

# Electric Railway Journal

Consolidation of Street Railway Journal and Electric Railway Review

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## One-Man Operation of Present Equipment Justified

ONE-MAN operation of street cars has been most successfully introduced heretofore where the change was accompanied by the installation of new cars of the safety type, a shortening of the headway between cars and in many cases a faster schedule speed. This plan gave the patrons better service in safer cars at the same time that it provided reduced operating expenses for the company. When conditions are such that this plan can be followed out it is undoubtedly the best course to pursue.

But under the condition of materially less riding which now prevails in many cities it is often a justifiable procedure to change over present equipment for one-man operation without giving more service and simply in the interest of self-preservation on the part of the company. This drastic economy measure is applicable particularly in the smaller cities. Even where there is an exacting rush-hour traffic, with fairly light traffic the remainder of the day, the judicious use of street collectors during the heavy periods will enable one-man operation to be installed successfully with large savings. Some companies are boldly coping with the present situation by replacing two men with one on single- and double-truck cars and thus obtaining the principal saving that can be derived from standard safety cars without waiting until new cars of that type can be financed. In some cases safety devices are installed to compensate in safety for the absence of the second man.

The Cleveland Railway has been operating forty double-truck cars with one man since June 1. The Eastern Massachusetts Street Railway is operating 426 double-truck cars with one man in addition to 251 standard safety cars. In Spokane, Wash., the Washington Water Power Company and the Spokane Electric Railway & Power Company are both operating all cars with one man. In Seattle, Wash., twenty-seven double-truck cars seating sixty people are being successfully operated with one man, as noted in this paper on page 940, May 21, 1921. The Tri-City Railway & Light Company is well along with its plan to operate all cars in Davenport, Rock Island and Moline with one man, as related elsewhere in this issue, and the same management is operating all cars with one man in Muscatine, Cedar Rapids and Mason City, Iowa. In other words, this practice has been successfully established in a number of places.

With gross revenue substantially lower than last year and with a further fare increase now usually untimely and undesirable for several reasons, companies should put into effect such measures as will keep operating costs well below the income, even though this may mean some radical departures from former practices. About the biggest saving that can be made is the elimination of one man on a car. There are many cities with population of less than 100,000 where it appears quite evident that this can be done, and should be done

in view of the exigencies of the time, rather than to go on accumulating a deficit. Furthermore, there are many lines in cities of over 100,000 population on which the cars could be satisfactorily operated with but one man. Incidentally, if such one-man operation of present equipment makes possible a reduction of fare later on, this should be welcomed, particularly where the competitive situation is a matter of concern.

## Broad Vision and Statesmanship Needed in Labor Readjustment

THE readjustment with labor in the railroad field is of such nationwide importance, is on such a huge scale, that it attracts the attention of the entire country. It emphasizes dramatically the necessity for real vision and statesmanship in dealing with the most important subject before the nation today—the economic and social readjustment, which cannot be evaded. And this much is certain, that the balance which will finally obtain will not and should not be the *status quo ante*, the mere return to conditions of 1913, good as they may have been. Actual progress must result, and this is the reason, above all, that real statesmanship is needed.

In the electric railway field the problem is as great and as serious as in any other. While the entire industry does not meet the problem as of one date nor as an entity, nevertheless the individual readjustments, each with its own local variations, have a vital effect on the entire labor situation. There is the same opportunity and necessity for leadership and vision in the labor problems of this industry as elsewhere. Will the industry measure up to the hour? Will it produce the leaders who will look to future conditions rather than past policies? There is reason to believe so. While at times there are signs of shortsightedness, there are also instances of the opposite nature.

One of the leading executives in this industry, an officer of a large holding and managing company, was recently approached by one of his local managers with his labor readjustment problems. "Now is the time," the latter said, "when labor is plenty, for us to break up the combination against us, to squeeze back as we were squeezed on our last agreement. The men have to take what we will give." "No," said his broad-minded superior, "now is the time, rather, for us to show that we deserve to be managers by showing a better vision ahead. Now is the time, when opportunity exists, to go to the men and improve our working rules, to place our relations with the men on a higher plane. They are willing to talk now, let's do something constructive; not something which will merely be an invitation to further radical action by the men if the tables turn again."

The local manager was converted to a trial of the broad policy. He went home and tried it. It worked. He wrote his superior that, by approaching the men in a constructive attitude, he had been able to make many improvements in working rules, make many changes in operating conditions, make a satisfactory re-

duction in wages, and still leave the men with their self-respect and, more important, with their respect for, and loyalty to, the management much strengthened.

It is this sort of leadership and vision, in dealing with labor, that is needed.

### The Labor Situation and Coal

**B**UT even when management does seem to show the bright attitude, it cannot always be assumed that labor will do so. An example seems to exist now in the coal industry which should make coal users sit up and take notice, as well as those who are interested in the general subject of labor relations.

No one minimizes the unfortunate effects of the seasonal occupation of the average coal miner. But individually, his rate is high. His working conditions are the subject of much debate. But he has apparently refused to arbitrate his condition when his present contract expires the first of next April. The quite possible result is a coal strike next spring, now freely predicted and more probable than a railroad strike.

Management, in this case, seemed at first uncompromising, but finally agreed to arbitrate. The miners, by their recent action, hold that the strike is their only weapon and refuse to arbitrate. The public feels that coal is high and will be impatient, but yet rather powerless, in case of a strike.

Meanwhile, industry is affected in unpleasant anticipation. An immediate remedy is to lay in large coal stocks. It seems wisdom to do this and certainly railroads and other utilities will do much to maintain community life if they can assure the community of no cessation of activity on account of coal shortage. A few months stock of coal is good business just now.

### Let Us Have More Material Specifications

**T**HE practice of purchasing railway materials and supplies on accurate and practical specifications is becoming more and more extensive. The standing committees of the American Electric Railway Engineering Association presented at the recent convention a number of such specifications which were approved. Every encouragement should be given to the committees to prepare and increase the number of such specifications which can be adopted as standard.

One way that railways can reduce costs is by using better material for making repairs. It costs no more to apply good material than poor, and when the latter fails in service additional material must be purchased, and the labor cost of one application and removal is lost. This adds to the maintenance cost and, in addition, the increased number of failures and delays in service will cost the company much in the loss of good will from its patrons.

Another advantage arising from the use of specifications is that railway companies are enabled to go into the open market for material and thus profit by trade competition and also have a greater variety from which to select. Manufacturers in general prefer to furnish material to intelligently drawn specifications, as they know in advance exactly what requirements are expected and can supply materials that will prove satisfactory. During the war it was frequently necessary to use inferior materials in order to keep equipment running, but now this practice should be discontinued.

To obtain the minimum maintenance cost consistent with safe, clean and reliable service requires close following of every detail that goes into the equipment. Whether or not material is standing up in service and producing the desired results can be best determined by a periodical checking of the amount ordered, the amount on hand and the amount used. It always pays in the end to purchase durable material, owing to the reduced maintenance and operating costs. No matter how cheap the first cost may be, any material requiring frequent repair, patching or renewal is expensive.

### Self-Preservation Is the First Law of Nature

**T**HE natural instinct for existence is the reason that citizens in a number of communities are organizing to supply volunteers if necessary to help operate the railroads after Oct. 30. The proposed strike of the railroad employees threatens the stoppage of a necessity of our civilized life. The spirit behind the offer of services to keep the railroads in operation is accompanied by no desire, in most cases, to pass upon the merits of the controversy over wages. The answer would undoubtedly be the same if the owners of the roads withdrew their equipment because they considered their remuneration unsatisfactory.

The organization of the community at large to act in labor troubles of this kind is the natural result of the size of existing labor unions. Formerly the largest strike on a railroad or a coal mine or other public utility involved an isolated property or a single community only. Then the rights of the public were preserved, if order was maintained, because men could be brought from outside to do the work. But many of the present unions are so large that a strike threatens a national stoppage of work, and they can be opposed only by an equally widespread organization of citizens.

Time lends perspective to the view—even to the labor view—and the belligerency so much in evidence now may subside with the passing of a few days and with a growing appreciation of such ideas as are expressed above. It is hoped that the present strike will not occur, but if it does the result will undoubtedly be a failure, as with the railroad strike and the coal strike in England.

### Electric Railways Ready in Railroad Emergency

**O**F ALL the agencies that will be called into play in the emergency of a strike, the electric railways hold out large prospects for being converted into an important agency in helping to meet the contingency that a cessation of activities on the railroads would create. Particularly is this true in the Central West. Already inquiries are beginning to be made of this paper as to the extent and location of the electric railways. All these data are on file with the authorities in Washington, for whose benefit they were carefully noted during the war-time period through the foresight and planning of the American Electric Railway Association. It is sincerely to be hoped that the steam railroad labor leaders will see the error of their ways in time, but in the emergency of a strike the electric railways offer a means quickly available of handling both passengers and freight to an extent perhaps little realized except by official circles in Washington and by the regular users of such lines.

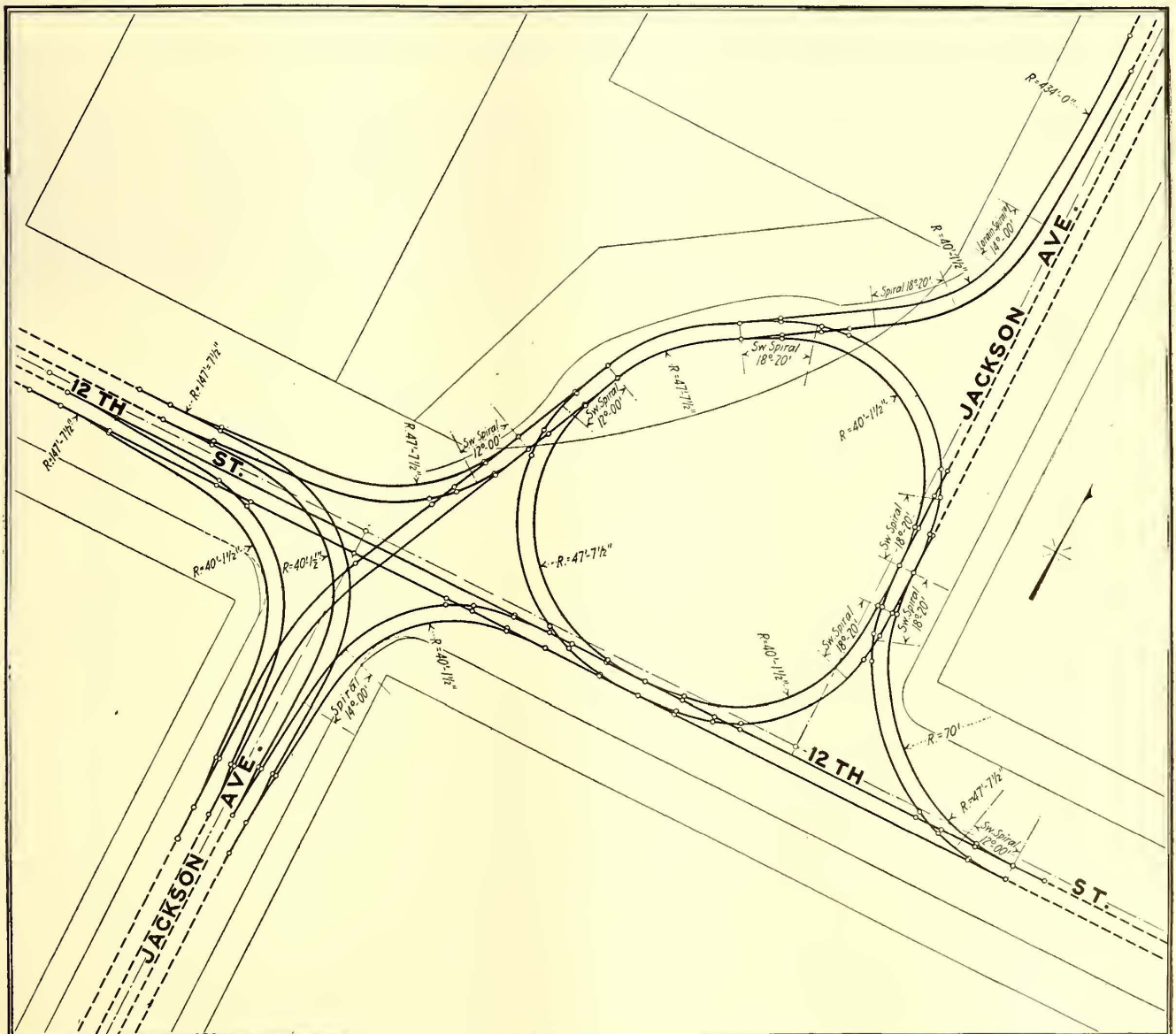
# Universal Loop for 118 Cars an Hour

### Extensive Special Work Layout Installed on the Kansas City Railways to Facilitate Operation of Cars on New Routing Plan and Avoid Congestion and Likelihood of Accidents Which Were Involved in the Old Layout

**C**ONDITIONS from an operating standpoint have been rather congested at the corner of Jackson Avenue and Twelfth Street, Kansas City, Mo., for some time back. At this point, the Jackson Avenue crosstown line of the Kansas City Railways intersects with the Twelfth Street line, which terminates at this point. The intersection of these two lines has heretofore involved a fairly complicated layout of special work on account of a jog in Jackson Avenue and the facilities necessary for wying the Twelfth Street cars, which carry the heaviest traffic and run on the closest headway of any line on the system. Extending east from Jackson Avenue, a single-track line on Twelfth Street has been operated with double-end cars, which have been turned back at this point.

The installation of the rerouting plan devised by John A. Beeler was seen to involve further complica-

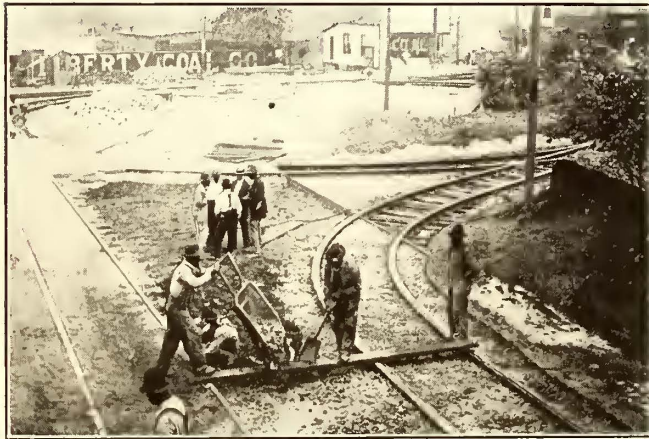
tions at this point, from the standpoint of track facilities. This plan provided for the through routing of the crosstown line on Jackson Avenue south of Twelfth Street with the Roanoke line, which is routed east over Twelfth Street from this intersection. In order to operate this through route, it was necessary to have a double curve in the northwest quadrant of Twelfth Street and Jackson Avenue. The new routing plan also provided for making Twelfth Street the southern terminus of the Hardesty-Jackson line except during rush hours. A further complication was brought into the problem by the desirability of operating single-end cars instead of double-end cars on Twelfth Street east of Jackson, which would then have to be wyeed at this point. It was also necessary to maintain track connections at this intersection to enable cars housed at the Brighton car-house to pass through and take up their routes.



NEW UNIVERSAL LOOP AT IMPORTANT TERMINUS AND INTERSECTION POINT, RECENTLY INSTALLED IN KANSAS CITY

While the layout of the old special work was such that most of these movements could be made, it was evident that with three lines terminating here and with the wying back of single-end cars, there would undoubtedly develop very considerable congestion and liability of accident to both the company's equipment and vehicular traffic. The problem would only partly be solved by putting in the double curves from Twelfth Street on to Jackson Avenue south, and there was not sufficient room in these street intersections for putting in a proper loop. The study made of the situation finally developed that the best solution was the installation of a universal loop so connected as readily to serve all lines.

In order to build this universal loop it was necessary to lease 5,930 sq.ft. of property adjoining in the northwest quadrant. Fortunately, the lease of this property appeared to the owners to be an advantage, inasmuch as it increased their frontage considerably and permitted them to build shops facing a heavy transfer and terminal point. The new layout of track



DOUBLE TRACKS AND UNIVERSAL LOOP AS SEEN LOOKING SOUTH IN JACKSON AVENUE

was such that it was practically impossible to use any of the old track to advantage, although it was in good condition. It was therefore salvaged and an entire new layout purchased from the Lorain Steel Company.

It was quite a problem to install the new track. The layout was such, and the service at this point of such character, that it was found impossible to install all of the work under traffic. Such parts as were not complicated by continuous service were therefore put down before the final installation, which was arranged to be done in a single night. This required the employment of a gang of more than 100 men. Service was cut off at 9 p.m. and the owl car used the loop at 3:30 a.m. A. E. Harvey, chief engineer, writes that "The work went together without trouble of any kind; there was not  $\frac{1}{8}$  in. variation to be taken up in any part of the work, so perfect were the computations, the manufacture and the staking out of the new alignment, which is somewhat remarkable, taking into consideration the size and character of the layout and the fact that various pieces of it were installed before the final connections were made."

The track in the layout is built of 7-in. T-rail, Lorain section 375, Trilby rail section 467, and the guard section 468. The switches, mates and frogs are of cast bound construction. The track was laid with wood ties on ballast and thoroughly tamped. Various types of paving were used to conform to the paving of the

adjacent streets. Six of the thirteen switches were equipped for electrical operation.

The large expenditure involved for trackage at this point is justified by the fact that it is an important intersection and transfer point where there would undoubtedly exist a great deal of congestion unless cars could always be moved in a forward direction. The new layout makes this provision for all lines entering the location, and the importance of this location from a traffic standpoint will undoubtedly increase from year to year. The maximum number of cars using this loop is now 118 per hour.

While it would be very difficult to arrive at an estimate of the actual operating saving effected by the installation of these extensive loop facilities, the company officials are satisfied that it is considerable, on account of avoiding the delays that would occur not only through the normal operation of cars of the various lines throughout the day but the delay that would occur in putting cars from the Brighton carhouse which have to pass through this important intersection en



UNIVERSAL LOOP AND CONNECTIONS AS SEEN LOOKING WEST IN TWELFTH STREET

route to five lines were proper connections not available. To carry out the larger rerouting scheme, which meant a very material saving, it appeared necessary to provide all the track connections installed with this loop, and careful investigation developed no other combination that would answer all purposes.

### Electrolysis Report Nearly Ready

**D**URING the past month the final editing work on the report of the American Committee on Electrolysis has been completed and the report placed in the hands of a printer. This work will bring up to date the conclusions and recommendations that have been agreed upon as a result of a joint study of the electrolysis problem by the Bureau of Standards and the utility interests represented on the American Committee on Electrolysis.

