

# Electric Railway Journal

Consolidation of STREET RAILWAY JOURNAL and ELECTRIC RAILWAY REVIEW

Volume 52

New York, Saturday, July 27, 1918

Number 4

## C. E. R. A. Shows Resourcefulness at Cedar Point Meeting

UNUSUAL interest attaches to meetings held during war-time, such as the recent summer meeting of the Central Electric Railway Association, on account of the difficulty of securing speakers and attendants, and of the responsibility laid by circumstances upon those in charge of the programs to see that each item has a bearing upon the winning of the war. The meeting held at Cedar Point, Ohio, by the C. E. R. A. was in part an outing and in part a conference for the discussion of pressing matters. It took the place of the boat ride which has come during the last few years to be a conspicuous feature of the year's activities. The outing in itself was excuse enough for the meeting, because, as more than one speaker forcibly pointed out, it is more important than ever for men engaged in the transportation business to foster personal acquaintance as a means of facilitating interchange of ideas and information. But the program of talks on timely subjects was a real success, in spite of the fact that it bore little relation to the printed schedule. The result was so striking that a suggestion was made to the effect that the same procedure be followed in future meetings. Of course, this could not literally be done, as it is very important that at least part of a program involve careful and adequate preparation. There is a lesson in it, however, namely, that a meeting thrown upon its own resources can instruct as well as entertain itself. In war-time it may be necessary to utilize this fact more and more, and in planning programs it will be well to have in reserve a number of semi-impromptu talks by experts who will explain in non-technical language the latest developments in their several lines of work.

## Has the Three-Cent Rate on Steam Roads Affected Interurban Passenger Traffic?

THOUGH the straight 3-cent rate recently put in force on steam roads by the order of the Director-General of the federalized railways has been in force only a short time, some idea of the trend of its effect on interurban passenger earnings can now be gained, although quantitative figures are not yet available. This trend as indicated by a recent brief survey is about as follows:

On those roads where the steam road competition was practically negligible and in great industrial districts where electric railway equipment was already being operated practically up to the limit of its passenger-carrying capacity the gains in traffic are, of course, negligible. On those lines which parallel steam roads through the great agriculture belts the gains are slight,

since in these districts local traffic has largely been destroyed by automobile competition and the long-distance traffic is light. The greatest gains seem to have been made by those roads operating into large city terminals. On some of these roads for hauls ranging from 15 to 75 miles in length the gain has been noticeable.

On the whole, however, the gain has not been at all sufficient to justify the statement made by a member of the public utilities commission in one of the states containing a large interurban mileage who is quoted as recently saying to electric railway operators in connection with an increased fare petition: "Now is the time to fill your cars." As a matter of fact, the present indications bear out the advice of the War Board recently quoted in these columns that this is no time for hopes of profitable competition with the steam roads, or, to get down to bed rock in the matter, competition with the government. There are far greater possibilities in increased income from higher rates of fare than from any increase in traffic taken over from the steam roads as a result of their 3-cent fare rate.

## You Cannot Indict an Entire Industry

"I DO NOT KNOW the method of drawing up an indictment against a whole people," said Edmund Burke in his famous speech on conciliation with the American colonies. Similarly we do not know how to, and we do not think it proper to, indict a whole industry.

The electric railway industry is on the threshold of great, of revolutionary changes. Already in many cities the long-headway, two-men heavy car is being replaced by the short-headway, one-man light car and the industry's price for a generation—the 5-cent flat fare regardless of distance—is in a state of rapid dissolution.

But as electric railways endeavor to make these changes, they are likely to be told that they must have been a lot of blithering idiots not to have done these things before. Is this true?

One answer to such a blanket indictment must stress the fact that the founders of electric railways were not permitted by the public sentiment of their time to charge higher fares because almost every franchise had an ironclad stipulation for a 5-cent fare. Another answer must bring out the fact that the more economical one-man car with automatic devices was not developed until a late period because of public opposition to be traced back to bobtail horse-car days. A third answer is found in the fact that the past generation knew nothing and cared nothing about

"depreciation," "obsolescence," "service-at-cost" and other things that now make the electric railway man's life a busy nightmare.

It is easy to criticise the operators of a private corporation for the mistakes and failings of their predecessors, but who would dream of criticising the present officials of a municipal corporation for what was done by mayor and aldermen 'way back in '89? Why not give the private corporation official an equally fair start for character and probity?

No doubt many operators have failed to take advantage of changed conditions, particularly in acting on the principle that the electric railway is no longer a monopoly—but give them a chance, ye Mayors, Councillors and Commissioners! They often know what ought to be done but need just a bit of encouragement from you to put it over!

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### A Large Working Force Turnover Causes Disorganization

A MAN cannot step into a new position, be it that of manager or waterboy, and develop his normal work output the first day. It takes some time for him to determine the exact nature of his duties and to become accustomed to his working conditions and the local routine. Not only is he inefficient himself during his "breaking-in" period, but by reason of the fact that he must receive his instruction from others, the output of his fellow workers is also affected. Obviously, different classes of work call for training periods of different lengths and the experienced hand creates less confusion than the green one. But no matter what the line of work or what the experience of the men involved, a large working force turnover is a fruitful cause of disorganization and makes the maintenance of discipline difficult. This problem is a serious one with the electric railway industry to-day since upon the maintenance of organization and discipline depends the safety of their patrons as well as the mere ability to move cars over rails.

What are the causes of the unsettled employment conditions? We would naturally expect military conditions to be the chief cause where the men concerned are of draft age. But the turnover is not by any means the direct result of large numbers of young men entering the military or naval services. It also is large with old, experienced men both of the salaried and working classes. The high wages and salaries now being offered in other fields of endeavor are the main cause of unsettled conditions among these men. Yet by all means they should be retained in the industry. They can be retained only if the compensation which they receive is commensurate with their training and experience, the continuity of employment which exists on an electric railway being considered as one part of their compensation, and if their working conditions approximate those in other lines of work. No more inspiring illustration of the "lure of the rail" can be found than the devotion of our experienced railway men to their work despite the higher pay and easier working conditions outside. But the "lure" cannot be expected to maintain its attraction indefinitely, nor can the wages of electric railway trainmen be paid out of an empty purse.

### Make Better Use of Claim Agents in Public Relations Work

THE operating head of a certain electric railway system recently called the claim agent into his office and said in effect: "My idea is that a claim agent should be a hard, unyielding sort of fellow who knows how to bluff and who cannot be bluffed. There is no place in a claim office for good fellows. Their work is dirty work, and they may as well realize it."

Could anything be more absurd? This operator may be a good engineer, but his ignorance of public relations is both broad and comprehensive. There are few electric railway employees who can be of greater service in public relations work than the members of the claim department.

The claim department policy is of the utmost importance. If the operating head thinks that every claimant is a thug and a thief, the claim agents who carry out his policy certainly cannot be makers of friends. On the other hand, if the company makes it known that it takes every possible precaution to prevent accidents and that it is always ready and willing to treat fairly those who have suffered through its fault, the public will in time treat the road fairly.

The traveling public is not made up of people who look upon a transportation company as legitimate prey. The public is made up of average men and women who respond to fair treatment and kindness when they receive them and who are just human enough to respond with harsh treatment and meanness when they are treated in such a manner by company representatives.

For the sake of a few dollars, no railway is big enough to be able to afford making an enemy. Money paid out to satisfy unjust claims is money that is gone. The settlement ends the matter financially. But an enemy made by saving a few dollars is a persistent liability that grows greater with time. Indeed, a miserly attitude in a claim department creates enmities that cost small fortunes later on. One time a claim agent boasted that he had saved \$20 by bluffing a workman who was not clever enough to hold out for what the claim agent would have been willing to pay. Later that workman was on a jury in an important case, and his influence was sufficient to swing the verdict against the company for \$10,000. Does it pay to save at the spigot and waste at the bung-hole?

All claim agents should be instructed in the art of making friends. They should treat every person with whom they have dealings squarely and fairly. Like salesmen (which they really are), they should do everything in their power to build up good-will for the company. Of course, they should not pay out money which does not rightly belong to the claimants. But even refusals can be worded in such a way as to make friends. Good reasons can often be substituted for dollars.

The idea of combining fair dealing, kindness, frankness and sound ethics with claim work is not new. More than one company has proved that such a policy costs less money than the old one of fighting everyone, and that at the same time it is a constructive force in the creation of good-will. Too many companies, however, are still mentally living in the stone age, when the only way to handle one's fellow-men was with a club. This will not now do with claimants or in any other kind of public relations work.

### Efforts Continue Toward Drafting a Service-at-Cost Franchise

ARE the electric railways to find their salvation in the service-at-cost plan? Cleveland was the first city to try this form of franchise in a modified way. Unfortunately there was a limit to the sliding scale of fares which was intended to provide proper service and meet all costs. Dallas more recently adopted an ordinance of the same general character, having also a maximum in its schedule of fares. The new Philadelphia franchise met this situation more adequately by providing for adjustable fares without limit subject to the approval of the State commission. Then came the Boston relief measure which is now so familiar, having no limit to possible rates of fare and providing also that the State would make up any temporary deficit by a tax on the communities served by the company.

In Chicago, after working many months on a franchise to the existing companies providing for merger and for subways, the public representatives have turned to a proposed form of trustee corporation to take over the system subject to existing liens—a novel method of municipal operation with a guaranteed return to security holders assured by provisions for flexible fares. Whether or not this type of ordinance will be approved by the companies and the public is a matter which it will require some months to determine. The situation is interesting, however, as an illustration of the growing tendency toward service-at-cost legislation.

In this connection it might be profitable to turn to the experience of Cleveland as set forth in a statement recently filed with the War Labor Board. Making the point that "there is no such thing as absolute service at cost," the company's attorneys contend that the service-at-cost idea is impossible of attainment and wrong in principle.

The Cleveland management undoubtedly has given the Tayler plan of franchise a long and fair test. Starting with a 3-cent fare and a charge for transfers, the company after a year's trial gave a rebate on transfers. When the new fare schedule was found inadequate to keep up the interest fund, higher rates were put into effect until at last the maximum was reached and then the financial outlook became more than ever a cause for worry.

At the close of the last fiscal year the company reported that eight years of operation under the Tayler ordinance had resulted in a serious impairment of capital. In addition to this deficit, the company has no reserve funds for renewals, replacements or damage claims. Its 6 per cent return is, of course, guaranteed, but even this protection is said to be jeopardized unless the management resorts to the privilege of curtailing service to such an extent as to reduce its operating expenses to a safe level.

The Cleveland franchise differs from several of the more modern enactments in offering a fixed return on investment with no encouragement for initiative and economy. The older Chicago ordinances provided for a division of surplus over and above expenses. However, they contained the handicap of a fixed fare. The new Boston measure is based on a sliding scale of fares with no maximum limit, but the stock return is fixed for various periods of years. It is not unlikely that a

type of franchise will yet be worked out for some company which will properly recognize interest on investment as a necessary element of the cost of service and will make explicit provision for any higher rate of return necessary to attract new money. The guarantee of 5 or 6 per cent looked attractive some years ago, but in future even an assured 7 per cent may not be sufficient.

### Company Section Delegates at the Atlantic City Convention

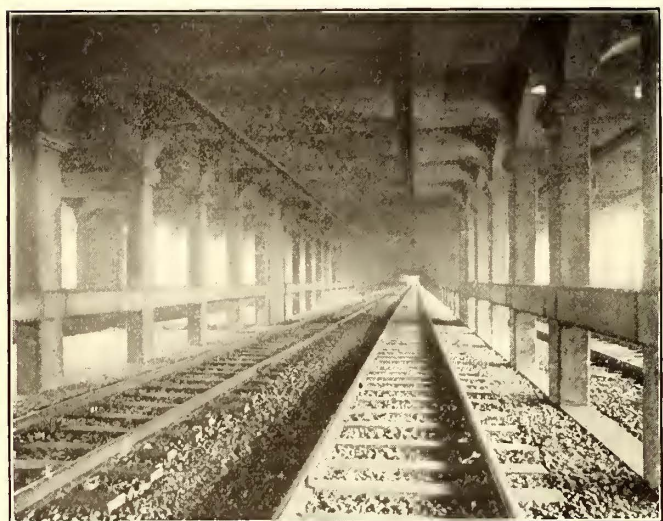
THE company section movement in the American Electric Railway Association is now at such a stage that it seems essential for representatives of the sections to get together to discuss ways and means for keeping up the interest during the coming strenuous war period. We use the word "coming" advisedly because thus far, with all of the splendid patriotism that has been shown, the war is just beginning seriously to affect the lives of individuals and organizations in this country. The company sections of the association have an important part to play in these times, and they should be thoroughly prepared now to play this part well. An opportunity will be afforded at the coming convention for conferences of those vitally interested in the section work to compare notes and outline programs for the coming winter, and it is none too early to lay plans now.

In every section there is one man to whom the members look for inspiration (and generally for hard work also) in the local activities. This is the man of analytical turn of mind who sees the opportunity which is before the section and who can formulate suggestions for meeting this opportunity. This man should be at the Atlantic City convention, specifically charged with the responsibility of bringing home a bagful of ideas which will make the 1918-1919 season a real success. And the only gage of success is the extent to which the section contributes to the winning of the war. Cannot each section send a representative to the convention so impressed with the importance of his job that he will really get something worth while? There will be an unwonted seriousness at the meeting this year that may well be reflected in the sections.

The companies are, very properly, going to be chary in sending delegates to the convention this year. The managers must "be shown" prospective results for every dollar of expenditure. In the case of section representatives it ought to be possible to show these results readily; if not, the section can furnish the "wherewithal" themselves. If section conferences demonstrate their effectiveness undoubtedly the association would eventually be willing to assist in financing these meetings. The American Institute of Electrical Engineers, which has only individual memberships, thinks so much of the presence of section delegates at its annual convention that it pays their traveling expenses, thus eliminating the geographical barrier to attendance. The substance of the whole matter, however, is: pick out the "live wire" in your section; charge him with the responsibility outlined above; get him to the convention, and, above all, apply his new ideas and enthusiasm when he gets home. If this line of thought appeals to any section, it should act at once.



APPROACH TO LOWER LEVEL, SHOWING TRACK UNDER CONSTRUCTION AND CONCRETED IN



VIEWS WITHIN THE BRIDGE—AT LEFT IN THE CONCRETE ARCHES; AT RIGHT IN THE STEEL ARCH



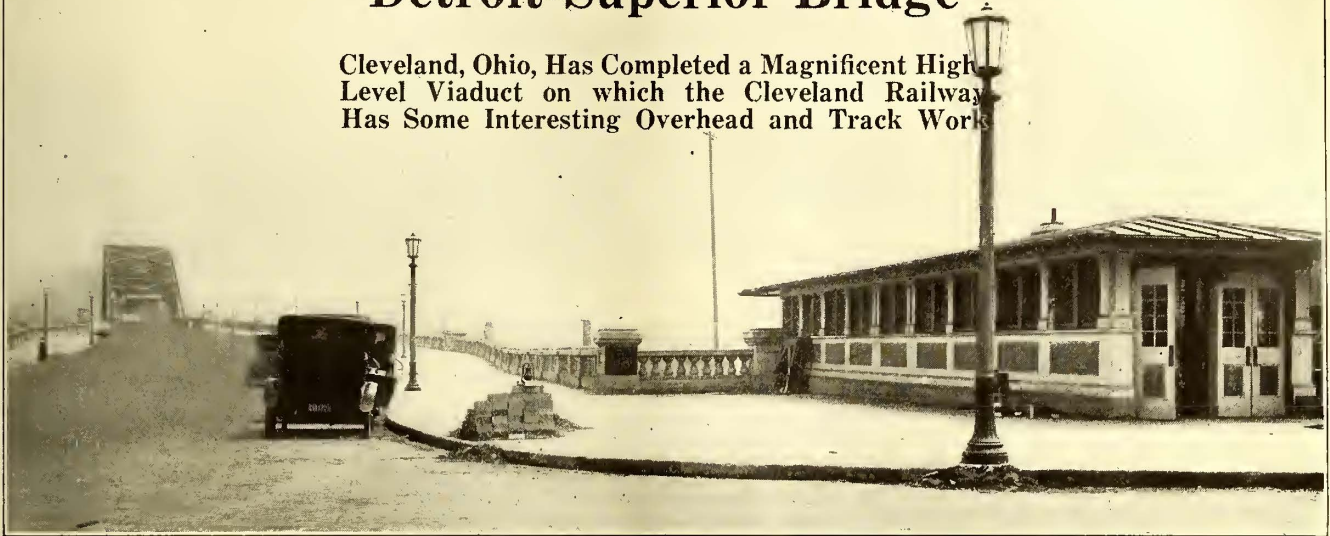
LOADING STATIONS—AT LEFT, SUPERIOR AVENUE END; AT RIGHT, DETROIT AVENUE END

### Track and Overhead Construction on Cleveland's New High Level Bridge, which Connects the Eastern and Western Sections of the City

(The electric railway tracks, now four in number, are on the lower level, which is wide enough for two future subway tracks also.)

# Electric Railway Construction on the Detroit-Superior Bridge

Cleveland, Ohio, Has Completed a Magnificent High Level Viaduct on which the Cleveland Railway Has Some Interesting Overhead and Track Work

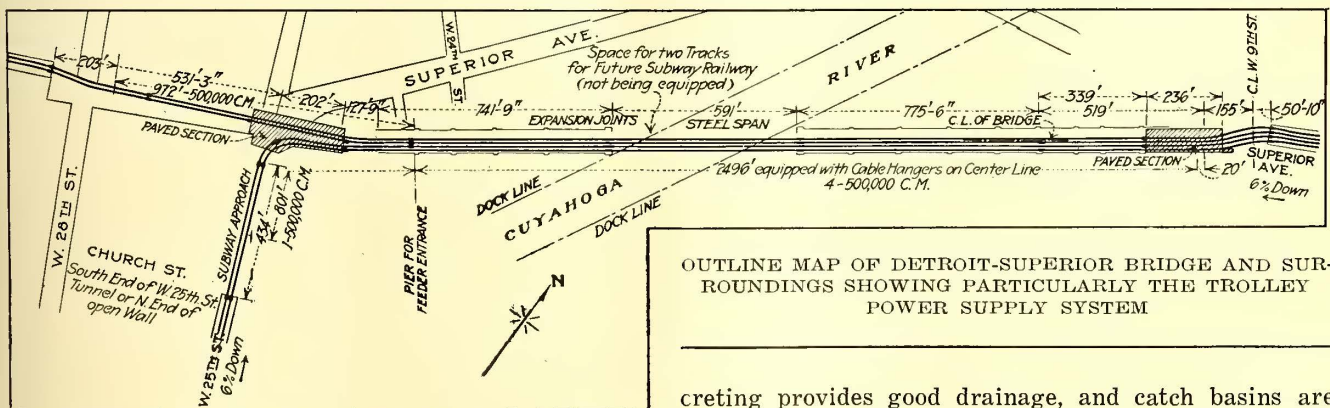


TWENTY-FIFTH STREET ENTRANCE TO ELECTRIC RAILWAY LEVEL, DETROIT-SUPERIOR BRIDGE

**T**HE famous concrete and steel bridge across the Cuyahoga River near the business center of Cleveland, Ohio, constructed by Cuyahoga County, is now complete and the cars of the Cleveland Railway are operating under full schedule on the four tracks of the lower deck. This bridge comprises a number of graceful reinforced concrete arches on the banks of the river, and a steel arch of 591 ft. span over the river itself. The total length of the viaduct is about one-half mile. The contractor for the bridge was the Hunkin-Conkey Construction Company, to whom we are indebted for the general view reproduced on page 146.

The track is laid with 100-lb. A. R. A. Type-A rail. In the open track between the paved areas, a distance of about 2500 ft., the rails are laid on white oak ties, 6 in. x 8 in. x 8 ft. in size. The rails on the steel span are laid on 7 in. x 9 in. x 9 ft. white oak ties with regular bridge tie construction. The track is ballasted with slag, of which there is a layer 6 in. thick below the ties.

On the approaches and in the paved station areas the track is laid on International steel ties, concreted in place. Two pictures have been reproduced to show the construction, before and after concreting. The con-



OUTLINE MAP OF DETROIT-SUPERIOR BRIDGE AND SURROUNDINGS SHOWING PARTICULARLY THE TROLLEY POWER SUPPLY SYSTEM

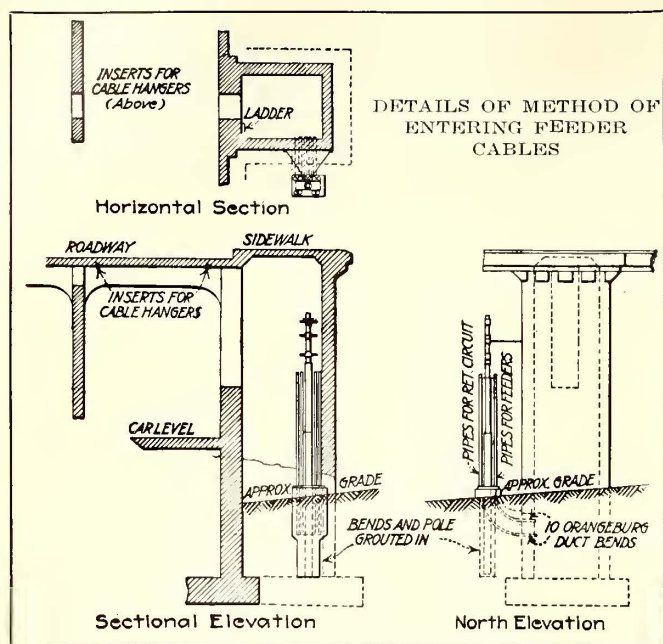
For the purpose of examining the bridge with respect to the electric railway construction it may be divided into three parts: the track approaches from the street, the paved areas at the ends of the bridge proper together with the passenger entrances from the street, and the main viaduct including the big span. The accompanying photographs have been taken to show the nature of the construction in these several sections.

Electric railway interest centers in the track, the power supply system and the provision for handling passengers. These will be taken up in turn.

creting provides good drainage, and catch basins are provided to take care of the run-off water. A layer of 1:5 gravel concrete was placed under the ties. The steel ties were used to minimize the depth of the concrete layer and on account of their general adaptability to concrete track construction.

### \$125,000 SPENT ON OVERHEAD LINE MATERIAL

In designing its part of the viaduct work the overhead department of the railway was confronted with the task of supplying power to a possible bridge full of cars, a third or more of which would be on an up grade. It was necessary to be ready to furnish power up to a total



of 2500 amp. per track, which would be drawn if all of the cars should start at once.

Over each of the four tracks so far installed (there is space on the lower deck for two future subway tracks) is hung a No. 0000 grooved trolley wire, extra hard rolled. Each is paralleled for 2500 ft. in the center of the bridge with a 500,000-circ. mil feeder, tapped in at frequent intervals. A 1,000,000-circ. mil feeder cross-connects these auxiliary feeders and leads to the power plant near by. The feed wires are exposed and are strung on the cross beams of the bridge, being supported on G. E. rack-type switchboard insulators.

The trolley wire is mounted on spring-type Ohio Brass hangers spaced from 10 to 12 ft. apart. These clamp the wire loosely to permit the motion resulting from expansion and contraction. The troughs are of hardwood, securely bolted together and either clamped firmly against the concrete roof or suspended from the steel beams by means of special malleable-iron hangers. The latter can be discerned in the picture showing the construction within the steel span.

The outline map on page 145 shows the relation of the lines on the bridge to the surrounding streets and to Cuyahoga Creek. The Viaduct power house, from which the power supply is drawn, lies about 300 yd. north of the viaduct, just outside the field of the map.

One matter which the power department of the railway has been considering with particular care is a method for keeping the trolley wire taut in spite of expansion and contraction of the bridge. The plan for this has as yet not been fully worked out.

#### APPROACHES TO THE TRACK LEVEL

At each end of the bridge is a paved area large enough to accommodate several cars on each track, the floor being of stone blocks grouted with cement. The tracks of each line are separated by a light fencing, a diving alley providing access to the inside tracks.

Long flights of easy steps lead from the street level to the track deck with attractive housings over the stairways at the street level. A view of the entrance at Twenty-fifth Street is shown on page 145 in the head-piece of this article.

The new viaduct will greatly facilitate transportation between the eastern and western sections of Cleveland, previously hampered by limited track facilities and by the operation of a draw in the Superior Avenue viaduct. Especially fortunate is the opportunity for loading and unloading cars away from the street level, which has been taken full advantage of in the manner indicated. The railway construction has been carried out by the railway company, the track work under the direction of Charles H. Clark, engineer maintenance of way, and the overhead under that of L. P. Crecelius, superintendent of power.

#### Car Meters for Instruction and Skip-Stop Studies

THE San Antonio (Tex.) Public Service Company recently purchased ten "Economy" watt-hour meters which it is putting to two interesting uses. One is to employ the readings of the meters as an object lesson to recruits in teaching them the principles of car operation. This is as far as the company can go at present in the use of energy-checking devices owing to the heavy problems presented by the absence of many department heads and trainmen in military service and the extraordinary pressure on its facilities due to war travel at San Antonio.

The second use now being made of "Economy" meters is to check the power requirements in proportion to the number and duration of stops to get some conception of the fuel saving possibilities of skip-stop service.



BIRD'S-EYE VIEW OF THE DETROIT-SUPERIOR BRIDGE

# The Space-Grabbing Automobile

## Automobile Use of Highway Space at Washington Only One-Twentieth as Efficient as Street Cars and Far More Dangerous—Regulation of Both Automobiles and Street Cars Essential

**T**HE relation of general traffic to street car traffic is the subject of section nine of John A. Beeler's report on the traffic situation in Washington. He points that while Washington's streets are generally wide, it does not follow that they are safe, because a wide street invites speed and permits more streams of traffic. As proof, he notes that fifty-three lives were sacrificed in Washington's streets during the past year—one life per week and the rate is steadily increasing.

### JAY-DRIVERS AS WELL AS JAY-WALKERS

When the automobile was apparently insignificant it was granted or usurped privileges that cannot be retained with the tremendous proportions it has now reached. These usurpations are unlimited parking, right-of-way over other traffic, and lack of observance of due caution in crossing intersecting streets, especially those with car tracks.

While most autoists show consideration for the rights of other drivers, nearly all display a contemptuous disregard of the rights of pedestrians. One of their most annoying and dangerous practices is to approach the street crossings at full speed regardless of the traffic signal, bearing down on the cross-walk full of pedestrians, and making a sudden stop directly across the walk, blocking the passage of those endeavoring to cross the streets. Should the brakes fail, a car skid or any one of a thousand things happen, serious accident or loss of life surely results. Continuing, Mr. Beeler says: "We hear a great deal about jay-walking, but I will venture to say that for every jay-walker there is a reckless driver. Until drivers are willing or are compelled to concede the rights of pedestrians to cross the streets in safety at the proper places, we can expect jay-walking, as it is frequently safer for the pedestrians."

### CONGESTED CORNERS GREATLY RELIEVED BY PREVIOUS RECOMMENDATIONS

Mr. Beeler then gave some figures to show that his previous recommendations had greatly relieved congestion. An abstract follows: On Jan. 10, 1918, a count made at Fifteenth Street and New York Avenue showed 924 vehicles passing through this intersection between 4 and 5 p.m. On March 18' a similar count disclosed a total of 1135, an increase of 23 per cent.

The average time of passage (on March 18) of each vehicle was 10.34 seconds. The total time spent by all vehicles in the intersection during the hour observed therefore was 11,736 seconds. Hence there was an average of three and one-quarter vehicles in the intersection all the time. In addition, some 203 street cars had to pass the intersection, each averaging thirteen seconds to do so. Such a condition required skill in the traffic officer directing the flow and skill on the part of the motormen to get through without striking

anything while running past the various cut-outs by momentum.

Observations showed that the 1135 vehicles mentioned carried 2144 persons, or an average of 1.89 persons, including drivers, while the 203 street cars conveyed 7541 passengers, or an average of 37.15. As each automobile averaged 10.34 seconds in the intersection and the street cars but thirteen seconds, the relative value of the car and the automobile as carriers is apparent. In other words, every passing automobile carries one person for every twenty on a street car, and for every street car held up to accommodate an automobilist, twenty people wait that one may pass. It takes less than three seconds longer in the intersection to pass a street car carrying nearly two score of persons than it does an automobile carrying less than two.

The new police regulations effective on June 1. controlling the vehicle traffic through this week have achieved marvelous results. A count made on June 20 showed the number of vehicles passing between 4 and 5 p.m. to be but 325, or a reduction from the 1135 observed on March 18 of 71 per cent. In other words, the new regulations have scattered the automobile traffic among many intersections instead of a few, much to the benefit of all.

