entire undertaking was accomplished in the week prior to the opening of the convention, and on Sunday night, Oct. 3, all booths were completed and the aisles cleared. There are about 135 exhibitors occupying 45,000 ft. of exhibit space. The arrangement of posts, railings and signs is uniform and pleasing; white and green are the prevailing colors. The exhibition contains numerous pieces of heavy machinery, and in nearly all parts of it the weight allowed per square foot of floor is 250 lb.

A consolidation of freight shipments was effected by which consignments in less than carload lots were concentrated at New York and Chicago and sent through in one car in each case. The New York car arrived in good time, but the Chicago car was detained by an accident to the truck, although not enough to cause any appreciable trouble. This car arrived and was unloaded on Friday morning. This consolidation of freight resulted in a considerable saving in money and made it easier to trace the shipments and handle them on arrival.

The Manufacturers' Association provides the general lighting for the entire premises until 10 o'clock each night. Arrangements have been made with the Denver Gas & Electric Company for special lighting and electric signs. The association provides exhibitors a reasonable amount of electricity for power at 110 and 220 volts a. c. and 220 and 550 volts d. c. This is done without extra charge to the exhibitors. Boxes, crates and packing material are stored in the basement of the Auditorium. The buildings are guarded at all hours of the day and night by special watchmen, as well as by the Police Department, and the Denver Fire Department has firemen in the buildings constantly.

The car exhibit is at the Champa Street end of the Annex. Here there are several complete cars on exhibition, as well as a mining locomotive in operation on a narrow-gage track.

The exhibit committee of the American Street & Interurban Railway Manufacturers' Association consists of Kenneth D. Hequembourg, Walken-Bennett Manufacturing Company, New York, chairman; L. M. Cargo, Westinghouse Companies, Denver; L. M. Cole, Sherwin-Williams Company, Denver; R. M. Babbitt, *Electric Railway Journal*, Chicago; G. W. Cox, Electric Supplies Company, Keokuk; Arthur T. Herr, American Brake Shoe & Foundry Company, Denver; H. J. Kenfield, Electric Traction Weekly, Chicago; Charles Knight, American Steel & Wire Company, Chicago; H. G. McConaughy, Dearborn Drug & Chemical Company, New York; S. P. McGough, Lorain Steel Company, Chicago; C. J. Thompson, The J. G. Brill Company, Denver; A. L. Wilkin-son, Ohio Brass Company, Mansfield.

Mr. Hequembourg has been indefatigable in his work as chairman of the exhibit committee, and he has been ably seconded by the Denver members of the committee, Messrs. Cargo and Herr looking out for the power, Mr. Cole for the freight and cartage and Mr. Thompson for the car exhibit. F. W. Darlington, an experienced railway man, electrical engineer, Denver & Interurban Railway, Denver, is the director of exhibits. A word of appreciation should also be extended to the Denver Convention League, which has co-operated with the exhibit committee to the fullest

extend and done everything that it could for the success of the railway convention. President C. H. Morse and Secretary W. F. R. Mills have represented the league in connection with convention matters most acceptably.

STREET CARS TO HOTELS

While all of the principal Denver hotels are within walking distance of the Auditorium, if one does not object to a little exercise, nevertheless it will be useful to know the street railway routes between the convention hall and some of the leading hotels.

To reach the Albany, Kaiserhof, Savoy, Shirley and Brown Palace, the visitor should take a Twenty-second Avenue car, eastbound, passing the main entrance of the convention premises. Riding three blocks he should transfer either to the Park Hill or the Seventeenth Street car going up Seventeenth Street. Cars on the Twenty-second Avenue route run every seven minutes and on Seventeenth Street very three minutes during the day. To reach the Adams Hotel, take the Twenty-second Avenue car and transfer to Depot Loop car going up Eighteenth Street. The St. James Hotel is but two and a half blocks from the Auditorium, and the Twenty-second Avenue cars pass the door.

REPORT OF THE COMMITTEE ON PASSENGER TRAFFIC*

M. C. Brush, Chairman; E. F. Peck, Franklin Woodman, F. W. Coen, W. S. Whitney and C. E. Flagg

At the convention held at Atlantic City in October, 1903, the committee on passenger traffic submitted a lengthy report on the methods of procedure by various electric railroads throughout the United States for creating traffic, laying particular stress upon the methods pursued and results obtained in connection with the operation of parks or pleasure resorts.

At the time of securing that report efforts were made to cover the ground as thoroughly as possible, and it therefore seemed wise in the report of the committee for this year to endeavor to lay before the Association examples of means adopted by electric railway companies throughout the United States in calling to the attention of the public features which would result in increased traffic.

The committee was reluctant to forward a circular letter to all the member companies for this information, and therefore the greater portion of the United States was divided into arbitrary divisions, governed to a certain degree by the homes of the respective members of the committee, and each member endeavored to secure from his territory a comprehensive assortment of all kinds of printed matter, such as folders, flyers, time-tables, pamphlets, postal cards, etc., referring to the matter in hand.

The committee was successful in securing printed matter from 117 companies, varying in number from one to twelve classes of printed matter, making a total of 278 different samples submitted. These the committee has endeavored to carefully arrange and have on exhibition in the convention hall.

It will unquestionably be surprising to some members of the Association to note the tremendous amount and variety of this matter being published, particularly when it is realized that it is but a few years since any effort along these lines was inaugurated.

The committee believed that the best results from its report could be secured by requesting a discussion of the relative merits of the different classes of printed matter.

*Abstract of report read before the American Street & Interurban Railway Transportation and Traffic Association, at Denver, Colo., Oct. 4, 5, 6, 7 and 8, 1909.

A SOUVENIR WORTHY OF A FINE TRIP

As is well known, the special train of the Massachusetts Street Railway Association, after leaving Denver will visit Salt Lake City, Butte, Helena, Seattle, Tacoma, Portland, San Francisco, Los Angeles and many other cities before returning to Boston. As many of the cities on the route are managed by Stone & Webster of Boston, and as the idea of the trip originated largely because of an invitation from this firm to visit its properties in the Far West and Southwest, the Stone & Webster Engineering Corporation presented to each of the party a souvenir album which will prove very useful during the trip, and also as a memoir of it. It consisted of a book of 73 pages and contained particulars of the equipment and stocks and bonds of each electric railway in each city to be visited, as well as a short statement in regard to the history of the city and its leading industries. A list of references in the *Street Railway Journal* and the *Electric Railway Journal* of each of the properties described is included. The book also includes a printed list of all of the members of the party and blank pages for autographs, memoranda and photographs.

The title page of each book bears the imprint of the name of the member to which it was presented. The cover is particularly tasteful and shows a cowboy throwing a lasso. The form of the loop of the lasso is that of the route to be traversed by the party. The frontispiece is a reproduction of a large painting in the Stone & Webster offices in Boston, giving a bird's-eye view of the district extending from the foot of Mount Ranier to Seattle. The picture shows the 20,000-hp water power development at the foot of the mountain, the transmission line, and the city of Seattle in the distance.

THE BOSTON SPECIAL TRAIN

The Boston special train which arrived in Denver at 4 o'clock Sunday morning will leave Friday night at 2 a. m. for its trip to the Pacific Coast. Altogether, there were 77 passengers on the train, including 27 ladies. Most of them came through from Boston or some other city in Massachusetts but several from New York boarded the train at Utica and at other places. About three hours were spent in Chicago and about the same time at Omaha. The latter visit was particularly pleasant, as the delegates were entertained by an automobile trip around the city, supplied through the courtesy of the Commercial Club of Omaha.

When the train reached the Omaha station at 9:30 a. m. on Saturday it was met by the representatives of the club and the tourists were escorted to some 20 automobiles which were in waiting. Each member of the party was decorated with a guest's badge bearing the name and colors of Omaha. The party then separated to visit different points of interest, but most of them went to Fort Omaha, where they watched the arrival of a large body of cavalry and artillery which had just traveled from Des Moines. Another object of interest at Fort Omaha was the large aerodrome, where military dirigible balloons are housed. A visit was also made by most of the delegates to the Country Club at Omaha, where refreshments were served. Many also called at the offices of the Omaha & Council Bluffs Street Railway Company.

After leaving Omaha, the party sent the following telegram to Mr. Guild, president of the club:

"Only regret time was too short to appreciate fully such hospitality which had the true American flavor. Accept our heartfelt thanks for the courtesies extended. None of us fully appreciated until now the commercial and social advantages of Omaha. We are certain that Omaha will have a great future."

Mr. Guild replied as follows:

"Thank you for your kind message. We enjoyed your visit immensely. Wish you might have remained longer and hope you will come again. Maybe you will have your convention here sometime. Best wishes for a pleasant and profitable journey."

A telegram of appreciation was also sent to E. L. Lomax, general passenger agent of the Union Pacific Railroad at Omaha, who had been largely instrumental in the arrangements for entertainment. Another message of similar tenor was sent to G. A. Cairns, general passenger agent of the Chicago & Northwestern Railway at Chicago, extending the thanks of the Massachusetts Street Railway Association to him for the service and hospitality extended to the passengers while the train was on the Northwestern system. Among the attentions of the railway company was the presentation to each of the ladies on Saturday morning of a large box of roses.

THE NEW YORK CENTRAL-ROCK ISLAND SPECIAL

The New York Central-Rock Island special, which left New York at 3:30 p. m. on Thursday, Sept. 30, and reached Denver at 6:35 p. m. on Saturday, Oct. 2, bore an assemblage which represented the last word in good fellowship. Everybody was put in a pleasant frame of mind at the outset, for not a single member was obliged to take an upper berth. Moreover, by the thoughtfulness of the committee, delightful weather had been provided, and the time of leaving New York so well calculated that the travelers were afforded a fine view of the "Half Moon" and "Clermont," as they sailed up the Hudson River. Some of the sporting spirits on the train, under the impression that they were on a ship, made up a pool as to the exact time of arrival. It is rumored that "Transfer" Stedman and Bertram Berry were the winners of the first prize. The crowning feature of the trip was an "ultra-refined" musical and literary entertainment which was held Saturday afternoon on the observation car. The following is an exact copy of the program as printed on the train:

Ultra-Refined Musicale

- Selections.....Rocky Voiced Sextette
(Rocks furnished by the Rock Island Railroad)
Selection.....Bertie E. Berry
(Composer of The Vacant Chair)
Song....."Singer" Smith
(The Boy Tenor; born in 1846)
Song.....Tom Hay
(The Man from Montana)
Pleasing Ballads.....Colonel Marshall
(The man with the double-barreled voice)
Special Feature
Marvelous mind reading Stunt....Professor J. "Fay" Ryan
(All those with minds please step forward)
Song—"We'd Like to Be Back on Broadway".....
(To be sung rising at the next watering station by the entire audience (if any be left))
Monologue—By "Transfer" Stedman, the famous raconteur,
"Wild Conductors I have Known"
Daring continuous performance on an untamed piano by the
Infant Prodigies, Masters Chaffee and Hopkins.

TO OUR PATRONS

Entire expense of this performance is more or less cheerfully borne by the "Angel" of the Show, F. Terence MacGovern, the noted Philanthropist who endowed the Library at Phillipsburg. Manager, D. Belasco Loomis.

Positively no encores; no missiles over 5 lb. Please omit flowers.

The passengers were so well pleased with the train service that they passed the following resolution of thanks for transmissal to the responsible parties:

Whereas, The special train operated by the New York Central Lines and the Rock Island Lines from New York to Denver for the accommodation of members of the American Street & Interurban Railway Manufacturers' Association and their guests has been conducted so successfully in every respect that the passengers desire to express their keen appreciation of the courtesy, convenience, comfort and pleasure which they have enjoyed by reason of the efforts made in their behalf; therefore be it

Resolved, That the passengers unanimously pass a vote of thanks to the New York Central Lines, the Rock Island Lines, the Pullman Company and especially to their efficient representatives, Messrs. L. F. Vosburgh, K. E. Palmer, J. V. Ryan and E. E. Spangler, for the excellent character of the service rendered.

THE PENNSYLVANIA SPECIAL FROM NEW YORK

The Denver convention special train from New York, over the Pennsylvania, Chicago & Northwestern and Union Pacific railroads, left Jersey City at 4:16 p. m., Friday, October 1. A large delegation of wives and stay-at-homes saw the party off. At North Philadelphia the Philadelphia Rapid Transit Company delegates and several supply men were taken on board. The train reached Harrisburg at 8:30 and took on a large party from Baltimore, Washington and other Southern cities, headed by Gen. George W. Harries of Washington. After a fast ride over the mountains an extra car, containing the Pittsburg delegates, was attached at Pittsburg at 1:37. Chicago was reached exactly on time, at 10:42 a. m. Saturday morning. The train was immediately switched from the Pennsylvania Railroad to the Northwestern Depot, where a stop of about an hour was made. The entire party was photographed in the station and at 12:10 p. m. the special started again on its way westward. A fast run was made across Illinois and Iowa. Omaha was reached at 12:30 a. m. Sunday and the train left at 1:07 a. m. over the Union Pacific. Two powerful engines pulled the 10 cars at a fast and steady gait across the plains, reaching Denver at 12:37 p. m. The running time from Omaha to Denver was 12 hours and 30 minutes at an average speed of 52 miles per hour. This breaks all previous records between Omaha and Denver, the fastest previous run being 13 hours and 40 minutes. The train carried 142 passengers and consisted of two standard sleeping cars, four compartment sleeping cars, a compartment observation sleeping car, a club car and two dining cars.