During the month also the final experimental field trials of the earth current meter have been completed, and the completion of these field trials has definitely established the utility of this instrument for practical electrolysis survey work. A description of the principle of the method and apparatus has been prepared for early publication and plans are now being made to use several of these instruments in connection with the co-operative work of the bureau and the research subcommittee of the American Committee on Electrolysis.

## One-Man Operation Saves \$110,000

All Cars in Davenport, Iowa, Now Operated with One Man—Experience in Several Iowa Cities Confirms Practicability of Using But One Man with Large Cars—Separate Entrance and Exit Provided

ON JUNE 1, 1921, the Tri-City Railway of Iowa, Davenport, Iowa, began one-man operation of its cars, reduced wages from a maximum of 70 cents an hour to 50 cents, with 5 cents additional for one-man operation, and voluntarily reduced the rate of fare from 9 cents cash, with three tickets for 25 cents, to 8 cents flat. By Aug. 6 all cars had been rearranged and were being operated with one man on the same schedule that had been in effect with two-man operation. The reduction in fare was virtually a trade with the public for one-man operation, though from the standpoint of net earnings the reduction was not justified. The company is looking to the future when business improves to derive the real benefits of the reduction in platform expense. At present the saving figures out to be about \$4,500 a month net.

The company operates 20,400 car-hours a month. Reducing the platform cost by 45 cents an hour means a monthly saving of \$9,180 and an annual saving of \$110,160. The reduction in fare was not of a nature to have any appreciable effect in stimulating riding, so that it entailed a loss in revenue of approximately \$4,500 a month, leaving a net improvement of some \$4,600 a month in the net earnings. Of course, because of the time required to prepare the cars for one-man operation, the reduction in fare with only partial one-man operation in June and July actually produced a loss. The saving in operating expenses in June was \$1,800 and in July \$4,000. August and succeeding months will produce the full saving of over \$9,000.

This drastic change of all of the two-man, forty-four-seat, double-truck cars in Davenport to one-man operation was preceded by experience in Mason City, Muscatine and Cedar Rapids, Iowa, where the local street railways are operated by the same interests, the United Light & Railways. All cars in these cities have been operated with one man for some time past. Standard safety cars are being used entirely at Mason City except for the single-truck old type cars used for extras, and some safety cars are used at Muscatine. Half the cars in Cedar Rapids are of the safety type and the remainder are double-truck cars operated with one man without any safety equipment. These include ten double-truck cars weighing 26,500 lb., seating forty people and equipped with 24-in. wheels, and four cars which weigh 40,000 lb. and seat forty-four passengers. B. J. Denman, president Tri-City Railway, stated that "Our Cedar Rapids officials and men prefer the large cars to the small ones, and so do the public."

While the company was satisfied that the cars could be operated with one man in Davenport, it was prevented from doing so by the Socialist City Council, which based its position on an ordinance prohibiting one-man operation that has been on the statutes some thirty years. Affidavits were secured from companies throughout the country to show what other cities think of one-man operation of street cars, and a temporary injunction was secured against the enforcement of this ordinance. The main contention of the city was that the cars were unsafe when operated with one man, and

the local company agreed to equip the cars with safety devices. The safety devices installed on the cars are of a special design developed by John Sutherland, master mechanic, and comprise a scheme for doing electrically practically what is normally done by air in the standard safety devices. The details of this equipment and its functioning are not yet available, but are expected to be made public in the near future. The average cost of equipping the first twelve cars for one-man operation was \$315.98 for labor and \$283.49 for material, making a total of \$599.47. The cost ran as low as \$459.36 and as high as \$635.90. It included the cutting of a new door in the vestibule at each end of the car, putting in a new post between doors, dividing rails to separate the entrance and exit passage ways, new air-operated hinged doors, and, in some cases, the trussing of plat-



TYPE OF CAR AND ARRANGEMENT OF DOORS FOR ONE-MAN OPERATION

forms and other rehabilitation work in the vestibule structure. The new exit door for one-man operation was cut in the vestibule just behind the former front exit door, which now serves as the one-man entrance. Both door openings are 29½ in. wide. These cars weigh 40,000 lb., are 44 ft. 8 in. long and seat forty-four passengers. The bridge cars operating from Davenport to Rock Island are of the same capacity and dimensions but weigh 30,000 lb. These cars are now one-man operated, but the extra door was not cut in.

### TRAFFIC IS LIGHT AND WITHOUT BAD PEAKS

To give an idea of the traffic handled in Davenport, it should be said that the base schedule calls for thirty-seven cars on seven lines. The headway on all lines is fifteen minutes except one, on which it is ten minutes. This schedule remains the same all day throughout the eighteen hours, since there is practically no rush-hour of any consequence to be handled. The average schedule speed in May was 8.77 m.p.h. for the entire system and for June 8.64. This same speed has been maintained with the one-man cars, which have been uniformly on time except for delays at railroad crossings, etc., and there have been no more cars late than there were when operated with two men.

The absence of any particular rush-hour period is partially due to the very great falling off in the number of passengers to be handled, due to the almost complete

shut-down of the industry of the city, 92 per cent of which is devoted to agricultural implement manufacture. In 1919 the Davenport company carried 15,000,000 passengers, while in 1920 it carried 13,000,000, and this year is going on the basis of approximately 10,000,000. In May, 1920, the number of passengers carried was 1,168,878, which is compared with 782,251 in May, 1921. In June last year the number of passengers was 1,118,758, as against 746,925 this year. The number of revenue passengers per car-mile was 4.4 in June, 1921. The fourteen extra cars which are run from the Rock Island arsenal to various points in the tri-cities each evening are also being operated with one man, the total traffic to be handled from here now being about 700 employees. Altogether, fifty-three cars were changed over for one-man operation.

#### CONDUCTORS USED AT START

For the first three days on each line, after the cars were rearranged, a conductor was placed in the front end to collect fares. The operators thereafter were a little slow at first, but soon became familiar with the equipment and their duties in collecting fares. The reaction of the public to the new plan of operation was practically nil and there was no newspaper comment one way or the other except for the discussion of one Socialist paper, which talked about the cars as "death traps." There has been some feeling in Davenport against the standard one-man safety car, as it has been talked that it would be a step backward, but absolutely no objection has been raised on the part of the public to the operation of the present car equipment with one man.

The change to one-man operation was of course an economy measure, made particularly urgent by the falling off in traffic. In speaking of deriving the advantage of one-man operation but utilizing present equipment, Mr. Denman made this significant statement:

"I would not ask an investor to put money in a railway property for new equipment under present conditions, when the largest saving due to the use of one-man cars could be obtained by the use of the present equipment, and especially when there is absolutely no question that there will be a very substantial reduction in the price of small cars in a year or two. Even if we desire to put smaller cars in service at some future time, the present equipment would be extremely useful on the heavier lines and for use during the peak hours."

Work has been started to change over the sixty-six cars in Rock Island, Moline and East Moline, Ill., for one-man operation. The base schedule in these cities calls for thirty-eight cars, and as soon as the necessary changes in equipment can be made, one-man operation will be started and the 9-cent fare, with 8½-cent tickets, reduced to 8 cents flat. A little later then, all of the cars on the Tri-City properties will be one-man operated.

The American Engineering Council has just made public a report on eye accidents that have occurred in various industries. The protective methods as applied in various plants have effected a great reduction in injuries. The report stresses the importance of correcting subnormal vision among employees, stating that excess eye fatigue results in conditions which must produce a time labor loss from the reduction in quantity and quality of the work produced. The importance of proper lighting is also dealt with.

## The Human Side of Energy Saving

Experiences and Observations in Winning the Support of the Trainmen and the Results Obtained on an Interurban System

BY R. E. LUELLEN

Safety Engineer, Union Traction Company of Indiana, Anderson, Ind.

WHEN the general manager called me into his office one day eighteen months ago and said, "Ross, we've decided to buy kilowatt-hour meters for installation on 105 of our interurban cars; how would you like to take charge of our power-saving efforts?" I did not at once answer. I was a claims and safety man, if anything, in the electric railway business. Could I succeed as a power-saving man? Could we actually save power under our operating conditions? Would a man who had never operated a car or even worked a day as an operating man be able to instruct skilled trainmen in better methods of operation? I doubted. But I had faith that the boss would not be asking me to attempt something that seemed impossible of attainment; so my affirmative answer was finally given. Then my experiences in a new phase of electric railway operation began. Installation of the meters was started on March 11, 1920, under the direction of an engineer from the manufacturers.

#### STARTING THE CAMPAIGN

The dials of the meters were masked as the meters were installed and these masks were not removed until we were ready to begin use of the meters. This was done to ascertain the amount of power normally consumed by the cars.

During the installation we prepared a booklet for the trainmen, dealing with proper methods of economical car operation. Cards were also developed, on which the motormen could record and report the meter readings and train movements, as well as record forms for use in the office.

Beginning on May 6, a series of meetings with the trainmen was held at which the purpose and use of the meters and manner of making reports were explained to them. At these meetings the instruction matter in the booklets was elaborated verbally. I was beginning to see the light by the time these meetings were held and was able, therefore, to inject some little enthusiasm into my discourse on economical operation.

Following these meetings, on May 10, the masks were removed from the meter dials and the motormen began reporting meter readings and experimenting with various sorts of operation, taking keen interest not always prompted by belief. After a few days' trial, I felt that most of them came to a uniform conclusion, which is summed up in the following literal quotation: "Maybe it can be done on some runs, but it can't be done on mine."

We found, as time went on, that the really big part of this work is that of inducing the motormen to disabuse their minds of the belief that on *their* run there is little or no chance to coast or otherwise to save power. However, a considerable number of men, principally those in service only a few years, maintained a permanent interest and belief which could not be ignored by the disbelievers, and as months passed a constantly increasing number of the men came to appreciate the worth of the efforts and to practice better operation in varying degrees.

To overcome the very human tendency of the motor-

men to lose interest in this work various means have been resorted to in co-operation with C. S. Keever, our superintendent of transportation. In addition to the periodical statements of showings of the motormen, which are posted in the trainmen's rooms, matter has been published each month in our employees' magazine, *Safety*, calculated to build and keep up interest and belief. The condition of equipment, we have learned, has a most vital bearing on power saving; for no motorman, no matter how well intentioned, can save power if his car does not roll freely from any cause, the principal one being tight brakes. Instances have come to my attention where tight brakes have caused an increase in power used, amounting to more than 25 per cent. M. F. Skouden, head of the motive power department, has been a firm believer in the possibilities of power-saving, and has co-operated in every possible way toward keeping the cars in the best condition.

On a system such as this, where the cars are heavy, speed high and stops few, we have found that the greatest saving is obtained by coasting the cars over considerable distance at high speed. Lately we have been able to stimulate greatly the trainmen's power-saving efforts by the inauguration of occasional days of special effort. On these days the men have been requested to make the utmost possible effort and to note such results as lowered power consumption, better voltage conditions when all men are making extra efforts to conserve power, count of the number of poles coasted, stops made, etc.

The surprisingly large amount of coasting that can be done is shown by the fact that on one day the aggregate number of miles coasted by all men totaled 36 per cent of the total mileage operated on that day. At the same time we noted a definite and satisfactory reduction of power consumption by the cars and in the output of the power plants. Is it any wonder that results such as these should change skeptics to firm believers in the possibilities of power-saving?

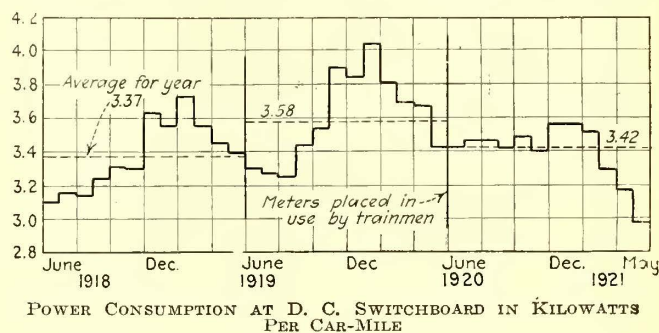
While we could not, of course, go into such a mass of detail for every day's work, we found that these days of special effort have a lasting effect on the power consumption in two ways. First, and most important, the men found it could be done on their individual runs and hence were encouraged to try harder afterward; second, even the skeptics would experiment on different methods of operation, so as to be ready for the next day of special effort. This all helped at the power house.

#### DOES ENERGY SAVING AT THE CAR MEAN COAL SAVING?

Have we really saved any coal? We have. Due first to power plant improvements and second to efforts to save power at the cars, the coal consumption has been greatly lowered and continues to drop, without any appreciable reduction in miles operated. Taking the figures from our auditor's records of the direct current output of the power plants, together with total miles operated, we find that the unit power consumption during the last seven months of meter operation has decreased more than 10 per cent from the figures for the corresponding months of the previous year. That this saving is reflected at the coal pile is clearly indicated by the fact that a large and satisfactory reduction was made in the consumption of coal per kilowatt-hour generated during the period the meters were in service. This reduction is due, in part, to power house improvements, but they show that the decreased power output did not increase the coal rate.

We have also noticed a very gratifying decrease in the cost of maintenance of equipment since the meters have been installed. While I do not have at hand exact figures on car maintenance, there is clearly a reduction in cost of such items as brakeshoes, motors and other electrical equipment. Mr. Skouden states that we are getting more mileage from our brakeshoes and, that whereas at this time last year we had a number of bad order field coils and armatures awaiting repairs, at present we have a reserve of as many good order coils all ready for trouble, despite a reduction in the number of men at the shop.

Two interesting by-products of our meter installation are the inspection of equipment on the kilowatt-hour basis and the data afforded by the meters on the amount of power used in various kinds of service. Our shop department has found that the inspection periods for different kinds of equipment may be easily regulated through the use of the inspection dials on the meters, which give them a very flexible and easily adjusted unit for inspection purposes. The data as to the amount of



power used in different kinds of service have been very valuable in determining the power costs of the various kinds of service, such as freight, express, work train, etc., and have also made it possible for us to determine the amount of power used by our trains.

Mechanical failures of the meters have thus far been so few as to be quite negligible. We have a plan of cleaning and calibrating the meters once a year and this, as well as other maintenance work, is assigned to one of the regular shop employees, who devotes all necessary time to it. The total expense for maintenance is averaging about \$10 per month for the 105 meters.

The results which we have obtained have been very satisfactory and have been achieved with very little additional expense. We have had no road instruction for the men, but have relied upon securing their co-operation entirely through our initial meetings, instruction booklets, and the constant encouragement and advice of the operating officials. The response of the trainmen to these efforts has been excellent. We have been able to maintain their interest in power saving and we believe that our trainmen are constantly improving in economical car operation.

Looking back over the year's work, I can see how the steadfast belief of our operating officials that our power bills could be reduced has gradually worked down through the rank and file of our men, myself included, until the results obtained have justified that belief and accomplished the fine results shown in the accompanying curve. I believe that in this branch of work, as in any other requiring co-operation, results may be expected directly in proportion to the degree of faith and enthusiasm plus amount of thought and energy put into it by the officials.

## How Some of the Principal Railways in the United States Construct Their Track

DATA COVERING STANDARD TRACK CONSTRUCTION ON SOME OF THE PRINCIPAL RAILWAYS THROUGHOUT THE UNITED STATES  
 COMPILED BY THE SAN FRANCISCO-OAKLAND TERMINAL RAILWAYS — APRIL 1921