### CENTER PARKING AND ACCIDENTS

Further to increase the speed and track capacity at this point other action is necessary. For example: Automobiles are allowed to stand in the middle of Pennsylvania Avenue at right angles to and at either side of the car tracks. This results in many collisions. Automobiles are constantly going in and coming out of the parking space. Many run too close to the tracks. Others start up and run onto the tracks without first ascertaining if the way is clear. People walk between the vehicles parked in the middle of the block onto and across the tracks. Accidents are prevented only by the vigilance of the motormen.

It is interesting to note where accidents occurred along the Avenue from this cause during the period Jan. 5, 1916—May 1, 1918. A summary follows:

Location	Number of Collisions Between Street Cars and Automobiles Due to Center Parking
Pennsylvania Avenue:	
Ninth to Tenth Streets.....	20
Tenth to Eleventh Streets.....	12
Eleventh to Twelfth Streets.....	21
Twelfth to Thirteenth Streets.....	22
Thirteenth to Fourteenth Streets.....	19
Fourteenth to Fifteenth Streets.....	82
Total .....	176

Observations made of the traffic between Fourteenth and Fifteenth Streets on Pennsylvania Avenue show that each street car is, on an average, twenty-two seconds in the block when going west and forty-five seconds when going east. The time of eastbound cars includes stopping time at Fourteenth Street. Each

automobile that crosses the tracks between these two streets consumes twenty seconds in maneuvering on the tracks. A total of 175 street cars has to operate here in both directions in a busy hour, from which it is readily seen that with a street car every twenty seconds and an automobile maneuvering on the tracks every thirty seconds (consuming twenty seconds in such maneuvering), that both danger and delay are produced for the street cars and their patrons.

Pennsylvania Avenue has a roadway 110 ft. wide. The street cars occupy less than one-fifth of it and carry a score of people for each one transported by automobile, so it seems only reasonable to assure them a safe, clear track between street intersections without such dangerous mid-block interference as is now going on. Yet May 23 and 24 show, not including machines crossing within 30 ft. of the ends of the block or at the alley near the middle of the block, seventy-six automobiles crossed the track between 4 and 5 p.m., and 122 between 10 and 11 a.m.

Many pedestrians also cross the tracks in this block and try to find a path between the parked automobiles, greatly to their own danger. During the periods of observation, 121 instances were noted in the morning hour, and 367 in the afternoon hour. It is a strain on the motorman constantly to watch out for people dodging in and out from between these machines and onto the tracks.

As center parking is desirable if it can be done in safety, a very simple way to minimize this danger is to establish a line of stanchions set in pockets sunk in the paving. Where parking is permitted, the same wire rope can be stretched to bar the automobiles from encroaching beyond their proper limits onto the car tracks. This would also prevent pedestrians from walking between the automobiles and across the tracks. On any occasion when their presence is undesirable, stanchions and wire rope can be removed on a few minutes' notice in the same manner as they are now removed from the curbing after a parade.

#### SAVING TIME AT TRAFFIC OFFICERS' POSTS

At present motormen frequently hesitate after receiving the "go" signal from the traffic officer. This may be due to a lack of proper instruction. The inevitable result is that the traffic officer reverses his signal and calls for traffic to proceed from some other direction. Meanwhile the waiting car is losing time and delaying the cars behind it. Motormen must keep their eyes upon the traffic man all the time while standing and waiting for a signal, and be prepared to get a quick start immediately upon the signal to proceed, unless their cars have not finished receiving and discharging passengers.

The control and direction of street traffic is in itself an occupation that demands the service of a capable and intelligent man. As has been shown, more than 1100 vehicles and 200 street cars will pass through a busy intersection in an hour. A traffic officer is a member of the police force, but his duties are as different from those of the other members as a fireman's duties are from those of a health inspector, although both are working in the interests of public safety. Unless the man at the intersection understands traffic work, the

traffic will get through just as well or better without him. The fact that a man is good as a patrolman is about as much of a qualification for a traffic officer as it would be for an engineer in the fire department. Washington is especially fortunate in possessing some most competent men in this branch of the service.

Traffic control is so important and vital a factor upon which the comfort and safety of the public are largely dependent that the traffic squad should be under one direct and authoritative head to permit no division of responsibility. The members should be carefully selected from those having special aptitude along these lines, and they should be carefully drilled in their respective duties until they all become proficient in the art.

Precedence for street cars is a principle that merely recognizes the rights of the majority, if a passenger ratio of twenty to one may be termed by such a phrase. Perhaps it might be said to recognize the rights of the masses as against the classes, but in Washington the classes as well as the masses use the street cars. At any rate, the street cars only run on a comparatively few streets where their tracks have been laid. Automobiles can and should go elsewhere and not follow car tracks.

#### CHOICE OF NEAR-SIDE OR FAR-SIDE STOPS SHOULD NOT BE UNIVERSAL

No unanimity of practice or opinion on the relative merits of the near-side and far-side systems of stops exists in this country. In a number of cities where nearly every street contained tracks, street cars were making two stops, one before crossing the intersecting track for the purpose of getting the car under control and one after crossing to the far side to receive and discharge passengers. By adopting the near-side passenger stop, one stop was saved at each such street.

With the increase in automobile traffic, street accidents began to increase and a country-wide agitation was started to have street cars stop before crossing intersecting streets. The reaction set in later when communities realized that the needs of street car passengers should be paramount in matters affecting vehicular traffic. To-day, probably as many cities employ one plan as the other, and an increasing number are using a combination, depending upon the special requirements of each case.

Although some authorities take a stand in opposition to all far-side stops, the model street traffic regulations issued under the auspices of the National Safety Council and written by William Phelps Eno, whom the Council terms "probably the most expert adviser on such matters in the world," contain the following indorsement of far-side stops:

Formerly cars stopped on the far side of the street (in the city of New York) except at fire, hospital and school stops, where they stopped at both sides. In 1904 the near-side ordinance was passed at the instigation of the author, but it was soon repealed. In 1914 this ordinance was re-enacted and has since been made to include buses. (Since changed back to far-side stops for buses.)

The reasons given for the near-side stop were safety and reduction in the number of stops.

As far as safety is concerned, the author after continued study now believes the far-side stop to be the safer, both for cars and for buses.

\* \* \* \* \*  
All things considered, the author has reached the conclusion that the far-side stop has the balance of advantage and that the compulsory near-side stop should be discontinued at all streets, hospital and school streets included.



In Washington, where the near-side stop has been generally observed for a long time, Mr. Beeler's recommendations have, in order to avoid a disruption of long-established practices, followed the same plan except in those instances where some particular advantage was to be gained by using a far-side stop. Where traffic officers control and direct traffic, it makes but little difference as far as safety is concerned whether a near or far-side passenger stop is in vogue, since all traffic must receive the signal before crossing the street.

Where street cars make a near-side stop for the purpose of receiving and discharging passengers, all automobile traffic is delayed and blocks the roadway behind the car, as it cannot proceed until passengers are safely on or off. Where a far-side stop is used, however, the automobile in many instances can turn into the cross street without delay while the car is loading. The far-side stop can often be used to relieve accumulated congestion.

From the safety standpoint, the principal objection to the near-side stop is the uncertainty as to whether or not the car is going to stop to receive and discharge passengers. Under the assumption that it will stop, many drivers will spurt ahead and risk a collision in order to make the crossing ahead of the street car. Doubtless if every street car in the city were required to stop at the near side of every street, regardless of whether there were passengers to board or alight, the plan would meet the approval of those motorists whose least concern is the time it requires the car rider to reach his destination. In many foreign countries the opposite rule prevails, namely, that all vehicles are required to come to a full stop before crossing a street railway track. Which is the more sensible regulation? The street car must follow the tracks. Its course is not only self-evident but limited. It cannot go out of its way to run over pedestrians or collide with vehicles.

This brief discussion of the relative merits of each system of stops gives some explanation of the great divergence of opinion as to which is the better. With automobiles privileged to run without restriction across streets containing street car tracks, the question of whether near-side or far-side stops are better hinges on two points: (1) Is automobile traffic or street car traffic more important; (2) on the conditions surrounding each stopping place, such as volume of the various kinds of traffic, liability of congestion, previous practice in the community and convenience of the car patrons. Street car stops should not be located according to an inflexible rule requiring all stops to be near-side or far-side, but according to selections based entirely on the factors listed above, and clearly indicated by car-stop signs.

**NO PARKING AT CAR STOPS OR PLOW PITS—  
EXCAVATION AND BUILDING PERMITS**

No parking of vehicles should be permitted opposite any plow pit or between any plow pit and the curb line. In addition to the prohibition of any vehicles standing between any raised loading platform or safety zone and the curb, no vehicle should be permitted to stand within 15 ft. of any regular car-stop sign.

Before making excavations or openings of any character in the roadways within the congested district, the permits should have the approval of the Police

Department (or the traffic division thereof). This will enable those in charge of the control of traffic to ascertain in advance when and where any important changes in the flow of traffic will occur and to provide against congestion or tie-ups by taking such measures as are necessary and desirable to prevent confusion and delay.

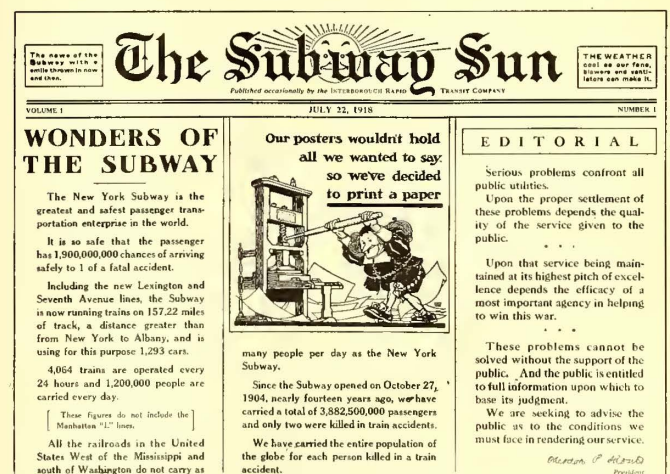
The regulation governing the use of building permits should be modified within the newly defined "congested district" to allow the builder to use during construction only the sidewalks of any street with car tracks on it, except that an allowance may be made for the erection of temporary sidewalks to allow pedestrians to pass the work in safety.

**IN WASHINGTON RIGHT-OF-WAY FOR VEHICLES SHOULD  
BE FROM THE RIGHT**

At present where the flow of traffic is not controlled by a traffic officer, vehicles moving north and south have the right-of-way over those going east and west. The "north and south" plan originated in New York. It is especially adapted to the necessities in that city, as practically all the main heavily traveled arteries there extend north and south.

Mr. Beeler believes that the plan of giving the right-of-way to the vehicle approaching from the right would be better adapted to conditions in Washington where the important thoroughfares extend in all directions. The right-hand rule is working admirably in many important cities. Its application at Washington would undoubtedly simplify vehicular traffic and prevent mix-ups, accidents and confusion, not only on the streets intersecting at right angles, but at the busy circles and on the diagonal thoroughfares, such as Pennsylvania, New York, Massachusetts and New Hampshire Avenues.

**Novel Car Poster in New York**



THE "SUBWAY SUN," THE LATEST INTERBOROUGH CAR POSTER

The latest subway poster is the *Subway Sun* which is reproduced herewith and was carried in cars on July 22. Its likeness to a newspaper gave the occasion of a number of jokes in the New York daily papers. The *New York Sun*, for instance, described the central engraving as "a full length portrait of Managing Editor Ivy Lee, turning the crank of the first unsuccessful newspaper press."

# Home Attractions Keep Track Laborers Satisfied

Solving the Labor Problem by Providing Free Section Houses With All Conveniences, Land for Gardens and Chicken Raising as Well as Free Transportation to Amusement Places for Their Employees and Families

BY CLIFFORD A. ELLIOTT

Cost Engineer Maintenance of Way Department, Pacific Electric Railway,  
Los Angeles, Cal.

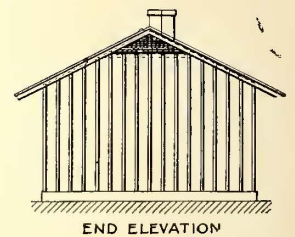
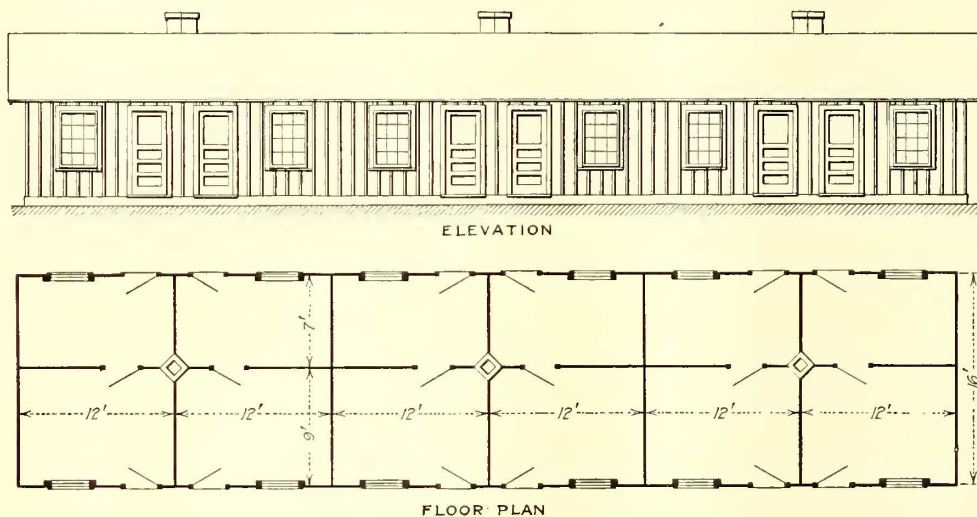
**T**HE present labor shortage has become a serious problem on electric interurban lines. The Pacific Electric Railway prides itself on its past and present efforts to meet the acute situation and retain laborers for maintaining its track. In southern California Mexicans have always been used for trackwork due to the reasonable wages for which they can be obtained. However, during the present war the supply has been badly depleted because the United States government established the literacy test, this barring from the country a large number of Mexicans who are anxious to enter the United States to engage in this work. Many

All of these conditions tend to work a hardship on the railroads in holding men in service and in maintaining a desirable organization.

## HUMAN NATURE STUDIED TO HOLD LABORERS IN SERVICE

The Pacific Electric has experienced these inroads into its maintenance organization so frequently that steps have been taken to hold it together by thoroughly studying the psychological and human nature side of the question. At the same time, modern and consistent wages are being paid to track laborers.

The Mexican is of a migratory nature, so that men



STANDARD SECTION  
HOUSE PACIFIC  
ELECTRIC RAILWAY

Mexican laborers have also migrated from southern California into Washington, Oregon, Montana and other Western states. Here attractive wages are paid them by mining companies and numerous other industries. They take the places of Italians, Slavs and Greeks, who have returned to their own countries on account of the war.

The Mexican has even invaded Eastern states to take the places of other foreigners in track maintenance and freight handling on steam roads, and large numbers were taken to Alaska to work in the fish canneries. Furthermore, the vast acreage planted to sugar beets in southern California has demanded large quotas of Mexican laborers during the summer. The wages for beet harvesting are attractive, and the restless Mexican is inclined to enter this work for the temporary period required for handling the crops and to work hard for several months. Then he is content to remain unemployed for two or three months thereafter, until, in Indian fashion, he has squandered all of his earnings.

with families have always been given preference over single men in employment. In addition, attractions have been provided constantly to hold them in service. The married Mexican is a lover of his home and its environment. Therefore, the Pacific Electric, a number of years ago, provided adequate and commodious section houses for living quarters free of charge in convenient section camp divisions, advantageously located for handling the maintenance work. These camps, where possible, are located near sidings or stations which may be easily reached by special cars to collect and distribute the track gangs. An accompanying plan shows the usual type of building erected for housing the men.

The standard type of section house is usually constructed with six units, lighted by electricity to avoid fire hazard. Additional units may be added as required. Stoves are installed in each section camp for cooking and heating, and adequate fire protection is provided to reduce insurance rates. Accompanying illustrations

show the latest model camps provided at Culver City, the home of the large Triangle Film Corporation's plant, and at El Monte Station.

In the general view of the Culver City camp a steam heating and hot-water plant is seen on the extreme right. Immediately to the left of this is the room for the family washings, provided with hot and cold water, tables and benches. On the extreme left in the view are toilets separately maintained for men and women. Garbage cans can be seen conveniently located at the kitchen doors. The heating plant and hot-water system furnish hot water during the daytime for the women at the camp, thereby saving their energy and reducing the fire hazard.

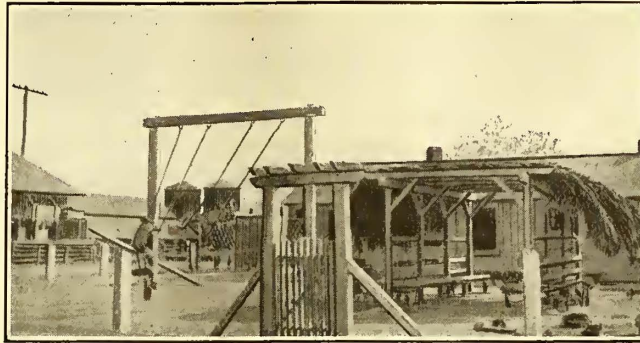
#### FLOWER GARDENS AND CHICKEN YARDS ARE PROVIDED

A further study of the Mexican's mode of living demonstrated that his home was incomplete without flowers and a few chickens and rabbits. The company therefore erected pergolas and chicken yards at each section house layout and planted flower gardens. The company's chief gardener and his staff give a portion of their time to maintaining the flower gardens at these camps.

When the food conservation wave swept over the United States last summer the Mexicans took exceptional interest in the company's plan to have them cultivate and plant gardens around the section camps and along the right-of-way. The company furnished free garden seed and the chief gardener and his men superintended the planting and gave the necessary instructions. Several prize gardens were developed by the Mexicans, and one raised enough to supply his own family and sold a few dollars' worth of vegetables besides.

#### A GARDEN CONTEST PRODUCED GREAT RESULTS

A garden contest was conducted by the company at the section camps as follows: Plots of ground of uniform size were set aside in front of the laborer's houses. These were planted to small vegetables, and a close watch was kept to determine which man produced the greatest results. At the side or rear of the main layout



PERGOLA AND PLAYGROUND EQUIPMENT AT EL MONTE STATION CAMP

of section houses a large plot of ground was also assigned to the laborers who were housed at the camp, to be used for raising potatoes.

As this welfare work progressed, the company, on its own initiative, undertook to teach sanitation to the Mexican track laborers and their families, as it realized that sanitary camps meant an increase in intelligence

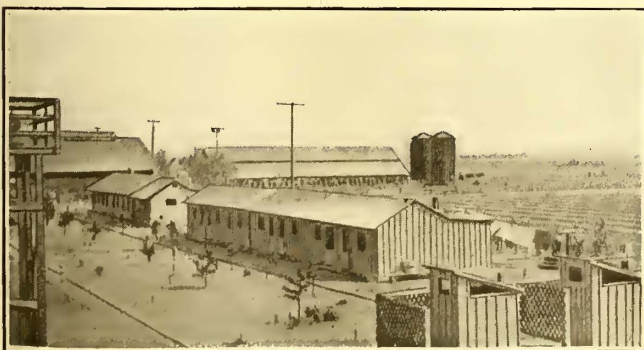
and efficiency. More modern toilet facilities, less crowded quarters, fresh air privileges and shower baths were provided. Washrooms with concrete floors, drains, storm sewer and cesspool connections were installed.

The houses were screened and a general sanitation program was carried out, which in time pleased the Mexicans and won the hearty approval of the State, County and city health authorities. The arrangements were strictly in accordance with the legal requirements of the California State Commission of Immigration and Housing. This latter body has given the services of its inspectors and sanitary experts to advise and assist the company in improving the status of the workmen. The company also supplied free fire wood to its laborers at the camp, utilizing discarded ties for this purpose. A contract has been made with an outside company to conduct a commissary department at each camp, and supplies are provided at reasonable rates approved each month by the railway company. The company protects the commissary department on its payrolls.

#### PROMPT ACTION PREVENTS A SPREAD OF TYPHUS

Recently the company experienced in one of the camps a "scare" regarding typhus, a type of fever in which the fatalities are high among Mexicans.

The disease was carried into the camp by a new employee. The promptness and success with which measures were taken to prevent its spread in spite of temporary opposition were highly creditable to the company's medical department. Since then the maintenance of way department has employed a competent nurse, who thoroughly understands the conditions. Her time is entirely devoted to the canvassing among the camps and teaching the Mexican women and their children the rudiments of hygiene.



SECTION HOUSES AT EL MONTE STATION, PACIFIC ELECTRIC RAILWAY



GENERAL VIEW OF SECTION HOUSES AT CULVER CITY CAMP—PACIFIC ELECTRIC RAILWAY

Further to promote camp sanitation the company has a force which visits and thoroughly cleans up the camps and grounds daily. Incinerators have been constructed to dispose of the waste materials and garbage, and metal garbage cans are maintained.

Since the United States entered the European war the labor situation has been decidedly acute. The higher wages offered by other corporations for the Mexican laborers has a tendency to draw the men away from the company. Therefore extraordinary efforts still further to attract the Mexicans for the railroad service were exerted. As the Mexican is a good worker when he knows his family is contented, the company constructed at its camps various playground and amusement features, such as swings, teeter-boards, handball courts, etc., that were attractive both to children and to the adults. Minor conveniences were provided about the houses, also, to favor the women. About 99 per cent of the Mexicans in the camps are ignorant, being unable to read and write. To meet the educational need the company established schools at its most important centralization camps, and the women are being taught English, reading, writing, domestic science, thrift, economy and marketing, etc. Suitable educational work is also being done for the children. The girls are taught sewing, cooking, while the boys have manual training, many of them taking up the carpenter trade course, with the expectation of entering the bridge and building department or the shops of the railway company.

#### FREE EXCURSIONS TO BEACHES PROVIDED BY THE RAILROAD

During the hot summer months the company arranged free excursions to the beaches for the women and children. In addition, at the end of each month the laborers and their families are furnished free transportation to points on the system which they may desire to visit. Usually these trips are taken on Sunday. The company provides continuous police protection in each camp to maintain good order and to keep out agitators, especially I. W. W. plotters who have a large following among the worthless class of Mexicans. These are always anxious to get into peaceful camps to stir up discord and discontent and to work against the selective draft of the government.

During the draft call the company vigorously trained its Mexican employees, through patriotic propaganda, not to avoid the draft, even if they were not citizens of this country. Excellent results were obtained. When the company purchased some \$500,000 worth of Liberty Bonds and sold by the partial payment plan about \$265,000 worth of these to its employees, the poor and ignorant Mexican laborers proudly did their bit by subscribing.

As an extra attraction the company is using a merit system, under which, if the women and children in each camp meet a certain standard of cleanliness each week they are rewarded with free passes to Los Angeles for shopping and pleasure trips. If they do not qualify for Class A-1, then this privilege is granted to them only every month. If they are careless about observing the rules they are disqualified from receiving any such free transportation. The families look forward joyously to these trips to the city and the contest has gained considerable favor.

## How Economies Are Effected

### Kansas City Railways at Rate Hearing by Public Service Commission Points Out the Methods It Has Used to Save Money

AT A RECENT hearing before the Missouri Public Service Commission on the application of the Kansas City Railways for permission to charge a higher fare, the company presented among its exhibits a list of methods used to effect economies in construction, maintenance and operation. This covered the various means taken to reduce operating expenses, in the effort to make them come within the revenue and provide for interest and the allowed dividends. The list follows:

#### WAY AND STRUCTURES

*Cast-Iron Bound Special Work.* This is used instead of solid manganese in special work repairs.

*Arc Welding Process.* This is for repairing special work and welding all defective joints in repairs, thus saving the installation of new steel.

*Welded Joints.* Seventy-eight per cent of all paved track now has welded joints, effecting a large saving in return current, electrolysis troubles and copper bonds.

*Track Machinery.* In all track work labor-saving devices are used, such as pneumatic tie tampers, pneumatic drills and riveters, electric drills, electric spike drivers for screw spikes, and pneumatic and electric rail benders.

*Asphalt Plant.* This is capable of handling all asphalt needed for company work and can be operated by five men in place of twenty-five by the old process. It is capable of instant conversion to a sand drying plant, in which all sand for the cars is dried.

*A Portable Rock Crusher.* This crushes old concrete and worn granite blocks to be again used as ballast.

*Rail Grinders.* These effect a saving in track repairs.

*Pneumatic and Electric Tools.* A complete line of the most modern pneumatic and electric tools for all purposes, together with a central storehouse and repair station where such tools are stored and kept in repair.

#### ELECTRICAL DISTRIBUTION DEPARTMENT

*Distribution System and Automatic Substations.* The electrical distribution system has been entirely rearranged and automatic substations have been installed. This has made possible a saving in copper wire alone estimated to be more than \$100,000, and secures more reliable and constant service, effects great reduction in current losses and allows a reduction of the substation operating force.

*Motor Trucks.* The use of motor-driven repair and emergency trucks secures greater efficiency and reduces the emergency force.

*Nitrogen Lamps.* The replacing of cluster and arc lights with 200 volt nitrogen lamps reduces current and maintenance cost.

*Automatic Signals.* The installation of automatic signal systems at all dangerous crossings reduces accident hazard.

#### POWER HOUSE

*Underfeed Stokers.* The installation of underfeed stokers, by increasing the efficiency of combustion, secures an increased generating capacity and allows the burning of high ash coal.

**Rehabilitation.** A program of complete rehabilitation includes the use of every modern economy device at the power plant.

#### CAR EQUIPMENT

**Light Weight Cars.** The adoption of a standard double-truck car of light weight, reducing the weight per passenger carried, has effected a saving of from 24 to 37 per cent in power over the types preceding.

**Folding Doors and Steps.** The equipping of all cars with folding doors and steps has greatly reduced accidents.

**Door Engines.** Door engines to operate folding doors and steps are a time and labor saver.

**Thermostat Heat Regulators.** Thermostat heat regulators, in addition to maintaining an even temperature in the cars and conducing to the comfort of passengers, also effect a great saving in power consumption.

**Fare Boxes.** These effect a material saving in time and secure better fare collection.

**Coasting Recorders.** Coasting recorders and a special power saving department have been installed. The recorders have effected a saving of 10 per cent in the power formerly used and in addition are a material factor in reducing certain classes of accidents and in keeping down electrical equipment maintenance.

**Slack Adjusters.** A thorough trial of slack adjusters demonstrated that these will automatically keep the brakes tight, eliminating the constant adjusting of brakes at the barns.

**Bearing Springs.** The use of coiled springs in motor bearings permits the use of worn bearings, thus effecting a large saving in maintenance.

#### OPERATION

**One Man Cars.** These are used where possible on outlying lines.

**Front End Collectors.** These are employed at heavy transfer points, facilitating prompt loading.

**Stop and Loading Signs and Safety Zones at All Corners.** These speed up operation.

**Traveling Train Instructors.** Their duties are to instruct the men on the road and secure more efficient operation.

**Emergency Transfers.** These eliminate much transfer waste and save time.

**Electric Switches.** The increasing use of electric switches makes for speedier operation.

**Dispatching System.** A complete dispatching system, with dispatchers at all points of heavy traffic, prevents unevenness in schedules with resulting inconvenience to the public and thereby effects a saving in platform time.

**Skip Stop.** Kansas City was the first place in the United States to adopt the odd and even stops during rush hours. This skip-stop system will shortly be applied to the entire system and will effect a saving in power and speed up schedules.

**Modern Traffic Department.** Constant checking allows more flexible adjustment of the service to traffic conditions, has effected a very material decrease in car hours, has cut out dead mileage and, while making possible better service, has effected a great saving in platform expense. The following is a sample of what is being done constantly:

	April, 1917	April, 1918	Change
Maximum cars scheduled daily.....	629	649	+20
Car hours scheduled daily.....	8,072	7,522	-550
Car miles scheduled daily.....	74,468	67,403	-7,065

**Car Barn Changes.** The elimination of outlying car barns has effected a large saving in dead mileage. By this means equipment is concentrated, and by reducing fire hazard, insurance rates have been lowered.

#### SHOPS AND MAINTENANCE

**Labor Saving Machinery.** Every known labor-saving device, including the latest type of welding machinery, has been installed at the car shops.

**Salvage.** Salvage of material of all kinds is made possible by the use of the oxyacetylene welding process.

**Painting.** Enamel is used in painting cars, thus securing longer life and cutting down the initial expense.

**Wheel Grinders.** Wheel-grinding machines at the car houses allow the grinding of wheels without removal from cars.

**Remodeling.** The remodeling of equipment and the rebuilding of cars greatly add to the normal life of rolling stock.

#### MISCELLANEOUS

**Safety Campaign.** A continuous safety campaign has greatly reduced certain classes of accidents.

**New Ideas.** In the last four years representatives of the company have visited every large system in the United States and have put the best ideas of each into practice.

**Advance Purchases.** A large saving was effected by the purchase of large quantities of materials before the sharp advance.