The train was in charge of a committee of which W. L. Conwell of the Westinghouse Electric & Manufacturing Company was chairman. Every provision was made for the entertainment and comfort of the party. On Friday evening a reception for the ladies was held in the observation car at the rear of the train and at the same time a smoker was given in the club car at the front of the train. A Pianola and a Columbia phonograph provided music in the observation car and another phonograph dispensed canned music in the club car. Saturday night a bridge whist tournament was held in one of the dining cars and handsome prizes for both ladies and gentlemen were awarded. An interesting feature of the trip was a guessing contest as to the mileage covered in each of the first three 12-hour periods. Beautiful prizes were given by the committee to those lucky enough to approximate the actual distance run. Before the train reached Denver the passengers' unanimous appreciation of the painstaking efforts of the committee in charge was expressed in the form of a resolution of thanks, which was signed by every member of the party and presented to Mr. Conwell.

THE ST. LOUIS PARTY

About 60 ladies and gentlemen formed the St. Louis party to the convention, leaving that city at 2:30 p. m. and arriving in Denver at 4:30 p. m., traveling over the Wabash and Union Pacific roads. The party filled two Pullmans and consisted of people from the Southeast, Southwest and Central West. Arthur S. Partridge of St. Louis was in charge of arrangements and the trip proved very enjoyable. Among those on the train were Messrs. Pratt, Gunsalus and McMullen of the Southwest Missouri Railroad of Webb City; Mr. Bixby of the Springfield (Mo.) Railway & Light Company; Messrs. Traddles and Barnes of the Westinghouse office in

Kansas City; Mr. Markham of the Brill Company at Atlanta; Bert Slimp of Atlanta, and E. C. Brown of Kansas City, both of the Ohio Brass Company; and J. M. Moffatt of the Metropolitan Street Railway Company of Kansas City.

SONS OF JOVE, ATTENTION!

Sons of Jove will hold a rejuvenation at El Jebel Temple, corner Eighteenth Avenue and Sherman Street, Denver, on Friday evening, Oct. 8, at 8 p. m. Immediately following there will be a banquet at the Hotel Savoy. Visiting Jovians are cordially invited. Apply for dinner tickets to John J. Cooper, Mountain Electric Company, 1621 Glenarm Street.

TO CONVENTION VISITORS

When Denver undertakes a thing
It never is a frost;
She pushes it along with vim
Regardless of the cost.
She gives to all a welcome that
Is warm throughout, and true;
And when it comes to promises,
Whate'er she says, she'll do.

If you should fail to find while here
Her welcome warm and true,
Just blame yourself for missing what
Has been prepared for you.
For everything that's possible
Has been arranged, you bet,
For making this, "the Denver meet,"
The greatest ever yet.

—E. B. Grimes.

BURLINGTON SPECIAL FROM CHICAGO

The special train from Chicago to Denver arranged for by the Burlington Route, for members of the associations, their families and friends, left the Burlington Station, Chicago, at 4 p. m. Saturday, Oct. 2, was on time at every one of its junction points, and arrived in Denver promptly on time, at 4:30 p. m., Oct. 3.

The special was one of the finest equipped trains ever furnished for the street railway convention during the 27 years in which these meetings have been held. The train consisted of eight modern and up-to-date Pullman cars, two of the Burlington's finest dining cars, and a buffet club car and baggage car. On the rear of the train were two transparencies, one portraying the emblem of the association, the other the trade mark of the Burlington Route, which added luster to the train's appearance.

On departure from Chicago every one of the 195 passengers was handed a souvenir list of the passengers, enclosed with note paper in an envelope already stamped for mailing. The passenger list was unique and one of the most beautiful booklets of its kind ever prepared. It was printed in brown and gold, on imported Italian paper, showing the names and addresses of the passengers in each car. The note paper was a heavy white deckle-edged paper, specially printed in gold for this train; and with much forethought the Burlington officials had stamped the envelopes so that the list could be mailed home at once and preserved as a souvenir of the trip. A further supply of the special note paper and envelopes was found in the writing room of the observation car for the use of members of the party en route. Souvenir post cards were also distributed and a full line of current magazines was in the observation-library car. Beautiful bouquets of flowers had also been placed in the observation car and dining car, and everything that could possibly have been thought of for the comfort and convenience of the passengers had been arranged for.

The train was personally escorted by O. L. Dickeson, assistant to the second vice president, and A. J. Puhl, city ticket agent of the Burlington, Chicago, Ill.

CLAIM AGENTS'—FIRST MEETING

The sixth annual convention of the American Street & Interurban Railway Claim Agents' Association was called to order at 2 p. m. Monday in the Metropole Hotel. About 50 members were present. The first order of business was the presidential address delivered by C. B. Hardin, who called particular attention to the number of new men before him. He regarded their presence as a proof that the Western companies were well represented. He said that the constantly increasing draft upon the treasuries of the street railway companies by those who are really injured and those who think they are injured, and the growing sentiment that he who is injured shall be compensated by the one committing the injury has made it necessary that the claim agent should broaden out. By constant study he could fit himself to meet the new conditions and properly direct a department that has become one of the most important spokes in the wheel of operation of which the general manager is the hub. Thus he could become something more than the door-keeper of what has frequently been called "the rat hole of the treasury." He was particularly interested in the question of an index bureau, as claimants are increasing so rapidly that something must be done toward securing a systematic record for quick and ready reference. In conclusion, Mr. Hardin expressed his thanks to the several committees and the secretaries of the parent and claim agents' associations.

On the conclusion of the president's address, the executive committee offered the following amendments to articles III and IV of the constitution as determined at a meeting held in New York on Jan. 28, 1909:

Executive Committee Report

A. Active members, consisting of active members of the American Street & Interurban Railway Association. Each member shall be entitled to one vote, which shall be cast by the properly accredited representative of the claim department.

B. Associate members, consisting of claim agents and others employed in or by the claim department of street railway companies which are not members of the American Street & Interurban Railway Association. Associate members shall have the same privileges as active members, except that they shall not be entitled to vote or hold office, nor shall they have the privileges of the floor unless permitted by the association. No person shall be elected to membership except by the unanimous vote of the executive committee, and in event of any associate member severing his connection with the claim department of a street railway company his membership in the association shall cease, and all his rights and privileges herein are forfeited and ended. The fees and annual dues for associate members shall be those charged by the American Street & Interurban Railway Association.

A further amendment to By-laws, Section 1, provides that former presidents of the association, who are eligible to membership may by vote of executive committee, become honorary members of said committee.

Article IV (a) was changed to read as follows:

*The capitulation shows 208 1908 members in good standing before each regular meeting of the association, and shall hold such special meetings as may be necessary. Such special meetings may be called by the president. Five members shall constitute a quorum at all meetings. A vote of the executive committee may be taken by mail when deemed necessary by the president.

A proposed amendment to the By-laws, Section 1, provides for making the office of secretary-treasurer an honorary position, without salary, and transfer the active duties of the office to the secretary-treasurer of the American Street & Interurban Railway Association. (This amendment was requested by the executive committee of the American Street & Interurban Railway Association.) This proposed amendment was defeated by unanimous vote.

It was moved and adopted that a committee of three be appointed by the chair to consider the questions of index bureau and Alliance Against Accident Fraud, and report their recommendation to the convention in 1909. It was also moved and adopted that the question of uniformity of accident reports be referred to a special committee of three, to be appointed by the chair, who shall

consider the same and formulate a plan and report to the convention of 1909 for adoption. It was also moved and carried that the chair appoint a committee of three to confer with the executive committee of the Accountants' Association the question of classification of reports. The chair appointed John J. Reynolds, H. R. Goshorn and F. J. Ryan.

After considerable discussion it was decided that the question of subjects for the next convention be referred to a committee of three to be appointed by the president, and upon their report to the president he should designate the men to bring the subjects before the next convention. And it was further decided that debates on all questions were to be limited to five minutes to each member wishing to talk. It was decided that no papers should be prepared but subjects should be allotted by the president to four or five members to prepare and to give their views orally before the next convention.

In April a mail vote of the executive committee was taken as to the advisability of a question box for the 1908 convention. It was decided to dispense with the question box for that convention.

Secretary-Treasurer's Report

On the conclusion of the executive committee's report, Secretary-Treasurer Davis recited a number of cases where warning circulars had been sent out from his office in connection with accident fakers. He had also corresponded with Acton Burrowes, secretary-treasurer of the Canadian Street Railway Association, regarding the interchange of fake claim circulars. As treasurer, Mr. Davis reported that there had been no funds in his charge since Oct. 1, 1908, but that the parent association had charged a total of \$1,274 against the Claim Agents' Association to cover all expenses for the last year. The reports of the executive committee and Mr. Davis were adopted as read.

Subjects Discussed

W. A. Satterlee, assistant general manager of the Kansas City Railway & Light Company and F. J. Ryan, claim agent of the Syracuse Rapid Transit Company, were assigned to the topic "What is the Best Means of Preventing Collisions of Cars and of Cars With Vehicles and Pedestrians?" After a general discussion of this subject a photograph of the delegates was taken and arrangements made for an informal dinner at the Metropole Hotel at 6:30 Wednesday evening. President Hardin announced the following committee on nomination carried that the chair appoint a committee of three to confer with the Rapid Transit Company; James R. Pratt, assistant general manager of the Baltimore United Railways & Electric Company; H. B. Drown, general claim agent of the Public Service Railway Company; H. M. Braun, claim agent East St. Louis & Suburban Railway; W. Tichenor, claim agent of the Terre Haute, Indianapolis & Eastern Traction Company. This committee will report at the Wednesday morning session.

The program for Tuesday will comprise two sessions, one beginning at 9:30 a. m. and the other at 2:00 p. m., as announced in the official program. The program committee consists of E. C. Carpenter, claim agent Indiana Union Traction Company; J. R. Pratt, assistant general manager of the Baltimore United Railways & Electric Company; and John J. Reynolds, claim agent Boston Elevated Railway Company.

ADMISSION OF THE PUBLIC

Many requests for admission to the exhibition have come from the general public, and it has been determined to admit the people of Denver for a nominal fee on Thursday. The proceeds will be turned over to Denver charities. Those strangers who desire to visit the convention exhibits on other days, and who have a legitimate interest therein, should apply for passes to George Keegar, secretary of the Manufacturers' Association.

The timber line on the mountains of Colorado is 11,000 ft. above sea level.

NEW STEEL CARS OF THE SEATTLE RENTON & SOUTHERN RAILWAY

Ten all-steel cars of an original design are now being built by the Moran Company of Seattle, Wash., for the suburban and interurban service of the Seattle, Renton & Southern Railway Company. These cars were designed by Charles H. Anderson, chief engineer of the railway company. Accompanying illustrations show the general appearance and some of the detail features of this type of car, which is built on rather original lines.

The body and underframing of these cars are entirely of steel, practically all of the members of which are standard structural shapes. In the design of the body the single side-entrance feature of the California type car has been used, but unlike most electric railway passenger cars, the body has no monitor deck. The roof is formed from steel plates carried from the top of the windows on one side to the top of the windows on the other side and supported within the car by T-section ribs, one over each window post. Four 6-in. channels extending from bumper to bumper carry the main floor stresses. It was necessary at the center side-entrance to cut one of these sills, but the structure at this point is reinforced with a deep channel, the back of which forms a part of the top entrance step, and with structural shapes carried beneath the steps as shown.