Name of Company	City	State	Type of rail	Type of joint	Tie rod	Tie plate	Cross ties	Ballast	Drain tile	Type of paving	Excavation	Tamping	Joint grinder
Boston Elevated Railway Co.	Boston	Massachusetts	132 lb.-9" girder 122 lb.-7" girder, 100 lb.-6" tee.	Lorain, Thermit, Arc weld.	2 1/2" x 3/8"	Acad. steel Cast iron.	Southern pine treated by Kieping process. A few (main) twin steel.	Broken stone 4" to 6" deep below bottom of tie.	6" vitrified pipe	5" granite block and 3 1/2" x 4" wood block laid on concrete.	Hand, and electric Type "O" Thew Shovel.	Air	Atlas, Universal.
International Railway Co.	Buffalo	New York	124 lb.-9" girder	Continuous	Flat	Flat	Yellow pine 80% Heart in paved Sts. Oak in open track. Some Carnegie M-24	8" concrete sub-base, 2" broken rock for tamping.	4" tile	Sandstone block on 6" concrete base.	Hand and machine. Keystone shovel.	Hand	Atlas, Reciprocating
Dallas Railway Co.	Dallas	Texas	103 lb.-7" girder, 80 lb.-7" tee.	Apex, Indianapolis.	None	R.R.S.Co.	Long leaf yellow pine.	Gravel.	4" tile	Bitulithic and brick.	Contractor	Air	Reciprocating
United Traction Co.	Albany, Troy, Cohoes, Capitol District	New York	122 lb.-7" girder, 95 lb.-7" tee	Continuous	Flat	None	Yellow pine.	Crushed stone and concrete.	None	Granite block.	Hand.	Handchair	Rotary Reciprocating
Cincinnati Traction Co.	Cincinnati	Ohio	140 lb.-9" girder	Arc welded channels.	Rail brace	Flat	Oak, 2" centers. Carnegie steel M-25, 3" centers.	Concrete 7" below bottom of tie.	4" tile	Granite block.	Thew shovel.	Hand	Indianapolis, Stone-air, Reciprocating
Chicago Surface Lines	Chicago	Illinois	129 lb.-9" girder, 122 lb.-7" girder 91 lb.-7" tee, 85 lb.-7 1/2" S.B.	Lincoln, Lorain electric weld.	2 1/2" x 3/8"	3" shoulder	Long leaf yellow pine, s4s. Some Carnegie steel M-25.	Concrete from 2" above to 6" below tie. Special construction 8" crushed rock 2"	None	Granite block.	Hand and machine. Electric steam shovels.	Hand, air, electric.	Atlas, Kerwin.
New Orleans Ry & Light Co.	New Orleans	Louisiana	105 lb.-7" girder 100 lb. A.S.C.E., 80 lb. A.S.C.E.	Channels on girder. Angles on tee. Some Lincoln weld	1/2" round	Brace plates	Long leaf yellow pine, creosoted. Few Infrat! twin steel; experiment	Concrete with girder rail. Crushed rock with tee rail.	Small amount	Granite and creosoted wood block.	Hand.	Hand	Atlas.
Omaha Council Bluffs St. Ry Co.	Omaha	Nebraska	97 lb.-7" girder	Continuous, Thermit, Arc weld	None	Brace plates	6 x 8-7 red oak treated with creosote, 2 gallons to each tie.	Standard construction 6" crushed stone. Concrete slab where necessary.	Small amt 6" tile	Vitrified brick block (also granite block) on 7" concrete base.	Thew Auto Shovel.	Ing-Rand, Duplex	Reciprocating
Detroit United Railway	Detroit	Michigan	91 lb.-7" tee	Solid cast weld—(molten metal poured in molds)	1/2" x 1 1/2"	None	Johnston steel tie proved failure. 6 x 10-6" N#1 white oak.	Concrete slab under ties, 6:1 mix 8" deep.	6" vitrified crock	Granite nose block adjacent to gauge of rails, with brick between.	Rough grade steam shovel, finished by hand.	Hand	Kerwin-Detroit
The Capital Traction Co.	Washington	District of Columbia	80 lb.-5" tee	Bolted	1/2" x 1 1/2"	None	Oak and chestnut.	Stone	6" tile	Asphalt and macadam.	Hand.	Hand	None.
The Milwaukee Electric Ry. & Light Co.	Milwaukee	Wisconsin	100 lb. A.R.A., 95 lb.-7" tee.	Cast weld, Thermit weld, Elec. weld.	1/2" x 2"	Shoulder	International twin steel—favorable. Untreated white oak.	Crushed stone 8" deep.	6" tile	Various, according to city requirements.	Type "O" Thew Electric Shovel.	Air	Atlas, Goldsmith, Reciprocating.
Kansas City Railways Co.	Kansas City	Missouri	91 lb.-7" tee	Thermit, Lorain, Indianapolis.	1/2" x 2"	None	Steel used experimentally 6 x 8-8 white oak.	Solid crushed concrete 6" deep.	6" tile	Special dressed granite blocks. Brick with granite flangeways, conc.	Hand.	Hand, air	Own design.
Indianapolis Street Railway Co.	Indianapolis	Indiana	95 lb. 8 1/2" girder, 91 lb.-7" tee.	For past 3 years, Thermit. Formerly Cast, Lorain, Elec. welds.	1/2" x 2"	None	Steel used experimentally 6 x 8-8 white oak.	6" to 8" concrete slab with 3" dry mix concrete ballast.	Some 4" tile	Granite block, or brick.	Type "O" Thew Electric Shovel.	Hand, air	Atlas, Universal.
Georgia Railway & Power Co.	Atlanta	Georgia	103 lb.-7" tee, 80 lb. A.S.C.E., 70 lb. A.S.C.E. 80 lb.-7" tee, 70 lb.-7" tee, 7" tri-ribby.	Abbot base plate elec. welded, Continuous, plates, Thermit.	1/2" x 2"	Flat	6 x 8 sap pine, creosoted.	Crushed granite, 6" deep.	6" vitrified tile	Granite, wood, or brick on concrete base. Asphalt on concrete base.	Hand.	Ingersoll, Rand, air	Atlas, Kerwin, Reciprocating, Atlas Rotary.
The Connecticut Co.	New Haven	Connecticut	9" girder, 95 lb.-7" tee 80 lb.-5" tee, 100 lb. A.R.A.	Continuous 24" 4 bolt for tee rail. Cont. 32" 4 bolt for girder. Arc weld.	1/2" x 1 1/2" on girder, only.	Lundie, tilted type.	6 x 8-8" wood (kind not stated)	6" of gravel or crushed stone under tie.	Some 6" tile	Concrete compressed, Nassampatan. Various block, brick and bitumen.	Hand, Thew Elec. Shovel, Keystone steam shovel.	Ing-Rand, Duplex	Reciprocating
Philadelphia Rapid Transit Co.	Philadelphia	Pennsylvania	141 lb.-9" girder	Lincoln Rail Welding, Bonding Co. Nichols zinc and electric weld.	None	None	5 x 9-8" yellow pine	No ballast used in city work.	None	Granite block on concrete.	Hand	Hand, air	Chicago, McLean, Own design.
Pittsburgh Railways Co.	Pittsburgh	Pennsylvania	134 lb.-9" girder	Thermit insert welded joint.	1/2" x 2"	Plain flat. Shoulder.	6 x 8-8" white oak.	8" crushed rock below tie.	6" vitrified farm tile	8 block stone.	Type "O" Thew Electric Shovel.	Air	Atlas, Universal.
The Memphis Street Railway Co.	Memphis	Tennessee	105 lb.-7" girder	Plain 8 hole bar with base plate, welded to rail.	1/2" round	Various types	Creosoted pine, white oak.	6" to 8" crushed stone.	6" tile	Asphalt, brick, and wood block.	Hand.	Hand	Metal Thermit Co. Universal.
Portland Railway, Light & Power Co.	Portland	Oregon	80 lb.-7" tee, 72 lb.-6" tee	Continuous	None	None	Narrow gage—6 1/2" 10" 6" fir Standard gage—7 x 9" fir	6" concrete slab with 2" of rock.	4" tile	Now using concrete. Formerly Belgian stone block vitrified brick with conc.	Hand.	Hand	Atlas, Stow.
The Columbus Ry. Power & Light Co.	Columbus	Ohio	122 lb.-7" girder (A.E.R. standard)	Columbus joint, Arc welding.	1/2" x 2" on macadam.	Special Wk.	Carnegie steel M-25 for standard trk. 6 x 8-7 1/2" white oak for special work.	Concrete and crushed rock.	6" tile	Granite block in heavy traveled streets, and brick in others.	Hand, steam shovel, (prefer Thew shovel)	Hand	Universal, Reciprocating
Birmingham Ry, Light & Power Co.	Birmingham	Alabama	105 lb.-7" girder, 80 lb. A.S.C.E.	34"-8 bolt plates, 26"-6 bolt plates. Continuous, in dirt streets. Arc welded in paved streets.	Brace plates	Brace plates	Infrat! twin steel, estimated cost same as wood. Creosoted yellow pine, s10 1st steel about \$3,000 per m. cheaper in round. Wood about \$3,000 per m. cheaper in round. Infrat! twin steel, Oregon, long leaf Texas.	6" crushed rock under ties in open trk. 6" slag conc. under ties in paved trk.	None	Straight concrete paving to top of rail. Brick on concrete with asphalt filter.	Hand.	Hand	Atlas Rotary.
The Denver Tramway Co.	Denver	Colorado	80 lb. A.S.C.E., 65 lb. A.S.C.E.	Continuous, in dirt streets. Arc welded in paved streets.	None	Shoulder	Long leaf yellow pine, creosoted. Mixed varieties of oak.	Gravel and broken up concrete paving base, 12" to 15" deep.	None	Standard concrete slab.	Hand.	Air	Universal, Reciprocating
Public Service Railway Co.	Newark	New Jersey	116 lb.-7" girder, 101 lb.-7" girder	Lorain electric weld.	1/2" x 2"	Brace plates	Mixed varieties of oak.	6" stone.	Some 4 x 6" tile	Various kinds. Mostly granite block with cement grout.	Hand and Thew shovel.	Hand, air	Atlas Rotary, Lorain, Kerwin, Gierky Reciprocating, Seymour
Cleveland Railway Co.	Cleveland	Ohio	95 lb.-7" tee	Riveted and welded, top & bottom. Seam welding with rail wide edge mach.	None	None	Cut steel and Carnegie steel combined. Saving of about \$3,000 per mile.	12" concrete below rail.	6" tile	Granite.	Hand and Thew shovel.	Stone-air	Kerwin.
Brooklyn Rapid Transit System	Brooklyn	New York	122 lb.-7" girder (A.E.R. standard)	Cast weld.	1 1/2" D.E.	None	Steel ties experimentally. Rough sawed yellow pine "Heart".	Natural soil in trench.	None	5" granite blocks, cement joints.	Hand.	Hand	Atlas, Reciprocating
United Railways Co. of St. Louis	St. Louis	Missouri	132 lb.-9" girder 103 lb.-7" girder, 100 lb. A.R.A.	Nichols. (Few Lorain during war).	Round and flat	Flat	Oak Steel ties in special construction, only.	Solid concrete foundation in pavement. Stone in unpaved streets.	6" tile	Concrete or bricks where possible. Wood blocks laid under protest.	Thew shovel.	Hand, air	Modified Indianapolis.
Twin City Rapid Transit Co.	Minneapolis and St. Paul	Minnesota	Farmer standard 91 lb.-7" tee Present standard L.S.Co. 93-507	Cast weld, generally. Some Thermit. Arc weld for repairs.	1 1/2" x 1 1/2"	Flat	6 x 8-8" sawed. (Kind not stated)	6" crushed rock under ties, rolled with 8" ton steam roller.	None	Granite blocks preferred. Creosote blocks, asphalt brick unsatisfactory.	Thew Elec. Shovels (3 in use).	Ingersoll, Rand, air	Chicago, Kerwin, Philadelphia, Reciprocating, Atlas Rotary
The United Ry. & Elec. Co. of Baltimore	Baltimore	Maryland	122 lb.-7" girder 105 lb.-7" girder, 100 lb. A.R.A.	Rail Welding Bonding Co. Cleveland, O. Weld fish and base plates to rail.	None	6" 10" with shoulder.	International twin steel, experimentally 6 x 8-8" untreated wood.	6" crushed stone under ties.	6 x 8" tile	Sheet asphalt with granite block liners. Granite block paving.	Hand and Thew shovel	Hand, air	Atlas Rotary, Philadelphia, Reciprocating, Atlas Rotary
Los Angeles Railway	Los Angeles	California	132 lb.-7" girder on curves, 116 lb.-7" girder	Rail Joint Co's continuous.	None	Brace plates	6 x 8-6 redwood.	6" crushed rock below tie.	4" tile	2" asphalt surface on 6" concrete base.	Hand and Keystone Excavator.	Air	Visen planer.
San Francisco-Oakland Terminal Rys.	Oakland	California	141 lb.-9" girder on curves, 106 lb.-9" girder	Rail Joint Co's continuous.	1 1/2" x 2 1/2" on c.	Shoulder	6 x 8-8" redwood.	9" crushed rock below bottom of tie.	6" tile	1 1/2" asphalt surface, 6" concrete base. 2" asphalt binder.	Hand and Keystone Excavator.	Air	Kerwin, Visen planer

THE TABLE given above was compiled in April of this year by the San Francisco & Oakland Terminal Railways, which operates the greater part of the local railway service in Oakland, Alameda, Berkeley and other neighboring cities in California, as well as a high-speed line, the "Key Route," with boat

connections, to San Francisco. The purpose of this table was to give information in regard to standard track construction in paved streets in some of the principal cities throughout the United States. A questionnaire was sent to thirty leading companies, operating track in paved streets, and the data, as tabu-

lated by the San Francisco-Oakland Terminal Railways, are given in the accompanying table.

The data supplied, as shown, are type of rail, type of joint, tie rod, tie plates, cross ties, ballast, drain tile, type of paving, excavation, tamping and joint grinder.



# A Study in Human Nature

Reasons for Labor Turnover—Back-to-the-Farm Movement  
—War Reaction Evident—Some Go to School—  
Interesting Data for Alert Managers

MAN is an animal of strange characteristics, particularly the employees of a street railway in the Middle West that has an average of between 550 and 650 conductors and motormen on its payroll. The accompanying is a remarkable document for use in the study of labor turnover and the railway company has a good psychologist in its organization.

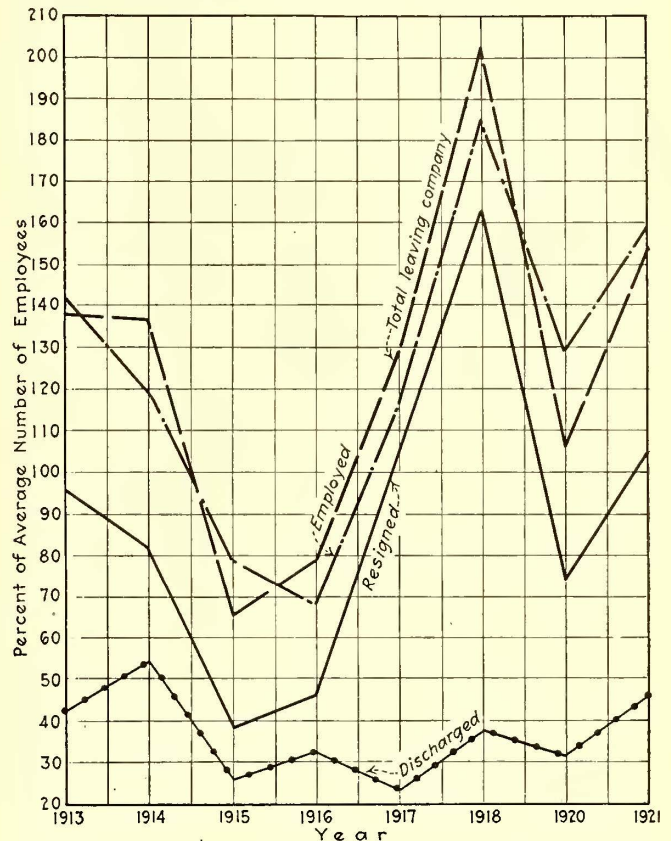
The time and labor necessitated in the keeping of such a record should not be compared to its value in handling labor, to say nothing of its value to industry in general. Little things grow into large ones if neglected and the crews are the transportation sales-

men in the railway industry. Any data that help the industry to understand the psychology of its crews are welcome.

The curves show the labor turnover for a period of several years and reflect countrywide psychological and business conditions. The business depression in 1915-1916 is reflected in the labor turnover—men held on to their jobs, although in 1916 a back-to-the-farm movement started. The war ebb and flow shows in the curves for 1917-1918-1919. Resignations increased for the purpose of going home or going back to the farm or joining the army or navy. Why did so many men

STATEMENT SHOWING CAUSES OF MEN LEAVING SERVICE  
1913 to 1920 Inclusive

Resigned Cause	Motormen and Conductors							
	1913	1914	1915	1916	1917	1918	1919	1920
Sickness.....	79	49	32	21	30	21	16	20
Sickness in family.....	43	45	9	8	6	2	2	2
To go home.....	52	108	89	88	194	273	189	278
To go to school.....	9	21	3	10	4	6	15	18
Short of funds.....							1	2
Don't like the work.....	94	81						
Can't stand the work.....	19	20	15	6	22	39	31	70
Can't make a living.....							3	4
Can't get enough work.....	18	15	8	9	10	6	6	4
Can't stand the climate.....						2	2	6
Can't stand cold weather.....	6					2	1	
To take another position.....								
—Going to farm.....	78	28	23	78	146	237	140	199
To attend to personal business.....								
Dissatisfied.....	61	8	5	4	1	2	1	4
Too much responsibility.....								
To keep from being discharged.....	11	15		3	9	31	23	55
Tired of work.....	11	5			2	1	9	
Don't like the run.....	6	4				1		
Wrong end.....	3	3	3	1	1	3	2	2
Could not learn.....	8	7	5		2	12	6	11
No reason given.....	11	7			7	39	4	10
Army and Navy.....					48	38	2	
Miscellaneous.....	20	8	1	20	37	25	12	18
<b>Total resigned.....</b>	<b>529</b>	<b>424</b>	<b>219</b>	<b>259</b>	<b>523</b>	<b>749</b>	<b>457</b>	<b>712</b>
<b>Discharged:</b>								
Incompetent.....	54			1	23	25	14	22
Short register—Register irregularities.....	26	99	42	22	10	19	72	80
Drunk.....		12	8	11	2	4	2	1
Drinking on duty.....	5	4			4	7	1	
Lied on application.....	6	14	10	7	4	3	11	7
Gambling.....			3					5
Immorality.....					1		2	2
Failure to make accident report.....		2	2	2	1	1	1	1
Failure to get witnesses.....	6	14	9	13	4			12
Failure to enforce rules.....	33	31	31	8	3	4	12	10
Undesirable.....	2	7	2	1				
Discourteous to passengers.....								
Running late.....						1		
Laying out at end of line.....								2
Failure to report—Misses.....				3	5	7	1	2
Defective eyesight.....					1	1		
Smoking on duty.....							3	5
Riding on front end.....						1		1
Insubordination.....	21	20	9	5	3	3	1	5
Quick bells.....								
Short changing passengers.....						1		
Laying out.....	10	3	1	1		15	19	38
Carrying passengers on front end.....								
Refusing to obey orders.....	8	7		2	2	20	4	15
Continually short in settlement.....								
Indifferent.....		6	4	1			2	3
Using wire for fuse.....								
Misappropriation of articles left on car.....						5		12
Manipulation of transfers.....								
Car collision.....	19	17	21	30	21	23	27	47
Train collision.....	1	2						
Vehicle collision.....	22	29	4	13	2	1	6	10
Reckless.....	5	6			1	2		2
Account of accidents.....	1	4	1	3	3	6	4	5
Abusing car.....						1	1	2
Running railroad crossing.....					2	1	2	2
Agitators (later reinstated).....				50				
Miscellaneous.....	13	3		13	23	22	7	26
<b>Total discharged.....</b>	<b>233</b>	<b>284</b>	<b>147</b>	<b>186</b>	<b>117</b>	<b>173</b>	<b>200</b>	<b>317</b>
Promoted and transferred.....	1	5	2		2	6	1	4
Deceased.....	1	3	2			4	3	2
<b>Grand total.....</b>	<b>764</b>	<b>716</b>	<b>370</b>	<b>445</b>	<b>643</b>	<b>932</b>	<b>661</b>	<b>1,035</b>
Employed.....	783	621	446	387	580	841	800	1,067
Average number of regular employees.....	551	521	567	564	500	458	620	674



GRAPHS FOR LABOR TURNOVER FOR EIGHT YEARS

go back to the farm? Living costs, wages and the boom in farm products no doubt answer the question. Very remarkable is the fact that few men were discharged as undesirable in this period, honesty was at a premium and collisions at a minimum. Even the Volstead law functioned well according to the data on the accompanying table.

Then from 1919 to 1920 the reaction from the war begins to have its effect as well as the high costs and wages as reflected in the table. The men still remained sober, but began to joy ride and feel their oats as evidenced by the increase in the number of collisions, the large number laying out and the failures to enforce rules. Register irregularities increased and an increase in turnover occurred because of going home, going to farm, going to another job and quitting to keep from being fired. A general "don't care" attitude in 1920 in all industry is reflected in the labor chart of this company.

A table of this sort is a valuable thing for an alert manager to study and more tables of this kind should be available.

## The Five-Cent Fare as It Affects the Electric Railway Employee

BY ALFRED A. GREEN  
New York, N. Y.

KNOWING something of the electric railway game, obtained through intimate connection with railway work for the past fifteen years, I wish to express a few thoughts in regard to the awful howling about increasing the 5-cent fare that comes from the different political aspirants of the great city of New York. It is quite evident that none of them ever depended long on a pay envelope for services rendered to an electric railway or they would have gained sufficient knowledge to know that if the wages paid to men on cars and in the shops were sufficient to care for their families and educate their children as they should be the railways could not operate successfully on a 5-cent fare.