**Organization.** The organization has been completely rearranged from the top down to secure greater efficiency in operation and economies in every department.

### Fare Increase Successful in Bradford, England

The increase of 50 per cent in the tram fares of Bradford, England, has so far been successful. The manager of the tramways department states that the receipts for the first nine days under the increased charges had been £13,099, as compared with £9,906 for the corresponding period of last year. This represented an increase of 32 per cent, whereas the official estimate was 30 per cent when the increase was decided upon. It is understood that the number of passengers had been considerably reduced, and the shorter queues have been very noticeable. The tramway committee of the city has decided to make a reduction in the number of stopping places on the various routes of the system.

### Japan Trying Women Conductors

As an experiment a few women were put on the cars of the Mino Electric Company, Gifu Prefecture, Japan, a few weeks ago and if they prove satisfactory other women will be similarly employed. There is a shortage of labor in Japan due to the general activity in manufacturing, but the proverbial reserve of Japanese women renders their introduction into car platform service rather more difficult than in western countries.

# High-Speed Circuit Breaker Prevents Flashovers on Milwaukee Electrification

With This Apparatus the Energy Waste Resulting from the Installation of a Permanent Resistance or an Increased Length of Feeder Cable to Reduce High Current Values Is Avoided

WHEN the decision to use high-tension direct current was made by the Chicago, Milwaukee & St. Paul Railway it was recognized that some means would have to be taken to prevent the flashover of the direct-current generators in case of a short-circuit on the overhead line. One suggestion made was that the company install resistance in the substations in series with the trolley circuit to cut down the current to a safe value. However, it was found that the construction of a suitable permanent resistance would be difficult and expensive; that the resistance would take up a great deal of room; and finally, that the energy waste would be appreciable. The electrification department, through R. Beeuwkes, electrical engineer, therefore favored the trial of some simpler and more

Rocky Mountain division—where telephone and telegraph circuits are located. There are no transpositions on the high-tension line.

## FUNCTIONS AND OPERATION OF THE HIGH-SPEED CIRCUIT BREAKER

The function of the high-speed circuit breaker hereafter described is to operate with sufficient speed to check the rise in current caused by a short-circuit before damage can be done to the converting equipment. In order to meet this requirement, it is necessary that the rise in current be checked within a few thousandths of a second, and the circuit breaker described below meets these conditions in every respect. The rate of acceleration on the main and secondary contacts is approximately 8000

ft. per second and they are released in a time as short as 0.003 second or less from the beginning of a short-circuit. The time from the beginning of the rise in current caused by a short-circuit until the secondary contacts part has been shown by test to be of the order of 0.004 second. This compares with about 0.10 to 0.15 second, the speed of ordinary switchboard type breakers. The designers have thus succeeded in building a breaker which will in effect foresee the rise in current caused by a short-circuit and insert sufficient resistance to limit this rise to a safe value.

It has been the practice on many railroads to install a certain amount of feeder as resistance between the substation and the tapping-in point usually by carrying out the feeders to some distance from the station before tapping in. It was evident, therefore, that if apparatus could be developed to protect the generators from flashover on severe short-circuits, it would permit of the feeders being tapped directly to the trolley at the substation, thus eliminating the losses due to feeder resistance.

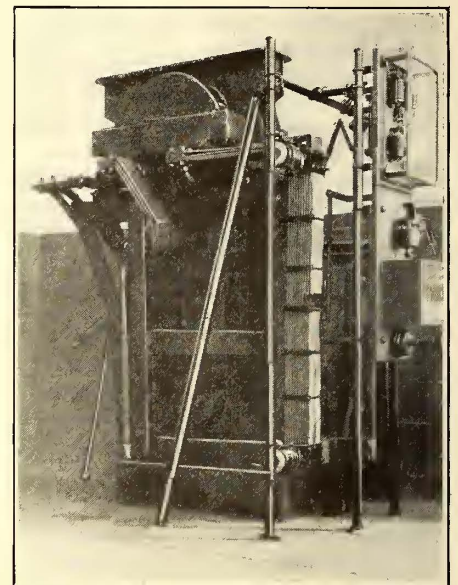


FIG. 3—HIGH-SPEED CIRCUIT BREAKER INSTALLED IN JANNEY SUBSTATION, CHICAGO, MILWAUKEE & ST. PAUL RAILWAY

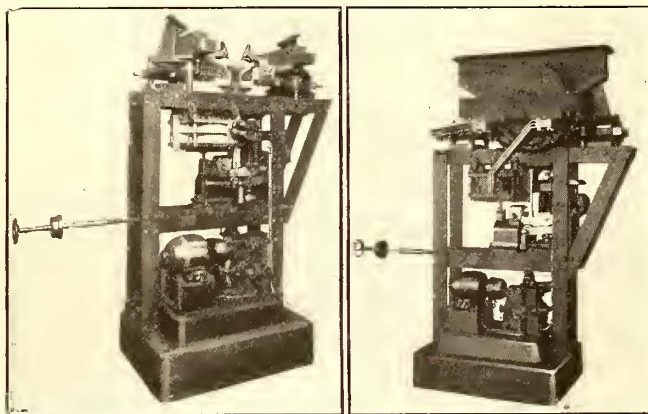


FIG. 1—HIGH-SPEED CIRCUIT BREAKER WITH ARC CHUTE REMOVED. FIG. 2—HIGH-SPEED CIRCUIT BREAKER WITH MAGNETIC BLOWOUT 3000 AMP., 3600 VOLTS

economical method. To this end, the General Electric Company developed a high-speed breaker which was tested out at Schenectady on a motor-generator set made for the Milwaukee electrification.

An auxiliary benefit of no mean value is the greater protection afforded to the company's telephone circuits which parallel the contact line. Since the installation of these breakers, the annoying acoustic shocks which previously occurred from short-circuits have disappeared. Notwithstanding the fact that this telephone line parallels both the 3000-volt direct-current contact line 40 ft. away and the 100,000-volt alternating-current transmission line 80 ft. away, the operation of the telephones is very satisfactory.

No attempt was made to eliminate inductive interference other than fully to transpose the weak-current circuits for varying lengths; to see that the insulation was in good condition; and finally, to install fuses in the circuits at the stations—both the Missoula and

Preliminary calculations in connection with the electrification of the Chicago, Milwaukee & St. Paul Railway showed that quite an appreciable amount of power could be saved each year by the elimination of this extra feeder resistance. Work was therefore initiated on the development of an air circuit breaker which would have such a high speed in opening that it could be used to insert resistance in the circuit soon enough to prevent the

very satisfactory results. All substation feeders are tapped to the overhead trolley system directly at the substation, eliminating the resistance losses occasioned by tapping at some distance away. Actual operation has demonstrated that it is entirely practicable to operate direct-current stations in this manner when protected by the high-speed circuit breaker, even though the voltage of the system (3000 volts) is the highest direct-current voltage used in commercial railway work.

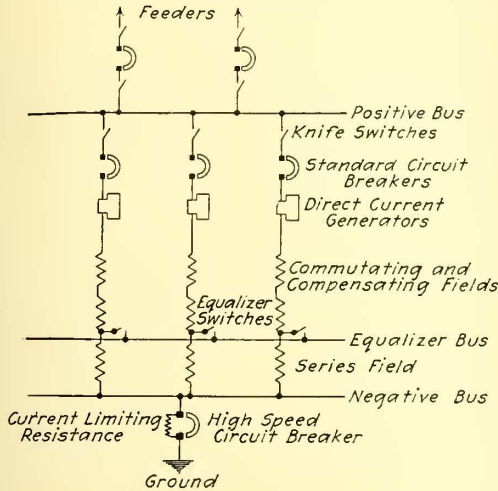


FIG. 4—D.C. CONNECTIONS FOR SUBSTATIONS WITH THREE MOTOR-GENERATOR SETS PROTECTED BY HIGH-SPEED CIRCUIT BREAKER

short-circuit current from reaching such a value as to cause the direct-current machinery to flash over. This design of breaker required a speed much faster than anything ever before attempted. Careful investigations demonstrated that the device must operate in a shorter time than is required for one commutator bar to pass from one brush to the next or less than one-half cycle for that particular machine.

One of these breakers is installed in each substation and connected into the negative return circuit between the ground and the negative bus, as shown in Fig. 4. This location affords the maximum protection, since the return circuit must pass through the limiting resistance in case of a flashover from the positive to ground, as all of the negative terminals, bus rigging, etc., are insulated for full generator voltage. To insure complete protection the high-speed breaker is so interlocked with the regular switchboard type of air

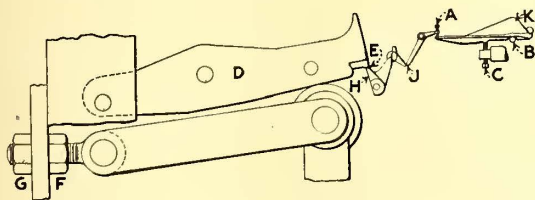


FIG. 5—DIAGRAM OF LEVERS FOR TRIPPING AND RESETTING THE TYPE MW CIRCUIT BREAKER

circuit breaker that the high-speed breaker must always be closed before the switchboard breakers.

The fourteen 3000-volt direct-current substations on the Chicago, Milwaukee & St. Paul Railway are equipped with this new type of breaker, and the first units installed have been in operation since early in 1917 with

CIRCUIT BREAKER IS MOUNTED ON AN INSULATED FRAMEWORK

The high-speed circuit breaker installed for the Chicago, Milwaukee & St. Paul Railway is of the single pole, magnetic blowout type rated 3600 volts, 3000 amp., direct current. The breaker and mechanism for a self-contained unit are mounted on a structural iron framework with cast-iron base. The base and framework are in turn mounted on an insulated base to insulate the circuit breaker from the station floor. The operating mechanism is so arranged that the breaker can be closed either by hand at the breaker or by a motor controlled from the station switchboard. The closing of the breaker by means of the motor is accomplished by a

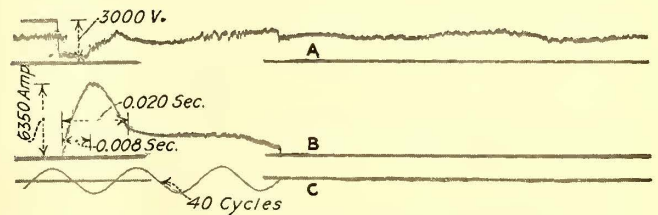


FIG. 6—OSCILLOGRAPH RECORD OF SHORT-CIRCUIT ON MOTOR-GENERATOR SET CHECKED BY HIGH-SPEED CIRCUIT BREAKER

Curve A—Voltage across generator terminals 1 mm.=143 volts.  
Curve B—Current positive terminal of generator 1 mm.=174 amp.  
Curve C—Timing wave 40 cycles.

cam mechanism operated through gears. When closed by hand, a ratchet mechanism is used.

The main contacts are of the well-known laminated brush type, the brushes forming the stationary contacts. The movable contact is a solid copper forging which is made as light as possible in order to reduce to a minimum the mass to be moved in operation. Secondary contacts are located above the main contacts and are of very ingenious design to insure their breaking after the main contacts in order to prevent any possibility of burning the current-carrying parts of the main contact. All of the contacts are located in a blowout chute of insulating material designed to withstand the burning incident to the arc. The blowout magnet is of laminated iron of large section. The blowout coils and trip coils are connected in series so that the blowout coils are excited at all times, as the usual arrangement of shunt blowout coils was found to give insufficient speed of blowout. The main and secondary contacts are carried on a lever and this lever is actuated by a nest of compression springs which exert a force of about 8000 lb. when the breaker is adjusted for operation. It was found that this pressure was required to give the rapid acceleration necessitated by the high-speed conditions under which this circuit breaker is required to operate.

The tripping is accomplished through a train of

latches and levers actuated by a solenoid, the magnet frame and core of which is specially laminated to obtain a quick magnetic response to the short-circuit current. The object in using a series of several latches is to allow the mechanism to move the main latch through a distance of  $\frac{1}{8}$  in. or more by means of a solenoid. This solenoid, in order to act in the time required, is able to move only a distance of about 0.001 of an inch and can exert a force of only about 200 lb., while the main latch is subject to a pressure of about 4000 lb. transmitted through a lever from the compression spring above referred to.

In order to take care of the varying number of units in the several stations, the calibration is obtained by means of an adjustable tension spring directly opposing the pull of the solenoid. Referring to Fig. 5, the actual tripping takes place at *J*. The levers *A* and *K* are for multiplying the movement of the solenoid, which delivers its force at *B* so as to obtain a movement large enough to be entirely definite. The latches from *E* to *J* are special forms of levers which reduce the great pressure at *E* to a value which can be handled by a small bearing surface at *J*.

Upon the opening of the breaker contacts, the resistance becomes increasingly effective due to the resistance of the arc as the breaker completes its operation and after the lapse of about eight-thousandths of a second or less from the beginning of the short-circuit (see oscillograph record, Fig. 6), the resistance has increased to such a value that no further rise of current can take place.

This method of protection has given such satisfactory results that high-speed circuit breakers have been adopted by the General Electric Company as standard on all 3000-volt direct-current generating apparatus for steam road electrification. Actual service has demonstrated that the high-speed breaker will protect the generating apparatus from all short-circuits experienced, and not only will prevent damage to the brush rigging, commutator, etc., but will relieve the duty on the regular switchboard air circuit breakers.

The oscillograph record shown in Fig. 6 gives a good idea of the remarkably high operating speed of this circuit breaker and the resulting protection against damage to equipment. It may also be noted that this oscillogram shows the maximum current rise of less than ten times normal which is quickly reduced to well within the commutating capacity of the machine. With this method of protection, none of the effects of the direct-current short-circuits is transmitted through the set to the alternating-current side, thereby preventing such disturbances from affecting in any way the alternating-current supply system.

### Modern Cars Speed Up Car Loading

THE value of a well-designed car from the standpoint of ability to load quickly and, therefore, to maintain a high schedule speed, or conversely, to operate a greater number of car-miles for a given platform expense, is well shown by some tests made recently by C. D. Smith, superintendent of transportation Mahoning & Shenango Railway & Light Company, Youngstown, Ohio. The loading times expressed in seconds per passenger were found to be as follows: Peter Witt car,

0.9 second; standard-type car with doors at both ends, 1.35 second, and high-floor center-entrance car, 1.5 second.

These cars are roughly of the same seating capacity. The Peter Witt cars were of the lot of thirteen delivered to the company last September. The data were taken at the Public Square in Youngstown, from which point all cars start their runs. During the rush-hour period the passenger interchange at this point is very heavy.

## Safety Education Reduces Accidents

### The Worcester Meeting of the American Society of Mechanical Engineers Was Devoted to a Discussion of the Safety Movement

IN VIEW of the draft made on the gross earnings of electric railways by accident claims, some of the discussions presented at the Safety Education Session of the American Society of Mechanical Engineers at its recent Worcester meeting should be of interest to electric railway men. In a paper by L. A. DeBlois, safety engineer E. I. du Pont de Nemours & Company, Wilmington, Del., it was brought out that safety engineering is more than merely a matter of safeguarding and advertising. An analysis of industrial accidents shows that from 15 per cent to 25 per cent are of the so-called "unavoidable" class.

Of the remainder, or avoidable accidents, between 10 per cent and 20 per cent are caused by unsafe mechanical or structural conditions and are therefore possible of correction. From 80 per cent to 90 per cent are attributable to human defects, that is, to ignorance, carelessness, irresponsibility, indifference, disobedience, recklessness, horse play and inexperience, and to defects of system, such as lack of proper supervision, discipline, etc., in the organization. The remarkable thing about the above figures are that they seem to apply equally well to all industries, being practically the same for such industries as explosives manufacturing, cement making, mining, railroading, and others in which it is usually considered that the life hazards are widely different.

So far as the structures with which the railway industry is concerned it was pointed out that stairs, handrails and narrow aisles are common causes of accidents. In the shop, insufficient headroom making machines, valves, etc., difficult to get at for repairs and manipulation are also fruitful accident producers. In connection with machinery it was pointed out that no machine can be made absolutely foolproof even in its regular operation and that conditions occur during adjustment, oiling, cleaning, repairs, etc., under which even the best safeguards may be either absolutely useless or introduce hazards of their own.

As the human element offers the greatest opportunity in the way of accident reduction the stress evidently should be placed upon the education and training of the individual workers in the matter of safe practices and the conditions which constitute hazardous operation. The organization of a safety department with a capable safety engineer or inspector was advocated. The men in charge of this safety work should be more than mere workmen transferred to a new job and should have the full backing of the higher executive officers.



# Labor Main Topic at C.E.R.A. Summer Meeting

Automatic Substations, Duties of the Claim Agent and Fundamentals of Railway Advertising Were Also Considered at Outing and Conference Held at Cedar Point, Ohio, on July 17 and 18—Program Was Largely Impromptu, Due to War-Time Conditions

**S**UPPLEMENTING the telegraphic report of the summer meeting of the Central Electric Railway Association given in last week's issue of this paper there are printed this week abstracts of the only formal paper read, that by H. A. Nicholl, and of the informal papers and discussion. The meeting was held at "The Breakers," Cedar Point, and was attended by approximately 225 members and guests. F. W. Coen, vice-president and general manager Lake Shore Electric Railway, president of the association, presided.

The entertainment was of the simplest character, appropriate to the times, the natural and artificial attractions of the place furnishing ample opportunities for recreation. A beach-ball game was played on Thursday, between a "supplymen's" team, and a "railwaymen's" team under the general direction of S. D. Hutchins and H. A. Nicholl respectively. The supplymen won.

The discussion of Mr. Nicholl's paper, which is abstracted in another column, showed that the members realize the gravity of the situation confronting the electric railways. The abnormal upward tendency of labor costs, and with this the impracticability of competing with war manufacturing industries for labor on a per-hour basis, formed the topics of most earnest discussion. The railway managers expressed themselves as in sympathy with the desire of the men for wages commensurate with rising living costs, but did not see how they could meet by proportionate increases the competition which has been forced upon them. The railways must increase their efforts along lines of making the work as attractive as possible to the men as well as by granting reasonable increases. The discussion brought out some of the results of efforts to do this. The working of the inexorable "law of supply and demand" was seen to be particularly hard on electric railways at this time.

## THE AUTOMATIC SUBSTATION AS A PARTIAL SOLUTION OF THE LABOR PROBLEM

The Thursday program was "shot to pieces" by the prevailing conditions, so that an impromptu one was substituted. With practically no preparation three speakers briefly but effectively presented "snap shots" of vital matters in their respective line of work. The first speaker was C. Dorticos, of the General Electric Company, who took up the automatic substation. Before doing this, however, he gave a graphic account, with sketches, of the battles of the Marne and Verdun.

Mr. Dorticos started by saying that the automatic substation has proved its reliability, and that it is here to stay. It began, in this field, with a request made by Bion J. Arnold addressed to the General Electric engineers at Chicago that they furnish him with an equipment for railway work somewhat along the same lines as the Edison Illuminating Company, of Detroit, had been using in remotely controlling a substation. At

Detroit control wires were used between the substation and the power plant, but by utilizing the variation in direct-current voltage the General Electric engineers were able to dispense with any control connection with the power plant. A sample outfit was constructed at the Chicago repair shop, using largely direct-current control. The Schenectady staff was called into consultation when Mr. Arnold wanted more control outfits. The control was then transferred to the alternating-current side of the station with the exception, of course, that the direct-current voltage remained the source of ultimate control through the operation of the contact-making voltmeter. This work was done in 1914.

Soon after this pioneer work it happened that the Des Moines City Railway had agreed with the municipal authorities that, with the going into operation of a new franchise, certain rehabilitation of the property would be put through. An important part of this consisted in extensive power supply improvements. F. C. Chambers, electrical engineer of the railway, was convinced that money could be saved by liberal use of the automatic substation principle in city work. It will be remembered that Mr. Arnold's was an interurban proposition. Mr. Chambers actually was able to take down many thousands of dollars worth of aluminum feeders, at a time when it commanded an unusually high price. He used "automatics" not only on the city lines but on the Inter Urban Railway as well, until now the lines are almost completely so equipped.

The "automatics" at Des Moines have proved particularly helpful on the line furnishing service to Camp Dodge, which produces enormous traffic. Substations much smaller than could be used with manual operation are handling the business successfully. An article printed in the issue of the *ELECTRIC RAILWAY JOURNAL* for Jan. 13, 1917, page 66, gives details of this installation. There are now thirteen automatics in operation or on order on this property, all but one within the city limits having automatic control. That one will be equipped soon.

Mr. Dorticos said that the flash barrier (see issue of this paper for July 6, page 9) is one of the greatest of recent improvements in the rotary converter for automatic substation. He also referred to a special case of automatic control; but in a railway installation, in which a synchronous condenser, that is, a synchronous motor with heavily overexcited fields, is automatically cut into and out of a circuit to maintain a high power factor. In this case the control is by the variation in power factor.

Following the outline of the "automatic" situation in general Mr. Dorticos answered a number of questions as to details. Among the most interesting points were these: At Minneapolis the Twin City Rapid Transit Company is installing the largest automatic control to

date, on a 1500-kw. machine. The line resistors for this large unit are to be made of steel rails embedded in concrete. At present prices an average control equipment costs about \$4,000 or \$5,000. Lightning has not proved troublesome in the automatic substations so far equipped and there is no more reason that it should do so here than in a manual substation. The aluminum cell arresters appear to furnish ample protection. Daily inspections of substations are desirable, but the amount of attention required is very small, and the labor saving is correspondingly great.

Asked as to the possibility of adapting automatic control to rotaries with induction-motor starters, Mr. Dorticos said that there is no insuperable difficulty in doing this, but during the war he thought that it would not be possible to give the problem the necessary attention. Deliveries of automatic equipment are necessarily slow, even for the standardized apparatus. A suggestion was made as to the use of shunt-wound rotaries in automatic stations and in manual stations subject to overload, with the idea that the drooping voltage characteristics could furnish protection against overload. Mr. Dorticos said that the plan has had favorable consideration and that the action is similar to the operation of the resistance which is cut into the circuit in the automatic substation.

#### GETTING RESULTS IN THE CLAIMS DEPARTMENT

Following Mr. Dorticos, Harry Rimelspach, claim agent Lake Shore Electric Railway, was called upon for some ideas from the claim department. He began by asking how one could tell when this department is producing results. The answer is given in two ways: First by the testimony of the operating expense report; second, by the conviction that the department is exerting itself to the limit in discharging its duties.

Mr. Rimelspach devoted attention principally to the details of the "real" investigation. Such an investigation is much more extensive than is sometimes supposed. It is not enough merely to get the reports of the crews with lists of witnesses. There is almost no limit to the range of facts which may have a bearing on an accident. The claimant himself is an important source of information.

To illustrate his point the speaker showed how important it is to know the characteristics of the claimant. For example, a claimant may be habitually careless, and it is essential to bring out this point, which may be done without difficulty. A claimant may impute careless habits to a motorman, and it is desirable to learn of the characteristics of the motorman in this way. But it is possible to convince such a claimant that perhaps he, as well as the motorman, may not be free from fault in this connection. While testimony regarding events not related to the accident have no real status, discussion of the accident with the claimant privately may greatly modify his claim.

To make real investigation of accidents and to go into the related questions which have bearing upon them require an ample staff. Obviously an overworked department is obliged to make analyses which are more superficial than is desirable, and in the end this is expensive because what is saved in salaries is lost in excessive awards for claims.

Another point is that the full educational value of claims work should be utilized. When an accident occurs the motorman or conductor responsible should be told of similar accidents that have occurred in the past and what was learned from those accidents. If the accident is a common one he should be told this in the hope that he will endeavor to assist in keeping down the number of repetitions. He should also be told what have been the rulings of the courts in case the accidents have resulted in claims.

Mr. Rimelspach mentioned the fact that, as the testimony of some witnesses is worth much more than that of others, it is essential to impress on crews the importance of noting upon their reports any circumstances which may tend to assist the claims department in utilizing such witnesses. For example, the fact that Mr. Jones sat upon the front seat near the motorman's compartment and was heard to remark, "Well, that certainly wasn't the motorman's fault," may mean much to the claim agent if the motorman will simply jot down a memorandum covering it.

The final point made by the speaker was the necessity for close association between the members of the claim department and the platform men. A knowledge of the characteristics of the latter will help greatly in preventing accidents and in adjusting claims resulting therefrom. This again furnishes an argument for an ample staff in the claims department, for such close association is impossible in an overworked department.

After covering the topic assigned to him Mr. Rimelspach spoke fervently regarding the patriotism of electric railways. He thought it especially important that the railways take an active part in all public movements such as War Savings Stamps campaign, Red Cross work, sale of Liberty Bonds, etc. The patriotism of the railway organization is unquestioned. The present crisis affords an opportunity for an outward manifestation of this. The result will be improved public relations.

#### ELECTRIC RAILWAYS MUST ADVERTISE

"Every man believes in advertising," said E. R. Kelsey, publicity agent Toledo Railways & Light Company, in beginning his remarks on railway advertising. This is shown in the display of signs over store doorways, and even the wearing of a necktie by a man is advertising in that he wants to make a good impression on the public. This war was "sold" to Great Britain by advertising, and thrift is being sold to this country in the same way. From a country having a dread of "Wall Street" and its doings we now have one made up of bond holders.

The best advertising assets of the electric railway are its own employees, especially those who come into contact with the public. The telephone operator or the platform man has a splendid opportunity as a continual advertisement. Next in value is the space in the cars. People when riding are, as a rule, in a receptive mood; they are not in a hurry as at other times. Hence in the comparative leisure of the car ride there is a chance for advertising to "sink in." Especially valuable for posters is the end window space in cars with bulkheads, or in the front windows in other cars.

As an example of what advertising will do for a utility Mr. Kelsey mentioned a recent campaign in To-

ledo in connection with a prospective increase on heating rates. The advertising was begun early enough to permit householders to put in other heating facilities if they so desired. The situation was also explained to the newspaper men. The result was very satisfactory indeed.

There is great need for advertising now for public good-will and for the rate raising that will be necessary both now and also after the war. A part of the public has the notion that an institution is bad because it is big, and that all rich men are crooks. This notion must be controverted by advertising. There is plenty of fine material available for use in advertising if the men who can use it will only look for it. And an important element in this work is utilizing the psychology of suggestion.

What suggestion is able to do was illustrated by Mr. Kelsey by referring to the work which is being done for disabled soldiers in Canada. Men whose nerves have been ruined apparently and who have come to believe that they cannot move their muscles again are taught to perform their normal functions by means of suggestion. If this is possible, how much easier it should be to convince the public of facts through the use of judicious advertising.

Mr. Kelsey discouraged the notion that advertising can be expected to produce results immediately. Sometimes a railway has a special propaganda to put out and expects to get results from, say, a three-week campaign. This is impossible. Building up good public relations is a slow process, as the work of years cannot be undone in a moment. The safety movement is a great help in this direction, as it furnishes a good excuse for putting real "news stories" in the papers. And they must be new stories to be worth while, or, in fact, to get into the papers. Advertising in the guise of news must never be used, but there is a plenty of good news on any live railway property. For example, in Toledo there are a dozen good stories every day.

Furthermore, good advertising material can be produced by any good salesman (and every successful manager must of necessity be a good salesman) if he will write himself into his copy. An illustration of this was furnished by the controversy between Henry L. Doherty and the City of Toledo. Mr. Doherty prepared a series of advertisements which reflected his personality. As a result when the Toledoans had an opportunity to ride free, 69 per cent voluntarily paid the full 5-cent fare.

In concluding his remarks Mr. Kelsey "made a hit" with his audience by commending the spirit of the meeting, stating that after all it is personal association that is necessary in lubricating the wheels of business. Even if no papers were read, a meeting would be a success if those in attendance got to know each other better. Correspondence is facilitated by personal acquaintance. This meeting was successful even with the program altogether disarranged through circumstances beyond anyone's control, as each one present was willing to do his part. At this point a suggestion was made that future programs be made impromptu in order that the association be brought closer together as had been done at this Thursday session.

After Mr. Kelsey's talk the meeting adjourned to meet at Indianapolis on Thursday, Nov. 21.

## Aspects of the Labor Situation

**Labor Is Uneasy and Higher Wages Are Necessary—Non-Essential Work Should Be Discarded—Committee Work Is Needed**

BY H. A. NICHOLL

General Manager Union Traction Company of Indiana,  
Anderson, Ind.

THE labor question confronting the electric railway industry is perplexing and difficult even under ordinary circumstances, but in these strenuous and trying times it is a most difficult matter to handle, and about as important as any other problem. The situation should be considered with reference to the following points: (1) Restlessness of labor due to the unusual activities produced by the war. (2) Necessity of higher wages on account of the increased cost of living. (3) Shortage of man-power on account of the great demand for men in the Army, Navy and manufacturing establishments producing war materials. (4) How can this situation be met satisfactorily to both employer and employee in the electric railway field?