The general dimensions of the car bodies are:

Length over bumpers.....	50 ft. 2½ in.
Length over sills.....	49 ft. 0 in.
Center to center of trucks.....	32 ft. 0 in.
Width inside.	8 ft. 6 in.
Clear height inside of car.....	8 ft. 3 in.
Bolster centers distance.....	31 ft. 0 in.
Height from top of rail to top of first step	1 ft. 0 in.
Seating capacity.	70 passengers

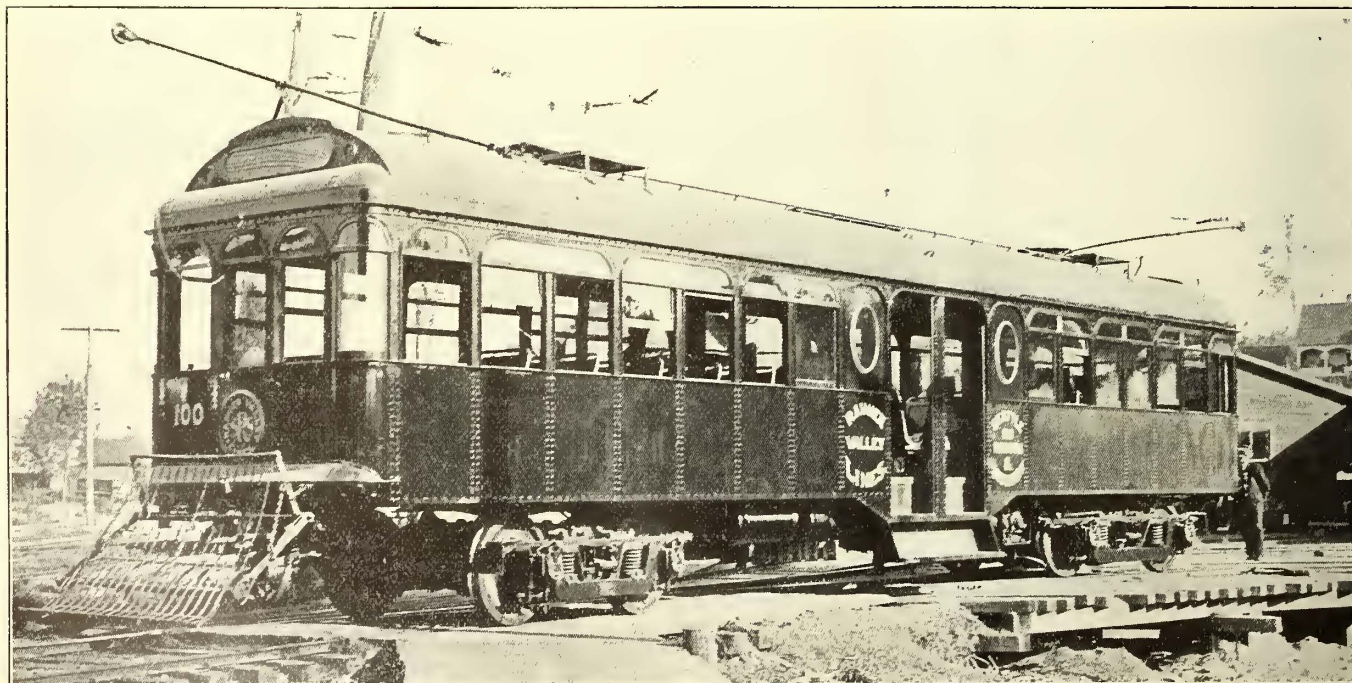
A diagram showing an analysis of the stresses in the body of one of these cars is presented. In calculating stresses

considered as being carried by a girder composed of the material below the windows only. With these assumptions and the materials chosen the designer of the car found a unit stress of 1800 lb. per square inch at the height of the channel-iron sill and at the center of the car length. The neutral axis



Seattle & Renton Steel Cars—Center Side Entrance

of the body structure between center bearings was found to be 35.4 in. above the bottom of the sills. The unit stress in the deck rail above the center door was found to be 2630 lb. per square in. The stresses at this point on the door side are carried by a 2½x3-in. 4.5-lb. angle and the



Seattle & Renton Steel Cars—Side View Showing Center Entrance

it was assumed that the car body loaded with passengers would have a total weight of 44,000 lb. uniformly distributed over its entire length. The channel-iron sills, the angles above the windows and 10½ in. of the No. 10 gage steel plate only, were taken into account when calculating the stresses at the side entrance opening. The overhang from the center line of the truck to the end of the car was con-

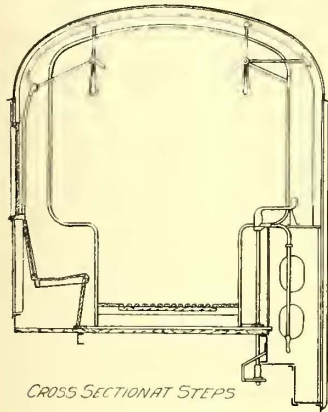
10½-in. section of the No. 10 gage steel plate forming the turtle-back roof. At the bolster where the neutral axis is 14 in. above the bottom of the sills unit stresses of 1750 lb. and 3000 lb. were found in the sills and at the window arm-rail level respectively.

A half-sectional view of one of the car bodies is shown, together with a partial seating plan. The cars are designed

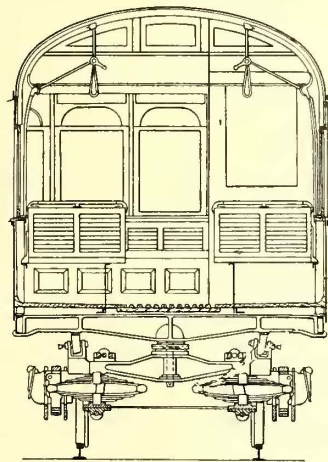
for single-end operation, but are equipped with double-end control. Seats are provided for 70 passengers. A specially designed seat built of teakwood is used. The exceptionally large seating capacity of 70 passengers in a 49-ft. body is obtained by placing cross seats at each end of the car with the backs close against the end bulkhead, and a long side seat on the blind side of the car facing the center entrance. A motorman's cab is provided at the right-hand forward end of the car. This enclosure is made with sliding doors so

fixtures also are special and provide as usual for one Pantasote curtain in front of the window sash. The curtain rollers are supported on brackets a short distance away from the sash grooves so that clearance may be had when it is desired to raise the sash clear of the window opening.

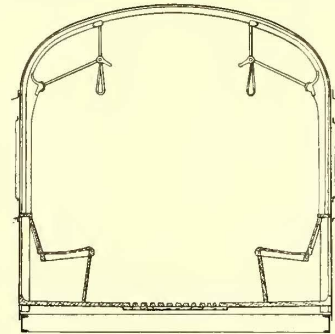
The interior of the car body is illuminated by two rows of incandescent lamps supported with their tips up and carried by two lines of heavy conduit, one along either side of the car. This conduit is securely supported at the proper



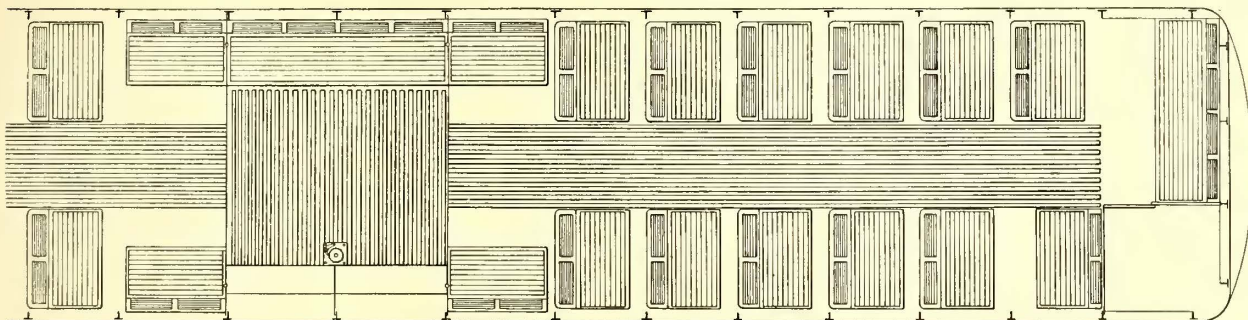
CROSS SECTION AT STEPS



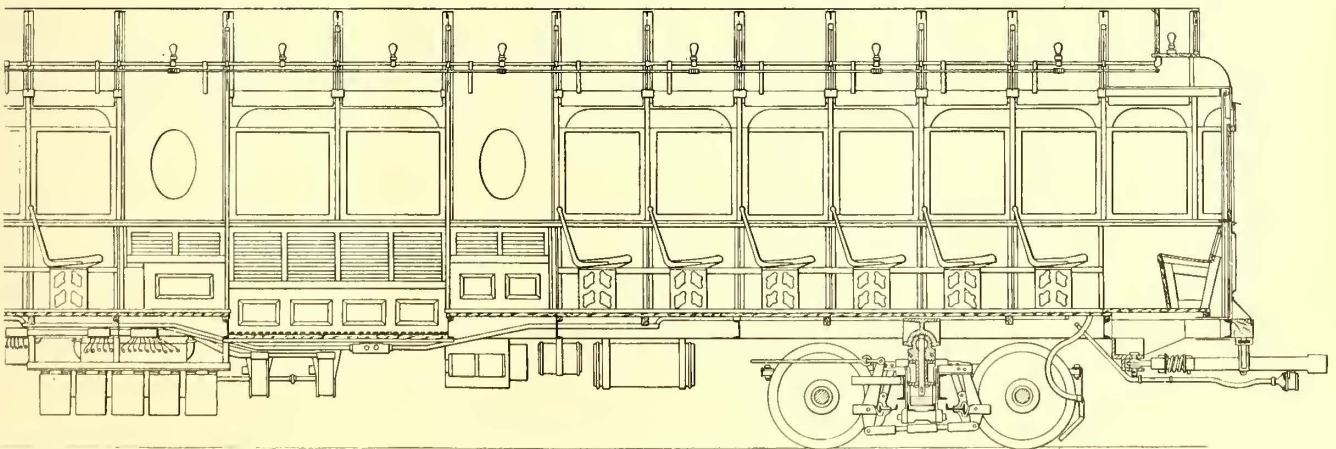
CROSS SECTION AT FORWARD BOLSTER



CROSS SECTION THROUGH DIAPHRAGM WINDOWS



SEATING PLAN



VERTICAL SECTION THROUGH CENTER LINE OF CAR

Seattle & Renton Steel Cars— Half Plan and Longitudinal and Cross Sections.

arranged that the motorman can be entirely shut off from the body of the car. A clear view forward and back of the car is obtainable from practically any part of the car body.

The steel framework of the car sides and window posts in connection with the roof supporting ribs is so designed that the bottom window sash may be raised and lowered entirely out of their ways and thus easily be removed for renewal or repair. The sash and the very flexible window arrangement were designed by Mr. Anderson. The curtain

height to afford a substantial strap rail. The curved turtle-back roof serves as an excellent diffusion medium for the rays of light from the vertical lamp globes. At each end of the car a destination sign box is built in the steel framework and arranged to be illuminated by incandescent lamps in series with those which illuminate the interior of the car body. The single wide door-opening of this car is fitted with sliding doors directly above the steps operated with an air-actuated mechanism. Each half of the center entrance is closed with a door which is moved toward and away

from the center post on the steps in closing and opening.

Each car body is mounted on two heavy M. C. B. type Baldwin trucks equipped with a bolster and center bearing of special design. The bolsters, both body and truck, are cast steel. In place of the usual form of through king bolt and in addition to the flat center bearing the body bolster has a hemispherical recess which rides on a spherical bearing pivot carried by the truck bolster. This knuckle joint permits the truck to turn or tilt in any direction without

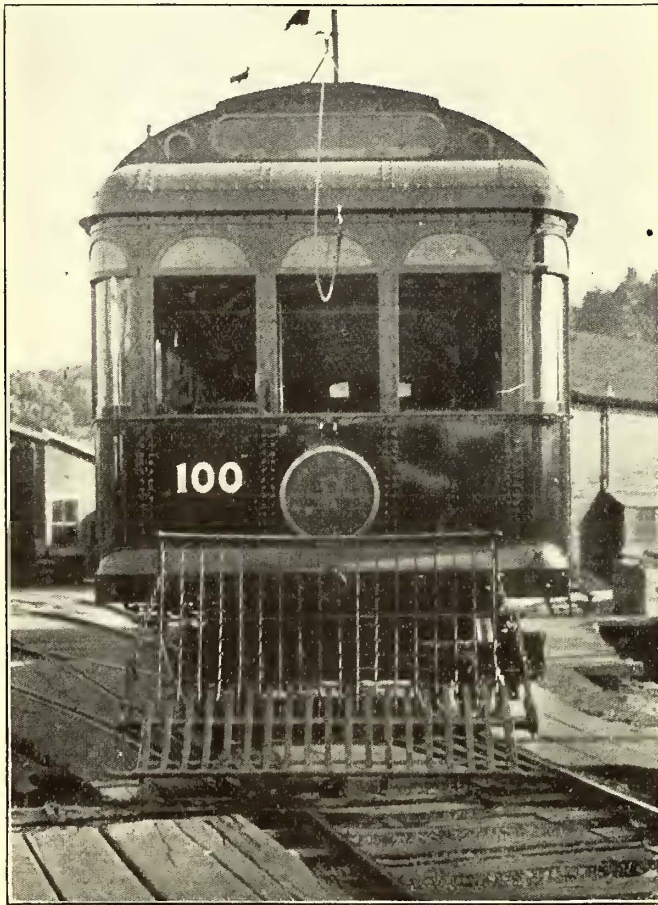
constructed for the Seattle, Renton & Southern Railway, is as follows: Tomlinson automatic couplers; Worcester fenders; General Electric headlights; Symington journal boxes; Sherwin-Williams paint; Ideal trolley retrievers; Standard steel wheels.