Newspapers during the past two or three months have contained items stating that the men on this or that road have accepted a reduction in pay so as to help the railway company which employs them to meet its operating expenses, and why? Because the low rate of fare does not bring in enough income and the politicians cannot permit an agreement made during the old horse car days to be changed for fear they would lose the vote of some poor mortal whose thinking capacity cannot carry him beyond 5 cents no matter what the results may be. There are hundreds of such people who would deprive the railways even of their 5 cents.

The men on the old horse car lines received less compensation for their labor and worked longer hours than men on any other known employment, and it was these men who were taken over to operate the cars and to do the repair work when the street railway systems were changed from horse to electric propulsion. The amount paid to the different classes of workmen varied from \$1.25 for twelve hours work to a maximum amount of \$2.25 paid first-class mechanics for ten hours work. It is also a fact that wage rates on electric railways did not increase in proportion to other trades during the years previous to America's entering the war, and the greatest increases received were during the last two or three years, and still the wages cannot be compared with those received by other men doing work less arduous and having less responsibility.

In many cities outside of New York there must be men of broader intelligence and less bigoted who have realized that the electric railways cannot pay the increased cost of material and labor with the same 5 cents that previously permitted them to exist by paying their labor the smallest wage possible. Fare increases have been allowed and in many instances the fare has been doubled in order that the railroads could pay their honest debts and still pay the men on the cars and in the shops a living wage.

Reducing pay does not make faithful employees, but under circumstances that exist in New York City it is the only alternative, as these railways have not been permitted to raise fares because the men at the head of the city government decided that there is more political pull with the masses than with the men and their families that depend upon the railways for an existence.

The motorman, the conductor, the pitman, the overhauler and all the other classes of workmen necessary for the operation of the railway have not entered into the scheme of things as far as the politician is con-

cerned, and the one thing that blights the politician's vision to all else in this vast universe is a 5-cent piece.

The question that each electric railroad employee should ask himself today is: "What can I as an individual do to bring about improved conditions for myself and the company that employs me, because its success is intertwined so closely with mine that neither can win alone."

This is a positive fact. A trainman or shopman may be only a small unit of the whole on a large property, but the success of the whole depends upon the success of its smallest unit. So it is necessary for each man to learn from the past and present as to what his duty is when the opportunity comes for him to express his will as to who is a real friend and who is broad enough to look beyond the nickel to a point of fairness to all.

## Letter to the Editors

### Baltimore's New Type Safety Car

STATE OF NEW JERSEY  
BOARD OF PUBLIC UTILITY COMMISSIONERS  
NEWARK, October 4, 1921.

To the Editors:

I have noted with very great interest the article contained in the issue of Sept. 10, 1921, entitled "Baltimore's New Type Safety Cars." I note that while these cars are practically of the same general design as what might be called the standard one-man safety car, yet it has been found perfectly practical to equip them with a wider door opening and wider aisle, thus providing a means for more rapid passenger interchange with only a minor change in the seating arrangement.

Ever since the one-man safety car was first put in operation I have been a very strong advocate of providing a wider door opening, an objectionable feature of the car having been, to my mind, the fact that passengers cannot board and alight at the same time. This has also been a source of much complaint on the part of the patrons of the cars, according to my experience and observation, and it has of course been detrimental to the successful operation of the car as far as running time is concerned.

I am very glad to learn that at least one company has undertaken this desirable change in the design of these cars, and am further pleased to note that the result has been a considerable saving in time of loading and unloading, which, of course, was to be expected. I trust that other companies will see fit to follow the same method of improving the use of the one-man safety car.

H. C. EDDY, Street Railway Engineer.

### Standards for Consideration

THE American Engineering Standards Committee announces that the American Society for Testing Materials has submitted eleven standards for consideration and approval. Among those of interest to electric railways are the specifications for steel forgings, methods of analysis of manganese bronze and gun metal, steel specifications and drain tile specifications. The American Society of Safety Engineers has been designated as sponsor for a safety code for compressed air machinery. This code will include rules for the construction and use of compressors, tanks, pipe lines, etc.

# Equipment and Its Maintenance

*Short Descriptions and Details of New Apparatus of Interest  
to the Industry. Mechanical and Electrical  
Practices of All Departments*

## A Variable Speed Polyphase Motor

THE forced draft fan equipment with push button and pressure regulator control recently put into operation at the Springdale Station of the West Penn Power Company by the Westinghouse Electric & Manufacturing Company is of special interest as it includes a comparatively new type of polyphase, alternating-current, variable speed, brush-shifting motor. This motor eliminates the objectionable poor efficiency and limited number of speed points inherent with slip-ring induction motors and provides a satisfactory and easily controlled alternating-current fan drive which can be applied to power plants. The installation is the first application of the motor to this type of work, with full automatic control.

The forced draft equipment for each boiler consists of one centrifugal fan having a capacity of 90,000 cu.ft. per minute at 5.9 in. water gage pressure, 65 deg. F., and 770 r.p.m. The fan is driven by a motor which is rated normally as a 150-hp., 720-r.p.m., 2,200-volt, three-phase, 60-cycle motor, with push button and pressure regulator control.

The motors are capable of operating at over synchronous speed and have sufficient capacity to drive the fans at 865 r.p.m. intermittently and 825 r.p.m. continuously. The lowest operating speed required is 355 r.p.m. This results in a total speed range of 2.4 to 1. The maximum limit of 865 r.p.m. corresponds to full load speed of 900 r.p.m. for slip-ring induction motors which permits direct comparison with the latter.

The motor consists of the stationary member or stator, the rotary member or rotor and a transformer connecting the rotor in series with the stator. The stator has a distributed winding and is similar to the ordinary induction motor. The rotor is in appearance and design essentially like that of a direct-current motor except that for the brush shifting motor the armature voltage is considerably lower, being approximately 80 to 90 volts. The rotor transformer is simply a series transformer with the primary in series with the stator of the motor and the secondary connected to the rotor through brushes and commutator. This transformer not only supplies a lower commutator voltage but also, by its ability to become saturated, limits the no-load speed of the motor.

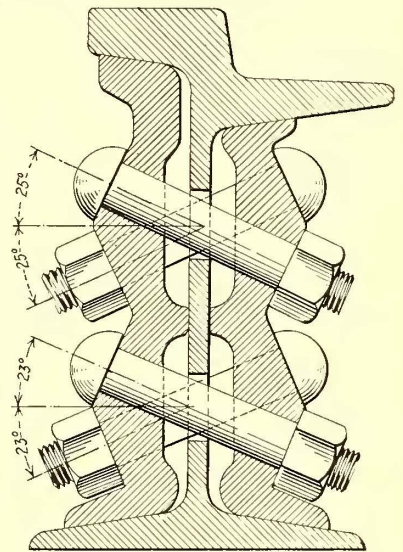
The control required for operating the motor is extremely simple, consisting merely of a switch for connecting the motor stator to the line and some mechanical means of shifting the brushes, the starting current being determined by the position of the brushes. The control at the Springdale Station provides for over-load and under-voltage protection with push button start and stop in addition to automatic speed control from a pressure regulator or from two push button stations. Another feature is that the motor stator is connected

for pole changing with automatic reshifting of the brushes to compensate for the accompanying change in speed. The actual equipment necessary to provide these features consists of a primary control composed of a line contactor panel with necessary interlocks, and a secondary control composed of the brush-shifting pilot motor, gear train and drum control switches, arranged for pressure regulator control through the rope wheel or for push button control.

From actual test data in comparison with a standard slip-ring 900-r.p.m. motor of the same size under the actual fan load and for the same range of speed this motor shows a very much higher efficiency and power factor.

## New Splice Bar for Girder Rail

THE accompanying illustration shows the Heinle rail joint which is now being marketed. With this type of joint the bolts are placed at an angle with the intention of taking care of the principal stresses more effectively. Some of the economies claimed for this type of splice bar are that it can easily be rolled and punched, weighs less per pair, gives greater efficiency and eliminates structural



TRUSS FASTENING FOR GIRDER RAIL

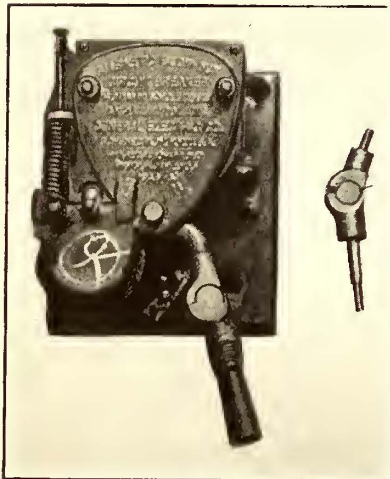
fracture due to bending stresses. The bolt arrangement can be supplied to various types of rail joints and other fabricated joints.

## New English Trolley Stand

A NEW trolley stand has been brought out in England which is fitted with roller and ball bearings and among other advantages it is claimed it is superior in strength and has extremely lightweight, few wearing parts, is easily adjustable and has an absence of friction. It is further claimed that damage due to rebound is reduced to a minimum. A considerable number of these have been in service for some time and have proved successful, having cost practically nothing for maintenance. This is due to the introduction of a roller bearing around the center pivot, which not only reduces friction to a minimum but renders the standard practically perfect for either straight, under running

or side running, the dewiring of trolley heads being almost eliminated. The relation of the pivot end of the pole sockets to the axis of the pivot end—to which the spring ends are connected—is so arranged that although the inclination of the pole to the vertical increases, the tension on the trolley wire remains constant. Instead of one or two large springs being used, this stand has two batteries of springs, which by special arrangement make the standard very flexible and compensating at all points. It is also provided with a special buffer spring mounted in such a manner that should for any reason the trolley come off the wire, the blow to the standard caused by the pole rising is very considerably lessened. The trolley stand is the product of Brecknell, Munro & Rogers, Ltd., Bristol.

### Hinged Circuit Breaker Handle



CIRCUIT BREAKER WITH  
HINGED HANDLE

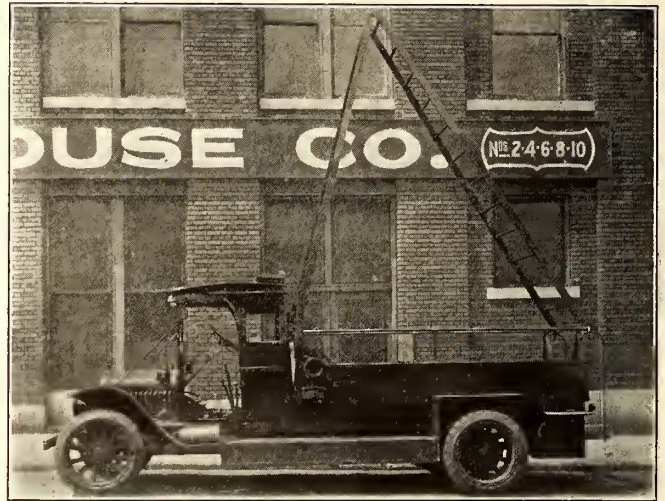
THE use of two kinds of circuit breakers on the same system, one that can be knocked out with the handle, and the other that requires tripping at the magnetic trip, is very confusing to motormen, who are likely to make a mistake and hit the handle of the trip breaker. This frequently breaks the handle or at least loosens up the various parts and causes delays in service as well as

frequent repairs. The Portland Railway, Light & Power Company has overcome this difficulty by putting a hinge in the handle of its trip breakers as shown in the accompanying illustration. This hinged handle is arranged so that it will push the breaker closed, but if it is pulled in the opposite direction the hinge will allow the handle to swing back so as not to break the catch. The use of this type of hinged handle has done away with trouble of the nature described.

### Atlanta's New Emergency Truck

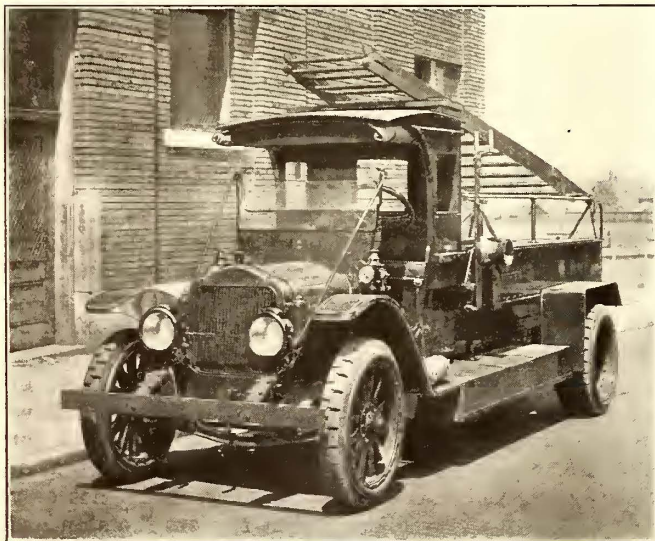
A NEW emergency truck equipped for service in almost all classes of emergency has just been put into service by the Georgia Railway & Power Company, Atlanta, Ga. The truck is built on a 2-ton White chassis. The body is entirely of steel and was built at the shops of the company in Atlanta.

As noted in the accompanying illustration, the truck is substantially built and is equipped with an "A" ladder to be used by linemen in event of trolley break. It is also equipped with a winch for use in rerailing



EMERGENCY TRUCK WITH "A" LADDER IN POSITION FOR  
LINEMAN'S USE

cars or removing obstructions from the tracks. The box on each side of the car carries within it one hose bridge for spanning six lines of hose and a complete outfit of jacks, blocks, plates and other tools necessary for use in clearing obstructions, rerailing cars, etc. In the event of the truck going to a derailment accident, it passes one of the main carhouses in Atlanta and picks up whatever additional help is required. The truck is manned twenty-four hours per day by one lineman and one competent driver. The latter is in charge of rerailing cars. The truck answers all fire calls in order to lay its hose bridge if required and is otherwise under the call of the railway company's central dispatcher's office at all times during the twenty-four-hour period.



TWO VIEWS OF ATLANTA'S NEW EMERGENCY TRUCK

## Proceedings of the Claims Association



J. J. REYNOLDS  
President, 1920-21

**T**HE American Electric Railway Claims Association held three sessions at its annual convention in Atlantic City, Oct. 3-5. Of these meetings, one, that on Tuesday afternoon, was a joint meeting with the Transportation & Traffic Association and was reported in the issue of this paper of Oct. 8. Reports of the meetings on Monday, Oct. 3, and Wednesday, Oct. 5, appear in this issue.

### Monday's Session

John J. Reynolds, claims attorney Boston Elevated Railway, as president of the American Electric Railway Claims Association, called the convention to order for its first session on Monday afternoon. An abstract of the presidential address by Mr. Reynolds follows.

#### ADDRESS BY PRESIDENT REYNOLDS

"When a number of men, keen, open-hearted, sympathetic and observant, as claims men are, come together from different places with widely different notions and freely mix with each other, they are sure to learn from one another. They gain for themselves new ideas and views, fresh matter of thought, and there is much to generalize. Generalities, it is true, get us nowhere, but it is just as true that we get nowhere without generalities.

"I wish particularly to emphasize the importance of the Claims Association in the general development of our relations and work. This association is practical in character and aim. It is the voice of the American electric railway claims departments, becoming articulate through its members. Every phase of claims department work is represented in its activities, hence the association exerts a vital influence on claims men.

"If there is a better way of doing our work than the way we are doing it, we want to know it; therefore it is surely worth our while to

**The Discussion at the Atlantic City Convention of the Claims Agents Centered on Methods of Handling Complaints—Some Delegates Urged a Close Follow-Up, Others Preferred Waiting for Claimant to Present Case—Other Topics Considered in Interesting Sessions.**

keep in touch with what of merit is being done along our own particular line. If we fail to do this, then our department is not running at its highest efficiency. Through this association we may share in the very latest ideas and progress in claims department work and thus prepare ourselves to enter aggressively on those duties, the details of which positively demand long and expert training. What we want is not passive acquiescence, but active co-operation.

"There is no body of men affiliated with the electric railway industry more capable of promoting the special interest of the industry than the men who go to make up the claims association. It should be of some interest to note that through the instrumentality of the claims association the everyday work of the claims man is now developed to a point where it embraces problems, apart from the mere settlement of claims, which add to the protection, safety, comfort and convenience of the car rider and of the traveling public generally. One of the supreme interests of claims men, whether representing a property which is large, small or otherwise, should be concerned with developing safe methods of operation and conduct. There is not a moment, nor circumstance, that can minimize this ever-present and all-important fact and duty. What is perhaps not quite so obvious, but nevertheless equally certain, is that this association takes the larger, the higher and the broader view of accident prevention education.

"We all appreciate the fact that the one great agency for the perpetuation of our effectiveness as a body is team play. Neglect of this fact results in an obscured vision of our duty and in an improper conception of basic principles. It is also a dangerous portent that half-hearted interest is a communicable disease.

"The 'up-to-the-minute' member will find in the papers, addresses and discussions in our annual reports an abundance of topics of large practical significance which may be used to advantage and with which he may stimulate with sound principles the departmental life of his immediate organization. Nothing yields better results than an intimate acquaintance with the



C. G. RICE  
President, 1921-22

thought-output found in those reports, for there is material already prepared for us. Speaking of these reports suggests to me the advisability of the association considering the compilation of this large body of information into an index or digest. Much has been written by claims association members which, were it classified and arranged under proper heads and titles, would make a volume that would be of service to claims men, a systematic arrangement that would take the form of a digest or an analyzed summary of the papers, committee reports and certain matter contained in our former question boxes, much of which contains matter of immediate practical value. This could be arranged and the work separated and classified under the various subjects which have been treated. The titles, divisions and subdivisions of relative principles and subjects could be cross referenced, thus making unnecessary those useless repetitions which now take so much time if one wishes to find a particular point or question which has been treated.

"The deep concern of the claims association for the state of the industry leads me to remind you that there probably was never before in the financial history of the electric railway industry in this country a graver moment than the present. This lays a responsibility upon each of us to determine in shoulder to shoulder action to lighten the burden of the railways as much as we can. This should be one of the chief aims of both the individual and the association.

"The Claims Association has a mission, and it is fulfilling it. It could be ill spared from claim department life. Open to criticism at many points it may be, yet I venture to state it has done more for our professional future than any other agency, and it has served to mark for all time a high measure of solid advance and the disappearance

of a retrogressive period. In conclusion, I gladly seize this occasion to make known to the members my deep gratitude for the great help given me by their readiness and willingness to execute any suggestions or commissions given them during my administration. This applies with special emphasis to Mr. Kubu, the efficient secretary of your association during my term of office."