### LABOR IS RESTLESS

During the growth of the present industrial activity the demand for labor, both skilled and unskilled, has been tremendous. To fill the necessary requirements, extensive advertising campaigns in many forms have been inaugurated, offering large pay, good living and improved working conditions. This propaganda has been carried on by the government, by large and small corporations, by private individuals and by agricultural interests, until a state of uneasiness in all classes of labor exists in most of our communities. It is with considerable difficulty that men in the electric railway industry are persuaded to stick to their present positions. Companies located in the great manufacturing districts and in places where large government work is being carried on are no doubt most seriously affected. Higher wages look good to the men, even though in many cases they may prove not to be (in the long run) so productive of net results as is their present employment.

Whenever the wage is large, the working conditions are generally arduous and the living expenses high. In general, the farther East one goes, the higher the wages paid and the more attractive seem to be the opportunities for employment. This is accounted for no doubt by the fact that more war munitions and supplies are made in that locality. As the war progresses, however, we may look for a gradual increase, extending to the West, somewhat in proportion to the distribution of munition and government supply orders.

Whenever the Central district loses a man to an Eastern or distant industry, we have to employ another in his place. If this process is carried on to any great extent, a shortage may be produced in our vicinity not easy to overcome with the man-power available in that community. This condition, if aggravated, is likely to encourage proselyting, thus increasing the uneasiness of labor.

Nothing seems so unnecessary and unfair as for one company to send representatives into other sections of the country, either far or near, to induce those already employed, through offers of higher pay or better work-

ing conditions, to leave their present places. It is difficult enough to protect our men from labor agitators and other local industry sharks, without having to fight labor procurers from friendly and associated properties. We should aid one another to create a feeling of contentment among our men that will make it practically impossible for outside inducements to have any appreciable influence on them.

#### LIVING COSTS HAVE GONE UP

The cost of living no doubt has advanced. Clothing, foodstuffs, medicines and nearly everything used by man has gone up in price. This advance has been most pronounced in the congested centers and in the East, on account of the extensive manufacturing and the inaccessibility of those localities to the great farming and food-producing sections of the country. On account of loss of men and families to the Army, Navy and governmental work, our house rents have not advanced to the same extent, although in some localities in our territory they are considerably higher than heretofore.

To meet this higher cost of living it is but right that higher wages be paid. How much higher is the great question. We should treat this matter with all fairness to the employees and to the properties. In some places higher wages can be paid than in others. Higher wages should be given voluntarily whenever possible, and in all cases the financial condition of the properties must be fully considered.

To be forced to pay higher wages through governmental agencies, without the opportunity to compensate in sufficient amount through raise in fares, would be manifestly inequitable and unjust. Representatives of labor argue that, regardless of the financial ability of the property to pay its obligations, labor should receive higher wages. To me this seems about as unfair as any demand ever made by labor, no thought whatever being given to the future of the properties or the rights of the owners, who may be more in need of protection than the laborers themselves.

To be compelled in any event to standardize the wages in our industry—split up into small units and scattered in all sections of the country—does not seem to be desirable and should not, through any channel of authority, be forced upon us.

#### MAN-POWER IS SHORT

Half the American nation will be actively engaged in war in another year if the administration sends 2,500,000 or more soldiers to Europe. A like number will also be needed at home for the defense of America, for use in the outlying possessions and in process of training. Approximately ten workers are needed to keep each soldier armed, fed and clothed. This would mean 50,000,000 men, women and children working to supply the army of 5,000,000,000. On the basis of 110,000,000 population—that's half the nation. And the other half will also be indirectly engaged in war work.

There will not be enough men to go around, and the condition will get worse as long as the war continues. Therefore it is necessary to conserve the supply.

After Aug. 1 the United States Employment Service will undertake to be the medium through which employers obtain their unskilled labor. Although the government may be of some service to electric railways

in providing such labor, it will not be of much help unless the companies exhaust every effort to obtain labor and are actually down and out. Even then it appears that if we secure the labor we need, regardless of our ability to pay the price, we will be forced to pay as high a rate as any establishment in our community, notwithstanding the fact that lucrative government orders may be enjoyed by the companies which have established the high wage scale. Furthermore, through this method of securing labor it will only be a question of a short time until it will automatically make certain a standard price for labor.

As patriots we shall have to accept the inevitable and co-operate for the successful operation of this scheme, but it may prove to the electric railway industry an expensive proposition, even if not attended by absolute financial disaster. Increases in fares guarantee more earnings per passenger for a given ride, but they do not guarantee that any number of people will ride. We are somewhat different from other industries in that we may reach a point in production cost that is greater than that which the traffic will bear.

The shortage of labor will cause the quality to decrease until the efficiency will be very greatly lessened through the employment of men above the age of strength and men under age who are frivolous and reckless. Many women will have to be employed in positions not suitable to their natural characteristics. Women, however, can be nicely used as ticket takers, clerks, substation operators, conductors, oilers in power houses, car cleaners, armature winders, etc. In most all of these places they perform their tasks about as well as men do, and in some instances they excel.

#### WHAT COMPANIES SHOULD DO

We can discard all the non-essentials and reduce the work to be done as much as possible. This does not mean that we should not keep our properties in good operating condition, but we should discard only the frills such as fancy painting on cars, flower beds adjacent to stations, operation of special trains, etc. We should discontinue the operation of two-men cars and replace them with one-man cars wherever possible. We should rearrange our schedules, cut out early and late passenger trips, use machinery instead of men, watch the scrap pile and use old materials whenever it is possible so to do. We should also instill in our men the idea that they should use their heads and thus save their feet. In this way many man-hours can be saved.

We should also assist in the enforcement of General Crowder's "work or fight" order, and see to it that anyone who is capable of fighting does fight or is put to work. The jitney is unnecessary, and the action of the Electric Railway War Board in directing the attention of the government to the duplication of the service through this instrumentality is commendable.

We should do all we consistently can to make our present employees as satisfied and as comfortable as we can so that they will remain in their present places. How are we to make our men satisfied? By giving them a living wage, commensurate with local conditions and finances, and thoroughly fair treatment. They must have

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# The Interesting "Flop" of the New Jersey Utility Commission

The Railway Decision of Last Week Represents a Point of View Entirely Opposed to That Expressed in the Earlier Gas Decision of the Same Commission—Opposition in a State to a Fair Return to Capital Will Discourage Investment There

By W. W. HARRIS

Of Lee, Harris & Lee, New York

IT TOOK four months and five days for the Board of Public Utility Commissioners of New Jersey to come to a decision upon the "emergency application" of the Public Service Railway Company for an increase in rates sufficient to meet an estimated deficit of \$3,980,112. The commission granted only \$860,000 (estimated), to be obtained by a 1-cent charge for transfers.

The petition was filed on March 5. The commission's report and order were dated July 10. To state this is not to accuse the commission of dilatoriness. It is, however, one more instance in a very long list which supports the position insisted upon in the ELECTRIC

RAILWAY JOURNAL, that the present system of public utility regulation is altogether too ponderous.

True, the Public Service Railway is a very large corporation, one of the largest of its kind in the United States. It serves 146 municipalities in the State of New Jersey. True, again, without pretending to point out wherein the blame lies, the Public Service Railway has had to meet a most formidable public opposition.

It seems likely that the heat of the campaign for a seat in the United States Senate now raging in New Jersey has not made for less strife, particularly since one of the leading counsel in opposition to an increase in rates, George L. Record, is a candidate for the Senate on the government ownership and operation platform.

The circumstances which have surrounded the adjudication of this case may properly be pointed out because the ultimate decision of the commission in refusing the major part of the requested relief can, it would seem, be understood only in the light of the complete picture.

The finding of the commission contains one paragraph of extreme importance. This paragraph to the lay reader of the East is in such striking contrast with the paragraph upon the same subject—the right of stockholders in public utilities to dividends—in a prior decision of the commission as to indicate a reaction upon the commission of the active and at times bitter public opposition to the petitioning corporation, an opposition which, in the heat of the political campaign now in progress, has not been overlooked by aspiring candidates.

Throughout the country there has come a public opinion more generally appreciative of the truth that included in the "cost of service" is the item of dividends. This has been recognized repeatedly in official utterances of commissions. Ex-President Taft, commenting upon the report of the Railroads' Securities Commission, noted the necessity of a reasonable return to the owners of capital invested in public utilities. He said "a reasonable return is one which, under an honest accounting and responsible management, will attract the amount of investors' money needed for the development of facilities. \* \* \* Less than this means a check to railroad construction and to the development of traffic."

Now note the two points of view of the New Jersey Commission. In a report made on Feb. 27, 1918, in the emergency petition of the Public Service Electric Company for an increase in rates, are these words:

In the present financial situation, the public has a vital interest in maintaining the fund available for dividends on the stock of the company. \* \* \* A material decrease in dividends would not only result in preventing the free flow of new capital, but would materially depreciate the

(Continued from page 160)

constant and agreeable work and be supervised by men who can recognize the performance of faithful service and treat employees accordingly. The greater the ability in the supervision, the more efficient will be the work and the better satisfied will be the men.

One way to interest employees is by organizing safety or efficiency committees. The plan should be the means of exciting a spirit of rivalry, loyalty, self-interest and co-operation. The membership of each committee should include employees of all departments. Committee membership should be changed frequently by rotation or some other method, so as to permit as many employees as possible to serve for a reasonable time.

It is of course desirable to have certain permanent members on the committees, who may be sub-heads of departments, division superintendents, etc., these men to be used for the instruction and guidance of other members in their work. In making individual appointments, it is desirable not only to appoint men who are already interested in their work, but also to appoint some employees whose interest is lukewarm, in the hope of securing greater co-operation.

The work of these committees should consist largely in handling and acting upon suggestions from their own members and from other employees. The committees should report, through their representatives, to a managing board composed of heads of departments and officers of the company. This is desirable in order that suggestions of a general nature, coming from the committees, may be handled without autocratic settlement by the management.

The appointment of committees of this kind tends to democratize the operation of the property and furthers the co-operative management idea. This is not an undesirable condition, in these days when the value of democracy to the world is being so prominently placed before us.

*market value of outstanding securities.* This possible shrinkage in the value and marketability of such securities would tend to undermine confidence and render unstable security markets. Such a condition would have direct influence upon the securing of money by the national government for war purposes. The required funds for these purposes must be yielded by operating revenues. In the broad view, the public interest requires it. [The italics are those of the writer.]

The contrast between that thought and the principle enunciated in the report upon the Public Service Railway application is even startling. The company in its application said that it ought to be restored at least to its financial condition of 1916, at which time it was paying some, but not complete, dividends. The commission replies:

We must \* \* \* maintain our declared policy of disallowing rates in war times for purposes of increasing dividends. Stockholders in such corporations must share the burdens and hardships resulting from financial changes due to the war and cannot expect to wholly escape therefrom. \* \* \*

In this statement there is no distinction whatever between war profits and fair return, no recognition of the fact that electric railway companies have "shared the burden" more than almost any other form of business, even to the point, in many cases, of absolute bankruptcy.

The board, after explaining that a formal rate case was for the determination of rates which would give "a fair return upon the fair value of the property used and useful in the public service," said that such a valuation in an "emergency case" was unnecessary. All that was needed was to meet a temporary emergency. Such an emergency it defined as follows:

An emergency for which a carrier is entitled to relief by a temporary emergency rate exists where, by reason of general conditions not affecting the applicant utility alone, operating revenues are insufficient to operate and maintain its property and to pay rentals and interest on such of its securities, a default in the payment of which would jeopardize the solvency of the company.

In short, the commission to all intents and purposes plants itself firmly upon the proposition that, in war time, the basic principle of "fair return" upon which the public service commission law is written, *is suspended*.

#### CAPITAL CANNOT BE COERCED

It is not the purpose here to argue the soundness or unsoundness of this conclusion. We merely call attention to the contrast of ideas in the two reports. It is pertinent as bearing upon the future willingness of capital to help develop the public utilities in the State of New Jersey. For while it is possible to deprive the investor of returns upon capital which has already been put into business, it is not possible to force him to take another chance of the same sort. Capital must be attracted, it cannot be coerced.

One of the major risks which an investor in public utilities must take into calculation is the risk of disregard by commissions of the immutable laws affecting the flow of capital.

True, the New Jersey Commission announced that any issuance of securities by this company was not immediately pending, as though a public utility in a growing community ever attained its full growth. Whether or not this implied that they might have to come to a definite conclusion, were such an issue to be immediately desirable, can only be conjectured. But

there can be no doubt whatever that capital will take into its calculations the factor of the state of mind of any commission which announces its policy in such unmistakable terms.

#### VIEWS NOT SO INIMICAL IN OTHER STATES

Meantime, if one may come to a fair judgment of the real state of mind of New Jersey toward the street railways and public utilities generally from the quotations from the press, that State is fallow ground for the seeds of education through intelligent publicity. New Jersey seems to be in an attitude of opposition, not to say animosity, toward public utilities. It seems to regard any added burden which can be put upon the utility, either by increase of taxation or by reduction of revenue, as "a victory for the people."

The real value of the service rendered by the public utility does not seem to be the uppermost thought. The thought that the hampering of service and reduction of its quality may be the necessary result of a general corporation baiting has not been strikingly apparent in the columns of the Jersey press.

The Grand Rapids *Press* recently said, "We may not love the utilities, but we need them, and to allow them to suspend their usual function would be fatal." One might remark, "New Jersey papers please copy."

New Jersey seems to be in that stage of its education in relation to the utilities which Massachusetts has only just passed through. In Massachusetts, however, a general sanity of view has succeeded the period of hysteria. As an instance, the Boston Elevated Railway, which is now in charge of State trustees appointed by the Governor as representatives of the people, has long met an unreasoning popular opposition to any proposition to raise the 5-cent fare, even though it was perfectly apparent that the Boston Elevated Railway was in the last financial throes.

Now the State trustees have announced that the 5-cent fare will not meet the bills. First it was declared that the fare probably would have to be raised to 7 cents. Now it is announced that the needs of the elevated railway indicate a fare of 8 cents before many weeks. This announcement has been received without any public protest whatever.

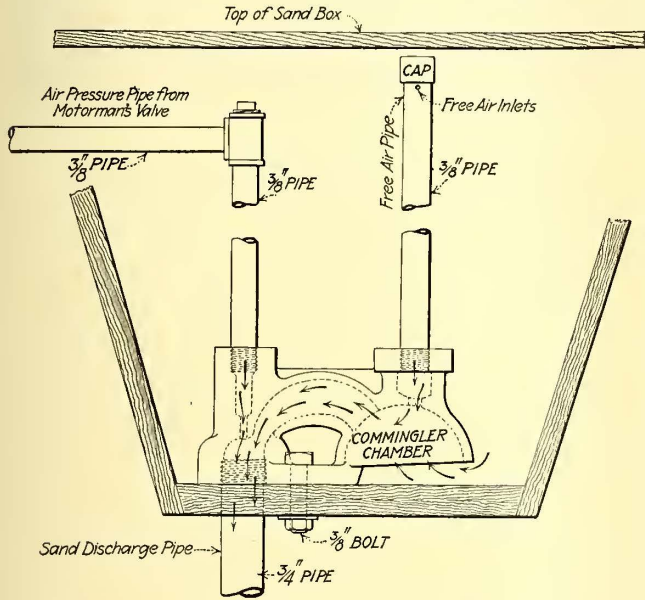
Commenting upon this prospect, the Boston *Record* says: "The public would prefer an 8-cent fare if that would guarantee good service to a 6 or even a 7-cent fare with service not materially better than that now given."

The *Transcript* says: "The public needs to remember that an 8-cent fare is the toll that it will be shortly called upon to pay, because here in Boston the general care is to set up for our street-car system a reign of justice and common sense which does not seek to pour money out of the system's treasury until none remains and at the same time refuse to pour in new money. Other American cities still cling to this strange mode of procedure and *they are in a fair way to witness a complete crash of their electric railway companies.*"

In short, the future of public utilities in New Jersey will be just as interesting and as important as the immediate past. In that future a widespread and intelligent publicity, that seems in the main to have been neglected, can play a most important part in arriving at a situation of sanity and common sense.

### Pneumatic Sander Readily Applicable to Existing Sand Boxes

A NEW FORM of pneumatic track sander for use on electric cars has been placed on the market by the National Railway Appliance Company, New York. The accompanying illustration shows this sander applied to the sand box of an electric car. The design permits of



PITT PNEUMATIC TRACK SANDER AS APPLIED TO THE SAND BOX OF AN ELECTRIC CAR

such an application without changing the usual type of sand box used.

All of the working parts of the sander are included in one casting which is bolted to the bottom of the sand box. Three outlets are provided in the casting for connecting the necessary piping. The air pressure pipe is connected to the top left-hand side, as shown in the illustration, and runs to the main air supply. This can be connected either to the emergency brake pipe at the motorman's valve, so that air will be supplied for operating the sander whenever the brake handle is thrown to emergency position, or the connection can be made through a sander valve to be operated by the motorman

as desired. A combination of these two methods is recommended.

The connection for sand discharge is made at the bottom left-hand side. This pipe is run through the bottom of the sand box to a point as close to the truck center pin as possible. A flexible hose connects this with the discharge pipe which conducts the sand to the front of the wheel. A free-air intake pipe is connected to the casting at the top right-hand side. This pipe should be of sufficient length to reach to the top of the sand box and is provided with a cap and holes drilled just below it to admit free air.

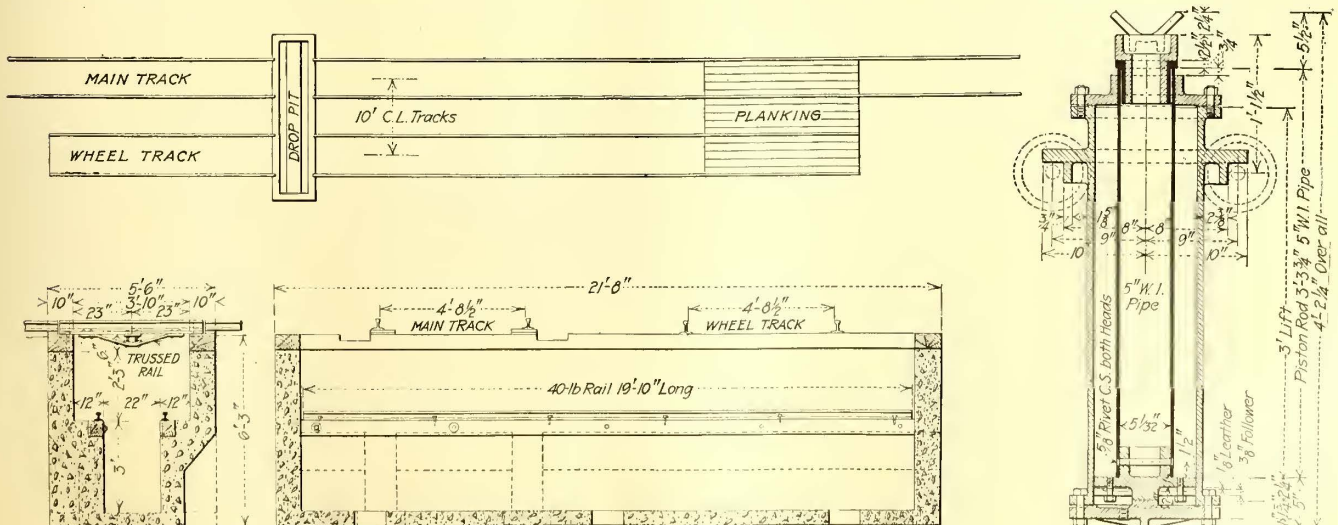
The operation of the sander consists of admitting air under pressure through the intake pipe. This passes through a nozzle or reducing discharge port into the larger sand discharge pipe leading to the rails. The expansion of the air as it leaves the reduced orifice causes a suction of air through the passage from the commingler chamber of the casting. The sand enters this commingler chamber through a passage provided at the bottom, and when air is being drawn out a circulation of air occurs through the free air pipe. This air passes over the top of the sand, lifting the grains individually, and its action thus prevents clogging should the sand be wet. The openings through the casting are so proportioned that any large pebbles which may be in the sand cannot enter the commingler chamber, and small pebbles are carried through by the action of the air.

### Car Wheel Drop Pit Saves Time and Expense

BY F. G. LISTER

Mechanical Engineer, El Paso & Southwestern System

THE car wheel drop pit shown in the accompanying illustration has been in use at the various terminals of the El Paso & Southwestern System for about three years. It has proved to be a means of saving much time and expense in removing and replacing car wheels, as it does away with the necessity for jacking up the car and trucks when wheels are to be changed. Sufficient details are given so that a similar drop pit can be constructed by electric roads where desired. The particular construction shown, being for steam road use, may be somewhat heavier



ARRANGEMENT OF DROP PIT FOR REMOVING WHEELS AT THE TERMINAL OF THE EL PASO & SOUTHWESTERN SYSTEM, AND STANDARD 10 x 36-IN. DROP PIT JACK USED FOR REMOVING CAR WHEELS

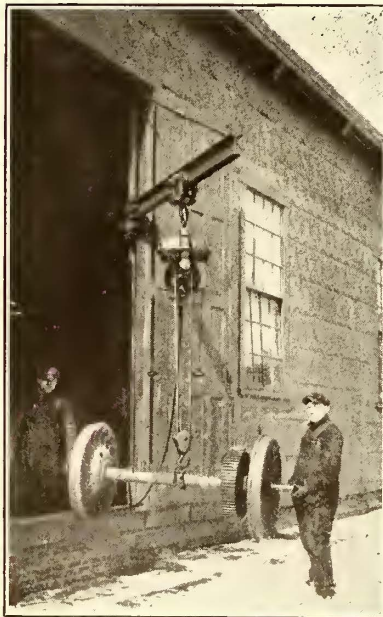
than would be necessary for the average small electric road but this can be arranged to suit conditions.

The essential features of the construction consist of a pit 3 ft. 10 in. wide by 2 ft. 9 in. deep which is bridged by two trussed rails in the track. A wheel track to facilitate the bringing of wheels to the pit and removing them for repair is located alongside the main track and the pit connects these two.

At the bottom of the pit and extending across these two tracks is another narrow-gage track. A jack provided with wheels to support it and to facilitate its movement runs on this track. To remove a pair of wheels from a car it is only necessary to run the car across the pit until the wheels which it is desired to remove rest on the center of the trussed rails. The jack is then run underneath the car and raised to support the wheels and lift them slightly so that the trussed rails can be removed. The jack is then lowered with the wheels and run along its track until in line with the wheel track where it is again raised, and by applying the trussed rails to the wheel track the wheels can be rolled out of the way. The jack is operated by compressed air.

### Mounting an Air Hoist in the Door Jamb

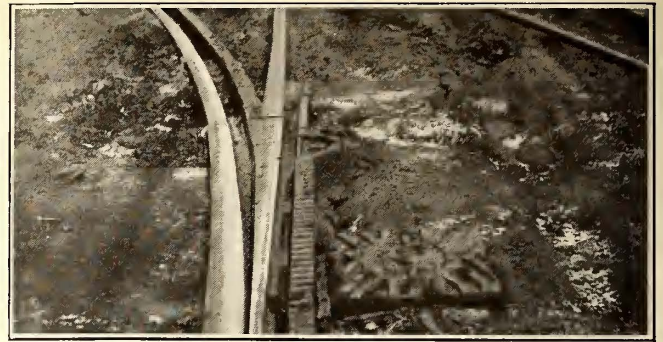
CONVENIENCE in handling wheels in an old electric railway repair shop is obtained by the 1-ton Imperial air hoist shown herewith, the hoist being mounted on an 8-ft. I-beam boom and arranged to swing from a center-bearing bolted to the door jamb.



AIR HOIST HANDLING WHEELS THROUGH DOOR OPENING

The I-beam is 6 in. deep, and a 3-in. vertical rod ties the brackets together at the top and bottom of the suspension. The I-beam is reinforced by a 1-in. rod with turnbuckle adjustment in the middle, and the door jamb was reinforced by 1-in. planking where the bolts were carried through the wall. The hoist is provided with a double drum equipped with  $\frac{1}{4}$ -in. stranded steel cable, air being supplied through a  $\frac{3}{4}$ -in. hose.

With this equipment a pair of wheels can be removed from a truck outside the carhouse and swung into place on the pit track inside the building within a comparatively few seconds, and when not in service between the inside and outside of the building the door can be closed without interference with the interior use of the equipment. A similar mounting for a hoist at the door of a shop supply car will be found of great convenience in handling material which can be picked up alongside the track and readily swung into the car.



LOCK ATTACHED TO SWITCH ON INTERURBAN TRACK

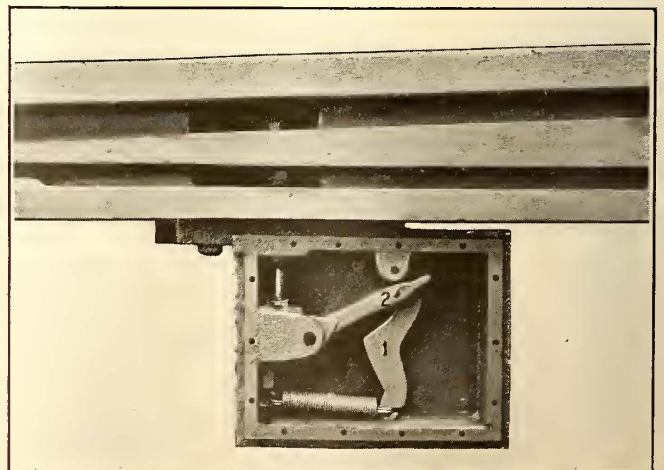
### Switch Lock Prevents Derailments

THE Weiss switch lock, which is being used by a large number of electric railways, has been adopted by the Illinois Traction System, Peoria, Ill., for all necessary replacements and new installations.

The device, which is shown in the accompanying illustrations, locks the switch positively both right and left and thus prevents splitting of switches. It is claimed that this switch lock is absolutely waterproof, non-freezable, dirt and sand proof. On the Illinois Traction System it is used both in paved city streets and on open interurban track. It requires no attention and stands up well under the most severe conditions.

The simplicity of the device is readily apparent from the illustrations. When the switch is thrown arm 2 shifts from left to right or *vice versa*, and it is held firmly in position by arm 1 and the spring. The only breakable part is the spring, and this can be readily renewed. When the spring is broken the switch remains in good working order minus the locking feature.

The box is filled with oil and the inner lid rests on a gasket and is secured by bolts. Where the connecting rod to the switch passes out of the box, a stuffing-box is provided. Thus the box is rendered absolutely tight and the loss of oil and the entrance of water or dirt are prevented. A thick casting fits snugly over the inner lid and prevents damage from traffic. These locks can be made to fit any switch by changing the position of the fastening casting on the side to correspond with the position of the bolt holes in the rails. All parts in the lock thus remain standard for the various sizes. This lock is made by the Weiss Switch-lock Company, Springfield, Ill.



SWITCH LOCK PARTS AND CONNECTIONS TO RAIL



# News of the Electric Railways

TRAFFIC AND TRANSPORTATION

FINANCIAL AND CORPORATE • PERSONAL MENTION • CONSTRUCTION NEWS

## Short Strike in Atlanta

Men Resume Work on Understanding that Matters Shall Go Before War Labor Board

The Atlanta strike has been settled by an agreement between the employees of the Georgia Railway & Power Company and P. S. Arkwright, the president, reached late on the night of July 19. The regular schedule of cars was resumed early the next morning.

### SERVICE SUSPENDED FOUR DAYS

For four days the entire railway and interurban system of the company was tied up, with the exception of cars between Camp Gordon, Fort McPherson, and Camp Jesup. These cars were operated by employees who had not struck.

At first the strikers contended that they had walked out because Mr. Arkwright would not reinstate and employ men who in 1916 had stopped work or who had participated with the disturbing element in dynamiting and other depredations. Later the strikers contended they wanted higher wages and better working conditions. Although these last-named reasons were entirely different from the ones first announced, Mr. Arkwright agreed to include them for arbitration before the War Labor Board.

During the strike, the men were urged to return to work by a representative of the War Labor Board, but this request was ignored. After Major Peck of the United States Army addressed the men, the executive committee agreed to a conference with Governor Dorsey and Mr. Arkwright. This conference finally culminated in an agreement drawn up by Governor Dorsey, Mr. Arkwright and Major Peck. The main points of this agreement follow:

### RIGHT TO ORGANIZE CONCEDED

"We agree that said controversy shall be submitted to the National War Labor Board for adjudication.

"All matters in dispute, which shall include among other things hours of labor, wages and working conditions, reinstatement of former employees and any and all points offered for consideration by either side, shall be decided by the National War Labor Board and both parties to this agreement will abide by said board's decision, with the following exceptions:

"1. The organization of a union known as Local No. 732 is recognized, a number of the employees of the company having affiliated with that union.

"2. The right of the employees to join this union and to affiliate with same is conceded.