THE DENVER AUDITORIUM

In many respects the Auditorium, where the convention is held, is unique. To begin with, the land and building belong to the City of Denver, the enterprise being authorized by popular vote. So far the building has cost \$575,000. It is a fireproof steel, concrete and brick structure fronting 175 feet on Curtis Street and running back 266 feet on Fourteenth Street. The exterior is dignified and handsome. As a convention hall it will seat 12,500 people comfortably, being the largest hall in the United States with a plastered ceiling. The ceiling is 60 feet from the floor. There are two galleries at one end of the building and three at the other. By a most ingenious arrangement the hall can be transformed within an hour into a theater having seating capacity for 4,000. The roof is supported by steel trusses 175 feet long resting on steel columns independent of the walls

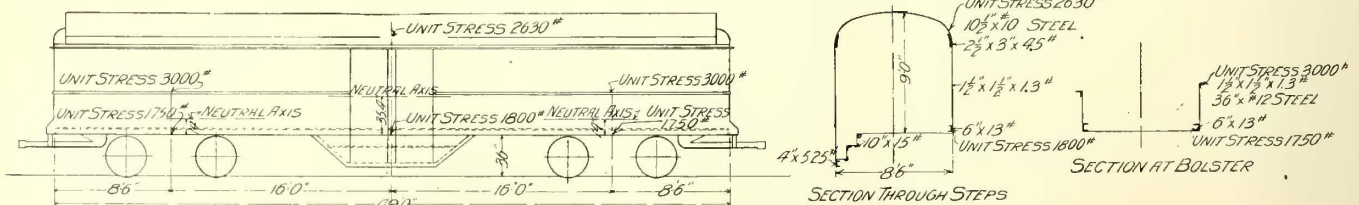
A heating, lighting and power plant is located in the basement, consisting principally of Babcock & Wilcox boilers, ldeal engines and Northwestern d. c. generators. Heating is both direct and indirect, four Sturtevant fans, motor driven, being provided for the latter purpose. In summer cooled air is forced through the building by these fans. Two of the generating sets consist of engines direct-connected to 125-kw 220-volt generators. A third equipment includes a 60-kw 500-volt generator for the motors. The three-wire system is used, with a balancer set. The building is lighted by 16-cp incandescent lamps throughout. There are 14 "sunbursts" for general illumination on the ceiling, each containing 96 lamps. In addition the galleries are outlined, and there are ample facilities for stage lighting and other lighting wherever needed. There are 2,500 lamps in all. An emergency connection with the Denver Gas & Electric Company is provided.

Electric motors are used in transforming the hall to a theater. Portions of the balconies at the north or Curtis Street end are arranged to run on tracks and turn on a pivot, so that they can be moved out into the hall or pulled back against the wall by a 10-hp motor operating a winding drum and an endless cable. The proscenium arch and the two pedestals on which it rests (the three pieces together weighing 17 tons) are lifted into or lowered from



Seattle & Renton Steel Cars—Front End View

placing any strain on the car body. Ball bearings are provided to assist in reducing the friction for the turning of the truck in a horizontal plane. Both trucks are equipped with Westinghouse automatic air brakes and with track



Seattle & Renton Steel Cars—Diagram of Stresses in Steel Body

sanders built according to the designer of this car. The outlets for the sand are carried on the truck frame and connected with the sand boxes in the car by flexible tubing, so that distribution always is made directly in front of the wheels.

The rear truck carries two Westinghouse No. 304 90-hp motors hung between the axles. No motors are carried on the forward truck, and therefore it was designed with a comparatively short wheel base. Westinghouse unit-switch control arranged for automatic acceleration is installed for double-end operation. The wiring for this control is all carried in steel pipe supported between the channel-iron sills.

Some of the detail equipment of this type of steel car as

the rigging loft by three separate motors by means of steel cables.

The building was first used by the Democratic National Convention in July, 1908, and has since been used for automobile shows and many conventions, including now the great street railway convention and exhibition, for which elaborate special preparations were made. The Colorado chapter of the Daughters of the American Revolution has taken an especial interest in the Denver Auditorium—which is indeed a fine representation of municipal public spirit—and has presented to it a curtain portraying an allegory of "Independence" painted by Albert Herter, the well known artist.

Among the Exhibits

MacGovern, Archer & Company, New York, have no exhibit at the convention, but are represented by Frank MacGovern, who is stopping at the Hotel Shirley.

* * *

The National Lead Company was first on the ground with useful souvenirs, for those who have desks at the exhibit found therein a neat leatherbound memorandum book, as well as a paper-clip bearing a reminder of "Phoenix" babbitt metal.

* * *

The arbor of the General Electric Company is a conspicuous feature at the main entrance. It forms a pleasant meeting place and it and the whole exhibit are arranged for easy inspection and with the idea of not obstructing the general view.

* * *

At the booth of the Consolidated Car Heating Company of Albany, N. Y., may be seen standard types of electric heaters, including those for vestibule use and also for house heating. "Consolidated" buzzers are shown operating on a 600-volt circuit. In order to show the durability of its pneumatic door operating device, the company has at the booth a device which has made 1,500,000 cycles or 3,000,000 consecutive operations without failure.

* * *

A new and effective device is being shown by the Electric Service Supplies Company at its exhibit booth, Spaces 270-76 and 321-27. It is a pneumatic gong ringer so designed as to be easily fitted to a standard foot gong. It is operated by the motorman by means of a small valve placed immediately above the brake valve. This valve has a double seat which entirely eliminates leakage of air. The valve is made in single form to operate either the gong ringer or sand trap, or, in double form for the operation of both.

* * *

Each succeeding year since the formation of the Manufacturers' Association, the National Carbon Company has had something new to show the railway men at the convention. The new Laclede brush, a product of two years' constant work on the part of a large corps of chemists and engineers and 12 months' extensive and critical services is being exhibited. It is claimed to represent the highest development in the railway motor brush field. Its texture and characteristics are so accurately graded that it can be adapted to any conditions of operation.

* * *

The heaviest exhibit at the convention is a lathe designed and manufactured by the Niles-Bement-Pond Company of New York for turning street car wheels. The complete machine weighs about 45,000 lb. It is operated by a 25-hp., direct current, 220-volt motor having a two-to-one speed variation. A 3-h. p. constant speed motor is used for moving the tail-stock backward and forward when changing wheels. The machine will turn from 16 to 20 pairs of wheels in a working day with a minimum of manual labor due to the use of power and automatic devices for handling the wheels, clamping the tools, etc. Only one man is required to operate the machine. The representatives present are E. S. Leeds and D. H. Teas.

* * *

American Automatic Switch Company, of New York, is exhibiting at Space 241 an electro-mechanical interlocked control cabinet for controlling switches and signals, a signal for low speed work, a switch-throwing mechanism controlled from a cabinet and one of the company's new type 14 electric track switches. The control cabinet is so arranged that it is impossible for the operator to give the signal for a car

to proceed into the switch until the latter is in the safe position at the end of its stroke. Then, after the car has started over the switch, the switch cannot be thrown between the trucks of the car. It is also impossible to give two signals simultaneously so as to send two cars into a colliding point. An automatic switch-throwing mechanism, known as type 14, containing the newly-patented mercury stuffing box, is shown. All this apparatus is wired up and is operated by the representatives present.

* * *

The American Mason Safety Tread Company, Boston, Mass., has recently received an order from the American Car & Foundry Company for safety treads and new Karbolith top floors to equip 110 cars for the Interborough Rapid Transit Company, New York. The treads are to be used at the center side doors as well as at the end doors and in the vestibules. Another large order is from The J. G. Brill Company covering treads for 334 cars, most of which are to be electrically operated. The Dallas (Tex.) Consolidated Electric Railway Company has also ordered Mason treads for car steps, while the Brooklyn Rapid Transit Company is buying more for its elevated railway stairways.

* * *

The first exhibit to be installed and finished at the convention this year was that of the Pay-as-You-Enter Car Corporation in Spaces 180-184. It consists of two full-sized sections of pay-as-you-enter car platforms. One represents the type used on the Third Avenue Railroad, New York, and the other is the type of platform adopted in Chicago. These two types, with some slight modifications, have been adopted in many other cities. The company is represented by Thomas W. Casey, general manager, and David Murdoch, special representative in charge of the exhibit. Mr. Vanellman is also representing the company. More than 5,000 pay-as-you-enter cars are now in service in 42 cities. The system is under consideration for use in many other cities which have not adopted it so far and the list of roads using it is being increased daily.

* * *

McCord & Company, Chicago, Ill., are exhibiting a spring dampener, which, when applied to coil springs, gives the coil springs the same even action as is obtained from the more expensive elliptic spring. The spring dampener saves a great deal in first cost of application, as well as in maintenance, while the same easy action is obtained. They are also showing McKim gaskets, which are used extensively for maintaining steam-tight connections, especially under high pressure; and an equalizing wedge for 4¼-in.x8-in. pedestal journal boxes, together with the brass that has been in service nearly eight months. The brass shows the even wear produced by the equalizing wedge, which insures, no matter in what position the box may be relative to the axle, an equal bearing to all parts of the journal.

* * *

The Whitmore Manufacturing Company, Cleveland, Ohio, is distributing some striking blue prints which show the value of Whitmore's gear protective composition in a very graphic manner. One print shows a gear and pinion which have been in service on the Spokane & Inland Railway. These ran 194,700 miles in one direction, with a total loss of metal of only 1.053 lb. A second print shows a gear and pinion as it appeared after running 100,959 miles on the Utica & Mohawk Valley Railway, and a third print shows the excellent condition of a gear and pinion removed from a Schenectady Railway Company's interurban car after making 53,232 miles. An interesting feature in connection with these records is the presence of the gears and pinions themselves, which were removed solely for purposes of exhibition at the booth, Space 415. Examination shows that their pitch lines have not been destroyed in a single case. After

the convention these gears and pinions will be returned to their owners for further service and next year will be placed on view again to show how much wear has taken place in the meantime. The company is also exhibiting a blue print and the originals of four pinions used on the Cleveland, Painesville & Eastern Railway. The first view is a new pinion and the second and fourth show the fine condition of the pinions after running respectively 29,286 miles and 55,330 miles with the gear protective composition, while the third, which was lubricated with graphite grease is practically worn out, although it ran only 23,078 miles under the same conditions. This striking exhibit, including journal and compressor oils, is in charge of S. W. Whitmore, president and general manager of the company; W. M. Lawyer, New York representative, and Henry Stuckenholz, western representative.

* * *

The Automatic Ventilator Company, New York, has an exhibit in space 203-205 which is a visual demonstration of the efficiency of its system of ventilation for steam and electric railway cars. A section of the clerestory of a passenger coach made practically air-tight is equipped with automatic ventilators and an electric fan playing on the exterior deflectors of the ventilators reproduces the conditions of a car in motion. The rapid change of air in the interior of the clerestory can be seen through glass panels. A door at each end gives access to the ventilators for tests of both the intake and the exhaust. George H. Ford and Ross Taylor are in attendance prepared to explain the action of this device.

* * *

The exhibit of the Goldschmidt Thermit Company, New York, at the street railway conventions is always interesting. This year it consists of samples of welded rail joints for both T and girder rail, samples of welds of heavy sections such as locomotive and truck frames, motor cases and similar work and numerous photographs of the operation of making thermit welds of various kinds. Thermit is extremely useful in foundry practice and several samples of metals and alloys free from carbon which are produced in this process are exhibited. These alloys include 99 per cent pure chromium, manganese, manganese copper, ferrovanadium and several others. The company is represented by C. E. Pellissier, Henry S. Mann and L. Heynemann. Practical demonstrations of thermit welding will be given every day on Curt's Street just outside the annex. Announcement of the time at which these demonstrations will be made will be published in a later issue for tomorrow.

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The National Brake & Electric Company, Milwaukee, Wis., reports that the demand for National straight-air brakes as well as for the latest types of National emergency and semi-automatic air brake equipments, has, in view of the trade conditions during the past year, far exceeded all expectations. The appreciation of the high standard of National air brakes is shown by the orders received for National apparatus since the 1908 Atlantic City convention. These amount to over 2,000 equipments, including straight-air, emergency and semi-automatic equipments, and also 1,200-volt air brake equipments for the Milwaukee Electric Railway & Light Company's Watertown interurban line. Some of the larger orders for National apparatus placed during the year, were received from the following companies: Chicago Railways Company, Chicago, Ill.; Milwaukee Electric Railway & Light Company, Milwaukee, Wis.; Portland Railway, Light & Power Company, Portland, Ore.; Seattle Electric Company, Seattle, Wash.; Seattle-Everett Traction Company, Everett, Wash.; Cincinnati Car Company, Cincinnati, Ohio; New York State Railways, Rochester, N. Y.; Louisville Railway Company, Louisville, Ky.; Chicago

& Oak Park Elevated Railroad Company, Chicago, Ill.; Bay City Traction Company, Saginaw, Mich.; Louisville & Eastern Railroad Company, Louisville, Ky.; Wisconsin Traction, Light, Heat & Power Company, Appleton, Wis.; Central Pennsylvania Traction Company, Harrisburg, Pa., and the Tidewater Power Company, Charleston, S. C. In addition to the foregoing railroads in the United States, numerous large orders for air brake equipments have been received during the past year from foreign railway companies.

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The exhibit of city and interurban railway tickets made by the Globe Ticket Company, Philadelphia, Pa., includes about 1,000 styles of ticket transfer books, cash fare receipts and mileage books, etc., used by steam and electric railways throughout the United States, Cuba, Mexico and South America. To any one interested in tickets, this will be a most instructive exhibit. Particular attention is called to the Pope patented P. M. coupon transfer. This style has been adopted by many large systems, and it is claimed that it has solved the problem of transfer abuses. The entirely different appearance of the transfers issued in the morning from those issued during the afternoon and evening is apparent at a glance to the receiving conductors, and prevents trading transfers received in the morning and used at night. Many other special forms of tickets, books and cash fare receipts, etc., designed to meet special conditions are well worth inspection.