#### COMMITTEE REPORTS

The report of the executive committee was then read. This was followed by the report of the secretary and treasurer. The latter gave the income and expenses of the association, which are shown in the report of the secretary and treasurer of the American Association, published in the issue of Oct. 8, page 610. The report of the committee on interchange of claims statistics was then read.

The committee reported that owing to the small number of requests which had recently been received for this information the data would not be compiled for this year at least. The committee also reported that the old form of questionnaire, known as Data Sheet No. 7, could not be materially improved until the various companies could agree upon a uniform method of accounting in their claims statistics. The report was signed by H. E. Briggs, chairman; W. F. Weh and J. S. Kubu.

#### FOLLOWING UP PROSPECTIVE CLAIMANTS

The paper by Louis H. Butterworth, attorney Boston Elevated Railway, on "Constructive Argument as Opposed to Destructive Contentions in Accident Investigations and Adjustment," was then presented. This paper is published in abstract on another page of this issue.

The discussion on this paper centered largely upon a statement in the paper that it was desirable to give a copy of the complainant's statement to him when it was given after an accident, and the extent to which the department should follow up injured claimants before suit.

A prominent claims attorney, arguing it was not necessary or desirable to give such a copy, declared that if the complainant is acting in good faith he will stick to his statement on the stand later, even if he does not have the statement. On the other hand such a copy would permit a complainant not acting in good faith to know just where he can deviate from the statement without contradicting himself. This claim agent did not agree also with the author of the paper that the claim agent should always decline to entertain any claim where a medical examination was refused. While he thought a medical examination is desirable, it is not always necessary, as with a broken leg, nor is it always possible. He did, however, often show to the attorneys of a claimant, when he knew them well, copies of the statements of four or five of his witnesses. In this way, by putting his cards on the table he has

been able to make settlements and avoid lawsuits.

Another claim agent declared that he gave reports to no one. His position was that it was desirable to impress on the public the desire of the company to act fairly in every way, and when it came to an actual suit the plaintiff was allowed to understand that he should take care of his own case and the defendant would do likewise. He opposed the idea of frequent calls from the adjuster on an injured claimant. Claimants, he said, who are petted too much by a zealous claim adjuster or investigator have an exaggerated idea of the extent of their injuries. His idea was a single visit unless for final adjustment. He urged, however, the settlement of suits for small amounts, even where the company was not clearly liable, as cheaper than paying the cost of a trial.

Another claim agent, in speaking about the reference to psychology in Mr. Butterworth's paper, said much depended upon the ability of the adjuster to get in touch with claimants. One of his adjusters began railway service as a conductor on the horse cars, but has special ability to understand human nature and get the claimant's point of view. This man is one of the best adjusters in his department.

Another speaker said that a man well informed on the principles of constructive psychology was bound to make a better claim agent than one who had not made such a study. He agreed with the first speaker that it is not desirable to give a copy of the complainant's statement to him. In regard to the refusal of a medical examination, his experience was that this refusal occurs a great deal more frequently than most people realize. An examination may be made immediately following the accident, when it is less liable probably to be refused than at any other time and for that reason that is the important time to obtain it, if possible, or it may be made when the lawyers for the two sides are having the matter up for discussion, or it may be requested while the case is actually on trial. A competent doctor should always be employed so that the report shall be complete. He urged that the fact that an examination by a medical man employed by the company has been made gives the claimant or his attorney a very good excuse for refusing another. This means that a competent and experienced physician should be employed. Moreover, to have a medical examination worth anything it should be complete. He cited a case where a medical examination had determined that the patient, a woman, was the victim of neurasthenia due to some long standing pelvic disturbance. This fact proved very useful when a claim was made by her that her backache, headache and other general troubles were caused by an accident. He disagreed with the suggestion of the previous speaker that it is desirable to compromise non-liability cases because it is

cheaper to do so for a small amount than to fight them.

The next speaker approved the idea of giving to complainants copies of the statements made by them. His experience in life has been that people like those who like them, and when a man goes into a house and the people like him they will like his company and will tell him all about the accident. It may be wise to call again or it may not be. In some cases he has called a dozen times because he wanted to know how the people were getting on and also because he hoped to adjust the case. He added, sentimentally, that no one knows whether the company is to blame until after the case has been tried.

The paper by Mr. Green on "Essential Points to Cover in Accident Investigations" was then read by the secretary. In the discussion which followed a variety of opinions was expressed on the plan of giving statements to claimants and making medical examinations, several taking the ground that no universal rule could be followed, and some that no doctor should be sent unless his services are requested by the injured person. One advocate of the principle of calling said that he thought the injured person would often be willing to settle if the company's representative called, but because they didn't he often would take up the case with the ambulance chasing lawyer.

### Wednesday's Session

The session on Wednesday of the Claims Association was held in the morning by resolution of the executive committee and the first action was the appointment of a committee to prepare resolutions on the death of Mr. Carpenter, formerly president of the association. The chairman then announced a paper by Walter E. Robinson, claim agent Cincinnati Traction Company, on "What Should Be the Method of Claims Department in Handling Accidents and Claims." An abstract of this paper appears on another page of this issue.

#### METHODS OF HANDLING CLAIMS

After the presentation of the paper, Mr. Robinson, in answer to a question, said that there was very little "ambulance chasing" in Cincinnati. At one time there had been, but it had about disappeared because the company had declined, as the speaker said, to do "ambulance chasing" itself.

The discussion which followed related principally to the extent to which it was thought desirable for the claim agent to follow up a claimant or possible claimant after an accident.

One delegate, who thought accident cases should be followed up promptly, said that while he believed that a claim department should not be overmanned, there should be a sufficient number of employees so that the department will take care of its work as expeditiously as possible. Time in a claim department, according to him, repays all the dollars for every minute that goes by after an accident has happened, because when a person is injured, his injury seems

to increase in his mind with the passing of days. The doctors have often said that "the gold cure" is one of the most effective for the early cure of a patient suffering from a railroad injury. It is not necessary to have all the men on a salary basis. If responsible men are on call, that will answer. The speaker had found young lawyers to make the best kind of claim assistants as they understand the points and facts which relate to the case.

The latter statement was taken up by another delegate who declared that an assistant in the department who is not a lawyer is often better because he is less apt to be technical in his testimony. He added that he encouraged claimants to come to his office and thought that this was the natural thing to occur to them to do rather than to stay at home and wait for the agent from the company to call.

Other speakers then urged the advantages of waiting for claimants to call, while still others urged a prompt following up of possible claimants.

One prominent claim agent referred to the effect which circumstances have on settlements in claim cases. They may be influenced, he said, by an apparently insignificant act or word. When a jury, getting ready to return a verdict, was attracted by a collision outside, it brought in a very large verdict. Other factors are topographical conditions, climatic conditions, the history of the company and whether its attitude toward the public as a corporation is antagonistic, friendly or intermediate, the character, nature, experience, occupation of members of the jury, etc. The attitudes of the attorneys who try cases, in the speaker's opinion, have also a material bearing, as has the attitude of the newspapers during the past and the present, and the nature, kind and variety of the accidents that occur on the property. The speaker believed the practice used in Cincinnati referred to in Mr. Robinson's paper was a desirable one, but he was doubtful whether many other companies could follow it.

Another speaker said many cases were overinvestigated and many investigations were misdirected, though in general he recommended making a very exhaustive investigation. He questioned Mr. Robinson's argument that ambulance chasing proceeds from an effort to get ahead of the claim agent and that if the claim agent does not act the ambulance chaser will cease his activities. He thought that the activities of the ambulance chasers were caused by competition with each other, rather than by competition with the claim agent.

The claims representative of a large company in the Middle West thought there was some danger in magnifying in the mind of the injured person the seriousness of an accident by too frequent visits. On the other hand he believed that certain cases ought to be followed up most thoroughly, especially if there is any suspicion of fraud. He said that a successful claim agent with

whom he was acquainted followed the policy that if a case showed signs of liability on immediate investigation quick settlement was the cheapest in the end, though it costs more than the case was worth. At the other extreme, a case where there was no liability should be fought to the bitter end regardless of cost. In the doubtful cases, individual judgment had to be used. If all cases were on the square, the speaker doubted if claim agents would be needed. Again, as regards visiting the claimant, much depends on the character of the road. On a road extending from, say, New York to Chicago, it would be impracticable for the claim agent in his office to wait for claimants to call.

#### OFFICERS FOR NEXT YEAR

At the conclusion of the discussion the nominating committee presented the following nominations:

*President:* C. G. Rice, superintendent claim department Pittsburgh Railways.

*First vice-president:* Wallace Muir, claim agent Kentucky Traction & Terminal Company, Lexington, Ky.

*Second vice-president:* W. H. Hyland, claim agent Fonda, Johnstown & Gloversville Railroad, Gloversville, N. Y.

*Third vice-president:* Howard D. Briggs, assistant general claim agent Public Service Railway, Newark, N. J.

*Secretary-treasurer:* E. L. Lindemuth, claim agent Wilkes-Barre (Pa.) Railway.

*Executive committee:* G. B. Proctor, claim agent Memphis (Tenn.) Street Railway; W. G. Fitzpatrick, general claim attorney Detroit United Railway; T. B. Donnelly, claim agent West Penn Railways, Pittsburgh, Pa.; S. J. Harrell, claim agent Knoxville Railway & Light Company, Knoxville, Tenn.

Mr. Rice, on being escorted to the chair, expressed his honor at the election and solicited the co-operation of the members in making the work of the Claims Association a success during the coming year.

## Conducting Accident Investigations\*

An Investigator Should Acquaint Himself with the Employee's Theory of an Accident as Well as the Physical Features Surrounding It—Ingenuity in Interviewing Plaintiffs Often Uncovers Fraudulent Claims

BY R. C. GREEN

Attorney Cleveland (Ohio) Railway

**D**URING the past decade there has grown up in our midst, especially in the larger centers of population, a business which in its return of profits has exceeded the dream of the most sanguine. I refer to the personal injury damage business. And in this connection the word "business" is used advisably. This particular branch of the law is no longer regarded as it was in times past but in the personal injury field today we find law firms devoting their time exclusively to this particular branch of the practice, with well-developed organizations for the securing of business, the adjustment of cases and their preparation and trial in court.

The adoption by most of the states of workmen's compensation laws has robbed this field of much good business and the result has been that many cases which heretofore would have been given little, if any, attention have been exaggerated and built up into what appeared to be real damage suits. This has fallen more heavily perhaps upon public carriers than upon others.

Confronted by this condition of affairs the question necessarily presented is how may one who represents the interests of a carrier of passengers most effectively meet this situation and cope with it. Many answers are presented, but it would seem that the thing most essential is an honest, comprehensive and intelligent investigation; one that will withstand the rigors

of an action at law, for the possibility of litigation should always be considered in every case under investigation.

It goes without saying that the ultimate object of every investigation is the truth concerning all the essential facts surrounding an accident. In most instances these facts are ascertainable from the public alone, and one going out upon an investigation is called upon to meet and interview men and women in all stations and callings of life. An investigator to be successful should study human nature. He should be a person of good address, capable of meeting and securing the attention not only of the man in the factory, but the business or professional man as well. His errand is one which means nothing to the person being interviewed. He is not only there securing certain information, but is taking up the time of the interviewed as well. He, therefore, must cultivate a pleasing manner which will gain him entrée with all. Brevity, conciseness and going straight to the point covering the essentials are always appreciated by our ever busy public.

The great majority of the claims that arise from the operation of a street railway system are those made by passengers. In a myriad of ways injuries to this great class are claimed to occur.

#### GET THE EMPLOYEE'S STORY

If possible the investigator before starting out on a case should have before him not only the theory of the employee as to how the accident occurred, but the alleged claims of negli-

\*Abstract of paper presented at the annual convention of the American Electric Railway Claims Association, Atlantic City, N. J., Oct. 3-6, 1921.

gence set forth by the injured party. If the matter be in litigation, he is, of course, supplied with the petition, as it is called in our jurisdiction, which sets forth the claimed injuries and the alleged negligent acts. If not, the signed statement of the injured party is of great benefit. Aided by this, he is able to go to the very crux of the controversy and secure from the disinterested spectators the information which should be determinative of the matter at issue.

In the investigation of the claims of passengers, the inquiry might be divided into three heads:

First: What were the physical features concerning the accident?

Second: What was the conduct of the employee against whom the negligent act is directed?

Third: What was the conduct of the claimant himself?

The physical features concerning every important accident where time might have the effect of destroying this evidence should always be preserved by photographs. Many cases where such evidence is lacking are lost to the defendant by the adroit argument of plaintiff's counsel that were the facts contended by the defendant true, they would have been supported by photographic evidence. This silent, irrefutable evidence in an investigation, which defies impeachment, has a value far in excess of human fallibility.

A large percentage of the platform men either have forgotten or else have never known, that the good will of the riding public is a valuable asset and that courtesy is about the only means they possess of acquiring it. It therefore follows that when their conduct is under scrutiny they and their employer labor under a handicap, the statements of witnesses often reflecting their feelings toward the employee. This, therefore, becomes a matter for the investigator to overcome, and of course he must rely upon his own initiative with suggestions tending to placate, if possible, the feelings of the hostile witness. On the other hand, the injured party having the natural sympathy of a fellow passenger usually loses no advantage in the telling.

As to what should be elicited from a witness in a given case, or class of cases, little can be said without resorting to the elementary.

The advent of the automobile has had the effect of bringing into existence certain traffic legislation which heretofore was unknown, and in many cases it is not at all difficult to discover where the driver, for instance, of an automobile has been guilty of the violation of certain traffic ordinances which may have been a contributing cause of his accident. An investigator should, therefore, thoroughly familiarize himself with the traffic ordinances of the city. He should have a knowledge of the law of negligence generally applicable to street railway cases, and he should keep posted, if possible, on the late decisions. Not only that, but

he should know the layout of the streets; the fact as to whether or not buildings or open lots are on the corners where an accident is said to have occurred, in order that he may intelligently discuss the matter with the witness. Nothing puts an investigator to so great a disadvantage as a lack of knowledge of the physical features surrounding an accident.

What has been said with reference to vehicular traffic holds true with reference to accidents to pedestrians, and, like passenger cases, the points he is to cover are too varied and too rudimentary to admit of discussion here.

#### FRAUDULENT CLAIMS

The bane of all investigators is the unreported accident. A suspicion that the claim is fraudulent and has no real basis in fact, and, on the other hand, doubting the statement of the employee to the effect that he knows nothing of the alleged affair, the investigator is often catching at straws in the hope that he may secure a clew that will lead to a satisfactory solution of the irreconcilable stories. Here the ingenuity of the investigator is called into play. It is often helpful in this class of cases to take the deposition of plaintiff if the matter be in suit, and go carefully into plaintiff's history. In this way much valuable information may be obtained, and leads secured, which otherwise would be impossible of ascertainment. He must make a thorough investigation of claimant among employers, neighbors, and those who have had an opportunity to observe and know the actions of the claimant for a period antedating the alleged accident. What has been his or her standing in the community; is he occupying a moral plane that is above the suspicion of attempting to foist upon the street railway company a claim for damages which grew out of injuries received, in fact, in an entirely different manner; has the physician in attendance in times past been connected with similar unreported cases, and if so, to what extent; have other members of the family or close friends been the recipient of money paid in settlement of damage claims; does the presence of the corroborating witness, if one be furnished, check up with his movements on the day in question? All these, and many other methods, may be resorted to by the investigator before the claim finally, unless satisfactorily proved to be bona fide, finds its way into the hands of the secret service bureau.

In cases where the objective evidence of the injury has disappeared at the time of making claim, and where the physical evidence does not seem to warrant the seriousness of the claim presented, then there arises another important phase of an investigation—the extent of the disability; the permanency of the injury, if any; and the damage the claimant will suffer by reason thereof.

In many jurisdictions we are confronted with what is known as the

"scintilla rule," and it therefore follows that most personal injury cases in these jurisdictions are submitted to the jury for their determination, and the sympathetic jury, running true to form, immediately loses sight of all other evidence except that pertaining to the physical condition of the plaintiff. It, therefore, becomes of the utmost importance that all the evidence possible bearing upon the plaintiff's physical condition, both before and after the alleged accident, be secured. Of course, in the defense of these cases we may call to the witness stand high-priced medical experts to testify as to their findings in the hope that we may show to the jury the exaggeration that is being attempted, but in the jurisdiction from which I come the money might better be spent in paying the judgment. Experts today can usually be secured on either side of a case; those, on the one hand, finding everything, and on the other nothing. And while this may be aside, it will be conceded by all that until such time arrives as the court appoints an impartial examiner, our medical expert testimony is more or less a farce. Were I preparing a case for trial—one, for instance, of a woman who claimed some serious injury, the objective evidences of which were negative, I would feel more assured of satisfying our counsel were I able to present in court the testimony of neighbors who had seen her on occasions doing things which would seem preposterous in view of her claimed disability.

In all cases where there is a suspicion that the accident under investigation was not the cause of the physical disability alleged, there should be a careful inquiry made concerning the claimant's actions prior to its occurrence.

It is true, of course, that where one case is uncovered and the fraud shown, many others go undetected. But this fact should only inspire an investigator to greater efforts. His task is no sinecure. It is an easy matter, indeed, to deal with a case where the injury is conceded and the facts surrounding it clean cut, but the ones which require the real effort, brains and ingenuity are those shadowy, unreported cases where not only is the question of the occurrence of the accident in doubt but also the injury alleged is more or less fake.

#### SIGNED STATEMENTS CARRY LITTLE WEIGHT

How should the investigator best preserve his evidence? Dictated interviews are not to be depended upon. Signed statements should always be secured in every instance where they can be taken, using as nearly as possible the language of the witness. Many a signed statement has been held up to ridicule before a jury and successfully argued out of the case by an attorney's contrasting the language therein with the apparent intellectual endowments of the witness.



After an investigation is completed and before filing it away it should be arranged in logical order; the statement of the claimant coming first, those of the witnesses next, and following should be the evidence bearing upon the physical condition of the claimant, together with the medical evidence. A

well-ordered and arranged investigation is appreciated by all who are called upon to consult it, from the adjuster to the trial attorney. A brief summary of what the investigation shows may be made up and filed with the papers to show at a glance the procedure followed.

from the original demand. I do not hesitate to reject a claim through any fear of its effect on possible future demands or relations, nor is the amount involved any incentive. I have no patience with the oft-repeated statement, "That we must buy our peace with the public," and if I were confronted with that kind of a situation, I surely would not pay the price. In the first place, I do not believe the necessity exists, and if it did, I would certainly see that it was not due to conditions or performances of the claim department, past, present or future.