"3. The right of the Georgia Railway

& Power Company to maintain an open shop, to retain its non-union employees and to employ men in the future who are not union men is conceded.

"All other matters now in dispute or differences which may arise in the future are to be adjudicated by the National War Labor Board, and the board's decision shall be binding upon both parties for the duration of the war.

"Upon the signing of this agreement by both parties to the controversy, it is agreed that the employees of the company shall return to work in the positions they held when they struck, and with the same rights, pending the decision of the War Labor Board."

While both sides are apparently satisfied, opinion prevails that the company has won its point, in not treating with the representative of the Amalgamated or other heads of allied trade unions, as the final agreement was executed by Mr. Arkwright and employees of the company, a point for which he had held out from the beginning.

## President McCarter's Comment

The decision of the Board of Public Utility Commissioners of New Jersey in the fare case of the Public Service Railway has resulted in a lively passage at arms between President Thomas N. McCarter of the company, the members of the board and the Governor of the State. In an interview with two daily newspaper reporters, Mr. McCarter was said to have used the term "political horse thieves" in referring to the commission. The Governor in a reply deplored the tendency, which he said was growing, on the part of losing litigants, to abuse the judge, and said that "the decision undoubtedly represents its best judgment." It developed later that Mr. McCarter did not expect or intend that his remarks be quoted.

On July 24 during the hearing on the application of the Public Service Railroad, a separate proceeding from that of the Public Service Railway, for an increase in fares, while making it plain that he desired to apologize for the attack on the commissioners, Mr. McCarter declared that he did not desire to retract his criticism of the report of the commission. He declared the decision was not in accord with the evidence submitted at the hearings and practically ruined the credit of the company. He asked permission to file the statement as part of the board's records, which was granted.

In accepting the apology, Mr. Slocum, president of the board, said:

"This board expects to be criticised. It occupies a very difficult position, but it does hope for and always expects to receive fair and constructive criticism."

## Promoting Patriotism

Local Safety Council at Kansas City Reaches Workers—Ed. Kelsey, Toledo, Does His Bit

The question of how industrial workers can be inspired to loyal service during the war the way that business men are inspired in their many war meetings was answered by the Local Safety Council in Kansas City, Mo., by a meeting in Convention Hall, admission being by tickets distributed only to employees of industrial plants. Speakers on war subjects delivered patriotic addresses, and a noted speaker on safety coupled these war talks with the obligation of men and women to keep the wheels moving.

### MANY PROMINENT MEN SPEAK

The local Safety Council took advantage of the International Rotary Convention, in Kansas City that week, to hold the meeting on June 26. The Rotarians arranged for three speakers, who readily agreed to take part. These were Frank Hering, editor of the magazine of the Eagles' organization; E. R. Kelsey, advertising manager of the Toledo Railways & Light Company, Toledo, Ohio, and Andrew Home-Morton, past-president of the British Association of Rotary Clubs. Mr. Hering has been devoting nearly all his time to war work. Mr. Kelsey has been "loaned" by the Toledo utility almost continuously during the past year for Liberty Bond, Red Cross, and War Chest activities in that city, and has been largely responsible, through his organization talent and his ability as a speaker, for the success of those campaigns. Mr. Home-Morton is in the thick of similar work, besides assisting in industrial arrangements, in Great Britain.

The Safety Council secured Isaiah Hale, commissioner of safety of the Santa Fé Railroad, to make the direct appeal to the employees to stick faithfully to their jobs as a means of quickly ending the war.

### 5000 IN ATTENDANCE

Convention Hall was engaged for the event. More than 5000 men, women and children are estimated to have been present at the meeting. Boy Scouts assisted fifty representatives of the various plants in ushering. The purpose of the meeting was to arouse the interest of the several local branches of national projects such as the Americanization movement, the American Protective League, the educational division of the federal department of labor, the conference committee on national preparedness. The event was considered highly successful.

## Mayor Hanson More Moderate

### Seattle's Chief Executive Inclined to Discard Unbending Policy for One More Reasonable

As a preliminary move toward an amicable agreement between the city of Seattle, Wash., and the Puget Sound Traction, Light & Power Company, looking toward the improvement of railway service in the city, the company recently paid to the city \$145,141, or 2 per cent of the gross earnings of the company for 1916 and 1917, together with interest. In making the payment, the company waives its right of appeal to the Supreme Court of the United States.

#### OUTLINE OF TENTATIVE AGREEMENT

In return, Mayor Hanson has sent to A. W. Leonard, president of the company, a communication outlining points in a tentative agreement and making concessions in the way of relieving the company of certain franchise obligations. Both actions are the result of the conferences lasting over a week between city officials and officers of the railway. The principal points outlined in the Mayor's letter, covering concessions the city is willing to grant, are as follows:

Skip stops on the various lines of the company.

Elimination of automobile parking on First, Second, Third and Fourth Avenues and on Pike and Pine Streets, where necessary to facilitate railway service.

Common-user privileges on the Fifteenth Avenue North Bridge in exchange for common-user rights of the company's tracks at other points.

Universal transfers on a fifty-fifty basis.

Use of idle cars in return for similar privilege.

Interchange of electric power in time of emergency.

Better arrangement for school and shopping hours.

Discontinuance of service on lines now operated solely to preserve franchise rights.

Relief from paving obligations, except where necessary for safety, during the period of the war.

Relief from \$100,000 of construction obligations.

#### CONCESSIONS BY THE COMPANY

In return for these concessions, the city asks the following of the company:

Increased wages of employees to meet wage scale of municipal lines.

Payment of 2 per cent gross tax without protest (which has now been done).

Employment of sufficient men to operate all cars.

Purchase of more cars if necessary to give efficient service.

Agreement to divide equally between employees and company all profits in excess of 4 per cent on its own valuation figures of \$15,000,000.

In his letter to the Mayor, A. W.

Leonard, president of the company, agrees to the payment of gross earnings tax without protest; to paving between tracks where the city deems it necessary; universal transfers, provided a proper aggregate fare is charged; mutual use of idle equipment; common-user privileges, with the provision that the values of the common-user privileges granted by either party shall be substantially equivalent, and that the owner of the tracks in each case will have a prior right to use whenever traffic conditions warrant it.

The company requests that the matter of increased fares and of increased wages to trainmen be referred to the National War Labor Board for settlement, and that both parties agree to abide by the board's decision. President Leonard states if the company pays the city scale of wages to its employees, the sum of \$600,000 a year would be added to the payroll when all the company's cars are put in service. Mr. Leonard also states that the proposed charge of 1 cent for transfers would add not to exceed \$150,000 to the company's annual earnings. Mayor Hanson estimates the increased payroll would amount to \$430,000 yearly, based on the company's payroll for May. The city committee, headed by Mayor Hanson, figures that skip stops would save the company \$200,000 a year; elimination of automobile parking at certain corners another \$100,000, while the paving obligations from which the company would be relieved will amount to \$30,000.

#### WAGE DEMAND A PROBLEM

The most important obstacle in the way of an agreement on the railway question in Seattle is the demand for wage increases ranging from 33½ to 50 per cent for trainmen, shopmen, barnmen and other employees. The proposed new working agreement has been presented to President Leonard. In addition to increases in wages in every branch of the railway service, the proposed agreement provides for a small reduction in the working day.

In a conference in the Council chambers on July 11 it was decided to appoint two accountants to check the books of the company for the last four years. The findings of the accountants will be the basis of a decision in regard to increased fares for the company and additional wages for the trainmen. If an agreement cannot be reached between the city and the company on these two matters, the entire question will be referred to the National War Labor Board.

The city has announced that it will grant such increase in revenue as is necessary to give the company the same percentage of earnings as shown in 1913, 1914, 1915, 1916 and 1917. All other questions under consideration

have been agreed to by both parties. Mayor Hanson has urged the Council to agree to some plan whereby the present controversy may be settled without any action on the part of the government.

A new twist to the railway situation in the city developed when the employees of the municipal system presented a demand to Mayor Hanson for a new wage scale, calling for a 10 to 50 per cent increase. The present city scale is a flat 50 cents an hour for eight hours' work. The new scale asked for fixes the rate at from 55 to 75 cents an hour. There are less than seventy-five municipal line employees. As the negotiations during the last two weeks between city and railway officials have had as one of their objects the fixing of a wage scale for traction company employees equal to that of municipal line employees, the new feature of the controversy may have an important bearing on the general railway situation.

## Adjournment Deferred

### Chicago Council Will Not Quit Until Report Is Made on Pending Railway Merger Ordinance

Members of the City Council of Chicago voted on July 17 to defer adjournment until a report is received from the local transportation committee on the pending ordinance for the merger of the surface and elevated lines. This gave new hope of getting action on the measure, and the committee has been holding frequent sessions. It is likely that a completed draft will be recommended about Aug. 1.

The Fisher plan for operation of the combined system by a public trustee corporation has found many supporters, and most of the newspapers are urging a settlement along this line. Leonard A. Busby, president of the Chicago City Railway, said he realized that a trustee plan would result in greater public confidence, and if an ordinance could be worked out with assurance of protection for the investors he would not oppose it. The principal debate has been on the rate of return to be guaranteed. The Traction & Subway Commission in 1916 recommended a return of 6.95 per cent. The Council committee cut this down to 6.35 per cent, which was finally accepted by the companies. The Fisher plan proposes an average guarantee of 5 per cent on bonds and 7 per cent on capital stock (one-third of the total securities), making an average of 5.6 per cent. The companies insisted that the investors would not consider this proposition, and conferences are being held in the hope of getting a higher rate on the securities.

A public hearing was held on July 20 at which requests were made for various extensions of the rapid transit lines. Advocates of municipal ownership also argued for a settlement involving this theory, and giving second choice to the trustee plan of public operation.

## As Mr. Mahon Sees It

Amalgamated Association President Shows How Fares and Wages Are One and Inseparable

William D. Mahon, president of the Amalgamated Association of Street & Electric Railway Employees of America, was interviewed by John J. Leary, Jr., for the New York *Tribune* of July 21 on the electric railway labor and fare problems. Mr. Mahon was quoted in part as follows:

### STRIKES NOT A REMEDY

"Looked at from any angle, the position of the traction companies from one end of the country to the other is serious. They have got to get more money. The only way they can get it is through permission to charge higher fares. It is not a question of paying dividends; it is a question of keeping the companies going and paying the necessary operating costs. It is not a question of caring for the stockholders; it is a question of protecting the public.

"It is no longer with us a question of striking to get more wages for our men. The big question has been to get the men to stay in traction work. In some of the larger cities railway men with twenty years' service have left in droves to work in other lines. It is not a question of choice with them; it is a question of getting enough to live on. The best that we have been able to do is to refer all the cases as they come up to the War Labor Board. Otherwise there would have been strikes all over the country.

"When we ask more money for the men, the companies come back at us and say they have not got the money—that they are not getting the revenues. In the majority of cases we know this to be true. The question, What are they going to do about it? comes up.

"We can call strikes or permit the men to strike—yes. That will not remedy the situation. We can allow the men to drift into other lines of work. That will not remedy the situation. Well, then, what are you going to do? If you dig into the situation you find that the companies, paying more for fuel and all that they use, are actually cramped for money. They are in the same position as the men—their cost of living has increased enormously. They ask for more money, for permission to charge higher fares, and there they stop.

### THE BUFFALO FIASCO

"Take the case in Buffalo as an example. There the Council sent the question of increased fares to the Public Service Commission. The Public Service Commission passed the buck back to the Council, and now the court has held that the question must be decided by a referendum vote. Can you imagine people voting to pay more car fare? If, however, they want to ride they will have to. Whether or not these properties are forced into the

hands of receivers, in the end the higher rates will have to be granted.

"My primary interest in the matter is that of the men. But we have got to be fair with the owners of these properties. They are entitled to some consideration. We have got to look out for the public interest. The public needs the services of the electric railway companies.

"Whatever our relations with the companies have been in the past, we find ourselves to-day in the position where we must, as a matter of justice and fair play, support their demands for higher rates. You can't get blood out of a turnip and you can't get money out of a company that has not got it. There is a limit.

"These companies have got to get more money, just as the government has found it necessary to give more money to the steam roads. It is the same proposition, exactly. The same elements which enter into the rising cost of steam transportation enter into the case of the traction companies. The cases are on all fours.

### HIGHER RATES MUST COME

"And if they don't the result will be the breaking down of the traction service of the country. But that result won't come. It cannot be allowed to come. The service of these companies is a matter of public necessity, of war necessity, if you please, and as a matter of public necessity, of public policy, higher rates will have to be allowed sooner or later. The sooner they are allowed the better it will be for everybody."

### Wage Increase in Baltimore

For the sixth time in as many years the United Railways & Electric Company, Baltimore, on July 11 raised the scale of wages of its motormen and conductors, shopmen and employees in certain other branches of the service. This increase, like each of those that preceded it, was voluntary on the part of the company. The percentage of increase in the pay of the employees under the new scale is from 10 to 20 per cent above the rate paid prior to July 11, and is the greatest increase ever made in railway men's wages in the city of Baltimore.

Officials of the company were prompted to make the raise at this time through consideration of the high cost of living and the desire of the management to enable its faithful employees to keep abreast as near as possible with the steadily advancing prices of everything under the influence of war.

The new schedule of wages per hour for conductors and motormen is as follows: Thirty-five cents, first year; 36 cents, second year; 37 cents, third year; 38 cents, fourth year; 39 cents, fifth year; 40 cents, sixth year.

In wages the operating expenses of the United Railways & Electric Company have increased more than \$1,500,000 per annum over 1915.

## Wage Award Expected Soon

Hearings Are Understood to Be Nearing Completion in Cases Affecting Electric Railway Employees

Hearings in the wage cases of the Chicago surface and elevated lines were concluded on July 22 before William H. Taft and Frank P. Walsh, joint chairmen of the War Labor Board. Later the chairmen heard arguments in the case of the Public Service Corporation of New Jersey. On July 23 arguments in the cases of the companies in Boston and Providence were heard by alternates appointed by Messrs. Taft and Walsh. Decisions in most of the pending cases were expected on July 22, but it was announced that none probably would be handed down before July 29.

### FORTY-CENT MINIMUM

The War Board of the American Electric Railway Association has issued a pamphlet giving a summary of decisions handed down to July 12 in various industrial cases. The basic awards were a 40-cent minimum wage and an eight-hour day, with time and a half for overtime and double time for Sundays and holidays. The wage question was ruled upon in industrial cases in Waynesboro, Pa., and that of working hours in East Cambridge, Mass., and Buffalo, N. Y., controversies.

In connection with the Waynesboro award the board announces that it has under consideration the matter of determining the living wage, which under its principles must be the minimum wage for the worker and family to subsist in reasonable health and comfort.

Oscar Straus, chairman of the Public Service Commission for the First District of New York, sent a telegram on July 23 to Messrs. Taft and Walsh, in part, as follows:

### STRAUS OPPOSES FEDERAL RATE RELIEF

"This commission has adopted a policy of granting public utilities such relief for the war period as may be necessary to conserve the usual corporate income, and request that we be promptly advised of any recommendations by your board affecting the wages of employees on or the rates chargeable by lines and companies within the city of New York. We believe that a policy of recommendations by your board to the proper State and municipal authorities will prove effective wherever the facts require rate increases."

The fare on surface, subway and elevated lines in New York City is not directly involved in any proceeding before the War Labor Board. Moreover, the commission's "policy" of granting war relief to utilities has not been followed in connection with metropolitan electric railways, for under the existing regulatory law the commission is powerless to change franchise fares. Its counsel, however, has submitted to the War Labor Board a brief declaring that Congress has not conferred on the President the power to regulate the rates of intraurban and intrastate elec-

tric railways operated for non-military purposes, but saying the presidential or federal recommendations would doubtless be heeded by State and municipal authorities.

## News Notes

**City Would Lease Line.**—The City Council of Portland, Ore., has decided to ask the Hill railroad interests to fix a valuation on the old United Railways line to Linnton, which will be used as a basis either for purchase or lease of the line by the city. The Council favors the lease of the line, with an option to purchase.

**P. R. T. to Open Hog Island Line.**—Emergency Fleet Corporation transportation officials are working night and day in an effort to have ready for full operation the new extension of the Philadelphia (Pa.) Rapid Transit Company to the Hog Island Shipyard by the time of the first launching. This event is now scheduled for Aug. 4 and it is planned to accompany it with rather elaborate ceremonies.

**Henderson Company Resumes Service.**—The differences between the City Council of Henderson, Ky., and the officials of the Henderson Traction Company, have been adjusted, and railway service was resumed on July 20. The company agreed to confess to judgment for oil taxes due and give notes in payment of same. The city ordered current shut off on July 1 because of a disagreement with the company over the matter of paying the oiling tax amounting to \$3,000.

**State Passes Ownership Bill.**—A bill has passed both Houses of the Louisiana Legislature authorizing cities, towns and villages in the State to co-operate with each other for the purpose of building, owning and operating electric interurban railways and also to build the necessary electric plants to run them. The purpose, it is said, is to give opportunity to furnish cheap and fast transportation facilities all over Louisiana.

**New York Commission Moves.**—The last of the many bureaus of the Public Service Commission for the First District of New York were moved on July 15 from the commission's old headquarters at 120 Broadway to 49 Lafayette Street, New York City. The new building is twelve stories high, and the commissioners have taken the top floor for themselves, their secretaries and stenographers. Other secretaries and the more important clerks occupy the eleventh floor, while the floors below are used by the various bureaus and engineers.

**Haig Honors Canadian Railway Man.**—Among those included in a recent list

of officers mentioned in dispatches by Sir Douglas Haig for conspicuous work in France was Lieut. C. E. Knox, son of R. R. Knox, traffic superintendent of the Winnipeg (Man.) Electric Railway. Lieutenant Knox has been in France for the last two years, having left with the 101st Battalion. His entire platoon was made up of conductors and motormen. Before going overseas Lieutenant Knox was in the employ of the Winnipeg Electric Railway as chief clerk to his father.

**Portland Wage Contract Ratified.**—At a recent special meeting the local branch of the Amalgamated Association at Portland, Ore., ratified the proposed new contract with the Portland Railway, Light & Power Company, and upon the declaration of Franklin T. Griffith, president, that the company would be unable to grant the proposed wage increases without additional revenue, it was mutually agreed that the entire issue be passed to the National War Labor Board for adjudication. If the War Board approves the tentative wage schedule, it is considered probable that fares in Portland will be raised to 7 or even 8 cents.

**Campaign for Help Obtains Results.**—The labor problem is a difficult one at present with the electric railways operating in the great industrial districts centered in the upper part of the Ohio River Valley. As a means of increasing its available labor supply, the Mahoning & Shenango Railway & Light Company, Youngstown, Ohio, shortly after the promulgation of General Crowder's "work or fight" order ran a series of advertisements in the local press calling attention to the essential nature of electric railway work. As a result of this advertising campaign the company received a number of applications for employment.

**Pacific Electric Injunction Sustained.**—The United States District Court at Los Angeles, Cal., has sustained the temporary injunction restraining officials of the Brotherhood of Railway Trainmen and Brotherhood of Locomotive Engineers from interfering with the operation of the Pacific Electric Railway. In handing down the decision, Judge Bledsoe classed the union organizers as third parties attempting to interfere with a fixed policy of the railway in dealing with its men. It is understood that this will have the effect of permanently restraining attempts to force recognition of the union or the use of intimidation in inducing employees to join in a walkout.

**Artillery Officers' School for Technical Men.**—A field artillery officers' training school has been established at Camp Zachary Taylor, near Louisville, Ky., and an opportunity is offered there for men with engineering training to become officers in this branch of the service. The camp is designed for civilians between twenty years and eight months and forty years of age as well as for enlisted men in the army. The period of enlistment is for the duration of the war. The commis-

sion given to those who graduate is second lieutenant, then promotion is by selection and should be rapid for men of ability. Further particulars can be obtained by addressing the school direct.

**Akron's New Terminal Nearly Completed.**—The splendid new terminal building of the Northern Ohio Traction & Electric Company at Akron, Ohio, is nearing completion. Except for a few minor details, the main structure is finished and is now being occupied by the company official force. Scarcity of labor and slow delivery of materials have delayed the completion of the structure, but company officials hope to have the train shed completed by Aug. 15. The shed contains eight loading tracks and has room for twenty-four cars. The terminal adds greatly to the facilities offered by the company for handling the heavy traffic in this great industrial district. A brief description of this building, with illustrations showing the floor plans, was published in the ELECTRIC RAILWAY JOURNAL for March 9, 1918, page 465.

**Forty-Cent Minimum Is Vancouver Award.**—Findings of the board of conciliation in the dispute between the British Columbia Electric Railway, Vancouver, B. C., and its motormen and conductors were handed down on July 6 by Mr. Justice MacDonald. The eight-hour day principle is conceded with the recommendation that its application be postponed till after the war. A minimum wage rate for motormen and conductors of 40 cents an hour is recommended, being an increase of one-third over the present scale. The maximum wage is placed at 47 cents, an increase of 16½ per cent. Overtime, the board finds, should be paid for after nine hours' work. The period of the new agreement is fixed at one year and it is recommended that the men have a voice in preparation of the running sheets. The employees had asked for a wage scale ranging from 40 to 51 cents with an eight-hour day. The company accepted the board's findings.

**Monongahela Valley Wages Adjusted.**—At meetings held in both Clarksburg and Fairmont, W. Va., on July 13 employees of the Monongahela Valley Traction Company accepted a compromise wage increase offered by the company in response to their demand for higher wages. It is understood that the employees of the Parkersburg and Marietta division are in conference with company officials, and that in a few days they, too, will have reached an agreement. The power house men have come to an agreement with the company and are now awaiting the signing of their contract. The linemen and carhouse men are still in conference over their increase. The scale of wages agreed upon follow: City men in the employ less than one year 38 cents an hour; second and third year, 39 cents; fourth and fifth year, 41 cents; in service five years or longer, 43 cents. Men employed on the interurban lines will be paid 2 cents more an hour than the city men.

# Financial and Corporate

## Issue of Notes Approved

**Interborough Rapid Transit Company  
Authorized to Offer \$39,416,000  
of Notes**

The Public Service Commission for the First District of New York on July 23 gave the Interborough Rapid Transit Company permission to issue \$39,416,000 face value of 7 per cent notes dated July 1, 1918, and maturing July 21, 1921. On maturity the notes are convertible into 5 per cent bonds of the company at 87½ per cent of their face value. It is expected that this will immediately relieve the company of the embarrassment created by its failure to dispose of its bonds at the minimum price of 93½ fixed by the commission. The condition of the money market due to war conditions made it impossible for the company to find a market for the bonds at this price.

It is expected that the War Finance Corporation will take approximately 30 per cent of the notes, or about \$11,000,000 of them, and it will therefore be necessary for the company to deposit as security \$61,596,500 in 5 per cent bonds under its first and refunding mortgage of 1913, because the corporation demands collateral equal to 125 per cent of the amount of its loans. The order of the commission stipulates that the notes must be sold so as to net the Interborough company not less than 95½ per cent of their face value. Of the amount raised by the note issue not more than \$1,773,720 must be spent to meet the total expense of the sale. The remainder of the money is to be used by the company for these purposes:

For the equipment of new subways, including improvement, reconstruction or modification of existing power houses, substations or other electrical equipment .....	\$20,229,762
To pay the actual cost of plant and structure and equipment of third or additional tracks upon the elevated railroads...	11,771,387
To pay the actual cost of plant and structure, and for equipment of the extensions of elevated railroads .....	5,250,131
To pay the cost of the improvements, reconstruction or changes to the power house, substations, transmission lines, etc., for the operation of the extensions and additional tracks, including certain replacements	2,391,000

The order of the commission authorizing the sale provides that all of the notes must be amortised out of the income of the Interborough company previous to the maturity of the bonds deposited as collateral.

The action of the commission followed an opinion written by Public Service Commissioner Hubbell, who found that the requirements of the company were urgent, and that the terms proposed under the prevailing wartime conditions

were reasonable and as favorable as it was possible to procure.

These conclusions were justified, it was said, by a letter on the subject written by Charles A. Peabody, president of the Mutual Life Insurance Company, who described the proposed terms as fair and reasonable. Testimony of a similar character was given by Charles H. Sabin, president of the Guaranty Trust Company; Clarence H. Kelsey, president of the Title Guarantee & Trust Company; James Speyer of Speyer & Company; Jacob H. Schiff of Kuhn, Loeb & Company, and Frederick H. Shipman, treasurer of the New York Life Insurance Company.

A statement by the commission says that \$953,235 of the \$1,773,720 set aside to pay the expenses of the sale is allotted under the subway bond issue, and \$820,485 is allotted under the elevated railway part of the bond issue.

## Many Minnetonka Bonds Extended

William A. Read & Company, New York, N. Y., announce that a very large proportion of the \$5,000,000 of Minneapolis, Lyndale & Minnetonka Railway, first mortgage 5 per cent bonds due on Jan. 15, 1919, has been extended by the present holders, who had until July 15 to accept the privilege of extension at a 7 per cent rate from July 15, 1918, to Jan. 15, 1922. The remainder of the 7 per cent bonds not extended by holders of the maturing 5 per cent bonds, have been sold by the bankers. The road is included in the system of the Twin City Rapid Transit Company.

The terms of the extension of the bonds were reviewed in the issue of the **ELECTRIC RAILWAY JOURNAL** for June 29, page 1251.

## Crosstown Line Sold July 25

The New York Railways on July 25 bid in the Central Crosstown Railroad and the lease of the old Christopher & Tenth Street Railroad at auction under foreclosure proceedings brought by the Guaranty Trust Company, as trustee, acting for bondholders. The New York Railways has been operating the crosstown line since the reorganization of the old Metropolitan Street Railway.

The Public Service Commission for the First District of New York recently approved the application of the New York Railways for authority to purchase and acquire the Central Crosstown Railroad.

The commission stipulates that its approval does not prejudice its right to inquire at any future time into the value of the property to be so acquired, in any proceedings involving the rate to be charged or securities to be issued.

## \$29,553,380 Maturities

**Total for Last Five Months of 1918 Includes \$18,259,880 for Railway and Miscellaneous Issues**

As most of the public utility issues falling due the balance of this year are for relatively small amounts, the War Finance Corporation will be called upon for little aid by public utility companies for refunding purposes compared with the large and numerous applications it received from this class of corporations in the first two months of its existence.

According to the *Wall Street Journal*, the total amount of public utility securities maturing for the last five months of the year is only \$29,553,380, as against \$81,015,000 maturing in July, and \$210,500,000 for the entire year. The bulk of the maturities consists of short-term notes, which have run from one to five years.

The maturities of issues of more than \$200,000 for the electric railways, arranged by months, as contained in the list follow:

AUGUST		
Issues:	Rate	Amount
West End St. Ry. ser. debentures .....	5	\$1,581,000
Hudson Cos. secured notes	6	1,500,000
Columbus Ry. P & Lt 1-year notes .....	6	1,000,000
Missouri Elec. R. R. pur money .....	5	700,000
Newport & Fall River St. Ry	5	240,000
Carolina Pwr. & Light notes	5	202,500
People's St. Ry. of Luzerne Co. ....	6	200,000
Miscellaneous .....		722,400
Railway total.....		\$6,145,900
Total all classes.....		\$12,045,900
SEPTEMBER		
Appalachian Power Co. notes	7	\$2,170,700
Chicago & West Towns Ry. 1st .....	6	690,000
Ohio Traction Co. notes....	6	300,000
Miscellaneous .....		775,500
Railway total.....		\$3,936,200
Total all classes.....		\$4,236,200
OCTOBER		
Cleve., P. & E. R. R. 1st con.	5	\$1,131,000
Cleve., P. & E. R. R. 1st ext.	5	500,000
Phil. & West Chester Traction 1st.....	5	400,000
Quincy Horse Ry. & Car Co. 1st.....	5	400,000
Christopher & 10th St. R. R. 1st.....	4	210,000
Miscellaneous .....		1,303,500
Railway total.....		\$3,944,500
Total all classes.....		\$7,305,000
NOVEMBER		
Springfield Ry. & Lt. 2-yr. notes.....	5	250,000
Miscellaneous .....		382,750
Railway total.....		\$632,750
Total all classes.....		\$2,365,750
DECEMBER		
Toronto Ry. 1-yr. notes....	6	\$750,000
Eastern Texas Electric Notes	6	500,000
Toronto Ry. gold notes....	6	500,000
Wandotte & Detroit River Ry. ....	5	425,000
Bay State St. Ry. notes....	6	357,000
Pan Handle Traction notes	6	309,530
Easton, P & Bethlehem St. Ry. ....	5	200,000
Miscellaneous .....		559,000
Railway total.....		\$3,600,530
Railway and miscellaneous total five months.....		\$18,259,880
Total all classes five months		\$29,553,380

The railway and miscellaneous securities maturing during the remaining five months of 1918 thus total \$18,259,880.