* * *

The Peter Smith Heater Company, Detroit, Mich., is exhibiting in Space 27, a number of types of hot water heaters for city and interurban cars. During September this company received orders for 195 heaters from the following electric railways: Twin City Rapid Transit Company, Minneapolis, Minn., 58 No. 2-C; Wheeling (W. Va.) Traction Company, 8 No. 2-C; Rochester (N. Y.) Railway Company, 25 No. 2-C; Illinois Traction System, 2 No. 1-C; Nashville (Tenn.) Interurban Railway, 1 No. 1-C; Public Service Railway, Newark, N. J., 5 No. 1-C; Detroit United Railway, Detroit, Mich., 5 No. 1-C; Dayton & Troy Electric Railway, Dayton, Ohio, 1 No. 1-A; Rock Island & Southern Railroad, Monmouth, Ill., 14 No. 1-C; Michigan United Railways, Lansing, Mich., 3 No. 1-C; Saginaw Valley Traction Company, Saginaw, Mich., 1 No. 3-B; Chicago & South Bend & Northern Indiana Railway, South Bend, Ind., 1 No. 1-C; Ohio Electric Railway, Columbus, Ohio, 3 No. 1-C; Saginaw & Flint Railway, Saginaw, Mich., 3 No. 2-C; Winona & Interurban Railway, Warsaw, Ind., 8 No. 2-C; Indianapolis Traction & Terminal Company, 2 No. 2-C; Houghton County Traction Company, 5 No. 2-C; Syracuse (N. Y.) Rapid Transit Railway, 50 No. 2-C.

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Since the presentation last year of the report of the committee on maintenance and inspection of electrical equipment of the Engineering Association, in which the use of an extra high grade of carbon brushes was recommended, the Speer Carbon Company, St. Mary's, Pa., has perfected a new grade of brush which fully conforms with the recommended requirements. This brush is made by a new process and is perfectly homogeneous and uniform, containing no laminations. It is furnished in four degrees of hardness, grades H, H-1, H-3 and H-8. During the past year very thorough service tests have been made with these brushes on a number of large city and interurban railway systems. The results have been very satisfactory. The tests were made on all types of motors without regard to the condition of the commutators or brush-holders. Some of the motors were specially selected on account of badly worn brush-holders, as it was desired to give the brushes the most severe test possible. The mileage of the brushes tested varied between 30,000 and 50,000 miles, thus proving that this grade of brushes will fully meet the suggested specifications.

EXHIBIT OF THE WESTERN ELECTRIC COMPANY

A comprehensive display of telephone apparatus for steam and electric railways is being shown by the Western Electric Company in Spaces 114-26. The selectors shown are the same as those installed on a number of steam railroads. The principal function of these selectors is to make it possible to call any one of the stations on the line without ringing the bell at any other station. This individual selector scheme has proved of great value in saving time in the transmission of train orders.

The apparatus shown at Denver is similar to that exhibited at the Street Railway Convention at Atlantic City last October and at the convention of the Association of Railway Telegraph Superintendents held at Detroit, Mich., last June, together with a representative exhibit of standard Western Electric telephone apparatus.

Electrose insulation will also be displayed in a variety of forms in the Western Electric booth. Five boards illustrating overhead line material, special arc light hangers, third-rail insulators, etc., are shown. Insulators of this material are made in various shapes and sizes, to resist all commercial voltages. The strain insulators exhibited possess superior electrical and mechanical qualities, owing to the relation and form of the metal parts. The insulating material disposed between them is placed under compression when under tension, thereby making the strength of the insulation far in excess of ordinary requirements. They have interchangeable terminals, thus making possible any combination desired and rendering it impossible for the line to drop. One interesting type of insulator shown is the disk type. The design of this insulator affords a large interrupted insulating surface to limit surface leakage and provides a very large factor of safety. Deposits of dust, etc., cannot form a continuous path over the surface of an insulator of the disk type. The form of the strain members and their disposition relatively to each other and to the insulating disk is such as to provide a strain insulator of great strength combined with the highest possible form of electrical insulation. This type of insulator may be used separately or a number of them may be linked or connected together either flexibly or rigidly for use where currents of very high potential are employed. They are furnished with various forms of terminals, the metal parts being interchangeable.

Another use for electrose shown is for arc light insulators of various types and designs. Electrose third-rail insulators of several types are made up in two parts and are provided with means of securely locking them together so that they may be used as a single insulator unit if required. The supporting portion of the base is provided with a large surface for sustaining the weight of the insulated section and the rail. The overhead and trench type of insulators differ in construction only. Equal care has been given to their construction. The overhead form is known as the Steinway Tunnel type and the trench design as the Third Avenue Railroad type. This latter design is provided with pin holes adapted for receiving cement for securing the pin in position. It is also furnished with a threaded pin hole adapted to screw on the pin, thereby avoiding the use of cement.

The latest type of trolley wire suspension shown is the Ideal locking cap and cone. This is provided with a heavy malleable iron protection ring thoroughly imbedded in electrose, which prevents the cap from breaking either when being carelessly installed or by blows from the trolley pole. It also permits the suspension to be readily disconnected and removed. The cone is threaded and when in position locks the cap, suspension body and cone together and prevents the line from dropping by the unscrewing of the cap due to vibration. It can be installed with an ordinary monkey-wrench or with a special cap and cone wrench.

Among other devices shown are a line of standard Western Electric ears, clamps, section insulators, overhead frogs and crossings and armatures, field coils and Kalamazoo trolley wheels and harps.

THE WAGNER MORALOMETER

One of the most popular booths at the convention is that of the Wagner Electric Manufacturing Company at Space 154. The attraction is the Wagner "moralometer," made famous at this year's National Electric Light Association convention, Atlantic City. This instrument indicates in electric railway parlance, the morals or idiosyncrasies of those who will submit to its searching power. Indications such as "star connected," "trolley off," "overloaded," "airblast" are given by the Wagner moralometer. The reading is taken by placing the subject who is courageous enough to have his "morals" divulged, in a chair and adjusting a head-piece to his head. The operator by manipulating the instruments on the switchboard, assisted, perhaps, by a tip from the gentleman who has introduced the subject, is able to throw the proper switch so as to complete the circuit of occult forces by which the machine is operated. The indication of the morals of the person being tested is then conspicuously displayed on a dial so that one who runs may read. The moralometer has never been known to make a wrong diagnosis. At Atlantic City the Wagner booth was the center of much gaiety, and few of those who had readings taken of themselves failed to return with one or more subjects, sometimes called victims.

The mysterious construction and faithful accuracy of the moralometer, however, are not the only subjects which the representatives of the company there present are able to discuss. They are ready to talk about Wagner single phase motors and large power transformers. Wagner single phase motors are not built for the operation of electric cars, but for stationary service, and the company claims that they make consistent and profitable the sale of electricity for power to farmers and the like, who are located along any high-voltage transmission line. Some electric railway companies are selling power from their trolley circuits, but others are opposed to this practice because of fire insurance restrictions. When high-tension transmission is utilized, it is a round-about way to sell current, which is first generated, then stepped up, then transmitted to a substation, then stepped down, then passed through a rotary converter and finally transmitted to its point of use. A single phase motor, such as built by the Wagner Electric Manufacturing Company, can be tapped off from any three-phase high voltage transmission line. Only one transformer and very simple connections are required. Farmers are not only good power customers, but their demands for power are usually in the morning or early afternoon, that is, at a time which is not at the evening peak load when the company requires all of its power for the operation of its cars. The matter of unbalancing is almost a negligible consideration because of the small current demand of any one motor or group of motors, and generally the different connections along a transmission line can be evenly distributed between the different phases. Wagner representatives in attendance at Denver include Walter Robbins, assistant general manager; Frank N. Jewett, sales manager, and Ray D. Lillibridge, advertising manager.

One of the unique features of the exhibit of William Wharton, Jr., & Company, Inc., Philadelphia, Pa., is the high switch stands shown at the entrance to the space occupied by this company. These stands are so tall that ladders are furnished as a part of them, to enable the trackman to get to the lamp. They are known as "Blizzard" stands, and are used extensively in sections of the country where the snowfall is such that a high stand is necessary.

List of Exhibits

- Adams & Westlake Company, The, Chicago, Ill., Spaces 366-363—Headlights, both arc and incandescent, signal lamps, lanterns, car trimmings, basket racks, brake handles, switch locks, water closets and earthenware. Represented by Charles E. Carson, William J. Pierson, Alfred Connor.
- Allen Switch Company, Pueblo, Colo., Space 719—Automatic track switch. Represented by A. B. Allen, O. D. Allen.
- Allis-Chalmers Company, Milwaukee, Wis., Space 200-210, 251-258—Air brakes, railway motor and controllers. Represented by J. H. Waterman, F. G. Bolles, J. R. Jeffrey, James Gardner, I. L. Dimm, R. B. McConney, E. W. Stull, F. W. Fanger, George Baiz. Phone Champa 90, Branch 51.
- Aluminum Company of America, Pittsburg, Pa., Space 403—Aluminum cable for high-tension transmission lines, aluminum feeder cables, lead-covered aluminum cables, rubber and paper insulation, various styles of joints, aluminum bus-bars. Represented by E. H. Noyes, F. N. Baylies, S. K. Colby.
- American Automatic Switch Company, New York, N. Y., Space 241—Interlocking control cabinet, automatic track switch. Represented by G. E. Willis, Ralph Sanger, H. A. Goode, R. V. Collins.
- American Brake Shoe & Foundry Company, Mahwah, N. J., Spaces 33, 35, 37 and 39—Brake shoes and brake heads, (standards of the American Street & Interurban Railway Association). Represented by F. L. Gordon, J. S. Thompson, A. T. Herr, C. C. Higgins, J. G. Tawse, W. L. Boyer, E. A. Gregory, E. L. Janes, E. B. Smith.
- American Locomotive Company, New York, N. Y., Space, Track Exhibit—American Locomotive type of heavy interurban truck as shown under a car of the Denver & Interurban R. R. Represented by William Wampler.
- American Mason Safety Tread Company, Boston, Mass., Space 711—American Mason Safety tread, lead and carborundum filled, karbolith composition flooring for cars and buildings. Represented by Henry C. King.
- American Railway Guide Company, Chicago, Ill., Space 106—Travelers railway guides, bureau of railroad information and reservation of Pullman accommodations. Represented by Geo. E. Armstrong.
- American Steel & Wire Company, Chicago, Ill., Spaces 28-32, 127-131—Electrical wires and cables; rail bonds and bonding tools; right-of-way fence. Represented by Charles R. Sturdevant, B. H. Ryder, F. A. Keyes, J. M. Holloway, J. D. Sutherland, E. R. Pool, W. H. Williams, W. R. Abbott, E. E. Aldous. Phone Champa 90, Branch 10.
- American Wood Preserving Company, Chicago, Ill., Space 245—Distributing literature describing antiseptine wood preservative. Represented by H. W. Weihe, R. J. Bird.
- Ames, Cortlandt F., Chicago, Ill., Space 713—Hercules bumping post, automatic lock nut, gear shield, rope shield. Represented by Cortlandt F. Ames, J. A. Schwartz.
- Anderson, Albert & J. M., Manufacturing Company, Boston, Mass., Space 221-223—Sixty-six thousand volt disconnecting switches of the truss type; full line of switches and pure copper castings; remote control mechanism for oil switches and time switches for alternating circuits up to 3,000 volts. Represented by Alfred E. Anderson, Ernst Woltmann, Henry Woltmann.
- Anglo-American Varnish Company, Newark, N. J., Space 378—Reception booth. Represented by William Marshall.
- Archbold-Brady Company, Syracuse, N. Y., Space, Box between booths 418-419—Photographs, circulars and blue prints of catenary bridges and construction, transmission line towers and spiral towers for long high tension crossings over rivers and railroads. Represented by C. Loomis Allen, W. K. Archbold.
- Atlas Railway Supply Company, Chicago, Ill., Space 168—Atlas straight, compromise, insulated and special rail joints; tie plates and rail braces. Represented by D. Thomson, J. G. McMichael.
- Automatic Car Coupler Company, Los Angeles, Space 605—Automatic car coupler for city. Represented by W. H. Soale, F. R. Bonney.
- Automatic Switch Company, Denver, Colo., Space 378, 181.
- Automatic Ventilator Company, New York, N. Y., Spaces 203-205—Large and small working models of car ventilator. Represented by George H. Ford, Ross Taylor, Frank A. Barbey.
- Avery Scale Company, North Milwaukee, Wis., Spaces 616-618—Automatic track scale, one automatic elevator scale. Represented by N. C. Webster, B. P. Ordway.
- Babcock & Wilcox Company, New York, N. Y., Space 174—B. & W. model of horizontal boiler and two types of boiler heads. Represented by Charles Onderdonk, William Turner, F. A. Einfeldt, Harry Byer.
- Badger Fire Extinguisher Company, Boston, Mass., Space 201—Chemical fire engines for car barns, repair shops, parks; hand chemical fire extinguishers of various sizes for buildings and electric cars. Represented by Charles R. Edwards, A. E. Stone.
- Barber Car Company, York Pa., Spaces 615, 617, 619—Single truck trolley car in operation on tracks of Denver City Tramway Company. Represented by Guy Webster, Edward A. Barber.
- Bayonet Trolley Harp Company, Springfield, Ohio, Space 411—High-speed trolley equipment, including detachable trolley harps, roller bearing bases with detachable pole clamps, self-lubricating trolley wheels, butterfly sleet cutters. Represented by R. A. Garlough, J. M. Olinger.
- Beaver Dam Malleable Iron Company, Beaver Dam, Wis., Space 714—Tie plates. Represented by F. S. McNamara.
- Berry Brothers, Ltd., Detroit, Mich., Space 166—Finished panels of native and foreign woods, varnish, varnish and paint remover. Represented by F. W. Hormann, Thomas J. Lawler.
- Bonney-Vehslage Tool Company, New York, N. Y., Spaces 207, 209, 211, 213—Many types of ticket punches. Represented by E. C. Vehslage.
- Brill Company, The J. G., American Car Company, G. C. Kuhlman Car Company, John Stephenson Company, Wason Manufacturing Company, Danville Car Company, Spaces 218-222, 269-273—High speed truck M.C.B.-E3; single-motor truck No. 39-E, city and suburban trucks Nos. 27-GE1 and 27-GFE1; car sets, seating materials, fare boxes, "Dedenda" platform gong, "Dumpit" sand box, truck springs of various types, "half-ball" brake hanger, one-piece pressed steel seat pedestals. Represented by Geo. H. Tontrup, D. B. Dean, S. T. Bole, E. Bronenkamp, S. K. Colby, Fred Brill, F. E. Markham, G. Wade, S. M. Wilson.
- Brown, Harold P., New York, N. Y., Spaces 128, 130, 132—Plastic rail bonds, electrical contact alloys, electro-pneumatic chisel, electrical testing outfit, bonding tools, hand power grinder, flexible shaft, Stay-There track bolt and "O. K." locks. Represented by Harold P. Brown, Clarence F. Brown, John T. McClure, J. M. Coote.
- Buckeye Electric Company, Cleveland, Ohio, Space 380—Buckeye tantalum railway lamps. Represented by L. P. Sawyer, Geo. S. Merrill, J. H. Cooke, A. G. Lucas, J. M. Johnson. Phone Champa 90, Branch 59.
- Buda Foundry & Manufacturing Company, Chicago, Ill., Spaces 50, 52, 153, 155—Manganese center special work, switch stands, track drills, jacks, motor and hand propelled velocipedes. Represented by W. S. Weston, F. C. Webb.
- Burroughs Adding Machine Company, Detroit, Mich., Spaces 215-219—Burroughs adding and listing machines especially adapted for street and interurban railway accounting. Represented by F. A. Willard, W. J. Parrish, G. M. Green, C. H. Smith.
- Carnegie Steel Company, Pittsburg, Pa., Spaces 16-26, 115-125—Skeleton mine showing mine timber construction with steel shapes and portable steel tie track. Soft welding and threading steels, specimens showing hot and cold bends. Section of interurban car truck made entirely with Carnegie welding and threading steel. Slack barrel hoops for spike and bolt kegs and miscellaneous packages. Steel wheels for street and interurban service. One pair wheels mounted on axles showing 89,368 miles serviced without turning. Piece of track with standard 100-lb. rail with steel cross ties showing type of concrete construction. Duquesne rail joints. Steel sheet piling for coffer dams, specimen of steel piling used for core walls for dams. Represented by K. E. Porter, C. B. Friday, N. D. Trist, W. E. Berry, J. C. Holding, L. P. Lincoln, R. B. Carr, E. S. Mills, N. M. Hench, E. M. Sparhawk, A. H. Hawkins, O. M. Ash. Phone Champa 90, Branch 2.
- C. A. Wood Preserver Company, Austin, Tex., Space 620—