## Method of Handling Accidents and Claims\*

The Good Response to Requests from Witnesses for Written Statements Has Caused the Adoption on the Ohio Traction Company of the Letter Plan of Investigation as Against the Personal

BY WALTER E. ROBINSON

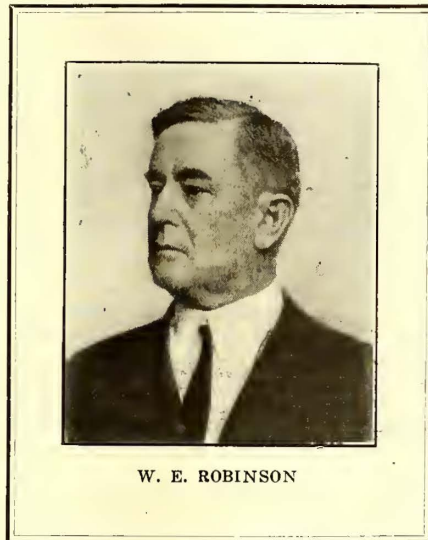
Claim agent, Ohio Traction Company, Cincinnati, Ohio.

**I**N CONSIDERING the organization of claims departments I am convinced of a marked tendency to overman them. The result of this is increased cost and decreased efficiency by overlapping of duties, duplication of effort, lack of interest due to uncertain responsibility, indecision, confusion, unnecessary friction, waste and a generally unfavorable comparison between the cost of maintenance and the accomplishments of the department. From the standpoint of economy and effectiveness, the foregoing reasons have caused me to operate with a comparatively small force, and I believe effectively.

### WITNESS' STATEMENT VERSUS INVESTIGATION

We are not influenced nearly so much by the number of witnesses or the length of an investigator's report as we are by the quality of the investigation. A lot of time spent on an investigation does not necessarily mean that the work is well done, nor does a maze of collateral matters covered add any value to it. I would rather have a two-line description of an accident from a witness in his own handwriting and over his own signature, than to have a two-page account prepared for him by an agent of the company. The former is not open to the same line of attack to which the latter is often subjected. No explanations are required, or necessary, of the circumstances under which the statement was obtained. We can not be charged with giving the witness no opportunity to read his statement before signing it, or with adding anything to it after it was signed. It is the witness' own document, in his own language, expressed without suggestion or interference. It is the witness' state of mind that we want, and if his attitude is friendly, he will defend his views in a way that will carry greater weight than he can if his description is prepared for him. Many embarrassing situations are thus eliminated.

These are some of the considerations, and taken with the further fact that a very large percentage of our witness letters are returned, answered satisfac-



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torily, argues strongly for the letter plan of investigation as against the personal, and has caused me to continue with its use as originally adopted.

### THE DISPOSITION OF CLAIMS

The final disposition of a claim, which consists of making a settlement, rejecting a claim or a law suit, is the one which should interest our management the most because it measures the success of our organization, and has as much or more to do in establishing the standard of the entire company in its public relations, and holding within reasonable proportions the operating costs of the property, as any activity in which any of its departments are engaged.

The influence exerted and the atmosphere emanating from the claim department are responsible, in many instances, for the esteem in which the company is held by the public, and reflect themselves in the jury room by the verdicts rendered and in the amounts carried by the verdicts. It also manifests itself in the feeling that is created in rejecting claims, and is shown in the litigation that ensues after we have declined to give favorable consideration to a claim.

I think it requires greater skill to reject a claim and bring a claimant to your point of view than it does to settle a claim even at a greatly reduced figure

A well-considered claim, rejected for sound reasons and our position firmly adhered to, will make friends for the company. If it is our intention to reject a claim, and the claimant is so advised and our reasons are sufficient for the action, do not lead the claimant to believe that you will try to find a way to adjust the matter, even though it has no merit. He will accept your money and justify it by saying that you were either wrong in the beginning, or dishonest with your employer in the end, and the company has suffered a loss in time, money and reputation.

### AN INFLEXIBLE COURSE

We must have some convictions about our work and stand upon them. First, I do not believe that the value of our service is based on the number of releases we can obtain, nor in undue haste in obtaining them. Property damage does not increase with age. Personal injury claims depend on a variety of conditions and circumstances under which a settlement is made.

I prefer to discourage the practice of indiscriminate claim making, and will not allow myself to be placed at a disadvantage while endeavoring to make a settlement.

The company provides offices where our business is conducted, and all matters pertaining to that business are transacted in the offices. Whatever ammunition we have on an accident or claim is there and can be used to a better advantage on our own ground.

I am opposed to hunting prospects, or soliciting new business in our line. It will come without seeking it. I think it is inadvisable to visit the scene of an accident of any kind for the purpose of making immediate settlements. We never send the surgeons to the scene, and rarely to see claimants at their homes. I have never done so, and could not sanction the practice at this stage of our experience.

I am opposed to the policy of adjusting claims outside the office, and under no circumstances do we attempt to do so. I believe the energy expended in this way is misdirected and misapplied, and is one of the causes of the ever-increasing demands on us. It has produced countless impostors, and has been the occasion for the reckless expenditure of enormous amounts, and if a remedy be not found, it will result in further and unnecessary hardships on the property.

\*Abstract of paper presented at the annual convention of the American Electric Railway Claims Association, Atlantic City, N. J., Oct. 3-6, 1921.

## Constructive Arguments as Opposed to Destructive Contentions in Accident Adjustments\*

An Experienced Claims Attorney Presents in Detail a Method of Adjusting the Every-Day Problems in the Operation of the Claims Department—This Paper Gave Rise to an Extended Discussion at the Convention

BY L. H. BUTTERWORTH

Claims Attorney Boston (Mass.) Elevated Railway

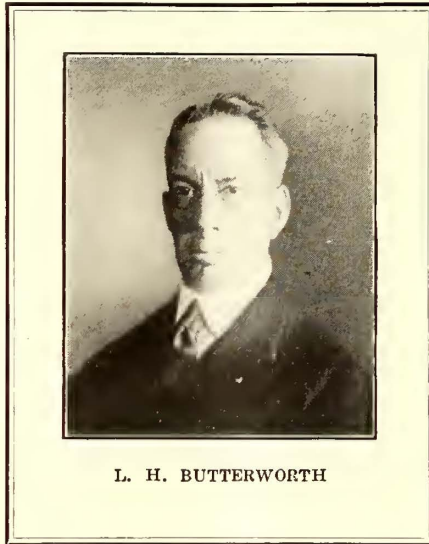
WE hear much these days about the "psychology of salesmanship." Now it should be carefully borne in mind that the claims man is not a salesman but a buyer—a veritable "purchasing agent"—at least in the case of the adjuster. The investigator, on the other hand, it would seem, cannot be classed as a purchaser, for he seeks to obtain something—viz., evidence—without, of course, being able to give any "quid pro quo." The adjuster, however, can, and does, make a definite money proposition for what he seeks, namely, a release, but he still differs from the ordinary buyer in that the object of his bid has no liquidated or fixed market value, as do most of the commodities bought by the company's regular purchasing agent. In determining what value would be placed upon this "commodity," i.e., claim, by the final appraisers therein lies the province of the claims agent, and the purchase of the same at a favorable discount is then his object.

If, however, there is a "psychology of salesmanship"—and of this there can be little doubt—then the converse of the proposition is true and there must be a "psychology of buying," i.e., a creation of influences or mental reactions and processes in the brain of the "seller" by suggestion and argument on the part of the "buyer."

Many of the difficulties and contentions with which the claims man is confronted may be anticipated and therefore forestalled by remarks or comments apparently merely incidental to the interview, but designed to produce a definite effect on the mind of the claimant or witness. For the sake of convenience this may be described as the "negative method" of procedure, i.e., the inhibition or repression of a contra opinion or state of mind on the claimant's part, before the same has been openly expressed or formulated. On the other hand, the claimant may surprise by some unusual or unexpected contention or objection, to meet and overcome which an entirely different process must be employed and recourse to affirmative argument had. This we may term the "positive method."

Let us now proceed to apply these two methods to our specific cases.

No. 1. *Refusal of claimant or witness to give signed statement:* This, unquestionably, is the obstacle most commonly met by the claims man and, therefore, one which he should be pre-



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pared to inhibit or check by anticipation. Applying our so-called "negative method" it would be well for the claims man to preface his interview with some such remarks as these: that he had called to obtain the story of the accident in the witness' or claimant's own words as nearly as possible; that he therefore desired to write it down in his or her presence and to submit it for approval to insure the correctness of the statement. Having completed the written statement the claims man should then hand it to the person interviewed with substantially this remark: "Now, in order that I may lay this before the company's officials as the true and complete recital or description of your claim or testimony, please read the same and call my attention to any errors, omissions or changes you wish made, then sign your name to the statement, so that I can show that I have correctly reported your version of the affair."

If, as frequently happens, the person shows an unwillingness to comply with this request or flatly "declines to sign anything," then the claims man must have recourse to other tactics and bring into play the so-called "positive method," which is nothing short of marshaling all the reasons and arguments at his command until the desired result is obtained. It may be helpful to remind the obdurate one that his claim will be looked upon with suspicion if it appears that he was unwilling to dignify it with his signature, or in the case of a witness, that his testimony will have less weight in exonerating an innocent conductor or motorman if he refuses to give it the stamp of his personal approval. Then again, in case of both claimant and witness, it may

smooth over the objection to state that it is a matter of first importance and clearly to their own advantage to make a written and signed statement at the earliest possible moment and before the facts are forgotten, for a permanent record of their knowledge of the matter is thus made and they are thereby relieved of the necessity of charging their minds with the details of the same; the copy (which should always be given to claimant) being a source from which they can at all times refresh their recollection.

No. 2. *Refusal to permit medical examination:* This, at least in the writer's experience, is the least frequent obstacle in claims work. A refusal to allow a medical examination should never be anticipated, but consent to same always assumed, and honest surprise and astonishment expressed when such consent is withheld. In those few instances, however, where refusal is made, the claim agent should decline summarily to entertain the claim any further, and should inform the claimant that the latter can hardly hope to be paid money for something which he refuses to show. This should be sufficient to bring the objector to terms, and in case an attorney is handling the claim a proposal to comment before the court or jury upon his refusal to allow medical examination may properly be made.

No. 3. *Refusal of reasonable settlement without the advice of an attorney, or a threat to employ a "shyster" or a professional negligence attorney:* Whether such a difficulty should be anticipated and hence sought to be banished from the claimant's mind is a matter of considerable doubt. It may do no harm for the adjuster to make some casual remark to the effect that "there is no need of incurring any unnecessary legal expense in this matter, as we can probably fix it up satisfactorily between ourselves," but, on the whole, it would seem wiser to assume the defensive rather than the offensive in this particular phase of the claim man's work. If the attack comes in the form indicated, i.e., expression of a desire for an attorney's advice, it may be promptly met by a recital of the well-known disadvantages of such a course—viz., the additional expense in the way of lawyer's fees, probably resulting in a net loss to the claimant; the fact that with an attorney in the case any payment is made to the attorney and not to the claimant; the delay caused by negotiations between the company and attorney and, in the event of a trial, the year or two which must elapse before the cause can be heard and the heavy expense incident thereto. The adjuster should then show by contrast the advantages of a direct immediate settlement, entailing no delay and incurring no outside expenditures.

If the opposition takes the form of "a threat to employ a 'shyster' attorney," further helpful arguments will immediately suggest themselves—the improper fee and other advantages

\*Abstract of paper presented at the annual convention of the American Electric Railway Claims Association, Atlantic City, N. J., Oct. 3-6, 1921.

which an attorney of low standing may take—the probability that the company will decline to have any dealings whatsoever with such an attorney—in other words, that the claim will be greatly weakened and prejudiced by such a course, if indeed not entirely lost.

No. 4. *Refusal of claimant to disclose names of witnesses or attending doctor:* This attitude on the claimant's part is closely akin to that suggested in No. 2, and hence calls for a similar line of argument to that therein employed, to wit—that in order for the adjuster to buy such a claim, we must have the fullest information relative to its merits both as to liability and injury, and in no way can he obtain this without a complete exhibit of the "commodity" offered for sale. The refusal to give the doctor's name is so unusual and obviously unfair to the "buyer" (adjuster) that a change of attitude or, psychologically speaking, a "reversal of the mental condition" ought not to be a matter of much difficulty.

The unwillingness to disclose witnesses' names should be met by a statement that their testimony, if favorable to claimant, will greatly increase the chances of obtaining a speedy and reasonable settlement with the company. If this fails to impress the adjuster or investigator may offer to interview such witnesses only in the presence of the claimant or even to accept signed statements from them. In every way he should endeavor to impress upon the claimant that his chief concern is to obtain information as to the facts and is not in any sense an attempt or desire to take any advantage of the claimant by a garbled or distorted report of what such witnesses may say.

The "negative method" is not desirable here, but the moment there are indications that such information is to be withheld, then the investigator should train the big guns of his "positive method" battery upon the objective sought and let go his "broad-sides" until the enemy is won over.

No. 5. *Request for company's witnesses;* No. 6. *Request by claimant for copy of company's report of occurrences:* At the outset and at the risk of being termed revolutionary I am going to venture the opinion that, in the long run, these requests are not such destructive contentions after all. Of course, I do not advocate that such information should be handed out broadcast and as a matter of course whenever a request for the same is made, but I do contend that in many cases it may be done without prejudice to the company's interests.

To get the progressive trend of modern thought on this subject we need only look at recent legislation in certain jurisdictions, notably Massachusetts, where by means of interrogatories a defendant may, at the discretion of the presiding justice, be ordered to furnish the plaintiff the names of witnesses to the accident. We all know, furthermore, that the car crews' report of an

accident is competent and admissible in evidence at the trial of the action if the plaintiff's attorney has the courage to ask for it.

The fact that both the above rights or privileges are made use of so seldom by plaintiffs is, to my mind, very significant in showing that not much advantage is derived therefrom.

Before suggesting what the "outside" claims man should do or say when confronted with these requests, let us consider for a moment the mental state of the claimant or his motives for making such a demand. He must desire this information for one or more of the following reasons: (a) because he hopes or expects the witnesses sought will corroborate his story of the accident and thereby strengthen his claim, or (b) because he wishes to find out how strong the company's case is, or (c) because he thinks he may be able to influence or change any testimony unfavorable to him. If, now, we have a case where the witnesses are numerous and very favorable to the company a disclosure of them will (a) blast the claimant's hopes and aspirations, or (b) will fully satisfy his thirst for knowledge and (c) he is welcome to any crumb of comfort he may derive from the remote chance of being able to affect or change their evidence. Certainly no harm has been done to the company and the only logical result of such a disclosure is that the claimant's own opinion of the value of his case has been appreciably lessened. The writer has frequently followed such a course in discussing claims or suits with either claimants or their attorneys.

On the other hand, where such a disclosure will reveal weakness instead of strength, of course, very practical objections at once arise against making known the witnesses or giving a copy of the report. The best way to meet this difficulty is not to meet it at all but to go around it by adjusting the claim for the best figure possible.

If the outside adjuster or investigator meets with these requests for witnesses or a copy of the accident report, his reply should be that he has not such information with him but that the same may probably be had by calling at the company's claim department. His superiors can then exercise their discretion as to the wisdom of granting such requests. If it be contended by the claimant that his request for the company's witnesses is merely the converse of the company's request for his witnesses, it may be pointed out that such is not the case at all and that such a conclusion is wholly illogical. The company desires the claimant's witnesses simply for the purpose of checking up or establishing the accuracy of the various allegations of the claim which the claimant has presented; whereas the claimant himself is presumed to know the facts and to have satisfied himself of the correctness and the justice of his claim before presenting same for payment and should

not, therefore, call upon the company (the alleged "debtor") for possible helps in proving the "bill." In general, the adjuster should remind the claimant that the principles of business practice and the rules of law govern in the handling of claims and that the burden is still on the claimant to establish the company's negligence, even if in some jurisdictions his due care is now presumed.

No. 7. *Request that claim department repair damaged property:* In certain cases such as broken windows or torn clothing such a request can sometimes be granted to the company's benefit, inasmuch as it possesses the men and facilities for doing the job at a reduced cost or, in the case of damaged clothing, the knowledge where repairs may be most skillfully and economically made.

It is assumed, however, that this topic refers more particularly to repairs of a mechanical nature, such as are necessitated by damage to vehicles. In such cases, it is not desirable from either the standpoint of the company or the claimant to grant the request. The company's representative should advise the claimant that such a practice is unsatisfactory to both sides in that the company's business is the transportation of passengers and that its mechanical department is devoted solely to the movement and upkeep of street cars; that it maintains no general automobile or wagon repair shop, and even if it did, it would still be unwise to undertake the repair work in question because there might be a perfectly natural tendency on the company's part to discover the least amount of damage attributable to the accident and the result would be a job not satisfactory to the claimant. The adjuster might further very frankly admit that the company did not care to assume the risk of a new liability in case the repairs were unskillfully or negligently made.

If the claimant then suggests that the damaged property be sent by the company to some general garage or repair shop the adjuster may point out what is very likely the strongest argument of all, *i. e.*, that it is literally impossible for the company to spend the time and money necessary to attend to the details of arranging for such repair work. He should then explain to the owner of the damaged property that by far the more satisfactory course for all parties is for the claimant to arrange for the repairing of the vehicle at such shop as he may elect, having first given the company's expert an opportunity to inspect the damaged property. Then when the work is completed the various items may be checked up and compared with the estimate of the company's representative and if no serious variances exist a settlement may be easily and promptly had. The foregoing, of course, is predicated upon the assumption that we are dealing with a "liability" case.

No. 8. *Allegation that unfair advantage is taken of claimant:* This contention is one which the adjuster may largely dispel by his very personality and the mode and tone of speech in which he approaches the claimant. A sympathetic, conciliatory, unbelligerent manner should go far toward inhibiting such an idea in the claimant's mind, or, for that matter, in the mind of any other person. In fact, here is a golden opportunity for the exercise of our "negative method" of procedure, and the experienced and skillful claims man will take care that he create an atmosphere of the square deal before he reaches the dollars and cents stage of the proceedings. If, however, in spite of all his efforts and skill in this direction, he is met by the allegation that it is unfair to the claimant to ask for an immediate release or for a release for such an amount as offered, the adjuster should then employ all the affirmative arguments at his command and point out, for instance, that he is not seeking to rush the claimant into a hurried or hastily considered settlement, but that experience has shown that fairly prompt adjustments are the best medicine; that his offer is based upon the "fair market value" for the injury and liability in question, illustrating his point by citation of similar cases; that the very fact of his being sent to see the claimant shows an attitude on the company's part to do justice and make reparation for the injury done; that a large public service corporation such as the adjuster represents is as dependent for its success upon the good will and opinion of its patrons as any private business concern and, therefore, it does not desire and could not wisely attempt to deal unfairly in the adjustments of its accidents.