## Not "Depreciation"—but "Retirement"

### Electric Railway Representatives at Hearing on New York Second District Classification of Accounts Suggest Change of Terms

A second conference on the proposed new uniform system of accounts for electric railways under the supervision of the Public Service Commission for the Second District of New York was recently held at the office of the commission in Albany. The discussion turned principally on the use of the term "depreciation" and on certain portions of the instructions pertaining to depreciation accounting.

In general, however, no objections were made to the adoption of the classification as a whole, except for a letter from W. H. Williams, vice-president United Traction Company, in which the point was made that the new classification would force companies without accumulated adequate reserves to charge against operating expenses losses incident to retirements instead of charging such losses to surplus as heretofore. The result of this requirement, the letter stated, would be a financial statement that would appear superficially less favorable to such companies and would injuriously affect their credit. Mr. Williams suggested that the adoption of the new classification be postponed at least until after the war.

#### PROPOSED DEPRECIATION REQUIREMENTS

H. C. Hasbrouck, chief of the division of statistics and accounts, described the changes in the wording of the tentative classification made as a result of the discussion at the earlier conference in May. He stated that in view of the decision of the Court of Appeals in the New York Railways case, the language of the instructions with reference to accounting for depreciation had been modified so as to do away with the mandate that charges must be made to depreciation accounts, but that special accounts would be retained in operating expenses to which such amounts should be charged as might be determined to be proper for the purpose of taking care of the losses due to wear and tear, obsolescence and inadequacy. The recommendation was retained that under normal operating conditions the annual charge to these accounts should be between 2 and 5 per cent of the cost of way and structures and between 2 and 10 per cent of the cost of equipment.

The commission's proposed attitude on depreciation is set forth in detail as follows:

Depreciation accounts in which to include charges to cover depreciation of way and structures, equipment, power plant buildings and power plant equipment are provided in order that carriers may, through the creation of adequate reserves, equalize from year to year, as nearly as is practicable, the losses incident to important retirements of buildings, bridges, trestles, etc., or of large sections of continuous structures like track or electric line, or of definite units of equipment. "Losses" as used above means in each case the difference between the original cost to the accounting corporation of the property retired and its salvage value at the time of its retirement.

There may be an occasional exception to the literal meaning here given. For example, a corporation prior to the establishing of required uniform accounting may have pursued the policy of recognizing depreciation by writing down its assets instead of setting up a reserve. In this case the "loss incident to the retirement" would be the so far unrecognized loss—that is, the difference between the ledger value and the salvage value of the property retired.

The cost of replacing minor parts which is not recorded by any entries in the road and equipment accounts and which is commonly called the cost of "repairs" or "maintenances" as distinguished from the cost of "replacements" of large units need not be provided for through depreciation charges.

The amounts charged to depreciation accounts should be upon a basis determined to be equitable according to the carriers' experience and best sources of information and should, in all cases, be sufficient to provide, during a period of years, a reserve against which can be written off all losses sustained upon the retirement of property either when its natural life has expired or when it has become obsolete or otherwise inadequate for efficient service.

A statement of the rule used by the carrier for computing these charges shall be included in its annual report to the commission. If the carrier so desires, it may file with the commission a verified copy of its rule for determining depreciation accruals, and refer to such rule in its annual report in place of repeating it in full each year.

While each corporation may determine for itself the amount to be reserved annually for depreciation as above defined, the commission will necessarily, in deciding rate and other cases, have to pass upon the adequacy or inadequacy of such charges. As an indication of its policy in this respect, therefore, the suggestion is made, based upon the commission's experience in the regulation of electric railways, that a depreciation charge amounting to not less than 2 per cent or more than 5 per cent per annum on the average total cost of all ways and structures, or to not less than 2 per cent or more than 10 per cent per annum on the average total cost of all equipment, will, under normal operating conditions, be generally less open to question than rates which fall above or below these limits. It is also suggested that depreciation rates should preferably be stated in terms of a percentage of the cost of depreciable property, because it is believed that that form of statement is, on the whole, the clearest and simplest way of expressing the normal depreciation charge and furnishes the readiest basis for comparison between companies.

Mr. Hasbrouck explained as follows the reasons for keeping the word "depreciation" in the title of the accounts provided for the purposes above described: first, the desirability of conforming as nearly as possible to the Interstate Commerce Commission's classification of accounts for electric railways; second, the lack of a better alternative term; and third, the fact that the word "depreciation" had come to be so extensively used that an attempt to discard it entirely would only give rise to more difficulties and misunderstandings than it would eliminate. He also mentioned a rephrasing of the general instructions pertaining to depreciation accounting to make it clear there is no implication that a separate depreciation reserve must be maintained for each individual unit of property.

#### "RETIREMENT" SHOULD BE THE TERM

J. C. Collins, as chairman of the accounting committee of the New York Electric Railway Association, read a

memorandum embodying the views of that body. The memorandum set forth that the inclusion of charges for so-called "depreciation" in the operating expenses of an electric railway is unnecessary provided the plant and the equipment are properly maintained. If it should become necessary to make such charges, however, they should be based on the judgment of an engineer or operating manager, with respect to a definite program of replacements in a particular case, and not on any general accounting or statistical theory of standard depreciation rates. The operating expense account to which such charges are made should be called a "retirement" account rather than a "depreciation" account, and the reserve created through such charges should be called a "retirement" and not a "depreciation" reserve.

#### ELECTRIC ASSOCIATION FAVORS CHANGE

H. M. Brundage, for the committee of the Empire State Gas & Electric Association, also suggested the use of "retirement expense" and "retirement reserve" as substitute titles, without otherwise changing the language of the instructions relating to these accounts. He objected to basing the amount of the annual charge on any estimate of theoretical life in service for different classes of plant and equipment.

The new classification, when finally adopted, will be effective on Jan. 1, 1919. It will be printed as soon as possible and will then be formally served on all electric railways in the Second District.

#### Indiana Line Defaults Interest

George C. Van Tuyl, Jr., president of the Metropolitan Trust Company, New York, N. Y.; L. H. Getchofer, president of the Pittsburgh (Pa.) Trust Company; David Taylor, vice-president of the Coal & Iron National Bank, New York, N. Y.; William H. Pritchard, president of the North Adams (Mass.) National Bank, and Frank Coenen, New York, at the request of a number of holders of the first mortgage 5 per cent thirty-year gold bonds of the Chicago, South Bend & Northern Indiana Railway, South Bend, Ind., upon notification by the company that it would default in the payment of the coupons due on July 1, 1918, and that a plan of reorganization of the company was under consideration, have consented to act as a committee for the protection of the interests of the first mortgage 5 per cent thirty-year gold bonds. Holders of such bonds are asked to deposit their bonds, with coupons attached, including the coupon due on July 1, 1918, with the Metropolitan Trust Company, New York, the depository of the committee, under a deposit agreement to be dated July 17, which is being prepared.

The Chicago, South Bend & Northern Indiana Railway operates 123 miles of electric railway, connecting South Bend with Mishawaka, Elkhart, Goshen, La Porte and Michigan City.

### Electric Railway Statistics

**Operating Ratio Continues to Rise, According to April Returns—Slight Improvement in the West**

A comparison of electric railway statistics for the month of April, 1918, with figures for the corresponding month of 1917, made by the Information Bureau of the American Electric Railway Association, indicates a slowing up of the downward tendency of net earnings and operating income. This is particularly noticeable in the Western District, which actually shows a slight improvement over last year.

#### OPERATING EXPENSES STILL CLIMBING

Operating expenses continue to rise at an increasing rate in all districts, but revenues have also taken a spurt this month, and although they are not keeping pace with the expenses, the increase is marked enough to retard the downward trend of the net earnings and operating income, which has been the consistent feature of recent operating statements.

Data for April, representing 6706 miles of line of companies scattered throughout the country, figured on the per mile of line basis, indicate an increase in operating revenues of 6.56 per cent, in operating expenses of 12.03 per cent, and a decrease in net earnings of 3.44 per cent. Data representing approximately 70 per cent of the above mileage indicate an increase in the amount of taxes paid of 8 per cent and a decrease in operating income of 5.72 per cent.

#### USUAL GEOGRAPHIC GROUPING FOLLOWED

The returns from the city and inter-urban electric railway companies, as shown in detail in the appended table, have been classified according to the following geographic grouping: Eastern District—East of the Mississippi River and north of the Ohio River. Southern District—South of the Ohio River and east of the Mississippi

River. Western District—West of the Mississippi River.

Of the three groups shown in the accompanying table, returns for the Eastern, representing 4290 miles of line, indicate an increase in operating revenues of 5.54 per cent, in operating expenses of 12.38 per cent and a decrease in net earnings of 7.48 per cent. Taxes paid by companies representing approximately 67 per cent of the above mileage increased 7.14 per cent, while the operating income of these companies decreased 12.09 per cent.

Returns from the Southern and Western Districts indicate that both have been affected by the rising cost of operation and increased taxes, the Western district in particular showing the greatest increase in taxes. But this district also had the greatest increase in operating revenues with the result that it was able to improve its condition only slightly with an increase of 1.50 per cent in operating income.

#### OPERATING RATIO 67.97 PER CENT

The operating ratio for the country as a whole has increased from 64.66 in 1917 to 67.97 in 1918. The operating ratio of the Eastern district has increased from 65.55 in 1917 to 69.80 in 1918. The operating ratios of the Southern and Western districts have also risen, the Western showing the smallest increase, from 65.05 in 1917 to 66.47 in 1918. In the Southern district, however, the operating ratio, while increasing faster than the Western, is still the most favorable, rising from 57.54 in 1917 to 60.60 in 1918.

### Decision in Favor of City

Judge Chatfield of the United States District Court, Brooklyn, N. Y., has dismissed the complaint in an action brought by Receiver A. C. Hume on behalf of the South Shore Traction Company, New York, against the City of New York to recover \$1,750,000 damages.

### Statement of Capitalization

**President Shonts, of the New York Railways, Does Not Hesitate to Grasp the Thistle Firmly**

It will be recalled that in the spring of 1917 the New York Railways petitioned the Public Service Commission for the right to make a charge for transfers. After the Court of Appeals of New York State decided that public service commissions had no power to increase rates of fare stipulated in franchises, the Public Service Commission for the First District concluded it had no power to grant a charge for transfers until the permission of the Board of Estimate of New York City had first been obtained. Meantime, the increase of expenses, beyond the figures existing when the petition was made, had become so pressing that it was necessary for the company to have greater income than a charge for transfers would procure; hence, the company has now a petition before the Board of Estimate for an increase of the basic fare.

The New York *Herald* recently published an editorial paragraph in which it was charged that the difficulties of the company were due to previous financial sins and over-issues of watered stock. Mr. Shonts, president of the company, immediately sent to the editor of the *Herald* a letter upon this subject. The company is also pressing the point home in other publicity matter.

#### REVIEW OF FINANCES

Mr. Shonts, in his communications to the *Herald* and to civic bodies, seized the thistle firmly, stating the position of the company to the following effect:

The New York Railways was organized on Dec. 29, 1911. Hence it has always been under Public Service Commission regulation. The company's stock represents actual value and there is no water in its capitalization. The company arose from the ruins of the Metropolitan Street Railway and the New York City Railway, which had been in the hands of receivers. A joint com-

COMPARISON OF REVENUES AND EXPENSES OF ELECTRIC RAILWAYS APRIL, 1918 AND 1917

Account	United States.				Eastern District				Southern District				Western District			
	Amount, April, 1918	Per Mile of Line			Amount, April, 1918	Per Mile of Line			Amount, April, 1918	Per Mile of Line			Amount, April, 1918	Per Mile of Line		
		1918	1917	% Increase Over 1917		1918	1917	% Increase Over 1917		1918	1917	% Increase Over 1917		1918	1917	% Increase Over 1917
Operating revenues.....	\$13,508,276	\$2,014	\$1,890	6.56	\$8,253,736	\$1,924	\$1,823	5.54	\$1,258,908	\$1,533	\$1,446	6.02	\$3,995,632	\$2,505	\$2,283	9.72
Operating expenses.....	9,178,697	1,369	1,222	12.03	5,761,096	1,343	1,195	12.38	762,679	929	832	11.66	2,654,922	1,665	1,485	12.12
Net earnings.....	4,329,579	645	668	†3.44	2,492,640	581	628	†7.48	496,229	604	614	†1.63	1,340,710	840	798	5.26
Operating ratio, per cent.	1918, 67.97; 1917, 64.66				1918, 69.80; 1917, 65.55				1918, 60.60; 1917, 57.54				1918, 66.47; 1917, 65.05			
Av. No. miles represented	1918, 6,706; 1917, 6,625				1918, 4,290; 1917, 4,274				1918, 821; 1917, 765				1918, 1,595; 1917, 1,586			

#### COMPANIES REPORTING TAXES

Operating revenues.....	\$9,091,397	\$1,950	\$1,837	6.15	\$4,884,505	\$1,685	\$1,614	4.40	\$589,831	\$1,735	\$1,627	6.64	\$3,617,061	\$2,540	\$2,342	8.45
Operating expenses.....	6,287,383	1,370	1,240	10.48	3,610,051	1,245	1,138	9.40	355,234	1,045	905	15.47	2,422,098	1,701	1,528	11.32
Net earnings.....	2,704,014	580	597	†2.85	1,274,454	440	476	†7.56	234,597	690	722	†4.43	1,194,963	839	814	3.07
Taxes.....	627,993	135	125	8.00	347,984	120	112	7.14	49,463	145	138	5.07	230,546	162	147	10.20
Operating income.....	2,076,021	445	472	†5.72	926,470	320	364	†12.09	185,134	545	584	6.68	964,417	677	667	1.50
Operating ratio, per cent.	1918, 70.26; 1917, 67.50				1918, 73.89; 1917, 70.51				1918, 60.23; 1917, 55.62				1918, 66.97; 1917, 65.24			
Av. No. miles represented	1918, 4,663; 1917, 4,634				1918, 2,899; 1917, 2,885				1918, 340; 1917, 334				1918, 1,424; 1917, 1,415			

† Decrease.

mittee, representing interests in both companies, made a plan for reorganization and the establishment of this company.

That reorganization plan reduced the capital \$41,883,894.50, and the Public Service Commission, specifically basing its action upon a decision by the Court of Appeals, approved the capitalization as then fixed.

The capitalization of the company is less than the value of its property. The sum total of stock, bonds and convertible scrip, underlying bonds or other mortgage indebtedness, is \$76,018,087.19. (This not only excludes any value for any of the franchises, although these alone are taxed by the State on the value of \$13,000,000, but it also excludes any "going value.")

At normal average prices, the value of the company's property used in the public service (exclusive of franchise and goodwill value) is, at a low estimate, \$92,000,000.

At the time of the reorganization, the Public Service Commission fixed a valuation of the company's property, for the issuance of securities, at \$85,801,000. This did not include franchise or "going value," either of which would have brought this value up to more than \$100,000,000. And more than \$3,199,000 has since been expended in additions and betterments.

Some of the company's opponents, while admitting that the company has paid no dividends, have declared that the situation of the New York Railways is due to excessive rentals, which it pays for leased and controlled lines. In reference to this, Mr. Shonts speaks to the following effect:

As to dividends and rentals: the shareholders of the New York Railways have never received any dividends on the company's stock.

The company is paying certain rentals—in the form of dividends or interest—to the owners of securities of some of the companies in the system, and some of these securities are owned by the company. This matter has been the subject of much misunderstanding, but the following facts are to be noted:

1. The securities do represent real value, a value which justifies the rentals. The value of these securities has been authenticated by the public authority which fixes the company's taxes. Taking their valuation (which includes both real estate and franchises) as a basis, the total return actually paid to security holders of leased and controlled lines is less than 6½ per cent on the valuation. This includes payments on securities owned by the company.

2. The total of these securities is less than a quarter of the total capitalization.

3. The total rentals now paid (\$1,620,713) constitute a return of only 7.49 per cent on the par value of the outstanding securities (\$21,612,144), the only part of the system that has ever had anything like a fair return.

Much emphasis is laid on the fact that every line leased was necessary to a complete system that, with transfers, could give the best and cheapest service.

Without discussing whether the terms of any or all of the leases are too high or too low, the important consideration, as it affects the public, is stated to be: The rentals have no effect on the fare. High or low, they must

come out of the statutory "fair return" on the value of the property in the system as a whole.

Having made these points, the company then develops the importance of the transfer system and points out that a receivership would put the continued existence of the transfer system in peril and that the loss of transfers would cost the public in dollars and cents more than the additional fare.

The company, in short, not only appeals to the fairness of the public, but it shows that the public does have a dollars and cents interest itself in the company's appeal for increased fare.

## Financial News Notes

**Holyoke Dividend Put Over.**—The Holyoke (Mass.) Street Railway has omitted its usual dividend payable at this time, due, it is said, to increased expenses. It is understood that the stockholders have in mind a service-at-cost plan as provided at the last session of the Massachusetts Legislature. In January of this year a dividend of 1½ per cent was declared and in July, 1917, a like amount.

**Babylon Railroad Suspends.**—The Babylon Railroad, operating between Amityville and Babylon, Long Island, N. Y., and from the main street of Babylon down to Great South Bay, has suspended service, its power having been shut off by the Long Island Lighting Company. The management of the lighting company says that the railroad owes the company about \$7,000.

**Changes in Personnel of Ohio Road.**—The officers of the Cincinnati & Dayton Traction Company, the successor to the Cincinnati, Dayton & Toledo Traction Company, the property of which was recently sold under foreclosure to the representatives of the bondholders, are as follows: J. M. Hutton, president; Otto Armleader, first vice-president; Claude Ashbrook, secretary; Leo Van Lahr, treasurer; The Warren Bicknell Company, operat-

ing managers; M. Ackerman, resident manager and purchasing agent; C. A. Hamilton, superintendent; J. M. Brick, general freight and passenger agent; J. P. Davis, chief engineer power station, and M. Schoenhals, master mechanic.

**Decrease in Passengers in St. Louis.**—The quarterly report of the United Railways, St. Louis, Mo., filed on July 15 with City Register Cuendet, shows that in the three months ended June 30, which included one month of 6-cent fares, the company carried 1,000,000 fewer passengers than in the corresponding three months last year, but received \$148,622 more revenue because of the 6-cent fare. In the last three months the cars transported 19,626,961 passengers at a 6-cent fare, 41,640,680 at a 5-cent fare and 977,407 children at half-fare. The cars made a total of 1,533,880 trips and traveled 10,064,977 miles. The average number of cars on week days was 1293, and on Saturdays 1171. An average of 772 cars were run on Sundays. In the same three months last year, the cars hauled 62,155,641 passengers for a 5-cent fare and 1,107,288 children for half fare. An average of 1278 cars were operated on week days, 1184 on Saturdays and 808 on Sundays, the report shows.

**Commission Opposes Delay.**—At the direction of the Public Service Commission for the First District of New York a letter has been sent to Pierre Jay, chairman of the district committee on capital issues in reference to the application of the New York & Queens County Railway, Long Island City, for approval by this financial committee of an issue of bonds amounting to \$281,000 for construction work ordered by the commission in Flushing Avenue, Borough of Queens. The commission's letter states that while the company's application, in form, asks approval of the bond issue, in actuality the petition is a request to the committee to refuse its approval and to disapprove and bar for the period of the war, the construction work in question. The commission asks the committee not to give the railroad the benefit of an adverse decision upon its application on the ground that the construction work has been ordered by the commission and is a necessary and important public improvement.

## Electric Railway Monthly Earnings

ATLANTIC SHORE RAILWAY, SANFORD, ME.					
Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., June, '18	\$14,865	\$12,151	\$2,714	\$517	\$2,197
1m., June, '17	16,495	11,634	4,861	430	4,431

AURORA, ELGIN & CHICAGO RAILROAD, WHEATON, ILL.					
Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$176,189	*\$141,073	\$35,116	\$35,975	†\$859
1m., May, '17	178,494	*134,555	43,939	35,706	8,233
5m., May, '18	772,536	*690,117	82,419	179,267	†96,848
5m., May, '17	811,757	*604,076	207,681	178,795	28,886

CITIES SERVICE COMPANY, NEW YORK, N. Y.					
Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., June, '18	\$1,808,929	\$38,393	\$1,770,536	\$5,750	\$1,764,785
1m., June, '17	1,388,560	29,785	1,358,775	233	1,358,542
12m., June, '18	20,907,945	398,630	20,509,315	13,815	20,495,500
12m., June, '17	15,865,984	300,303	15,565,681	13,999	15,551,682

\* Includes taxes. † Deficit. ‡ Includes non-operating income.

CLEVELAND, PAINESVILLE & EASTERN RAILROAD, WILLOUGHBY, OHIO					
Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$46,226	*\$30,633	\$15,593	\$11,512	\$4,080
1m., May, '17	43,746	*29,011	14,735	12,176	2,559
5m., May, '18	206,022	*140,888	65,134	57,144	7,990
5m., May, '17	195,889	*120,928	74,961	58,953	16,008

LAKE SHORE ELECTRIC RAILWAY, CLEVELAND, OHIO					
Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$161,528	*\$118,466	\$43,062	\$36,001	\$7,060
1m., May, '17	141,530	*97,997	43,533	34,253	9,280
5m., May, '18	772,168	*585,297	186,871	181,005	5,866
5m., May, '17	659,925	*465,053	194,872	171,837	23,035

REPUBLIC RAILWAY & LIGHT COMPANY, YOUNGSTOWN, OHIO					
Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., June, '18	\$449,349	*\$313,081	\$136,268	\$100,833	†\$43,646
1m., June, '17	375,345	*254,386	120,959	80,514	†44,747
12m., June, '18	5,467,589	*3,832,521	1,635,068	1,111,278	†614,943
12m., June, '17	4,283,069	*2,688,203	1,594,265	907,876	†719,560



# Traffic and Transportation

## New Fare in Effect

### Kansas City, Mo., Goes to a Six-Cent Fare Without Any Undue Complications

The Kansas City (Mo.) Railways on July 15 put into effect the 6-cent fare authorized and ordered by the Public Service Commission of Missouri. Each conductor was supplied with several dollars in pennies, but there was little need for making penny change. Many of the passengers had pennies ready, but in some cases the penny was proffered with dimes, quarters and half dollars, the change to be made being the same as in case of a 5-cent fare.

#### 175,000 METAL TICKETS SOLD

The company had issued about 50,000 metal tickets several weeks ago for which 5 cents each had been paid. Fully 40,000 of these, it has been estimated, had been retained by purchasers, and are now being used to pay 6-cent fares. The company issued 125,000 metal checks of a new lot, many going out a day or so before the higher fare went into effect, for which purchasers paid 6 cents. These were mostly bought by county and city officials and deputies, in large lots, and for similar purposes by institutions which provide car fare to representatives. The company is expecting 125,000 more of the metal checks, delay having occurred at the factory.

A few passengers proffered \$2 bills—a Missouri law existing under which a conductor must pass up a passenger whose \$2 bill he cannot change, the law giving the privilege of ejecting the passenger who proffers a \$5 or larger bill that cannot be changed.

The 6-cent fare applies only in Missouri. Passengers boarding cars in Kansas City, Rosedale and other parts of the company's lines in Kansas, pay only 5 cents. The cars entering Missouri are stopped at the State line, where collectors from the inspection department of the company go through the cars and take up an additional cent for the ride into Missouri. On the morning the new fare went into effect collections were made in an average time of a minute and a half, most of the passengers having their pennies ready. Eighty-six per cent of the business of the company is in Missouri, so that the temporary necessity of operating at a 5-cent fare in Kansas does not impose a serious loss on the company.

#### SLIGHT DECREASE IN TRAFFIC

There was occasional controversy with passengers asked to pay the extra cent, due chiefly to local agitation against the increased fare.

Attorneys for the city and the city

commissioners in Kansas City, Kan., are seeking methods of preventing the collection of the penny from interstate passengers. The appeal of the Public Utilities Commission to the Supreme Court, in the case of the injunction issued by the County Court against the holding of a hearing by the commission on the company's application for increased fare in Kansas, is still pending.

#### SLIGHT DECREASE IN TRAFFIC

The revenue of the railway on the first day of the increased fare, ran about 17 per cent ahead of the usual Monday revenue. Average traffic on that day, with the additional 1 cent from all passengers, would of course have increased the revenues a full 20 per cent.

## Attacks Michigan Two-Cent Law

The Grand Rapids, Grand Haven & Muskegon Railway, Grand Rapids, Mich., has filed suit in the United States District Court in Grand Rapids to "test the validity and enjoin the enforcement of the statute of the State of Michigan fixing the maximum fare for railroads at 2 cents a mile."

The company alleges that it is operating at a loss, and that to continue to force the railway to conform to the 2-cent fare is practically the confiscation of its property for public use, without just compensation and due process of law, and in violation of the constitution of the United States and the constitution of the State of Michigan.

District Judge Sessions set July 23 for the defendants to show cause why a temporary injunction should not be issued in favor of the company.

The company in its bill prays:

"That Act No. 54 of the public acts of the Legislature of the State of Michigan of the year 1907, approved April 18, 1907, and effective Sept. 29, 1907, as amended by the Public Acts No. 276 of the year 1911, be adjudged and decreed null and void and of no force and effect so far as the complainant railway, its officers, agents or representatives are concerned, as in violation of the constitution of the United States and the constitution of the State of Michigan.

"That a temporary injunction be issued pending the trial and final decree in this section, according to the course and practice and out of and under the seal of this honorable court, strictly enjoining and restraining the defendant, Alexander J. Grosbeck, as Attorney General for the State of Michigan, from enforcing or attempting to enforce in any manner whatsoever, Act. No. 54 of the public acts of the Legislature of the State of Michigan, etc.

"That a temporary writ of injunction be issued pending the trial and final decree in this action."

## Rights of Cities Denied

### Pennsylvania Commission Holds Power Over Rates Belongs to People, Not to Municipalities

The Public Service Commission of Pennsylvania ruled on July 21 that it is within the power of the commission to increase or lower electric railway rates as the evidence justifies, notwithstanding that a specific rate was fixed by municipal ordinances.

The decision was rendered in the case of the borough of Wilkinsburg vs. the Pittsburgh Railways, wherein it was argued by the borough that the corporation could not increase its fares because it had accepted the terms of a franchise ordinance limiting the fare to 5 cents. The commission says:

"The ability of the company (Pittsburgh Railways) to make extensions and improvements is so dependent upon the return it is entitled to receive that the regulation of each must be placed in one body; and the Legislature has designated the Public Service Commission as this body. The power of the commission to regulate rates will also result in eliminating discriminations bound to exist where rates are fixed by a number of municipalities, all served by one street railway system."

The opinion recognizes the validity of the conditions contained in the municipal consents, but holds that these contracts were entered into, or conditions were accepted, subject to the continuing right of the people, through the Legislature, to exercise police power, even if such exercises result in wiping out the terms agreed upon.

#### WHERE REGULATION IS LODGED

The report of the commission says:

"It was conceded at the argument and is settled by judicial authority that municipalities have not been invested either by the constitution or by the Legislature with rate-regulating authority. If the regulation of rates and service of utilities is a proper exercise of the police power of the commonwealth and cannot be abridged, and if the municipality has no power to regulate rates of street railways, it would follow, if the complainants' position is sustained, that that power, in this respect, at least, cannot be exercised by any body or authority within such municipalities, and therefore the constitutional mandate, generally conceded to be one of highest importance to the inarticulate citizenry, is nullified or suspended. If such a position is to be sustained, it ought to be sustained upon very clear authority and supported by cogent and impelling reasons."

Commissioner Ryan dissented.

The opinion by the Public Service Commission does not grant the rate increases. It merely says the commission has the right to grant increases or compel decreases. The next step in the case of the borough of Wilkinsburg and the dozens of other municipalities protesting rate increases will be the calling of hearings, in which the railways will present their claims for an increase.

## Seven-Cent Fare for Boston on Aug. 1

### Recently Appointed State Trustees See in This Move Only Means of Preventing Financial Disaster

A 7-cent fare will be established on the entire system of the Boston (Mass.) Elevated Railway beginning on Aug. 1, according to a statement of the trustees of the company issued on July 24. The new fare will be in force until further notice and the existing 5-cent fare will be abolished, as will the use of 8-cent checks on certain lines.

#### FIVE TICKETS FOR THIRTY-FIVE CENTS

Beginning on July 29, tickets will be sold in strips of five for 35 cents at all prepayment stations and by collectors, ticket sellers and conductors. Tickets will also be sold at many important stores and industrial concerns, and the public is urged to supply themselves with tickets previous to Aug. 1.

It is hoped to speed up the service materially by the use of tickets. Cash will not be accepted at prepayment stations, except at ticket windows. While cash will be accepted by conductors, it is to be the policy of the company to encourage the use of tickets to the maximum. The same ticket will be accepted at all stations and on all cars, and the tickets will be transferable. Transfers will be issued along present lines, without extra charge, for travel in the same general direction, and the existing system of free bodily transfers will be continued.