- Railway ties treated with C. A. wood preserver, removed from Denver City Tramway tracks after 5 years' service. Other samples of treated timber and photographs. Demonstration in Denver City Tramway tie yard of method of treating ties with the C. A. wood preserver. Represented by Herman F. Gerhard.
- Chicago Car Heating Company, Chicago, Ill., Spaces 170, 172—Hot water heater in operation, special fitting for increasing circulation of hot water, regulating temperature and facilitating filling system without air pockets. Represented by W. P. Cospers, E. H. Gold. Phone Champa 90, Branch 7.
- Chicago Varnish Company, Chicago, Ill., Space 370—Car sides showing 6-day process of painting and varnishing. Represented by O. H. Morgan, G. S. Bigelow, F. L. Olds, F. H. Gundrum.
- Chisholm & Moore Manufacturing Company, Cleveland, O., Spaces 76, 179—Chain hoists. Represented by H. E. Dickerman. Ludlow track drill. Represented by W. E. Ludlow.
- Cincinnati Car Company, Cincinnati, Ohio, Spaces 186, 188, 190, 192—Completely equipped double truck car for city service built for Ogden Rapid Transit Company. Ogden, Utah. Represented by Henry C. Ebert, Dana Stevens, Thomas Elliott.
- Coin Counting Machine Company, New York, N. Y., Space 160—Coin counting machines, registering fare boxes. Represented by W. P. Butler.
- Coleman Fare Box Company, Buffalo, N. Y., Space 179—Fare boxes for pay-as-you-enter cars. Represented by J. H. Coleman, Geo. H. Dreybus, E. C. Rutherford, E. A. Rooney.
- Consolidated Car Fender Company, Providence, R. I., Spaces 229, 231—Providence fender, Providence wheel guard, snow broom section, lockers. Represented by Albert J. Thornley, George H. Hollingsworth.
- Consolidated Car Heating Company, Albany, N. Y., Spaces 316, 369—Electric car heaters, motorman's cab heaters, house heaters, quick break knife switches, high-voltage push button, signal system, light signal to motorman indicating when doors are closed on multiple-unit train service, pneumatic door operator. Represented by Cornell S. Hawley, Thomas Farmer, Jr., W. S. Hammond, Jr.
- Cooper Heater Company, Dayton, Ohio, Space 71—Hot water heater. Represented by W. L. Blackwell, W. E. Hinmon.
- Couch & Seeley, Boston, Mass., Space 625—Coin separating, counting and packaging machine. Represented by C. N. Smith.
- Coulter & Company, C. J., Hammond, Ind., Space 611—Rail wrench, track drill. Represented by C. J. Coulter, J. W. Paxton, A. A. Stapp.
- Crane Company, Chicago, Ill., Space 613—Tilt traps, cast-steel, Ferro steel and extra heavy gate valves; hydraulic and extra heavy brass valves. Represented by F. W. Knapp.
- Crouse-Hinds Company, Syracuse, N. Y., Spaces 360, 362—Arc and incandescent headlights, condulets, panelboards and cabinets, knife switches, harpoon guy anchors. Represented by A. F. Hills, F. F. Skeel, F. W. Buchanan, D. C. Gidley.
- Curtain Supply Company, Chicago, Ill., Spaces 406, 408—Ring curtain fixtures, Forsyth fixtures, Acme cable fixtures, Climax cable fixtures, Burrows fixtures, Keeler Eccentric fixtures, car curtain material. Represented by R. F. Hayes, S. W. Midgley, F. C. Kenly.
- Day & Williams, Weldona, Colo., Space 419—Guard rail lubricator. Represented by W. L. Day.
- D & W Fuse Company, Providence, R. I., Space 116—Fuses and cut-outs including railway cut-outs, service switch boxes and fuse boxes for 250 and 600 volts and transformer and high-tension junction fuse boxes for both pole and subway installations, square and rectangular wires with Delatabeston insulation, field and armature coils. Represented by Willard S. Sisson.
- Dearborn Drug & Chemical Works, Chicago, Ill., Spaces 308, 310, 361, 363—Scientific methods in the treatment of boiler feed waters to prevent scale, corrosion, pitting and foaming. Represented by George R. Carr, H. G. McConaughy, D. E. Cain. Phone Champa 90, Branch 54.
- Duff Manufacturing Company, Pittsburg, Pa., Space 150—Genuine Barrett track jacks, Duff-Bethlehem hydraulic jacks, Duff ball-bearing screw jacks, Barrett motor armature lifts, motor lifts, wheel and axle lifts, special car equipment jacks. Represented by E. A. Johnson.
- Duntley Manufacturing Company, Chicago, Ill., Spaces 176-178—Pneumatic cleaners, motor-driven section cars. Represented by George Clements, L. C. Thompson.
- Eclipse Railway Supply Company, Cleveland, Ohio, Space 601—Eclipse life guard fender. Represented by Ross Forward.
- Edwards Company, The O. M., Syracuse, N. Y., Space 384—Car window fixtures, sash balances, steel trap doors. Represented by E. F. Chaffee, G. G. Norris, C. H. Rockwell.
- Electric Railway Equipment Company, Cincinnati, Ohio, Spaces 624 and 626—Catenary line material, iron and steel tubular poles, pole brackets, electric mine haulage supplies, trolley pole splicers. Represented by J. G. Kipp, A. L. Johnston, E. P. Morris, O. H. Davidson. Phone Champa 90, Branch 13.
- Electric Railway Improvement Company, Cleveland, Ohio, Spaces 214, 216, 265, 267—Electric welding rail-bonding car in operation. Represented by W. B. Cleveland, George Long, W. E. Huber.
- Electric Railway Journal, New York, N. Y., Spaces 1-13—Twenty-fifth anniversary souvenir convention number, and convention daily issues printed at Denver. Represented by James H. McGraw, J. M. Wakeman, Joseph A. Kucera, H. W. Blake, L. E. Gould, Rodney Hitt, F. Nicholas, Walter Jackson, W. E. Keily, C. A. Baptiste, W. K. Beard, C. T. Walker, R. M. Babbitt, E. J. Hunt, H. E. Hopkins, Malcolm Muir, Miss J. Phelps, Miss M. Murphey. Phone Champa 90, Branches 11 and 12.
- Electric Renovator Manufacturing Company, Pittsburg, Pa., Space 413—Invincible renovators, commercial domestic and junior types; car and house air cleaning machinery with accessories. Represented by Chas. P. Fenner, W. T. Bridgers, W. W. McCauley.
- Electric Service Supplies Company, Philadelphia, Pa., Spaces 270, 272, 274, 276, 321, 323, 325, 327—Pay-within car, automotoneer, Garton-Daniels lightning arresters, Keystone pneumatic bell ringer, sander and valves, protected rail bonds, Keystone overhead material, improved St. Louis trolley pick-up, Lyon reinforced steel gear cases, sheet steel tool boxes. Represented by Chas. J. Mayer, J. W. Porter, Max A. Berg, J. V. E. Titus, E. R. Mason, Thos. H. Henkle, C. E. Ewing, G. W. Cox, M. S. Earl. Phone Champa 90, Branch 57.
- Electric Traction Supply Company, St. Louis, Mo., Spaces 207-213—Overhead line material for plain and catenary construction; high tension porcelain insulators; Recording Register and Farebox Company's printing registers and P. A. Y. E. and the cash-fare boxes. Banner Electric Company's high efficiency tantalum railway lamps; Van Dorn & Dutton Company's gear pinions; Van Dorn Electric Company's armature and field coils; Bird folding fenders and automatic wheel guards; Brann car replacers; G. & S. wheel-press jog. Represented by O. W. Uthoff, Ernest Boehme, Nat Fallek, E. C. Veshlage. Phone Champa 90, Branch 60.
- Emery Pneumatic Lubricator Company, St. Louis, Mo., Space 410—Emery pneumatic lubricators for traction service, automatic freight equipment and passenger cars; also several forms of lubricants. Represented by E. L. Adreon, E. A. Emery, R. E. Adreon, C. P. Cass, F. P. Livingston.
- Eureka Tempered Copper Works, North East, Pa., Space 402—Commutators, commutator bars, trolley wheels, bearings, controller parts, brush holders, line material, wire stretchers. Represented by O. C. Hirtzel, Fred Rundell.
- Felt & Tarrant Manufacturing Company, Space 717—Calculating machines. Represented by W. B. Plettner.
- Fertig, Charles T., Colorado Springs, Colo., Space 627—Automatic fusible lightning arresters. Represented by O. E. Collins, C. T. Fertig, C. B. Garnett, A. Elliott Hart, Andrew Reid.
- Flood & Conklin, New York, N. Y., Space 721—Reception room.
- Ford & Johnson Company, Chicago, Ill., Space 607—Car seats, cane webbing. Represented by E. Morris, B. H. Forsyth, C. A. Van Derveer.
- Forsyth Bros. Company, Chicago, Ill., Spaces 212, 263—Doyle steel post for wood and steel cars; Forsyth metal sash with adjusting shoe; Hedley anti-telescoping device. Represented by A. L. Whipple, A. H. Sisson.
- Forsyth Steel Tie Company, operating Pittsburg Pole &