No. 9. *Contention that any person injured in car accident is entitled to damages:* This is one of the commonest fallacies which we meet in dealing with the riding public, and occasionally even an attorney seems to labor under the delusion that a passenger virtually receives a policy of insurance when he sets foot on one of the company's cars. Nothing, however, is further from the truth, and whenever an adjuster is confronted with this time-worn contention he cannot do better than meet it in the language of the courts. For years, and in countless decisions, judges have stated, in substance, that the carrier of passengers is not an insurer although it owes its patrons a very high degree of care, which has been further defined as the "highest degree of care consistent with a practical operation of the company's business."

In proportion as this contention of an insurer's liability is one of the commonest, so too is it one of the easiest to overcome and banish when dealing with an intelligent claimant. In the case of a stupid or stubborn one the adjuster must draw upon his inexhaustible stock of patience and by simple every-day occurrences illustrate his

point and show the unreasonableness and unfairness of asking the company to pay for damages which it did not cause.

No. 10. *Request for adjuster to make frequent return calls:* Whatever motive actuates a claimant in making such a request, the result of granting it is undesirable from the company's standpoint, because it consumes time which might better be devoted to other and newer cases. While a quick settlement is best, nevertheless, the adjuster should not press the claimant too zealously but should show willingness to call again in a few days after the diagnosis of the attending physician, or the opinion of the company's medical examiner has been obtained. The adjuster should refuse, however, to keep calling at frequent intervals and should tell the claimant that such a course will serve no useful purpose and also that the convalescence and recovery will be more rapid and permanent by removing the mental or "psychological" factor of worry by an early adjustment of the claim.

No. 11. *Refusal to call at claim department offices for discussion:* This contention or obstacle is not of sufficient importance for the adjuster to waste any time in trying to overcome it. There may be some good reason for such a refusal, as for instance, physical infirmity or lack of time, but even if caused by downright stubbornness or unreasonableness no serious thought or time should be sacrificed in combating it. "If the mountain won't come to Mahomet let Mahomet go to the mountain."

No. 12. *That the company is liable or it would not call upon claimant:* This thought, although perhaps not openly expressed, may very naturally arise in the mind of the injured party when a claims adjuster makes him an unsolicited call. It would seem wise, therefore, at least in cases of debatable liability, for the adjuster to employ the "negative method" and introduce himself more in the character of an investigator than an adjuster and by means of his opening questions create the impression that there is doubt in the minds of the company's officials as to their liability for the accident and hence call upon the injured person to ascertain his version of the occurrence. In the case of absolute liability such as car collisions, derailments and the like there is little occasion for such a procedure and the adjuster may account for his voluntary visit by the perfectly sincere statement that he desires to learn whether the person was injured and if so, the extent of such injury. They can then get down to the real business of settling the claim without further preliminaries.

Thus far it will be seen that we have been working along the lines of the "negative method." If now the claimant becomes belligerent and asserts that the adjuster would not have called upon him had the company not believed itself liable for the accident in ques-

tion—then the style of procedure shifts to the "positive method." It is then up to the adjuster to enlighten the claimant as fluently and thoroughly as possible as to the principles and advantages of compromise and to inform him that corporations and also individuals frequently make small payments even in cases where it is definitely settled that there can be no recovery at law; that such a course is taken not only to assist the injured by lightening their financial loss but also as a matter of sound business policy on the part of the company.

No. 13. *That settlement with driver for injury indicates liability for property damage:* This contention is one to be anticipated and denied at the very outset, and presents an excellent opportunity for an application of our "negative method" of procedure. In other words, such an idea existing in the mind of the property owner must be aborted by a denial or negation of its logical soundness. The adjuster, if he is endeavoring to effect a compromise, should commence the interview by differentiating the reasons and motives which make it expedient for the company to desire the personal injury claim settled and yet to have no particular concern relative to the outcome of the property part of said accident. The argument is this—that the driver's claim presents a case of personal injury, *i. e.*, hurt done a human being, the measure of damages for which may be estimated anywhere between nothing and thousands of dollars. The property loss, on the other hand, presents merely a claim for a fairly definite, practically liquidated amount of damage to a piece of personal property. There may be some minor differences or disputes between the parties, as to the market value before and after the accident and as to reasonableness of repair bills, but these are trivial when compared with damages in the personal injury case and the maximum amount of damage can be almost mathematically ascertained. Hence the company's treasury is not faced with a claim whose value is undeterminable and which may possess great potentialities.

This line of reasoning, it will be noted, closely resembles the argument to be used in dealing with No. 12, and seems too simple to need further elaboration. Many others of equal or greater merit will doubtless suggest themselves to members of this association. The particular environment, social and financial status, local customs and laws, all these are factors of the utmost importance in the application of psychological principles, for to be of any real assistance to us this psychology must be of the so-called *practical* or *applied* kind, as contrasted with *pure* psychology. In short, the successful claim agent is, after all, merely a shrewd trader or business man, to whom, in plain English, the greatest assets are a fairly fluent and persuasive tongue coupled with a large amount of good, hard common sense.

# History and Comments on the Third Rail System\*

## Some of the Interesting Features of and Experiences on the Third Rail Systems of the Pacific Coast

IN CONSIDERING the history of the third rail, we are not confronted with a problem of ancient history. In the eighties there were several feeble attempts at using a rail on the same plane as the running rail instead of the overhead trolley. The first successful application, however, was on the Intramural Railway around the World's Fair Grounds in Chicago in 1893.

Following this, the next installations of importance were the elevated roads of Chicago. The Metropolitan on the West Side was the first one, the others being converted from steam to electric using the third rail. From this it was a mere matter of a few years and all the elevated roads in New York City and Boston were converted to this system.

Then in quick succession followed several of the terminal electrifications in the East, all using the third rail where the voltage did not exceed 600. These installations are still going on east of the Rocky Mountains. This story, however, deals more particularly with the installation on what is now the Northwestern Pacific Railroad, Marin County, Cal.

To one of the early pioneers in the electrical field in California is due the credit for the electrification of the interurban section of the old North Pacific Coast Railroad. John Martin purchased the North Pacific Coast Railroad, then a narrow gage road from Sausalito to Cazadero and running over the hills from San Anselmo to San Rafael and down to San Quentin Point, and made the electrified section broad gage, still retaining the narrow gage for steam. The present system consists of 6 miles of single track and 15½ miles of double track, or a total of 37 miles of electrified track, all at 600 volts.

In this state there are three third-rail systems, the Northwestern Pacific and the Sacramento Northern, using the over-running type of construction at 600 volts, and the Central California Traction, using the under-running type at 1,200 volts. The contact rail as used on the Northwestern Pacific is all regular common "T" rail, and nearly all of it is either 60-lb. steel or 50-lb. iron.

In the first installation the rail was supported mainly on a large block of wood spiked to the tie and the contact rail spiked to the block. These were continually breaking off and did not last very long. Then some patent granite blocks were tried. These were put in at the Sausalito terminal and through the Corte Madera tunnel. The leakage over them was excessive and the aura at night was at times brilliant. It was quickly decided that the

object to be obtained was a support for the contact rail and not a means of illumination.

At that time the present style of support block which has proved very satisfactory was designed and put into service. Every sixth tie in the track is 1 ft. longer than the standard tie. On this extra length the support for the contact rail is placed. This support consists of a redwood block 5 in. square and 6½ or 7 in long. The length depends on the size of the rail in the track. This block is treated with two coats of insulating paint by dipping. There is a ¾-in. screw bolt at the base holding to small angle irons, which in turn are lagged to the tie. On top of the block is placed a cast-iron cap upon which the rail rests. The cap is so constructed as to form an apron over the block and give a space of nearly 2 in. on the block that is always dry even in the worst rainstorm. Of course, this does not exist when flood water comes up over the track and even over the contact rail. This cast-iron cap has a channel in which the rail rests. The rail is not clamped or fastened to the block in any way, but is free to move with the expansion and contraction. The contact rail has tried to crawl over the right-of-way at times, but it generally landed on the running rail and the result was a shutdown. When this buckling has occurred, it is simply a case of breaking a joint at this place, allowing the rail to straighten out, dropping the overlapped end to allow space travel of the collecting shoe on the cars. To overcome this trouble about twice a year men go over the line and hammer the joints and pour oil around the angle bars and over a large proportion of the support block caps. When this has been done, the buckling feature has been eliminated. As an illustration of how successful this is, we have several sections of 3,000 ft. and one section of over 4,000 ft. of continuous power rail.

At road crossings and intervals in front of stations the rail is open and the ends protected by approach blocks. These blocks are pieces of rail equal in cross-section to the contact rail but with one end heated and hammered, thus allowing the contact shoes on the cars to ride up onto the rail easily. At these openings there is constructed an underground box with at least one 1,000,000 circ.mil cable in it, the ends of which are soldered to the end of the contact rail.

These undergrounds, as we call them, are constructed of 1-in. redwood and are made 4 in. square inside. The cable is supported in the box clear of the wood by porcelain cleats every 2 ft. The box is then filled with an asphaltum insulating pitch. Properly installed, this type of box has proved very satisfactory and has the most excellent moisture resisting qualities.

In the original installation a feeder was placed in the web of the rail from Sausalito to San Anselmo with the exception of the section through the Corte Madera tunnel. This feeder proved very unsatisfactory, for it was but a short time after its installation that the sleeve joints began to loosen up. Even after the sleeve and rod were drilled through and aluminum pins driven in, these were sheared off.

The experiences with this rod were very interesting. At openings where the rod ended it was necessary to use a long brass sleeve for connections. In one end of the sleeve was soldered the rod, using only pure block tin. In the other end was soldered a short piece of copper cable using half and half solder and the cable soldered to the rail. The jumpers were soldered directly to the rod on either side of the sleeve. After they were soldered the joints held and would not give. There were about seventy-five of them put on in the section between Alto and Almonte. Four days later all the jumpers were on the ground, having fallen off of their own weight. Another attempt to solder aluminum has proved futile.

About five years ago there came suddenly a demand for aluminum. All the aluminum feeder was then replaced by a 1,000,000-circ.mil. copper cable and the change was made without expense to the railroad company.

One great advantage in the third-rail construction, both mechanically and financially, is our method of carrying feeders. From Sausalito to Alto Power House, a distance of four and one-half miles, we have two 1,000,000 circ.mil cables on each rail, or four cables in all, and the only additional expense for feeder support is the small iron clamp used to hold the cable in the web of the rail. There are at advantageous points switches so that the system can be sectionalized if necessary and in case of trouble one section can be eliminated entirely. We also carry an overhead jumper on pole line over Corte Madera tunnel, and have switches installed so that the tunnel section alone can be cut out without interference with any other section.

The use of a third-rail system of course can only be justified where, like the Northwestern Pacific, the operations are entirely over private right of way. There have been several cases where people being struck by trains have been thrown against the power rail and burned. There is but one case of human life lost that I can find directly traceable to contact with the third rail.

Our maintenance costs after thirteen years of service show the following averages:

For 1916.....	\$87 per mile
1917.....	95 per mile
1918.....	145 per mile

The differences in these costs do not reflect any change in the condition of the rails, but rather a decided change in labor and material cost. At the present time we are maintaining the entire system with a crew of five men,

\*A paper prepared by the electrical department, Northwestern Pacific Railroad, and read by C. E. Thatch, at a meeting of the Pacific Railroad Club, San Francisco, August 11.

three of whom only devote one-half day to power rail work. This crew also does all track bonding.

The costs previously given take care of all track bonding. All joints on the running rail are bonded with a 300,000-circ.mil soldered bond with a "T" head, soldered directly to the rail. We admit that we are without doubt cranks on solder. All joints of whatever nature, bonds, feeder cable, cross cables, are soldered direct to the rail, using half and half solder.

The gage of our rail is 26½ in. out from the gage line of track and the top of power rail 6 in. above top of running rail. For total clearance we ask 12 in. above top of running rail, 22 in. out or more. This clears on all classes of equipment. Occasionally there is sent on the road some large furniture car with unusually low truss rods, but this

difficulty is overcome by observing the published clearances and also the alertness of car inspectors at Tiburon, where most of such equipment reaches our road.

One of the main difficulties is in the winter from high water. We have had several times when at certain points the water was up over the power rail, but it was fresh water and we were able to keep power on the rail and keep trains moving. When the extreme high tides come in the winter along the shores of Richardson Bay, with a good southwester behind them and the salt water begins to get up around the power rail, operations cease. This condition occurred during one storm in the winter of 1918-1919, and our traffic out of Sausalito was stopped for about three hours during the most severe part of the storm.

## Railroad Crossings and Crossing Signs\*

Standardization Suggested Along Various Lines to Reduce the Hazard  
—The Railroads of the Country Are Spending Thousands  
of Dollars a Year to Protect the Public

By R. S. MESSENGER

Claim Agent Rochester (N. Y.) & Syracuse Railroad

THE RAILROAD LAW of New York State specifies the type and position of the crossing sign to be installed. This sign is furnished by the railroad company and is set by the highway authorities of the town or municipality in which the crossings are located. This law is a step in the right direction, but I do not believe that the sign is sufficiently conspicuous to be adopted as a standard for all crossings; also there is nothing in the law to prohibit other signs being placed at crossings. You have all approached crossings where there was the usual "Stop, Look and Listen" sign, a sign put up by the State Highway Departments, a sign put up by the local automobile club and last but not least a sign put up by some industrial concern ostensibly as a warning sign but in reality an advertising scheme.

In my opinion, this multiplicity of signs is worse than no sign at all because when the driver of a vehicle approaches a crossing so decorated he tries to read them all and doesn't sense any of them, or, what is more apt to happen, they are taken for advertising. If one conspicuous uniform sign was placed at each crossing and the public seeing that sign could know that it meant one thing, many crossing accidents would be avoided. A uniform standard sign of such size and coloring and so lettered that its meaning cannot be mistaken should be placed at every grade crossing in the country. Such signs should be placed at a uniform distance and far enough from the crossing so that there will be plenty of opportunity to have an automobile under control before reaching the crossing.

When such a sign is adopted and placed, it should be *prima facie* evidence of negligence on the part of the driver of a vehicle who is struck and injured at a grade crossing.

The chief safety officer of a large railroad recently told me that he had checked three widely separated crossings to find the number of vehicles going over them in a day and to check the number of drivers of such vehicles who stopped, looked and listened before crossing the railroad tracks. Approximately 7,900 vehicles, of which 98 per cent were automobiles, crossed the three crossings that day, but none of them stopped and less than 5 per cent of the drivers of these vehicles looked or listened before crossing the tracks. The railroads of this country are spending thousands of dollars every year to protect the public at their crossings and to train and educate the motormen and engineers in safe operation, but until the automobiling public shows a disposition to co-operate, we shall continue to have these appalling catastrophies at grade crossings, no matter what type of sign is adopted as standard.

Gates and flagmen are considered by many as the most effective protection for grade crossings, but the expense of maintenance is greater than the electric railways of this country can stand. Aside from the expense I personally know of numerous instances where automobiles have been driven through the gates, and the August number of the *National Safety News* contains an article showing where the Long Island Railroad has been compelled to use telegraph poles in place of the usual type of gates because so many drivers of automobiles had driven through the ordinary gates. This is a pretty good evidence that the fault is not all with

the railroads. Pedestrians also are daily disregarding the gates, walking under or around and being struck by approaching cars.

Flagmen are human, and where the human element enters failure sometimes arises, but more often in the case of railroad flagmen than elsewhere, because cripples and old men are placed at crossings as a substitute for a pension. This should not be done, for a flagman to be efficient must be intelligent, active and alert.

There are many automatic signals for crossings such as electrically operated gongs, good at some places but affected by climatic conditions, easily getting out of order or else they ring continually when there is no danger, which leads to their utter disregard.

The old type "Stop, Look and Listen" signs were all right before the advent of automobiles, when the approach to crossings was at the rate of 4 to 8 m.p.h., but in the present day these are not conspicuous enough nor are they seen soon enough to stop a vehicle approaching a crossing at 20 to 50 m.p.h., so today we are advocating a standard crossing sign to be placed at from 300 to 500 ft. on each side of every crossing.

In New York State, and I am informed in many other states, the railroads are compelled to pay for these signs. It does not seem reasonable to require the railroads to furnish or maintain crossing signs to be erected off their right-of-way. This should be a public charge, or at least the cost of the signs should be shared by the public and the signs placed and maintained entirely by the public. As to the maintenance of these railroad crossing signs, I have seen any number of them that have been placed at crossings in New York State within the last year riddled with bullet holes, the enamel knocked off, the sign bent so as to be useless as a warning and in many instances knocked down entirely. Much of this damage is done thoughtlessly by boys, some deliberately by men. The National Safety Council should, through its local councils, start a campaign to educate the public as to the meaning and importance of the standard crossing signs and as to the possible results which may arise from their effacement and destruction.

To the railroad man grade crossings present another problem, which is to make the view for the motorman and driver of approaching vehicles as long and as clear as possible. Here again the railroad meets the opposition of the thoughtless public who own property along the right-of-way. For example, the company with which I am associated has for the past four years sent out men to trim trees and clear the view at all crossings on our road, which is a double track, high speed road, 87 miles long, operated between the cities of Syracuse and Rochester over 117 grade crossings. As foreman of this safety crew we use a motorman who has been in the employ of

\*Abstract of paper presented at the electric railway section of the annual congress of the National Safety Council, Boston, Mass., Sept. 29, 1921.

the company for the past fourteen years. His instructions are to trim all trees, bushes and weeds on the right-of-way which in any way interfere with or obstruct the view of a motorman or the driver of an approaching vehicle; also to trim all trees, etc., adjoining the right-of-way that interfere with or shorten the view, where he can obtain the permission of the owners of such trees or bushes. Here is where the trouble begins. The one idea in the minds of adjoining property owners, particularly near cities and towns, is to grow a hedge or line of trees that will shut off the railroad regardless of the safety of the public at such grade crossings. We have no power to compel the trimming or to prevent the planting of these barriers, but are annually forced to pay out large sums of money for accidents caused by those death traps erected by unthinking people.

All railroad grade crossings should have easy approaches, good planking and be so graded that the danger of stalling motors would be eliminated as far as possible. All automobiles should be driven over railroad crossings in intermediate gear to reduce the danger of stalling and thus prevent accidents. Slight inexpensive changes in highways often make dangerous crossings comparatively safe. When a road crosses the track two or three times within a short distance, several crossings can be eliminated by re-locating the highway, especially when state or county highways are being constructed.

Among the safety rules of the road with which I am connected is an order to the motorman that all highway crossings in cities and villages must be approached under such control that a car may be stopped short of any obstacle. Sometime ago at one of these crossings an automobile was pushed by the car between 200 and 300 ft. The motorman was laid off for thirty days. The situation has improved since then, but there again we have the human element, and it is necessary constantly to check up these crossings to see that the order mentioned is obeyed, but who checks up the careless, thoughtless and reckless automobile driver for whose mistakes the railroads are daily made to pay?