After Aug. 1 the 5-cent tickets now in the possession of passengers will not be honored by the company, but the treasurer will refund their value upon presentation.

#### STATEMENT BY TRUSTEES

The statement issued by the trustees on July 25 follows:

"Commencing on Aug. 1, at 4 a. m., and continuing until further notice, the rate of fare in all cases on the lines of the Boston Elevated Railway where the unit is now 5 cents will be 7 cents. The use of 8-cent checks will be discontinued.

"This increase in fare is made by the trustees in performance of the duty expressly imposed upon them by law (Chap. 159 of Special Acts of 1918) to 'fix and put in operation rates of fare which in their judgment will produce sufficient income to meet the cost of service' including operating expenses, interest, taxes, rentals, depreciation and the dividends specified by the statute.

"After making a careful study of the finances of the company and taking into consideration the known increase in various elements of its expense in the near future, according to the most conservative estimate it will be necessary to procure during the year ending July 1, 1919, additional revenue of about \$6,150,000. It seems reasonable to believe that this amount will be produced by the 2-cent increase in the fare rate. If, however, this result is not brought about, other expedients will have to be resorted to."

"The difficulties of operating surface, subway and elevated lines preclude the introduction of a zone system or an elaborate change in the transfer privileges at this time.

#### 250 CARS ORDERED

"For the purpose of making much needed improvements in service 250 new cars and other equipment have recently been ordered by the trustees. War conditions familiar to all will make it impossible to secure a speedy delivery of this new equipment, and such conditions also handicap the road in procuring and keeping competent employees and in obtaining coal and other necessary supplies. Nevertheless, the trustees will bend every energy to give the public the best service that can be supplied under the circumstances.

"It is possible that further consideration and study by the trustees will result in modifications of the fare which is established at this time, but to-day, confronted as the trustees are by the serious emergency arising from the tremendous monthly deficit in the company's revenue, and the necessity under the law of protecting the Commonwealth from paying the company's bills, the trustees have no alternative but to increase the unit of fare.

#### PUBLIC CO-OPERATION ASKED

"The trustees ask that the public be patient in the unavoidable difficulties that now confront the road, and that may under the pressure of war conditions become still more burdensome, and give the trustees sincere co-operation in their effort to conduct the business of the company with the highest degree of efficiency obtainable under existing conditions."

## Advertises Car Service

### Lynn Merchant Explains Why Publicity Is Needed to Secure Traffic During Off-Peak Hours

The Lynn papers recently carried large display advertisements of the tickets which are good between 9 a. m. and 4.30 p. m. and are sold at six for 25 cents by the Bay State Street Railway. The advertisements were inserted by Ralph S. Bauer, large dealer in furniture in Lynn, who during the recent hearings before the commission had advocated this reduced off-peak rate. Mr. Bauer explains his reason for the publication of these advertisements in a letter to Wallace B. Donham, receiver of the company. After saying that he had made a canvas of 120 Lynn people who are frequent riders on the road to find that only twelve knew of the reduced rate, he continued:

"The only commodity the Bay State Street Railway has to sell is car rides. The investigation I personally made last week, as to the number of people

who knew about the tickets to be used during the non-peak-load hours was such a revelation to me that I am sure, as a merchant who has bought newspaper publicity for more than twenty years, and previous to that time who sold newspaper publicity for fifteen years, there is a tremendous need of newspaper publicity to educate the people as to the different kinds of fares and rides under which the Bay State Street Railway now operates. I hope you will take up the matter from this point and exploit it in a way as to bring returns to your company.

#### SELL CAR RIDES LIKE MERCHANDISE

"I believe it is possible to get thousands of new riders in your district on this proposition if you go after them as a merchant goes after customers for a line of goods he wishes to dispose of. On the other hand, if you do not merchandise the only commodity you have to sell in what appears to be the modern, efficient way—newspaper publicity—it is very doubtful whether the full measure of success will result from any action your railway may take. An educational campaign also ties the people closer to you because they believe you are making an effort intelligently to help them understand your public service."

## Baltimore Wants More

The United Railways & Electric Company, Baltimore, has filed a petition with the Public Service Commission for an increased rate of fare. The company asks the approval of the commission of "a uniform cash fare of 6 cents in lieu of all cash fares now collected except in the case of children between the ages of four and twelve years, and in the case of such children and also in case of all those riders now using commutation tickets a uniform increase of 1 cent."

T. A. Cross, president of the company, on July 20, addressed the following letter to all employees:

"In to-day's papers you will find an announcement over my signature regarding the 'United's' inability to continue its service for a 5-cent car fare.

"This announcement will be followed by a series of others pointing out exactly what the problems are that confront the company.

"It is your duty to read and become thoroughly familiar with all the facts brought out.

"You can't prosper unless the company prospers. Therefore, you should make it your business to be able to talk intelligently about the road's condition and needs whenever the opportunity presents itself.

"I will appreciate your hearty co-operation, and I am going to take it for granted that you are going to do all that you can possibly do to prove to the public that what we are asking of them is fair, reasonable and absolutely necessary.

"In anticipation of your help and co-operation, I am, with best wishes."

### Six Cents in Saginaw

The Saginaw-Bay City Railway, Saginaw, Mich., has obtained permission to charge a 6-cent fare in Saginaw, in which city it operates under a franchise granted twenty-five years ago, at rates of fare as follows: Single cash fares, 5 cents; regular tickets, six for 25 cents; labor tickets, eight for 25 cents; school tickets, eight for 25 cents.

Some time ago the company petitioned the City Council to pass an amendment to its franchise granting it authority to charge 6 cents straight for all passengers carried. The City Council considered the matter carefully and then engaged the services of Prof. M. E. Cooley of the University of Michigan to appraise the property and report to the City Council whether the company's request was justified. The report of Professor Cooley stated clearly and emphatically that the request of the company was fully justified. The City Council, therefore, on July 2 passed an amendment authorizing the increased rate of fare. The ordinance became effective on July 16.

All special rate tickets have been abolished and the fare is now 6 cents straight with five tickets for 30 cents, as a matter of convenience.

During the negotiations of the company with the City Council, the railway conducted an educational campaign in the newspapers, explaining its position. After this campaign had been closed the railway reproduced the newspaper articles in pamphlet form and distributed them by means of small "Take One" boxes placed in all the cars. The company also displayed posters on its cars.

### Vancouver Jitneys Eliminated

The City Council of Vancouver, B. C., on June 21 passed a by-law prohibiting jitney operation in Vancouver and on the interurban line between Vancouver and New Westminster. This action was taken in accordance with the report of Dr. Adam Shortt made last November and with the agreement made with the city in June, 1917, to carry out Dr. Shortt's recommendations. The jitneys were to go from the streets on June 30. The by-law recites that after July 1, no person was to drive or operate any motor vehicle coming within designations set out in the measure as Class "A" or "B."

The city jitney was eliminated by Class "A" and the interurban jitney by Class "C." The latter operated on a 25-cent fare between Vancouver and New Westminster. This clause prescribes that the fare for any distance greater than 2 miles outside the city limits shall be at least 50 cents. It was agreeable to the company that the jitney line running between Vancouver and Woodward's Landing should continue to operate since it did not compete with any of the lines of this company.

The New Westminster jitney service has been in the hands of the Blue Funnel Motor line, composed of a number

of independent owners operating one or more cars under the same name. It is possible that the representatives of the jitney interests may contest the by-law in the court.

Despite the order ruling the jitneys out on July 1 the vehicles were continued in operation upon advice of their attorneys. They raised the fare to 10 cents. Steps are being taken by the jitney attorneys to quash the by-law calling for the elimination of the automobiles.

### Kansas Rates in Court

Judge E. L. Fisher, of the District Court of Wyandotte County, Kansas, has issued an injunction against the Public Utilities Commission of Kansas considering the matter of rates of the Kansas City (Mo.) Railways in Kansas City, Kan. The attorney for the Public Utilities Commission has appealed to the Supreme Court. Judge Fisher's decision carries two points: one was that he had jurisdiction to consider the application of the City Commissioners of Kansas City, Kan., for the injunction against the Utilities Commission; the other that the Utilities Commission had no authority to interfere in the rates, which were entirely a matter of contract between the city and the company and therefore should be handled by the City Commissioners.

The Supreme Court had previously refused a writ of mandamus asked for by the attorney for the Utilities Commission, following the filing of the petition for the injunction and the granting of the temporary restraining order by Judge Fisher. It is understood, however, that it is possible that federal participation in the subject may obviate the necessity for final adjudication of the State Commission's authority over fares.

The War Labor Board will probably soon take up the matter of wages of the employees of the Kansas City Railways in Kansas and may then bring about an increase in fares in order that wages be raised.

### Company Publication Enlarged

With the July number the *Puget Sound Electric Journal* will become the house organ for the district, covering the news of the various companies under Stone & Webster management in the Pacific Northwest. The paper is now in its eighth year as the company publication of the Seattle division. The principal features of the enlarged paper will consist of a department of intimate talks to readers from the executive offices, which will reflect the attitude of district officials toward the problems of the several communities included within the district and also a discussion of the problems of the companies themselves. The purpose is in short to give the employees of all of the companies under the management of Stone & Webster in the Pacific Northwest territory an enlarged knowledge of the affairs of the management in the district.

### Hull Fare Increase Allowed

The Board of Railway Commissioners has authorized the Hull (Que.) Electric Company to increase passenger and freight rates on its line to Aylmer. Judgment by the commission was made on June 26, but announcement of the decision by the board was not made until July 9.

The company is authorized to increase its standard passenger rates from a basis of 2½ cents per mile, to a basis of 2.875 cents per mile, which figures out as a 15 per cent increase. One of the most noticeable increases in the freight business will be on coal. In the past, a charge of 50 cents per ton has been made on coal from Hull to Aylmer. On this commodity the board has allowed an increase of 15 cents.

With regard to the claims of the company, the board finds in part as follows:

"The increases in cost, and especially in wage cost, are clear and unmistakable. There is nothing before the board to warrant an assumption that there will, under existing conditions, be such an increase of traffic as to take up these increased costs and in addition give a reasonable return on the investment. Nor is there anything established by way of showing that there are any economies or efficiencies neglected, which economies or efficiencies, if utilized, might take care of existing costs."

The judgment then goes on to say that a case for an increase has been made by the railway company, not only as concerns the standard rates but also for special rates.

### New Jersey Decision Accepted

The Public Service Railway, Newark, N. J., on July 23 filed with the Board of Public Utility Commissioners its acceptance of the conditions upon which the company recently was authorized to put into effect an increase of 1 cent on all transfers issued. In filing its acceptance the company through its counsel made the following statement to the commission:

"If the commission please, the Public Service Railway has filed its acceptance of the three conditions mentioned in the order of July 10 made in the fare increase matter.

"One of those conditions requires the company to submit a plan for an equitable zoning system by Jan. 1 next. The testimony of the witnesses for the company at the hearing showed that such a plan, if possible to be prepared at all, would require much longer than five months. However, the company will proceed in good faith to prepare the best plan it can as rapidly as practicable and submit it for consideration in the best form possible by the first of January."

The decision of the commission in this case was reviewed in the *ELECTRIC RAILWAY JOURNAL* for July 20, page 113.

## Transportation News Notes

**War Emergency Fare Agreement.**—The Council of Milwaukee, Wis., has finally passed an ordinance permitting the Milwaukee Northern Electric Railway to sell six instead of eight city fare tickets for 25 cents and twenty-five for \$1. This is to give the company financial relief during the war, and by it neither the city nor the company will waive rights under the 1907 franchise.

**Formal Twin City Plea Made.**—Horace Lowry, president of the Twin City Rapid Transit Company, appearing before the City Council of St. Paul, Minn., on July 10 intimated the company faced bankruptcy because of increased cost of operation and pleaded for increased fares. He did not ask for any fixed rate, rather leaving the measure of relief to the company to be decided after the presentation of the evidence. The Council appointed a committee to confer with the Minneapolis Aldermen and arrange a joint session at which Mr. Lowry will present details for both cities.

**Fare Increase in Laurel.**—The difficulties attending the operation of the railway lines of the Laurel Light & Railway Company, Laurel, Miss., have been very satisfactorily adjusted. The employees of the railway recently demanded an increase in wages. The management of the company agreed with the men, that they were entitled to an increase if it were possible for the company to obtain higher rates. A petition was presented to the city and for a period of about two weeks the line ceased operating, pending a public election to be held for the approval of the company's fare demand. At this election, held on July 12, it was voted to grant the 6-cent fare. Railway service was immediately resumed.

**Los Angeles Jitneys Recalled.**—By a unanimous vote the Board of Public Utility Commissioners of New Jersey has requested the city attorney to draw a resolution to the effect that on Aug. 1 all existing licenses covering buses paralleling electric railway lines shall become void. It was explained that where public convenience and necessity require the board will grant licenses covering the operation of jitneys on other routes. The board's action will wipe out the sixteen jitney buses operating on the Main and Moneta Avenue line and the thirteen operating on the Central Avenue line. According to Assistant Engineer Anderson of the utilities department, the total revenue of these lines is about \$74,160 annually.

**Youngstown-Alliance Freight Service.**—Harry Rhodehouse, manager of the traffic bureau of the Chamber of

Commerce at Youngstown Ohio, announced on June 19 that a daily six-hour freight service between Youngstown and Alliance had been started over the lines of the Mahoning & Shenango Railway & Light Company and the Alliance & Mahoning Valley Railway. This, it is said, will relieve congestion on the steam roads and give shippers a service that is superior to anything they have had heretofore. Plans are also being worked out for a service connecting Cleveland, Akron, Canton and Youngstown, with intermediate points, in connection with the Northern Ohio Traction & Light Company's lines. The starting of this service will depend upon the success of the Youngstown-Alliance line.

**Would Use One-Man Cars in Galesburg.**—The Galesburg Railway, Light & Power Company, Galesburg, Ill., included in the system of the Illinois Traction Company, has asked the City Council for permission to use one-man cars. In its petition the company said: "As the gross receipts are not enough to pay the expenses of the company because of the high cost of fuel, material and up-keep and operating expenses and the decrease in the traffic because of thinning of population and increasing automobiles and also because the employees have asked an increase in wages, the company feels that it is justified in asking for permission to use the one-man cars, and it will so alter and equip the present cars to meet the approval of the Public Utilities Commission." The matter has been referred to the City Attorney and to the Public Utilities Commission.

**Interurban Rates Modified.**—A rate of 1½ cents a mile has been ordered on the Kansas City-Western Railway, the Leavenworth line, by the Public Utilities Commission of Kansas when patrons pay in advance for forty rides a month between specified points on the road. The tickets are not transferable, and cannot be used beyond the thirty-day period indicated thereon when purchased. When forty-ride books are not used, patrons pay 2 cents a mile. A charge of 10 cents is made in addition, when a patron boards a car, without a ticket, at a station where tickets are sold. The commission had previously established the fare between Kansas City and Leavenworth at 50 cents, with no reduction for round-trip tickets. Formerly, the company sold round-trip tickets for 75 cents, and also sold commutation tickets as low as 44 cents for the round trip. The zone system of fares was in effect previously. Under it in some cases the rates were around 1 cent.

**New Chicago-Joliet Rates Filed.**—Increased fares on city and interurban lines will become effective on or about Aug. 12, if a petition to that effect, presented to the Utilities Commission of Illinois by the Chicago & Joliet Electric Railway, Joliet, Ill., is favorably acted upon. The petition embodies a request for authority to increase the passenger fare rates on Joliet city lines

from the present charge of 5 cents to 7 cents. Also to increase the passenger rate on the line between Chicago and Joliet from the 1.87 cents per mile for one-way tickets to a straight 2 cents per mile. Round-trip fares will be changed to the sum of two single fares in the place of the present rate of 1.75 cents per mile. Individual commutation tickets will be changed from the present rate of 1 cent per mile to 1.5 cents per mile. Cash fares paid from points where passengers could have secured a ticket will be raised from 2.5 to 3 cents per mile, and special excursion rates will be changed from 1 to 1.5 cents per mile.

**I. C. C. Hearing at Louisville.**—Hearings were held in Louisville, Ky., on July 15 and 16 before an examiner for the Interstate Commerce Commission on the applications for increased fares made by the Louisville & Southern Indiana Traction Company, operating to Jeffersonville, and the Louisville & Northern Indiana Railway & Light Company, operating to New Albany. The Public Service Commission of Indiana has already allowed an increase from 5 cents to 10 cents for the interurban ride from New Albany to Jeffersonville, both of which cities are in Indiana. Olaf Erickson, Chicago, was examined first. It was largely on the strength of the investigation and report made by him to the owners of the properties that the application for the increases was based. At the request of Col. C. L. Jewett, representing the legal department of the city of New Albany, it was agreed that oral arguments would be made in Washington before the commission at a date convenient for the commission. Briefs may be filed as late as Aug. 16.

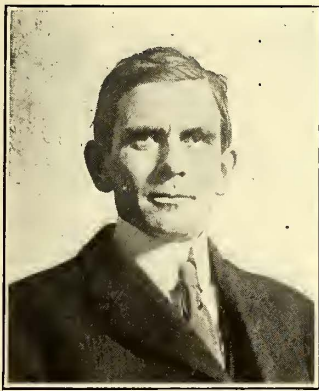
**Albany Fare Brief Filed.**—The United Traction Company, Albany, N. Y., on July 12 filed its brief with the Public Service Commission for the Second District of New York in connection with its plea to that body for a 6-cent fare. The company complains that in the "general acquiescence" of localities served by its lines, the only objection comes from the Albany zone. The company says: "Certain officers of the city and members of a commercial organization have so far misapprehended the condition as to convince themselves that if Albany could be isolated from the balance of the company's system, its railway business would be found to be profitable at the present rate of wages and fares. The facts refute the suggestion. The sole question in this case is whether the United Traction Company shall be allowed a living wage. It is pleading for its life in this proceeding, and unless relief is obtained, its continued existence as an efficient agency for public service inevitably must cease. Enforced restriction of rates to the present level would confiscate not only the equity of the stockholders, but the security of the bondholders." An extension of time for one week has been granted to the city for filing its brief.

## Personal Mention

### Mr. Shoup, Vice-President

Head of Pacific Electric Railway Made Southern Pacific Vice-President After Many Years' Service

Paul Shoup, president of the Pacific Electric Railway, Los Angeles, Cal., since 1912, was signally honored on July 11 when he was elected a director, vice-president and assistant to the president of the Southern Pacific Company. While his election makes him one of the highest officials of the Southern Pacific, Mr. Shoup will not sever his connections with the Pacific Electric Railway. He will be the executive representative of the Southern Pacific Company on the Pacific Coast with headquarters in San Francisco. He will continue to have



PAUL SHOUP

general supervision over the Pacific Electric Railway and will succeed William Sproule in connection with the various corporations in which the Southern Pacific Company is interested. The railroad governing body also elected Julius Kruttschnitt president of the company, succeeding William Sproule, who resigned to become the federal district director of the United States Railway Administration. Mr. Shoup succeeds W. R. Scott, who resigned as director and vice-president of the Southern Pacific Company to resume his position as federal manager of the Southern Pacific and Western Pacific lines in the Central Western region.

As president of the Pacific Electric Railway since 1912, in which year he succeeded William F. Herrin with that company, Mr. Shoup has been responsible for the management and operation of one of the largest systems of city and interurban lines in the United States. The properties embrace 1060 miles of road, with very diversified service. They are known particularly for their high-grade service and for

their excellent personnel. Prior to 1912 Mr. Shoup was vice-president of the lines. Before becoming connected with the Pacific Electric Railway he was assistant general passenger agent of the Southern Pacific Company. He entered the service of the Southern Pacific Company in 1891 as a clerk in the office at San Bernardino. When the narrow-gauge railroad between Riverside and San Bernardino went into the hands of a receiver Mr. Shoup was practically in charge, and he is said to have been largely responsible for converting the road into a paying investment. Mr. Shoup next entered the passenger department of the Southern Pacific Company. Soon thereafter he went to San Jose as district freight and passenger agent of the company. He went to Portland, Ore., later and reorganized the freight department of the Southern Pacific Company in that city. From December, 1908, until April, 1910, Mr. Shoup gave his time to the interests of the late E. H. Harriman in California not related to the Southern Pacific Company. Prior to his election as vice-president of the Pacific Electric Railway Mr. Shoup was assistant general manager of the Southern Pacific Company, in charge of its electric lines in California, which included the Los Angeles-Pacific Company and Peninsula Railway, San Jose.

### Journal Men in Service

Members of the Staff of This Paper in Many Branches of the Federal War Service

A card recently received by the editorial staff of the *ELECTRIC RAILWAY JOURNAL* announced the safe arrival in France of L. E. Stibbe, formerly editorial representative for this paper.

Mr. Stibbe enlisted in the engineering branch of the service and was recently promoted to the rank of sergeant. His arrival in France swells the *ELECTRIC RAILWAY JOURNAL* total at the front to three, viz.: Lieut. Frank Kingsley, Ordnance; Lieut. Harold W. McGraw, Infantry; Sergt. L. E. Stibbe, Engineers. Other former *ELECTRIC RAILWAY JOURNAL* men now in the service are A. C. Davison, Infantry, and Harold Rudd, Aviation. The normal staff, editorial and business, at the New York office of the *JOURNAL* consists of about twelve men.

Lieutenant Kingsley was in one of the first contingents to be sent abroad and has seen continuous service there since last November.

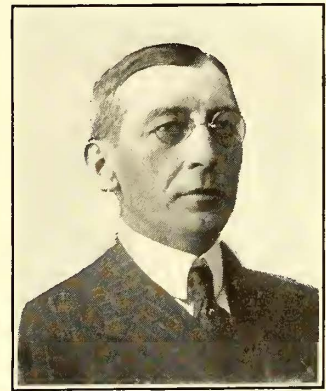
In addition to the home office representation, Harry L. Brown, who was Western Editorial representative of the *ELECTRIC RAILWAY JOURNAL* until he entered the Signal Reserve Corps of the United States Army last January,

has been promoted from first lieutenant to captain. Since he entered the military service he has been stationed at Washington in the Radio Division and later the Training Division of the office of the Chief Signal Officer.

### Mr. House in Northern States

Technical-Business Executive Returns to Northern States Power Company as Manager at St. Paul

Garrett O. House, the superintendent of the St. Paul (Minn.) City Railway, Twin City Lines, has been appointed to succeed the late P. T. Glidden as manager of the Northern States Power Company, St. Paul, Minn. Mr. House is a native of New York State. For fifteen years previous to 1904, when he came to St. Paul, he was engaged in civil engineering work, municipal, state and railroad. He acted as city engineer of Poughkeepsie, N. Y., for several years and was an assistant engineer under the State engineer of New York State engaged in the en-



G. O. HOUSE

largement of the Erie Canal and State highways. He was identified with the location and construction of the Troy & Sand Lake Electric Railway and also with the change in motive power on the Poughkeepsie City Railway from horses to electricity. In 1904 Mr. House went to St. Paul as the representative of Eastern capitalists promoting the public utility corporation now known as the Northern States Power Company. He helped to obtain the necessary franchises and directed the installation of steam and electric equipment. In 1909 Mr. House performed special work, directing the installation of large, electrically operated coal docks for the North Western Fuel Company at Superior, Wis., including 13,000-volt trolley lines and all auxiliary equipment. In 1912 Mr. House became general superintendent of the St. Paul Water Department. He reorganized and readjusted the business methods and equipment of the department. His administration gained the confidence and approval of the general public in St. Paul, demonstrated his ability as a technical-

business executive and indirectly resulted in his appointment a few months ago to the Twin City Rapid Transit Company. He knows well the problems of the Northern States Power Company through his previous long connection with the company at the time of the inception of the enterprise.

**F. J. Larsh** has been appointed auditor of the Atchison Railway, Light & Power Company, with headquarters at Topeka, Kan., to succeed W. C. Glover.

**W. C. Stockman**, formerly chief inspector of the Mobile Light & Railroad Company, Mobile, Ala., has been appointed superintendent of transportation.

**J. F. Beard** has been appointed superintendent of lines of the Birmingham Railway, Light & Power Company, Birmingham, Ala., to succeed B. H. Elliott.

**A. Mueller** has been appointed superintendent and purchasing agent of the Mankato (Minn.) Electric Traction Company, to succeed E. N. Thyse, resigned.

**Louis J. Hauck** has been elected vice-president of the Cincinnati, Newport & Covington Light & Traction Company, Covington, Ky., to succeed Clifford P. Garvey.

**R. E. Bowen** has been appointed engineer of the power station of the Little Rock Railway & Electric Company, Little Rock, Ark., to succeed A. W. Russell.

**J. M. Ahearn**, assistant superintendent of the Ottawa (Ont.) Electric Railway, has also been appointed purchasing agent, vice D. N. Gill, who has entered military service.

**Frederick E. Hayes** has been appointed general superintendent of the Sandwich, Windsor & Amherstburg Railway and Windsor & Tecumseh Electric Railway, Windsor, Ont.

**G. K. Rudd** has been appointed roadmaster of the Cincinnati, Newport & Covington Railway and the South Covington & Cincinnati Street Railway, Covington, Ky., to succeed K. B. Norman.

**W. D. Ranshaw** has been appointed claim agent of the Cincinnati, Newport & Covington Railway and the South Covington & Cincinnati Street Railway, Covington, Ky., to succeed B. W. Fitzgerald.

**R. Harold Smith**, who has been managing the Bridgeton (N. J.) Traction Company, has been appointed general manager of the Schuylkill Railway and Schuylkill Electric Company at Girardville, Pa.

**A. R. Koonce**, formerly master mechanic of the Little Rock Railway & Electric Company, Little Rock, Ark., has been appointed superintendent of the railway department to succeed Richard Eick.

**E. D. Loper**, formerly master mechanic of the Key West (Fla.) Electric Company, controlled by Stone & Webster, has been appointed master me-

chanic of the Columbus (Ga.) Railroad, also controlled by Stone & Webster.

**Robert Allan Stephens**, lawyer, Danville, Ill., and secretary of the Illinois Bar Association, has been appointed by Governor Lowden as secretary of the Public Utilities Commission of Illinois. He succeeds Robert V. Prather, Olney.

**Clarence R. Manzer**, chief clerk of the transportation department of the Chicago (Ill.) Surface Lines, has been commissioned first lieutenant in the Quartermaster's Corps and is now in Washington, D. C. Mr. Manzer held his position with the Surface Lines and the Chicago City Railway for many years.

**J. F. Rodgers**, superintendent of track and roadway for the Chicago (Ill.) Surface Lines, has been commissioned major in the construction division of the Quartermaster's Department, U. S. Army. Mr. Rodgers held his position with the Chicago Surface Lines since the merger in 1914 and held a similar position with the Chicago City Railway for a period of several years prior to the merger.

**N. S. Wiltsie** has been promoted to general superintendent of the Bamberger Electric Railroad, Salt Lake City, Utah. He will have charge of all operating departments and the active operation of the line. Mr. Wiltsie has been with the Bamberger line for the last ten years and was recently in charge of the train service, with the title of superintendent of transportation.

**William L. Ransom**, counsel Public Service Commission for the First District of New York, has in *The Survey* of July 20 an article which discusses in a broad way the necessity of the public paying for utility service and meeting present emergency costs so as to keep essential services unimpaired. Mr. Ransom also believes, as noted in the issue of July 20 in connection with his address before the National Municipal League, that cities in now permitting a disregard of franchise fare limits may properly insist upon other changes in the public interest.

**Richard Eick** has been appointed purchasing agent of the Little Rock Railway & Electric Company, Little Rock, Ark., to succeed C. J. Griffith, who retains the title of general manager. Mr. Eick has been superintendent of the railway department of the Little Rock Railway & Electric Company since 1911. Before becoming connected with the company, Mr. Eick was division superintendent of the North Jersey Traction Company, from which company he went to the United Railroads, San Francisco, as division superintendent. He resigned from the United Railroads in 1904 to become superintendent of transportation of the Little Rock Railway & Electric Company, which position he held until July, 1911, when he was promoted to the position of superintendent of the railway department.

**M. F. Flatley** recently resigned as master mechanic of the Dayton & Troy Electric Railway, Tippecanoe City, Ohio, to become master mechanic of the Lackawanna & Wyoming Valley Railroad, Scranton, Pa. Before becoming connected with the Dayton & Troy Electric Railway Mr. Flatley was master mechanic at the Lebanon shops of the Terre Haute, Indianapolis & Eastern Traction Company, in charge of equipment on the Northwestern, Martinsville, Crawfordsville and Lebanon divisions. He became master mechanic of the Terre Haute, Indianapolis & Eastern Traction Company's property in June, 1915, and was previously employed for six years as master mechanic on the Rochester, Syracuse & Eastern Railway. He was also employed by the Brooklyn Rapid Transit System as foreman of the elevated division for four and one-half years, and served three years as foreman of car equipment on the elevated division of the Interborough Rapid Transit System in New York. His first experience in electric railway work was obtained during his connection with the Westinghouse Electric & Manufacturing Company.