- Forge Company, Pittsburg, Pa., Spaces 78, 181—Forsyth steel tie, Verona seamless trolley pole, Pittsburgh standard span wire pole, Pittsburgh steel insulator pin. Represented by W. D. Forsyth, B. D. Foster, Parker Biggert.
- Galena-Signal Oil Company, Franklin, Pa., Spaces 68-74 and 171-177—Reception room. Represented by Geo. A. Barnes, L. J. Drake, Jr., W. A. McWhorter, E. H. Baker, H. C. Mason, J. V. Smith, C. H. Thomas, W. O. Steiff, C. L. Richards, Robt. McVicar, Alfred Green, Mr. Lemon, Geo. J. Smith, C. E. Schaufler, Mr. Toppan, Wm. Walsh, E. N. Hedley. Phone Champa 90, Branch 6.
- General Electric Company, Schenectady, N. Y., Spaces 2-14, 101-113—Type M control equipment; complete emergency straight-air brake equipment for motor car and trail car; New York variable release motor car air brake equipment; railway motors; aluminum cell lightning arresters; Magnetite arc headlights; indicating and recording steam meters; air compressors; A. C. railway signal system; complete line of rail bonds and line material. Represented by F. H. Gale, J. G. Barry, H. N. Ransom, W. G. Carey, C. E. Barry, E. D. Priest, F. E. Case, A. H. Armstrong, S. W. Trawick, W. J. Clark, C. B. Keyes, T. Beran, H. G. Geier, R. E. Moore, H. L. Monroe, J. W. Buell, G. D. Rosenthal, C. C. Peirce, H. M. Winter, A. W. Arlin, A. V. Thompson, C. W. Blyvin, H. C. Marsh, W. J. Hanley, Irving Hale, G. A. Woolley, H. C. Glaze. Phone Champa 90, Branch 9.
- Gest, G. M., New York, N. Y., Space 29—Cable racks. Represented by H. H. Stannard.
- Globe Ticket Company, Philadelphia, Pa., Space 233—P. M. coupon transfers, books, cash fare receipts, strip tickets, one-way and round trip tickets. Represented by P. C. Snow, R. C. Osman.
- Goldschmidt Thermit Company, New York, N. Y., Spaces 71, 73, 75—Thermit rail joints, compromise joints, Thermit solid-section joint, welded motor cases and pipes, various metals produced free from carbon by Thermit process. Represented by George E. Pellissier, H. S. Mann, L. Heynemann.
- Griffin Wheel Company, Chicago, Ill., Spaces 41-45—Chilled iron car wheels and axles. Represented by C. K. Knickerbocker, J. O. Ferguson, W. H. Dickinson, C. F. Kopf. Phone Champa 90, Branch 14.
- Gulick-Henderson Company, Pittsburg, Pa., Space 609—Reception booth. Represented by Henry Gulick, W. O. Collins.
- Hale & Kilburn Manufacturing Company, Philadelphia, Pa., Spaces 312-314-365—Electric railway car seats of several patterns, including those adopted for 700 new cars of the Chicago Railways Company; steel doors and steel window sash; rattan canvas-lined seat covering. Represented by H. T. Bigelow, A. F. Old, C. W. Laskay.
- Handlan-Buck Manufacturing Company, St. Louis, Mo., Space 140—Switch lamps, markers, semaphore lamps, lanterns, oilers, engine lamps, bells, Yale & Towne chain hoists, metal signal flags, machine tools, lock washers. Represented by H. O. Rockwell, A. H. Handlan, Jr.
- Hendrie & Bolthoff Manufacturing & Supply Company, Denver, Colo., Space 80-183.
- Hess-Bright Manufacturing Company, Philadelphia, Pa., Space 126—Ball bearing G. E. 74 motor 65-h. p. that has been in constant daily use during the last year on the Schenectady Railway, in operation at booth; ordinary babbitt bearing G. E. 74 motor in operation at booth. Photographs of railway cars and motors employing ball bearings on various railway systems. Represented by Cyril J. Hopkins, H. E. Brunner.
- Heywood Brothers & Wakefield Company, Wakefield, Mass., Spaces 38, 137—Car seats. Represented by Bertram Berry.
- International Register Company, Chicago, Ill., Spaces 134, 136, 138—International fare and recording registers, coin receiver and register, register fittings, trolley and bell cord, conductors' punches, Heeren badges. Represented by Arthur H. Woodward, John Benham, Wm. G. Kirchhoff.
- Ironsides Company, The, Columbus, O., Space 709—Gear shield, wire rope shield, paint, tornay oilers. Represented by James L. Bone, D. J. Holliger, Homer C. Smith, E. R. Carter.
- Jeandron, W. J., New York, N. Y., Space 351—Carbon brushes. Represented by W. J. Jeandron, E. S. Taylor.
- Johns-Manville Company, H. W., New York, N. Y., Space 152—Porcelain insulators, transite asbestos wood, low-voltage overhead line material, catenary line material, moulded insulations, indurated fiber forms for third-rail protection, high-voltage oil-switch tanks and fiber conduit, Noark enclosed fuse and service boxes, fuses and devices for high and low-voltage service, J-M guy anchors and mine supplies, friction tape and rubber compounds, asbestos and magnesia pipe and boiler coverings, packings, linolite, desk and table lamps. Represented by J. W. Perry, George A. Saylor, A. H. Pierick.
- Kenfield-Fairchild Publishing Company, Chicago, Ill., Space 102, 104—Represented by H. J. Kenfield, George S. Davis, W. J. Field, R. M. Standish.
- Kerite Insulated Wire & Cable Company, New York, N. Y., Spaces 414, 416—Insulated wires and cables for A. C. and D. C. feeders, transmission, signals, telephone, telegraph, car wiring, and car house wiring. Represented by R. D. Brixey, Azel Ames, P. W. Miller, J. A. Renton, J. V. Watson, B. L. Winchell, Jr., R. E. Butterick.
- Lang Retrieving Trolley Company, Petaluma, Calif., Space 703, 705—Retrieving trolley base. Represented by C. E. Lang, H. H. Oellig, J. E. Bowers.
- Lorain Steel Company, Philadelphia, Pa., Spaces 42, 44, 46, 48, 141, 143, 145, 147, 149—Girder rails, high tee rails, special track work, electrically welded joints. Represented by P. M. Boyd, F. J. Drake, E. B. Entwisle, H. C. Evans, Wm. W. Kingston, H. F. A. Kleinschmidt, A. S. Littlefield, S. P. McGough, H. C. Stiff, A. L. Verner. Phone Champa 90, Branch 3.
- Massachusetts Chemical Company, Walpole, Mass., Space 114—Liquid and rubber insulating specialties, as armalac, enamelac, friction tapes, splicing compounds, filling compounds, cement; moulded rubber specialties, as motor bushings, pump valves, car-seat bumpers, field coil cushions, switch rubbers, brake rubbers. Represented by L. O. Duclos, A. E. Duclos, E. W. Furbush.
- McConway & Torley Company, Pittsburg, Pa., Spaces 318, 320, 322, 371, 373, 375—Janney radial equipment for interurban cars. Represented by Stephen C. Mason, E. M. Grove, H. C. Buhoup, I. H. Milliken.
- McCord & Company, Chicago, Ill., Space 148—McCord journal boxes; McCord spring dampener; McKim copper asbestos gaskets; National equalizing wedge. Represented by Clive Runnells, D. J. McOsker, Morrell Dunn.
- McGuire-Cummings Manufacturing Company, Chicago, Ill., Space on tracks of Denver & Inter-Mountain Railroad Company—Two double-truck sweepers, one double-truck passenger car. Represented by John J. Cummings, W. J. Cooke, W. H. Stevenson, C. T. Biddison.
- Meyer Safety Guard Company, Omaha, Neb., Spaces 609, 602—Full sized models of pay-as-you-enter car and open car with Meyer safety guard attached. Represented by Martin Meyer, E. W. Gwynne-Vaughan, Otto Baysdorfer.
- Midvale Steel Company, Philadelphia, Pa., Space 239—Reception booth. Represented by W. P. Barba, James C. H. Ferguson, Ernest Harrah, W. J. Patterson, Stuart Hazelwood, F. S. Remhold. Phone Champa 90, Branch 62.
- Nachod Signal Company, Philadelphia, Pa., Space 409—Signal for trolley roads, Nachod automatic signal. Represented by Carl P. Nachod.
- National Brake & Electric Company, The, Milwaukee, Wis., Spaces 350-358—New semi-automatic air brake equipment for motor cars and trailers, mounted as a working exhibit. 3VS air compressor driven by d.c. motor and combined automatic controlling apparatus which embodies an automatic starter, unloading device and governor; portable air compressor outfit; automatic governors and motorman's valves; repair parts for National air brake apparatus; a National air compressor sectioned so as to show details, operation and the ready accessibility of all parts. Represented by R. P. Tell, S. I. Wailes, C. N. Leet, W. H. Goble, W. N. Bisel, J. J. Nef, B. S. Aikman, J. J. Riley, G. W. Johnstone, W. J. Richards, C. W. Chase.
- National Brake Company, Buffalo, N. Y., Space 112—Ackley adjustable brakes and Peacock brakes. Represented by G. S. Ackley, W. D. Brewster, F. D. Miller, J. C. Raymond, Alphonso Wigmore.
- National Carbon Company, Cleveland, Ohio, Space 372—New Laclede railway motor brushes, also Columbia, National high grade Partridge, high-grade Partridge Perfection and other railway motor brushes, special graphite brushes, standard pig tail brushes, Columbia

- dry cells, railway signal dry cells, head-light carbons, turbine rings. Represented by W. B. Brady, O. T. Weaver, F. D. Kathe, F. J. Kyselá.
- National Lead Company, St. Louis, Mo., Space 108—White lead, babbitt metals, solders, metal compositions, raw materials. Represented by J. B. Mendenhall, W. B. Sale, E. A. de Campi.
- National Lock Washer Company, Newark, N. J., Spaces 142, 144—Car curtains, curtain fixtures, sash locks, sash balances, window fixtures, lock washers. Represented by F. B. Archibald, John B. Seymour.
- New Tone Company, Denver, Colo., Space 603—New Tone preservative, a transparent preparation to be used for refinishing the varnish, paint and metal surfaces on passenger cars. Represented by E. H. Newton, M. Pfeffer.
- New York Pole Company, New York, N. Y., Space 29—Reinforced trolley pole. Represented by H. H. Stannard.
- Nichols, A. O., Omaha, Neb., Space 417—Street car signal warning of approaching car on parallel track. Represented by A. O. Nichols.
- Niles-Bement-Pond Company, New York, N. Y., Spaces 61, 69—Niles lathe for turning street car wheels. Represented by Edward L. Leeds, D. H. Teas. Phone Champa 90, Branch 18.
- Ohio Brass Company, Mansfield, Ohio, Spaces 47-59—Trolley hangers, ears and clamps, catenary fixtures, mine trolley fixtures, rail bonds, automatic car couplers, pneumatic sanders, electric car signals, third-rail insulators, high-tension porcelain insulators. Represented by C. K. King, A. L. Wilkinson, L. W. Olson, E. F. Wickwire, G. A. Mead, N. M. Garland, J. E. Slimp, F. V. Cook, E. C. Brown, F. E. Johnson, R. J. Deneen, F. S. Deneen, G. W. Cooper, C. H. Tomlinson and A. L. Price. Phone Champa 90, Branch 4.
- Ohmer Fare Register Company, Dayton, Ohio, Spaces 15, 17, 19, 21, 23, 25—Registers for street and interurban railway cars, including new machines for the indication and registration of from one fare up to 60 classes of fares; operating devices and registers for use in pay-as-you-enter or pay-within cars. Represented by John F. Ohmer, J. H. Stedman, John P. Breen, C. W. Ketteman, C. V. Funk, J. C. Liggett, Edward Seebers, P. F. Buckley, R. D. Buckley, E. R. Diehl.
- Onderdonk Engineering Company, Denver, Colo., Space 174—Model of horizontal B. & W. boiler, asbestos packing, two types of boiler heads, valves, tie plates, and other engineering specialties. Represented by Charles Onderdonk, William Turner, F. A. Einfeldt, Harry Byer.
- Pantasote Company, The, New York, N. Y., Spaces 405-407—Pantasote car curtains; Agosote for head linings, panels, etc. Represented by W. A. Lake, W. S. Barrows, John M. High.
- Pay-As-You-Enter Car Corporation, New York, Space 180-184—Two sections of the pay-as-you-enter car; one illustrating the type used in Chicago, the other the Third Avenue, New York. Represented by T. W. Casey, A. J. Varrelmann, David Murdoch. Phone Champa 90, Branch 8.
- Pennsylvania Steel Company, Steelton, Pa., Maryland Steel Company, Philadelphia, Pa., Spaces 157-169, 54-66—Parts of several special work lay-outs built for the Denver City Tramway Company, including pinless tongue switches, renewable hard-center Manard frogs and mates; Manard hard-center steam railroad frog; New Century switch stand, Positive switch stand, main line switch stand, solid Manard crossing, Manard reinforced crossing; No. 20 reinforced Manard frog, locking spring box for tongue switches, B. & I. box, Gem box and automatic box; permissive and positive tongue locks for tongue switches; Manard concaves, mantles and heads for ore crushing machinery; Titanium, nickel, chrome and low phosphorus high carbon open hearth rail sections, and sample of rolled Manard (improved manganese steel) rails; Automatic stereopticon showing views of the various mill operations in the manufacture of special track work, rails and other products. Represented by H. F. Martin, Charles C. Clark, John C. Jay, Jr., R. C. Hoffman, Jr., William C. Cuntz, H. B. Green, C. E. Irwin, N. E. Salsich, Drew Allen, Bent Weaver, G. S. Vickery, William H. Henderson, W. R. Miller, Robert E. Belknap. Phone Champa 90, Branch 5.
- Pittsburgh Pole & Forge Company, Pittsburgh, Pa., Space 78, 181—(See Forsyth Steel Tie Co.)
- Planet Company, Chicago, Ill., Space 374—Eclipse curtain fixtures, planet babbitt metal, Schrosen journal bearing. Represented by T. P. Convey, H. J. Summers.
- Rail Joint Company, New York, N. Y., Spaces 156, 158—Continuous, Weber and Wolhaupter rail joints for T, high T and girder rails, both standard and composite. Represented by F. C. Webb, J. A. Greer, W. T. McCaskey, W. E. Clark, E. L. Vandersar, P. D. Watson.
- Roebing's Sons Company, John A., Trenton, N. J., Space 31—Reception room. Represented by A. B. Conover, W. H. Slingluff, J. McG. King.
- Scott & Company, J. F., Highland Park, Ill., Space 723—Scott combination hanger and ear, flexible mesh rail bonds, H. B. Clark section breaker skate. Represented by J. F. Scott.
- Scully Steel & Iron Company, Chicago, Ill., Space 245—Simplex jacks. Represented by B. A. Ragan, A. E. Barron.
- Sherwin-Williams Company, The, Cleveland, O., Space 314—Paints and varnishes for railway use. Represented by E. M. Williams, Henry E. Billau, F. A. Elmquist, E. Donnelly, L. W. Cole.
- Smith Heater Company, Peter, Detroit, Mich., Space 27—Nos. 1-C, 2-C and 3-C Peter Smith magazine hot-water heater, No. 2-P-2 Peter Smith forced-circulation hot-air heater. Represented by Daniel W. Smith, Elmer J. Smith, M. J. Phelan. Phone Champa 90, Branch 17.
- Speer Carbon Company, St. Marys, Pa., Space 110—Motor and generator brushes of all kinds. Represented by J. S. Speer.
- Standard Brake Shoe Company, Aurora, Ill., Space 400—Brake shoes. Represented by C. P. Wright, F. C. Peck.
- Standard Motor Truck Company, Pittsburg, Pa., Spaces 608-614—City and suburban type O-50 short wheel-base double truck, 50,000 lb. capacity; C-60 Interborough type high speed double truck, 60,000 lb. capacity; five sample forged steel wheels made by the Forged Steel Wheel Company. Represented by A. W. Field, W. G. Cory, W. G. Price.
- Standard Paint Company, New York, N. Y., Space 404—Reception room for explaining and recommending P. & B. and S. P. C. varnishes, compounds and insulating tape; also Novac compound for impregnating coils, without the aid of a vacuum. Represented by Charles E. Smith, Bernard C. Beckman, John H. Thomas, J. I. Pfeiffer. Phone Champa 90, Branch 55.
- Standard Steel Works Company, Philadelphia, Pa., Spaces 36 and 135—Reception booth. Represented by H. de H. Bright, F. W. Weston, E. S. Lewis, C. H. Peterson, C. H. Dodson, C. a'Becket.
- Standard Varnish Works, Chicago, Ill., Space 382—Insulating specialties. Represented by L. Robinson, H. P. Salmon and local representative.
- Star Brass Works, Kalamazoo, Mich., Space 364—Kalamazoo trolley wheels and harps, Root track scrapers. Represented by F. P. Crockett, F. N. Root.
- Sterling Varnish Company, Pittsburg, Pa., Space 418—Insulating materials and metal protective paints. Represented by A. S. King, W. F. Hebard, W. V. Whitfield.
- St. Louis Malleable Casting Company, St. Louis, Mo., Spaces 621, 623—Malleable iron specialties, Way cross-arm attachment, high tension pins, telephone and telegraph pins, service brackets, O. K. pole anchors, malleable iron feeder arms, wood strain insulators, malleable trolley line material, expansion bolts and malleable iron washers. Represented by R. H. Manwaring, W. A. Manwaring, Duncan Bond.
- Stromberg-Carlson Telephone Manufacturing Company Rochester, N. Y., Spaces 34, 133—Telephone apparatus and railway signaling apparatus. Represented by A. M. Hanbrich, H. W. Lucia, C. P. Button.
- Symington, T. H., Company, Baltimore, Md., Spaces 40, 139—Journal boxes, dust guards, ball center bearings. Represented by C. J. Symington, D. Symington, W. W. Rosser. Phone Champa 90, Branch 19.
- Taylor Electric Truck Company, Troy, N. Y., Spaces 604-606—Electric car trucks, elliptic and coil springs and T. M. C. steel tired wheels. Represented by John Taylor, C. H. Dodge.
- Tool Steel Gear & Pinion Company, Cincinnati, Ohio., Space 227—Hardened gears and pinions. Represented by C. E. Sawtelle.
- Traction Lubricating Company, Chicago, Ill., Space 622—Solidified oil mixed with wool waste, especially pre-

- pared, for use on armature and motor axle bearings. Represented by D. W. Kimball, C. L. Kimball, H. F. Kimball.
- Transfer Issuing Machine Company, Boston, Mass., Space 625—Transfer issuing machine. Represented by N. C. Smith.
- Transportation Equipment Company, New York, N. Y., Space 711—Fare box as used on 300 cars of the Metropolitan Street Railway of New York City. Represented by Robert C. Adams.
- Trolley Supply Company, The, Canton, Ohio, Spaces 162, 164—Peerless roller and National roller and ball bearing trolley bases, Knutson No. 2 and Peerless retrievers, Ideal catcher, Star and Climax headlights, semaphore dash headlight. Represented by J. E. McLain, Jos Hollis.
- Under-Feed Stoker Company of America, The, Chicago, Ill., Space 412—Reception booth and printed matter regarding the Jones stoker. Represented by Gilbert Wilkes & Company, Denver representatives; C. H. Thomas, D. Hunter, Jr.
- U. S. Wood Preserving Company, New York, N. Y., Spaces 82 and 185—New and old wood block pavement for street car tracks. Represented by Alexander Reed, H. B. Langan.
- Van Dorn Company, W. T., Chicago, Ill., Space 146—Various sizes of Van Dorn coupler heads and draft gears including M. C. B. couplers. Represented by W. T. Van Dorn, H. E. Van Dorn.
- Wagner Electric Manufacturing Company, St. Louis, Mo., Space 154—Wagner single-phase motor, skeleton governor mechanism of single-phase motor; Wagner "moral-ometer," an entertainment feature. Represented by Walter Robbins, Frank N. Jewett, Ray D. Lillibridge, O. H. Davidson. Phone Champa 90, Branch 15.
- Western Electric Company, New York, N. Y., Spaces 118, 120, 122, 124—Railway telephones, portable telephone sets, bells, buzzers and batteries, Electroze insulation, strain insulators, Ideal cap and cone hangers, line and over-head construction material, armature and field coils, Kalamazoo trolley wheels, harps and sand boxes. Represented by F. C. Killion, R. H. Harper, W. E. Harkness, M. H. Nichols, C. L. Howk, A. Brown, H. C. Biglin, H. Olsen. Phone Champa 90, Branch 1.
- Western Elaterite Roofing Company, Denver, Colo., Space, Box between Spaces 418 and 419—Elaterite car roofing. Represented by E. J. Yetter.
- Westinghouse Companies, Pittsburg, Pa., Spaces 250-268 and 301-319—A 60-ton interurban car of the Denver & Interurban Railway, equipped with unit switch control and four 125-horsepower motors, and designed to operate on 11,000-volt a.c. and 600-volt d.c., a 15-ton mining locomotive, a 25-kw turbo-exciter set, a No. 5 Westinghouse-Leblanc condenser with motor-driven air and water pump; line and trolley material, catenary construction, poles; car circuit-breakers, arc headlights, multiple-unit switch control apparatus, train connectors, gears, traction brakes, lightning arresters, interpole railway motors, types CCL, DA, HF and SA motors; series, 110-volt and "W" and "V" sign tungsten lamps. Represented by Jos. R. Ellicott, Chas. Ellicott, S. D. Hutchins, S. J. Kidder, W. M. McFarland, A. L. Humphrey, N. W. Storer, Thomas Cooper, E. L. Adreon, E. H. Sniffen, C. Kyle, T. J. McGill, J. A. Brett, Q. W. Hershey, C. W. Register, J. L. Tuttle, Horace Clarke, C. Olmstead, C. C. Chappelle, L. L. Brinsmade, G. O. Noble, E. H. Heise, A. A. Miller, E. A. Craig, W. S. Bartholomew, W. V. Turner and J. C. McQuiston. Phone Champa 90, Branch 52.
- Wharton, Jr. & Company, Wm., Inc., Philadelphia, Pa., Spaces 300-306, 353-359—Wharton H. C. switches, mates, frogs and crossings (girder and high T-rail), of solid manganese and manganese steel centre construction, manganese steel rail and pointed split switch, restored manganese steel frog; also tongue locks, spring boxes, switch stands and views of track layouts furnished different roads. Represented by V. Angerer, L. R. Ashurst, Jr., R. C. McCloy, Arthur S. Partridge, W. McLain, J. C. Robinson, Joseph Cavanaugh. Phone Champa 90, Branch 53.
- Wheel Truing Brake Shoe Company, Detroit, Mich., Space 225—Abrasive brake shoes for grinding car wheels. Represented by J. M. Griffin, F. F. Griffin.
- Whitmore Manufacturing Company, Cleveland, Ohio, Space 415—Gears and pinions that have been in service on eastern and western roads showing exceptional service and mileage lubricated with Whitmore's gear protective composition, Whitmore's gear protective composition, Whitmore's journal oil, Whitmore's compressor oil. Represented by S. W. Whitmore, Henry Stuckenholz, W. M. Lawyer. Phone Champa 90, Branch 57.
- Wilson, George, Pasadena, Cal., Space 401—Wilson's continuous railway rail joint. Represented by George Wilson.
- Wonham, Magor & Sanger, New York, N. Y., Space 241—"H. B." life guard. Represented by George E. Willis, Ralph Sanger, H. A. Goode, R. V. Collins.
- Wright Wrench Manufacturing Company, Canton, Ohio, Space 700—Patent quick adjustment monkey wrenches, automobile wrenches and pipe wrenches. Represented by J. F. Wright.
- Wyoming Yarn Company, Wyoming, R. I., Space 415—Samples of "Wypak" journal packing. Represented by E. M. Tillinghast.

The electric fountain at the City Park will play at 8 o'clock on Tuesday, Thursday and Friday evenings. City Park is at the end of Colfax Avenue and can best be reached by a Colfax Avenue car.

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Harold P. Brown, New York, is making an interesting exhibit at space 130. He is showing his new electro-pneumatic bond chisel as used to secure a better and larger rough surface for the application of his well-known plastic alloy than is possible by hand filing. The non-rusting quality of this alloy is proved by a specimen joint cut out from a main line track of the Denver Tramway Company's system after six years' service. Mr. Brown is also showing an electrical rail joint drill, rail grinder, motorman's mirror and a complete testing set for demonstrating the conductivity of the plastic rail bond. This testing set comprises a motor-generator outfit, switch board, measuring instruments and a sample rail joint installation.

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The pleasure of the trip on the special train over the New York Central and Rock Island from New York to Denver was enhanced by the thoughtfulness of the representatives of the Wagner Electric Manufacturing Company, who were numbered among the passengers. On entering the train at New York each member of the party was presented with an artistic little booklet giving the name of each person on board the train, the point at which they intended to board the train, the number of the car and berth reserved for each and the company which they represented. The book was of great assistance in enabling those on the train to locate their friends and to become acquainted with their neighbors. The booklet also contained an announcement that upon request the stewards in the dining cars would provide without charge to each guest at dinner on both evenings a "Wagner, Quality" cocktail. After dinner "Wagner, Quality" cigars were distributed. Each of the ladies on the train was presented with individual boxes of chocolates. Similar boxes of chocolates were given the ladies on the Boston train. Another feature of the New York trip contributed by the representatives of the Wagner Company was the taking of a photograph of the entire party on Saturday at Goodland. If these photographs are satisfactory when developed prints may be secured during the week at the Wagner exhibit in Space 154.

Edward Hungerford of the Brooklyn Rapid Transit Company will be one of the lecturers who will address the class in journalism which the Twenty-Third Street branch of the Y. M. C. A. of New York will conduct this winter. Mr. Hungerford was at one time a member of the editorial staff of the New York Sun. Many magazine and newspaper editors will also address the class, among them Chester S. Lord, managing editor of the New York Sun, and Alexander Black, editor of the New York Sunday World.