**R. R. Smith**, mention of whose appointment as general manager of the Chicago, South Bend & Northern Indiana Railway, South Bend, Ind., was made in the July 13 issue of this paper, has been connected with the electric railway industry for the last twenty years. He was graduated from the electrical engineering course of Worcester Polytechnic Institute in 1898. After a few months with the Shaw & Ferguson Syndicate, he was appointed superintendent of the Sherbrooke (Que.) Street Railway. In 1901 he became superintendent of the Pawtucket City division of the Rhode Island Company, and in 1896 left there to accept the position as general manager of the Evansville & Southern Indiana Traction Company. He left Evansville to assume charge of the transportation, power and track departments of the Louisville Railway, as traffic manager of that property, leaving there to take the position of general superintendent of the Buffalo & Lake Erie Traction Company. In 1913 he became connected with the Terre Haute, Indianapolis & Eastern Traction Company and Indianapolis Traction & Terminal Company, as purchasing agent for both these properties, which position he resigned to assume the management of the Chicago, South Bend & Northern Indiana Railway.

## Obituary

**David Morgan**, formerly with the Illinois Traction System at Carlinville, Ill., was killed in action in France on June 15. He was a private in the United States Marine Corps.

# Construction News

Construction News Notes are classified under each heading alphabetically by States. An asterisk (\*) indicates a project not previously reported.

## Franchises

**San Diego, Cal.**—The City Council of San Diego has granted a franchise to the Los Angeles & San Diego Beach Railway for the construction of an extension on Girard Avenue from Prospect Street to Silverado Street.

**Santa Ana, Cal.**—War conditions which made it inadvisable and unnecessary for the Pacific Electric Railway to build its proposed extension to Irvine at a cost of \$300,000 have resulted in the company filing a request with the Board of Supervisors asking that an extension of not more than three years be granted the company for completing the work under its county franchise. If the war should end within three years the franchise could then be made operative, according to the petition.

## Track and Roadway

**Anniston & Camp McClellan Transportation Company, Anniston, Ala.**—It was expected that actual construction would be begun on July 20 by the Anniston & Camp McClellan Transportation Company on its line from Anniston to Camp McClellan. The project is estimated to cost about \$300,000. More than \$125,000 has been subscribed. L. L. Crump, Anniston, secretary. [July 6, '18.]

**Mobile Light & Railroad Company, Mobile, Ala.**—Operation has been begun by the Mobile Light & Railroad Company on its extension to the Chickasaw shipbuilding plant.

**Pacific Electric Railway, Los Angeles, Cal.**—The City Council of Riverside has denied the petition of the Pacific Electric Railway to abandon its lines on Brockton Avenue and Seventh Street.

**Municipal Railways of San Francisco, San Francisco, Cal.**—The Board of Supervisors of San Francisco has under consideration the construction of an extension of the line of the Municipal Railways over Army Street to Potrero Avenue, so that service may be afforded to the Union Iron Works, Hunter's Point and the industrial plants in that section of the city.

\***Washington, D. C.**—Emergency war measures are under consideration by the authorities for various extensions of the street railway systems in Washington so as to afford more adequate means of transportation to and from the many new government buildings in

West Potomac Park and the section of the city south of Pennsylvania Avenue and west of Seventeenth Street. A plan said to be favored by the Public Utilities Commission of the District of Columbia calls for the construction of a "belt" line having physical connection with existing lines from all points in the city and suburbs. The Secretaries of War and Navy are in correspondence with the District Commissioners on the subject and a plan of action will be adopted in a short time.

**Gary (Ind.) Connecting Railways.**—The Public Service Commission of Indiana has issued an order denying the petition of Charles M. Alford to dismantle that part of the Gary Connecting Railways from Gary to Woodville Junction.

**Louisville & Interurban Railway, Louisville, Ky.**—The newspapers of Louisville have been conducting a campaign in an effort to get the Louisville & Interurban Railway to extend its line to West Point, Ky., for the purpose of giving the soldiers stationed at the artillery range at that place an opportunity of coming to Louisville on the electric line instead of having to depend on the steam roads. So far the company has not declared any intention of extending the line.

**New Orleans Railway & Light Company, New Orleans, La.**—Work will be begun at once by the New Orleans Railway & Light Company on the relocation of its tracks on Dauphine Street from Poland and Jourdan Avenues to North Rampart Street.

**Boston & Maine Railroad, Boston, Mass.**—A new signal tower will be erected by the Boston & Maine Railroad in the Charleston district of Boston. The structure will be about 25 ft. x 40 ft., and will be two stories high. The cost is estimated at \$10,000. The H. Wales Lines Company, Meriden, Conn., is the building contractor.

**United Railways, St. Louis, Mo.**—Construction is under way by the United Railways of an extension of its Hamilton Avenue line through the Hi-Pointe subdivision, and it is expected that the line will be completed in September.

**Public Service Railway, Newark, N. J.**—Plans are being made by the Public Service Railway for immediate work on the extension of its system on the west side of the Hackensack River. The extension is planned to provide transportation facilities for workers engaged at the plant of the Federal Shipbuilding Company and other plants in this vicinity.

**Cincinnati & Dayton Traction Company, Cincinnati, Ohio.**—Extensive improvements in the equipment, properties and service of the Cincinnati, Dayton & Toledo Traction Company, which

connects Cincinnati, Hamilton, Middletown, Franklin, Miamisburg, Dayton and Germantown are being planned by the Cincinnati & Dayton Traction Company which recently took over the operation of the line.

\***Miami, Okla.**—A committee has been appointed by the Miami Business Men's League to build and operate an electric or other interurban railway through the Miami mining district, at an estimated cost of about \$650,000. Among those appointed were Dr. W. L. McWilliams, George L. Coleman, John Cheyne and G. W. Dick.

**Wheeling (W. Va.) Traction Company.**—The construction of a new approach to the Steubenville (Ohio) bridge across the Ohio River is under way by the Wheeling Traction Company. When this construction is completed through car service will be inaugurated between Steubenville and Wheeling, W. Va. For this service the company recently purchased nine new steel center-entrance cars. Seven of these cars will be required to maintain the schedule. Each car has a seating capacity of seventy persons and is 57 ft. 10 in. long.

## Shops and Buildings

**Washington, Baltimore & Annapolis Electric Railway, Baltimore, Md.**—This company has acquired half a block in Baltimore, bounded by Eutaw, Lombard, Howard and Pratt Streets, and plans to construct a terminal station and additional tracks. The cost is estimated at about \$300,000.

**Public Service Railway, Newark, N. J.**—A new car shop will be built by the Public Service Railway at Bloomfield Avenue and Lake Street, Newark. The structure will be of brick, 162 ft. x 50 ft., one story high, and will cost about \$45,000. The company will also make some alterations in its office and storage building at the same location.

## Power Houses and Substations

**Georgia Railway & Power Company, Atlanta, Ga.**—A new high-tension line has been installed by the Georgia Railway & Power Company from the Dunlap plant to feed the two mills of the Pacolet Manufacturing Company at Gainesville and New Holland. The mills will consume about 6000 hp. Four 2000-kva. transformers, one to be held in reserve, were installed to supply power from the 110,000-volt current brought in by the Tallulah Falls lines. A 110,000-volt switch was moved from Cartersville to the Dunlap substation to control the bank of transformers.

**Maryland Electric Railways, Annapolis, Md.**—A report from the Maryland Electric Railways states that its substation formerly located at Baltimore has been moved 6 miles south to Linthicum.

# Manufactures and the Markets

DISCUSSIONS OF MARKET AND TRADE CONDITIONS

FOR THE MANUFACTURER, SALESMAN AND PURCHASING AGENT

ROLLING STOCK PURCHASES • MARKET QUOTATIONS • BUSINESS ANNOUNCEMENTS

## Heavy Sales of Coils for Traction Road Service

Traction Companies Heretofore Having Their Own Winders Forced Into Market by Labor Shortage

Unexpectedly the sale of coils for electric railway equipment was greatly augmented during the season now about closed. At the present time the demand has fallen off, excepting for obligatory replacements and maintenance of rolling stock in actual operation. It is the custom to provide coils for the rehabilitation of cars withdrawn from service during the off-season, which is in the late winter and all through the spring months.

It has been the practice of traction companies and public utility companies, generally, particularly throughout the East, to wind coils in their own shops. For lack of skilled winders, and a shortage of every kind of expert labor, many railways were obliged this year to purchase their supply for 1918-1919 in the open market from manufacturers specializing on such equipment.

Prices for coils have been fairly steady, with increases coming along at intervals with the changes in the cost of metals and other essential material. The scarcity of labor competent for winding of coils has also been a factor of the first importance with production costs in this highly specialized field. The latest advance was 15 per cent, announced about sixty days ago. Manufacturers do not look for any further increase, at least this year.

## Activity in Specialties Market

Holden & White, Inc., Chicago, report unusual activity on the part of electric railways in the purchase of their car equipment specialties. For example, they have received in the last few days a large number of orders for Perry-Hartman side and center bearings, Garland ventilators, Anderson slack adjusters and Miller trolley shoes. Among those who have purchased bearings are the West Penn Traction Company; Buffalo & Lake Erie; Honolulu Rapid Transit Company; Houston Electric Company; Michigan Railway; Levis County Railway; Oklahoma Railway; Buffalo, Lockport & Rochester; West Chester Street Railway; Union Traction Company of Indiana; North Branch Rapid Transit Company; Emergency Fleet Corporation; Schuylkill Railway.

Garland ventilators have been ordered for new cars being built for the Fort Wayne & Northern Indiana, the Public Service Railway, and the Rich-

mond Light & Railway Company. Considerable quantity orders for Miller trolley shoes have been received from the International Railway; Waterloo, Cedar Falls & Northern; Elgin & Belvidere; Dayton & Troy Electric Company; Milwaukee Electric Railway & Light Company; Salt Lake, Garfield & Western; East St. Louis & Suburban Railway, and the Aurora, Elgin & Chicago Railway.

## Bituminous and Anthracite Production Increased

Requirements of Fuel Administration Being Reached—Shipping Record Also Heavy

A record-breaking production of bituminous coal, quoting the weekly report of the United States Geological Survey, marked the week of July 13. The output (including lignite and coal made into coke) is estimated at 13,243,000 tons, an increase over the week of July 6 (five working days) of 2,987,000 net tons or 29 per cent and over the current week of last year of 1,479,000 net tons or 12.5 per cent. The average production per working day is estimated at 2,207,000 net tons as against 2,051,000 net tons during the week of July 6, or an increase of 7.6 per cent, and as compared with the average production per working day of 1,961,000 net tons during the week of July 13, 1917.

The output during the current week of 13,243,000 net tons is approximately 1,031,000 net tons, or 8 per cent, above the average weekly requirements of 12,211,500 net tons established by the United States Fuel Administration. However, the average weekly production for the coal year to date is estimated at 11,568,000 net tons or 5.3 per cent behind the weekly requirements. In order to make up the deficit for the coal year from April 1 to date of 643,000 net tons per week or 9,651,000 net tons, it will be necessary to have approximately ten more weeks of production equivalent to that of last week, or a production of 12,472,000 net tons during each of thirty-seven remaining weeks in the coal year ended March 30, 1919, a figure only twice attained—the week ended June 15 and the current week. Reports from the carriers show increased shipments for the week of July 13, ranging from 26 to 36 per cent.

Anthracite shipments for the week were also vastly increased, the records showing 48,331 cars of anthracite, against 31,493 cars during the week of July 6.

## Future Bright for the Buying of Railway Equipment

Careful Survey of Eastern Field Leads to This Conclusion—Price Increases New and Prospective

With manufacturers and sales representatives urging traction road managers to place orders for maintenance and replacement equipment for the fall and winter, buying during the past week is rather sluggish. Optimism is not lacking, however. A well-known supply agent returning from a personal survey of the field in the East stated that railway buying was looking up. He believed that before the year is out a number of the electric lines will be in the market for a quantity of new equipment. Orders for current replacements in volume and value compare favorably with the same season in 1917. The increase in prices on many accessory lines has deterred buying, so much so that houses make announcements of this character, which are considered unavoidable under present conditions, with more or less reluctance.

LIFE GUARDS ADVANCE 10 PER CENT—FENDER MATERIAL TO FOLLOW

About a week ago an increase of 10 per cent was made on life guards. Material for fenders is difficult to obtain and when the stock now in hand is exhausted an advance in price will follow. Manufacturers therefore advise the early placing of orders.

The supply of rattan for car seatings is approximating a state of acute shortage. Prices have been revised only at long intervals, but the indications are now that higher quotations will be in order if the rattan situation does not improve.

On bells and gongs trade is active and sales are increasing. Within a month one manufacturer, who said the revision was general, increased his prices from 10 to 25 per cent. Deliveries from stock are fairly prompt.

An announcement that copper wire has been advanced \$50 a ton, which aroused some comment, only means that the apparently higher price is that of the official figures on copper given in detail in the *ELECTRIC RAILWAY JOURNAL* of July 6, as against the former quotation of 23½ cents a pound.

GEARS AND PINIONS ACTIVE

Managers and purchasing agents are in the market for gears and pinion requirements for 1919. A number of large orders have been booked, and conditions are such that promises are given on a definite basis. On July 12



an increase of 12½ per cent was made on gears and pinions, both for cast and forged, by a Western manufacturer. Heretofore a differential in price existed, but both kinds are now placed on the same selling basis. The buying is on a more generous scale than for some time.

Inquiries for snowplow equipment are coming along in increasing numbers. Manufacturers have accepted orders from prominent traction companies, East and West, for early and late fall shipment. Prices remain unchanged, although each specification is treated individually from the factory's viewpoint.

Various grades of plush car seatings were advanced from 5 to 7½ per cent on July 1 by one of the leading manufacturers in the East. The same company on July 8 also announced an increase of 5 to 12½ per cent on imitation leather goods employed in the production of seatings and curtains for electric cars. The higher cost is owing to the increased cost of material—cotton drills, sheetings and other goods used in the backing of the artificial leather.

### Shortage in Track Hardware Generally Admitted

**Bolts and Nuts on Longer Delivery—Fish Plates, Tie Plates, Etc., Go Out of Stock**

Following a scant supply of many items in the list of electric railway supplies and accessories, the presumption was that in this category would fall nearly everything of iron and steel. Manufacturers and sales agencies producing and handling these goods have stated at various times that the shortage in certain lines was becoming more acute. Under the conditions with which nearly all the primary metals are distributed for commercial manufacture, being under the control of the government, the supposition that track hardware was short seemed more than probable.

Careful inquiry among producers and sellers of the goods in question proved that in some respects a shortage exists, at least for bolts and nuts of some sizes. Track bolts, mill supply, can be delivered in from thirty to sixty days. Nuts in thirty days. Fish plates, tie plates, angle plates, angle bars, tie rods, mill supply, deliveries on some are from stock, with shipments going forward, without priority preference, whenever the embargoes will permit. Deliveries on rollings can be made in from two to three weeks. Prices on these lines are under government control, and follow the quotations made in the regular market for electric railway materials of the **ELECTRIC RAILWAY JOURNAL**, on another page in this department.

A Wall Street report that no agreement had yet been reached between the steel men and the War Industries Board on the price of rails is authoritatively stated as being without founda-

tion. The prices ruling for the past three months for T-rails, A.S.C.E. standard, in various quantities, still prevail. The quotations on T-rail, high (Shanghai) and grooved girder rails are also unchanged. Traction compan-

ies are not very active in looking out for rail requirements at present, although making inquiries; but are expected to come into the market before the close of the year, if the financial situation warrants.

### Rolling Stock

Connecticut Company, New Haven, Conn., is reported as contemplating the purchase of twenty one-man and fifteen interurban cars, for which specifications are under way.

Terre Haute, Indianapolis & Eastern Traction Company, Indianapolis, Ind., which recently placed an order for thirty-one one-man cars with the American Car Company as noted in the **ELECTRIC RAILWAY JOURNAL** of last week, is reported as having delivery promised by Oct. 1.

Monongahela Valley Traction Company, Fairmont, W. Va., has placed orders for twelve new cars, two of which are express. The order has been placed with the Jewett Car Company, Newark, Ohio, which agrees to supply them within thirty to forty-five days after it receives the steel for their construction. The company has already secured the steel at Bridgeport, Pa., which was shipped to Newark on July 12, therefore the cars should be delivered by Sept. 1. The four interurban cars have been ordered from the same company which agrees to deliver four months after it receives the steel herewith, now being arranged for. The Kuhlman Car Company has been awarded the contract for six light double-truck car bodies to be delivered in four months. This purchase of cars mentioned in the **ELECTRIC RAILWAY JOURNAL** of June 29 puts the rolling stock of the Monongahela Valley Traction Company in fine condition. This is one of the largest orders for equipment for electric railways ever given by a West Virginia concern. Specifications for the city and suburban cars follow:

#### CITY CARS

Number of cars ordered.....	6
Date order was placed.....	July 3, 1918
Date of delivery.....	Four months
Builder of car body.....	Kuhlman
Type of car.....	Pay-as-you-enter, double truck, city service
Seating capacity.....	40
Weight:	
Car body.....	15,500 lb.
Trucks.....	11,000 lb.
Equipment.....	6,400 lb.
Total.....	32,900 lb.
Bolster centers, length.....	16 ft. 3½ in.
Length over all.....	40 ft. 6 in.
Truck wheelbase.....	5 ft. 0 in.
Width over all.....	8 ft. 4 in.
Height, rail to trolley base.....	10 ft. 8½ in.
Body.....	All steel
Headlining.....	Composition
Roof, arch or monitor.....	Arch
Air brakes.....	Westinghouse Traction Brake—straight
Armature bearings.....	Plain
Axles.....	Carnegie hammered steel
Bumpers.....	Channel
Car signal system.....	Paraday
Car trimmings.....	Plain
Center and side bearings.....	Plain
Control.....	K-35 with line switch
Designation signs.....	Hunter
Door operating mechanism.....	National Pneumatic
Fenders or wheelguards.....	H-B
Gears and pinions.....	Nuttall "BP"
Hand brakes.....	Peacock

Heater equipment.....	Consolidated Car Heating Co.
Headlights.....	G. E.
Journal boxes.....	Symington
Lightning arresters.....	Westinghouse
Motors, type and number.....	4 West 506-A, inside hung
Registers.....	Ohmer
Sanders.....	De France
Sash fixtures.....	Brill Renitent
Seats.....	Brill conforming longitudinal rattan
Step treads.....	Feralun
Trolley catchers or retrievers.....	Knutson No. 2
Trolley base.....	Nuttall
Trucks.....	Standard C-50 depressed side frame
Wheels.....	26-in. forged steel

#### SUBURBAN CARS

Number of cars ordered.....	4
Date of delivery.....	Four months from delivery of steel
Date order was placed.....	July 3, 1918
Builder of car body.....	Jewett Car Co.
Type of car.....	Suburban passenger car
Seating capacity.....	48
Weight:	
Trucks.....	15,500 lb.
Equipment.....	6,400 lb.
Bolster centers, length.....	21 ft. 0 in.
Length over all.....	48 ft. 0 in.
Truck wheelbase.....	6 ft. 1 in.
Width over all.....	8 ft. 6 in.
Body.....	All steel
Headlining.....	Agasote
Roof, arch or monitor.....	Arch
Air brakes.....	Westinghouse straight air
Axles.....	A E R A—E B
Bumpers.....	Angle
Car signal system.....	Consolidated
Car trimmings.....	Plain
Center and side bearings.....	Plain
Conduits and junction boxes.....	Plain
Control.....	Westinghouse K-35G
Couplers.....	Radial
Curtain fixtures.....	Curtain Supply Co.
Curtain material.....	Pantafote
Designation signs.....	Hunter
Gears and pinions.....	Nuttall—"BP"
Hand brakes.....	Peacock
Heater equipment.....	Consolidated Car Heating Co., electric
Headlights.....	G. E.
Journal boxes.....	Symington
Lightning arrestors.....	Westinghouse
Motors, type and number.....	4 Westinghouse 306-CV-4, inside hung
Paint, varnish or enamel.....	Standard
Registers.....	Ohmer
Sanders.....	De France
Seats.....	Hale & Kiburn
Seating material.....	Rattan
Stack adjuster.....	American Slack Adj.
Springs.....	Semi-elliptic
Trolley catchers or retrievers.....	Knutson No. 2
Trolley base.....	Nuttall
Trucks.....	Standard Motor Truck Co. C-50-P
Wheels.....	Carnegie hammered steel 34 in.

San Diego (Cal.) Electric Railway, while not in the market for new cars, is to have a hearing before the Railroad Commission of California on Aug. 7 out of which some suggestions for one-man cars may come. Whether the company will change its own cars or purchase new ones, states W. Clayton, vice-president and managing director, depends upon a great number of conditions which it is impossible to anticipate at present.

Boston (Mass.) Elevated Railway has placed with the J. G. Brill Company an order for the bodies for 200 center-entrance motor cars, 47 ft. 5 in. over end posts, and for fifty center-entrance trailers, 46 ft. 10 in. over end posts. The motor trucks are to be Brill 77-E and the trailer trucks are to be Standard arch-bar type. These cars are duplicates of the latest center-

entrance multiple-unit cars now operating in the East Boston tunnel. The order for the electrical equipment has been evenly divided between the Westinghouse and General Electric companies.

**Trade Notes**

I. D. Landis has been appointed sales manager of the John D. Godfrey Company, Elkhart, Ind., manufacturer of coal-handling equipment.

Rutherford & Uptegraff, in the First National Bank Building of Pittsburgh, Pa., have been appointed exclusive representatives in the Pittsburgh and near-by territory for the Electrical Engineers' Equipment Company of Chicago.

Under-Feed Stoker Company of America, Chicago, Ill., has removed its office in Cincinnati, Ohio, from the Union Trust Building to the Union Central Building, Fourth, Vine and Baker Streets, where S. A. Williamson is the company's representative.

L. D. Calhoun has been appointed as assistant sales manager of the Square D Company, manufacturer of electrical safety switches at Detroit, Mich. Mr. Calhoun has been advertising manager of the company for the past year, and in addition to his new duties will continue to handle the company's advertising, etc.

F. A. Mansfield, formerly connected with the sales department of the West-

inghouse Electric & Manufacturing Company at East Pittsburgh, Pa., has resigned to take the position of Pittsburgh district sales manager of the Mechanical Appliance Company at Milwaukee, Wis. This company manufactures a complete line of alternating-current and direct-current motors, small generators, motor-generator sets and inverted rotaries.

Le Carbone Company, a French concern with wide American affiliations, manufacturing carbon brushes, has sent the following cable to its representative in the United States, W. J. Jeandron, New York City, showing the great ties of friendship which bind the French and American republics together: "Advise all our friends what admiration and gratitude France is feeling for the gigantic effort of sister republic. Thursday, July 4, was also our national day."

Bound Brook Oil-less Bearing Company, Bound Brook, N. J., has perfected arrangements whereby every employee who has been in the service of the company for three months is insured to the amount of \$500, increasing with the length of service, payable at his death to whomever he may direct the policy to be issued. The entire expense of the policy is paid by the company. The insurance will apply to the employees of the company's three plants: Plant No. 1 at Bound Brook, N. J., and Plants Nos. 2 and 3 at Lincoln, N. J.

United States Railroad Administration, division of public service and accounting, on July 11 issued circular No. 16, which deals with the matter of

bonds to be required in connection with the extension of credit for transportation charges, as prescribed in general order No. 25, effective Aug. 1. The bonds covering the extension of credit will be of two classes, namely, (1) to cover patrons transacting business at one or more points with one carrier; (2) to cover transactions at one point with two or more carriers. Details applicable to both classes of bonds are furnished. Copies of this order may be obtained by applying to the regional director.

**New Advertising Literature**

Bush Electric Tool & Manufacturing Works, Redlands, Cal.: Catalog describing safety tools for use on high-tension lines, with illustrations showing the tools used in actual practice.

Holophane Glass Company, New York, N. Y.: Handsomely illustrated thirty-six-page book on street lighting. Diagrams are given showing how energy in lighting may be conserved through the use of scientific methods. There are suggestions also for obtaining artistic effect.

Westinghouse Church Kerr & Company, New York, N. Y.: Map of the United States, in colors, inclosed in stiff covers, showing, by designating marks, location of construction work, consulting engineering projects and engineering and construction done under the supervision of this company.

**NEW YORK METAL MARKET PRICES**

	July 17	July 24
Copper, ingots, cents per lb.	26	26
Copper wire base, cents per lb.	29.25	29.25
Lead, cents per lb.	8.05	8.05
Nickel, cents per lb.	40	40
Spelter, cents per lb.	8.87½	8.62½
Tin, Chinese*, cents per lb.	92	94
Aluminum, 98 to 99 per cent., cents per lb.	†33.00	†33.00

\* No Straits offering. † Government price in 50-ton lots or more, f. o. b. plant.

**OLD METAL PRICES—NEW YORK**

	July 17	July 24
Heavy copper, cents per lb.	23½	23½
Light copper, cents per lb.	20	20
Red brass, cents per lb.	22	22
Yellow brass, cents per lb.	14	14
Lead, heavy, cents per lb.	7	7
Zinc, cents per lb.	5½	5½
Steel car axles, Chicago, per net ton.	\$41.52	\$41.52
Old carwheels, Chicago, per gross ton.	\$29.00	\$29.00
Steel rails (scrap), Chicago, per gross ton.	\$34.00	\$34.00
Steel rails (relaying), Chicago, gross ton.	\$60.00	\$60.00
Machine shop turnings, Chicago, net ton.	\$16.25	\$16.25

**ELECTRIC RAILWAY MATERIAL PRICES**

	July 17	July 24	July 17	July 24
Rubber-covered wire base, New York, cents per lb.	30 to 39	30 to 37		
Weatherproof wire (100 lb. lots), cents per lb., New York.	32.10 to 32.40	36.75	3.95	3.95
Weatherproof wire (100 lb. lots), cents per lb., Chicago.	33.42 to 35.00	37.50	80%	80%
T rails (A. S. C. E. standard), per gross ton.	\$70.00 to \$80.00	\$70.00 to \$80.00	80%	80½%
T rails (A. S. C. E. standard), 100 to 500 ton lots, per gross ton.	\$67.50	\$67.50	82 & 3%	82 & 3%
T rails (A. S. C. E. standard), 500 ton lots, per gross tons.	\$62.50	\$62.50	11½ to 22	11½ to 22
T rail, high (Shanghai), cents per lb.	4½	4½	13 to 13½	13 to 13½
Rails, girder (grooved), cents per lb.	4½	4½		
Wire nails, Pittsburgh, cents per lb.	3½	3½	\$38.50	\$38.50
Railroad spikes, drive, Pittsburgh base, cents per lb.	4½	4½	\$42.50	\$42.50
Railroad spikes, screw, Pittsburgh base, cents per lb.	8	8	\$45.00	\$45.00
Tie plates (flat type), cents per lb.	*3½	*3½	\$3.20	\$3.20
Tie plates (brace type), cents per lb.	*3½	*3½	\$3.34	\$3.34
Tie rods, Pittsburgh base, cents per lb.	7	7	\$3.68	\$3.68
Fish plates, cents per lb.	*3½	*3½	\$1.80	\$1.82
Angle plates, cents per lb.	*3½	*3½	\$1.81	\$1.83
Angle bars, cents per lb.	*3½	*3½	10½	10½
Rail bolts and nuts, Pittsburgh base, cents per lb.	4.90	4.90	73	66
Steel bars, Pittsburgh, cents per lb.	5	5		
Sheet iron, black (24 gage), Pittsburgh, cents per lb.	4.90	4.90		
Sheet iron, galvanized (24 gage), Pittsburgh, cents per lb.	5.80	5.80		
Galvanized barbed wire, Pittsburgh, cents per lb.	4.35	4.35		
Galvanized wire, ordinary, Pittsburgh, cents per lb.				
Car window glass (single strength), first three brackets, A quality, New York, discount†.				
Car window glass (single strength, first three brackets, B quality), New York, discount.				
Car window glass (double strength, all sizes AA quality), New York discount.				
Waste, wool (according to grade), cents per lb.				
Waste, cotton (100 lb. bale), cents per lb.				
Asphalt, hot (150 tons minimum), per ton delivered.				
Asphalt, cold (150 tons minimum, pkgs. weighed in, F. O. B. plant, Maurer, N. J.), per ton.				
Asphalt filler, per ton.				
Cement (carload lots), New York, per bbl.				
Cement (carload lots), Chicago, per bbl.				
Cement (carload lots), Seattle, per bbl.				
Linseed oil (raw, 5 bbl. lots), New York, per gal.				
Linseed oil (boiled, 5 bbl. lots), New York, per gal.				
White lead (100 lb. keg), New York, cents per lb.				
Turpentine (bbl. lots), New York, cents per gal.				

\* Government price. † These prices are f. o. b. works, with boxing charges extra.