Many grade crossing accidents on electric roads, in my opinion, are due to ignorance on the part of the public as to the speed, distance traveled per second and distance in which a large interurban car can be stopped. Not long ago a vehicle was struck at a crossing on one of the roads running out of Syracuse. The following morning the coroner asked the motorman, who was a man of long service, the speed at which the car was traveling when the vehicle was first seen. The motorman's estimate was 40 to 50 m.p.h. "How far away were you from the crossing when you first saw the vehicle?" "About 200 to 250 ft." "How far did you go after you applied

your air before stopping?" "About 650 ft." At this reply the coroner said, "That is all I want from you. You should have stopped in less than that distance." After the motorman had left, the claim agent told the coroner that a test was to be made the following day with the same car and motorman at the point of the accident and asked the coroner to be present. A number of tests were made, and the shortest stop according to the coroner's own measurement was 700 ft. The coroner told the claim agent that he wanted to apologize to the motorman as he considered after seeing the test that a wonderful stop had been made at the time of the accident. He also said that he had learned a great deal about the operation of interurban electric cars that he had not before appreciated. That particular coroner is very careful since that experience about placing the blame before he knows all the facts.

My observation has been that the officials in charge of constructing state and county highways pay too little attention to safety features at electric railroad crossings. I know of a number of roads constructed within the past two years where the crossings are diagonal, a good view one way and no view the other for either the public or railroad employees. Cuts have been dug, the grade changed and no attempt made on the part of the highway officials to eliminate the resulting banks from obstructing the view. The railroads, the state and county highway authorities, automobile associations and local safety councils should get together in every state in the Union and adopt some sane, uniform and practical method of road construction in relation to grade crossings.

It is my opinion that the standard crossing sign should be of a color that is most visible in daylight and will most readily reflect light from automobile headlights and even from a dim lantern on a farmer's wagon and that color from my experience should be "traction orange" for the background or field, with "Railroad Crossing" in large black letters. It should be of such size as to compel the notice of passing vehicle drivers, at least 4 ft. x 4 ft., and should be constructed of a material as nearly indestructible as possible. This sign should be located on the right-hand side of the highway on each side of every crossing at a distance of not less than 300 ft. All other signs should be prohibited by law from being placed within 1,500 ft. of such grade crossings.

Some may wonder why "traction orange" has been my choice. The cars of the company with which I am connected were formerly painted a dark green and some Pullman color. One day I heard one of the Public Service Commissioners of New York State say that our cars blended too much with the landscape and should be painted a more visible color. Our company immediately took a car and painted it

in panels of several different colors. We found after an exhaustive test that the "traction orange" was visible at a greater distance and reflected light farther than any other color.

"Traction orange" is a shade of yellow. Yellow is the color that is used by railroads as a caution sign. Caution is the thing that must be instilled in the minds of the people approaching railroad crossings. If the public will approach grade crossings with caution there is no danger and, therefore, no need for a red sign. When it becomes a habit with the public to approach grade crossings with caution, the grade crossing problem will be near a solution.

## Eject the Grundys\*

The Constructive Method of Teaching Safety Methods Is Urged Upon the Railway Industry

BY LAURA M. ROADIFER  
("Miss Safety-First")

Philadelphia Rapid Transit Company

IN THIS world problem of preventing needless injury to human life probably no other industry began earlier or worked more persistently than the street railway industry, for the reason that upon its operations the city's economic life depends. With perhaps greater frequency, too, as a result of careful and continuous study of the material causes of accidents, new and better improved safety devices have been put into operation to reduce the mechanical hazards to a minimum. The street railway industry, probably more than any other, is confronted with ever changing conditions involving new dangers and new problems. Contributing largely to these changes is the automobile traffic, which shows such a marked increase every year, affecting some cities more than others, depending largely upon the width of the streets upon which we operate, that it unquestionably has become the greatest menace to safe street car operation.

In my opinion the greatest problem which we have now to solve lies in discovering the best means of inculcating the "preventive spirit" in the minds of the general public, but principally directed to employees, autoists and school children playing in the streets; the latter being the particular phase of this problem to which I have been giving attention with very gratifying results. Numerous methods to effect this "preventive spirit" have been employed, some more successfully than others, but most of us at least until a comparatively recent time have been prone to let our attempts in this direction rest upon the "Better be safe than sorry" type of slogans, which time and usage have robbed of their edge, instead of attempting to arouse active spirit. By arousing a spirit of emulation among the employees, the major tendency for

\*Abstract of address delivered before the electric railway section of the National Safety Council at Boston, Sept. 27, 1921.

a clear accident record can be created and accentuated. Recognition of careful service ignites the spirit of emulation readily. One motorman of the P. R. T. Company has operated a car for the last twenty years and holds a no accident record. His fellow workers know this is not merely a stroke of luck, but careful application to his duty at all times. A development of overzealousness must be guarded against, however, for an industrial organization must have for its foundation co-operation for continuous mutual benefit, and it is very important that every individual in an organization understand where the mutuality of interest lies.

Unfortunately the greater number of accidents remaining in the street railway industry depends largely upon the public's failure to comply with the obvious laws of safety, for in this modern day of civilization the instinct of self-preservation is not as keen as in the more primitive ages and safety teaching has become recognized as an essential part of every one's education. It is a state requirement in some parts of the country that safety be taught in all the schools. I take it every one here acts as instructor among either

the employees in his organization, the public, or both, but, regardless of the people whom he works among, the first essential is that he should understand human nature well enough to select intelligently a method of approach which will bring the proper mental reaction. Things regarded as educational do not have a strong appeal, generally speaking, for comparatively few of us have a natural thirst for knowledge. If this were so, more men would rise from the ranks into executive positions than really do, if the interest to learn everything possible about one's job were prevalent.

Don't you think, however, that all of us are a little too inclined to regard ourselves as teachers, modifying our name somewhat by calling ourselves safety instructors or directors, but employing the methods used when we went to school, rather than regarding ourselves as salesmen of a product for which we must create a demand? The old style teaching, the kind we had, "won't take" any more, and the modern teacher must apply the arts of the salesman to make his subject appear attractive, whether it is or not, and we must admit that safety is fundamen-

tally unattractive. We sometimes become so terribly impressed with our own importance and take our work so very seriously that we become what I call the "Grundy" type, complaining of the everlasting carelessness of the men, or the unwillingness of our superiors to see the conditions as they really exist, or go about deploring the fact that "some one" around the shop had done some very careless thing and predicting as a consequence that that "some one" was going to get hurt if he weren't more careful, or announcing to some one before his fellow workers that that was the second time he had been caught without his goggles and the next time it was expected that he would be caught without his eyes.

Cheerful thoughts that suggest so many pleasant things. Let us eject the Grundys and adopt the constructive, happy method of teaching or selling safety. Instead of continually telling the people to avoid injury so much of the time let us try more to impress them with the right way to keep safe.

The "constructive" method apparently is the one that sells the goods; why can't it be just as successfully employed in selling safety?

## Illinois Association Annual Meeting

Talks on Manufacturer Co-operation. Advertising the Railway and Bus Competition, Followed by Golf Tournament, Make Day of Work and Recreation

WITH an attendance of sixty, the Illinois Electric Railway Association held its annual meeting at the club house of the Aurora (Ill.) Country Club on Oct. 14. President E. M. Walker, general manager Terre Haute (Ind.) Traction & Light Company, presided, and, after rollcall, addressed the members briefly on the current aspects of the business. In speaking of the trials through which the industry has passed, he said that while even now we cannot say with assurance that the storm is over, we can at least see the break in the clouds sufficiently well to give us the feeling that the electric railways are going forward to better days. Conditions improve with the process of liquidation, and liquidation is going on and will go on effectively until the process is complete. Natural movements do not stop midway. We are finding out that our prosperity as a nation depends not so much on the amount of the world's gold supply that we own as on the amount of the home-produced commodities that we sell at a profit to the rest of the world, and until that lesson is fully learned we cannot talk of normalcy as an existing state. Normal times will not come until business is reassured and made to know where it stands with reference to such vital questions as the tariff and taxation and until our constituted governments begin to practice thrift and economy in earnest and make it clear that business properly conducted will not be interfered with as long as it is managed with due regard to the laws.

Continuing, he remarked that at the recent convention of the American Electric Railway Association the keynote seemed to be salesmanship, and to his mind this should ever be the uppermost thought in the electric railway business. When the idea of salesmanship is lost sight of, the idea of doing business at a profit is lost also. All incentive to give good service vanishes and business falls down. The way to sell any product is to make it attractive and as we have only one product to sell and it is such a product as cannot be stored or placed on shelves or in showcases for future use, but on the other hand must be sold out on every trip and a new supply made for the next trip, we must put our best thought and energy into making this product attractive. By this he meant that it should be furnished with the best and most suitable type of equipment at the frequency and with the regularity that the traffic demands, and at a price which the customers are willing to pay and which will return a profit to the operators.

K. A. Simmon, Westinghouse Electric & Manufacturing Company, then addressed the association on what the manufacturers are trying to do to assist in relieving the burdens of the electric railways. Among the examples cited to indicate co-operation of the manufacturers, he mentioned the part they have taken in the general task of educating the public to an understanding of utility problems, the use of space in popular national magazines for the same purpose, the studies made of the

field of usefulness of electric transportation and the work of expounding the results before business men's associations and various civic bodies. Of more direct assistance was the effort of the manufacturers to reduce operating and maintenance expenses by cutting down the cost of production of manufactured articles and improving their quality. The safety car, particularly, he thought, was a credit to the manufacturers' aid to the industry as there are now some 5,000 of these cars in operation which, at an average annual saving of \$2,000 per car, means a saving to the industry of some \$10,000,000 annually. He counseled against any misapprehension as to the replacing of the street car by the trolley bus, saying that there was little possibility of that form of transportation displacing the street car even in a minor way.

John Benham, vice-president International Register Company, called attention to the paper read by E. F. Wickwire at the recent convention at Atlantic City (See ELECTRIC RAILWAY JOURNAL for Oct. 8, page 599), in which it was pointed out that the manufacturers' employees should be made to realize that their bread and butter depends on the wellbeing of the electric railway industry. Mr. Benham said that manufacturers' employees constitute a large number of people who can talk and vote in a way to help correct sentiment and legislation tending against the electric railways. He thought that few manufacturers were taking the trouble to give their employees this angle of



their responsibilities to the industry and he emphasized it as a thing which should be done. As for the International Register Company, he said that he would not have an employee in the establishment who was against the utilities.

A paper on "Advertising the Electric Railway," by E. E. Soules, was read by Mr. Helton, Chicago Elevated Railways, in the absence of the author. An abstract of this paper appears elsewhere in this issue.

Luke Grant, publicity manager Chicago Elevated Railways, in discussing Mr. Soules' paper, said that the efforts of the publicity man, no matter how good, fall flat if the operating department does not back him up with good service. Truth in advertising must hold absolutely with any publicity matter gotten out about electric railway service. He pointed out also the great desirability of having all employees thoroughly informed as to the company finances, stating that there are no secrets any more in the electric railway business and the employees should have the information in order to give them proper background for their contact with the public. In one of the publications gotten out for the employees of the elevated railways, a monthly simplified analysis of the operating statement is published and the results have been good. Mr. Grant explained that the publicity work of his company included the monthly publication and distribution of 5,000 copies of the *Safety Bulletin* for the employees, and 50,000 copies of the *Elevated News* and 12,000 copies of the *North Shore Bulletin* for the public.

#### DISCUSSION ON MOTOR BUS COMPETITION

In his report Secretary R. V. Prather called attention to the bill passed by the Fifty-second General Assembly of Illinois which provides for fees in addition to those required under the motor vehicle law, for the operation of motor buses and motor trucks over improved highways. The fee originally written into this bill as introduced was 1c. per mile for passenger or freight carrier vehicles. In the absence of data to support these fees an amendment was agreed to with the Illinois Automobile Association which provides that  $\frac{1}{2}$  cent per mile shall be paid for all vehicles, trailer and semi-trailer used in carrying freight, and one-twentieth of 1 cent per mile for each passenger seat for each vehicle, trailer or semi-trailer used in carrying passengers. The bill requiring the payment of these fees was passed by the Assembly and signed by the Governor. Mr. Prather reported that the Secretary of State is experiencing some difficulty in collecting these fees, and he urged the co-operation of the railway companies in reporting to him the names and addresses and sphere of operation of any bus companies known to them. This will make it possible to check up with the Secretary of State as to the application of this law. He thought it was important

to make a showing as to the financial benefits to the State accruing from this act, as an effort will probably be made to repeal it at the next session of the Legislature.

A. M. Farrell, general freight and passenger agent Chicago, Ottawa & Peoria Railway, discussed various aspects of the competitive situation in Illinois at some length, pointing out particularly the requirement of the law that a bus company or freight trucking company operating on public highways must secure a certificate of convenience and necessity from the Illinois Commerce Commission before it can begin operation. He summarized the requirements set forth in general order No. 68 of the commission for applicants desiring to operate motor bus or motor truck lines, as follows:

- Must be incorporated under Illinois laws.
- Must notify a utility with which they will be in competition.
- Must file notice with every municipality, county or township into or through which applicant proposes to operate.
- Must give notice, three weeks before hearing before commission, by publishing in not less than 3-in. space once each week for two successive weeks, in a newspaper published in or of general circulation in every city, town or community affected, but when cities are more than 10,000 population such notice must be published twice each week in two papers. The commission prescribes the wording to use in such notices.
- Must secure authority from cities, villages or towns to operate upon the streets of any municipality and file a certified copy of same at hearing before commission.
- Must engage chauffeurs only in accordance with motor vehicle law of Illinois and a certified copy of license issued to each chauffeur must be filed with the commission. Chauffeurs must be twenty-one years of age or older and have two years' experience.
- Must produce, at hearing, information as to weight of vehicles.
- Must make quarterly reports to the commission, on the first of January, April, July and October, showing condition of each vehicle, cost of operation, statement of income and liabilities, and claims pending, showing amounts involved and character of claim.
- Must make immediate report to commission of any accident, causing loss of life or injury to any person.
- Must make quarterly report showing number and make of motor vehicles, seating and tonnage capacity thereof. No such vehicles shall be operated over any other route, or at any other than schedule time, so as to interfere with the operation on schedule time over the specified route, without express permission of the commission, unless the established route is blocked or impassable.
- Must file time-table showing time of arrival and departure at each point. No change may be made in schedule until after five days' notice to the commission. Must file tariff showing charges, in accordance with commission's instructions.
- Must operate cars without interruption unless authorized to the contrary by the commission. Unless they comply strictly with the terms of commission orders the certificate of convenience and necessity is declared cancelled.
- Must continue to furnish service until the commission holds a hearing (under the same rules of procedure as when certificate of convenience was issued) and issues an order cancelling their certificate.
- Must file on or before hearing before the commission, and also before operating any vehicle, a sworn statement of ability to pay damages resulting from accidents for which they may be held liable, or file with the commission securities, indemnities or bond protecting the traveling public. Section 55A of Ill. C. C. Laws places the amount of \$10,000 on each vehicle.
- Must not operate any vehicle until every provision of this order is complied with and evidence thereof has been submitted to the commission.
- Must stop at every grade crossing.
- Must forfeit all rights if vehicles are not operated within ninety days after certificate has been granted.
- Failure of any corporation to comply

with each and every provision of the commission's order shall be full and sufficient cause to cancel and set aside any certificate of convenience and necessity granted.

Continuing, Mr. Farrell spoke of a certificate which had been issued to a bus company to operate in competition with his company between LaSalle, Oglesby, and Starved Rock, Ill. The granting of this certificate was opposed by the railway, but the commission ruled that the bus company was entitled to the certificate by reason of the geographical location of the point served. The route of the bus company is a direct one and somewhat shorter than that of the electric line. The traffic of the interurban is handled to Starved Rock Station, from which passengers walk about a quarter of a mile to the Illinois River, and there board a ferry boat which conveys them to the south bank to Starved Rock proper. After failing to prevent the operation of the bus line, the railway arranged with the ferry company for a sale of joint tickets at a very low round trip rate. The bus company charged 75c. for the round trip between LaSalle and Starved Rock, and when the railway put in a through ticket rate, the former was forced to reduce the charge to 50 cents. Additional service was also put on the electric line and quite a good deal of business was drawn away from the bus company. This method of meeting the competition with cut rates and frequent, good service is to be continued next year, even making further reductions if necessary.

F. E. Fisher, general manager Chicago, Ottawa & Peoria Railway, called attention to a serious defect in the Illinois law governing highway common carriers which hinges on one word. The law describes the companies affected as those engaged in the business of picking up passengers "indiscriminately." For this reason, he said that many buses which are doing very great harm to the electric railways are without the jurisdiction of this law. He explained that some bus operators contract with coal mining companies, school districts, manufacturers, etc., to haul the employees to and from work or children to and from school. Having once contracted to haul certain people, they do not come under the definition of indiscriminate handling of passengers and have therefore been able to operate without securing a permit from the commission. During the off hours, these bus people contract to handle baseball crowds and miscellaneous gatherings so that they are kept occupied a good deal of the time in a way that forms very serious competition for the electric railway companies. Mr. Fisher said that as a result of the various bus competition, the earnings of his company have shrunk from \$10,000 to \$20,000 a month and that unless some way is found to put them out of business, the interurban will have to cease operation before many years. He explained further what Mr. Farrell had said about the competitive bus line operating to Starved Rock. This line runs over a fine concrete road all the

way and by virtue of crossing a bridge and carrying the passengers directly to Starved Rock, it is able to give a quicker, better service than the electric railways can possibly furnish. In view of this, Mr. Fisher could see no way to compete, except to cut rates to such a point as to starve the Starved Rock buses.

The matter of correcting the fault introduced by the word "indiscriminate" was to receive the immediate attention of the legislative committee of the association.

#### ELECTION OF OFFICERS

As the concluding business of the annual meeting, the following officers were elected for the ensuing year:

President, W. L. Arnold, secretary and treasurer Elgin & Belvidere Electric Company, 105 South LaSalle Street, Chicago; first vice-president, A. D. Mackie, Springfield, Ill.; second vice-president, R. A. Moore, Joliet, Ill. Executive committee, E. M. Walker, Terre Haute, Ind., chairman; D. E. Parsons, East St. Louis, and H. E. Chubbuck, Peoria, Ill.

After luncheon at the Country Club, the annual eighteen-hole medal handicap golf tournament was played, Luke Grant carrying away the president's cup. The Aurora, Elgin & Chicago Railroad provided a special train from Chicago to Aurora and automobiles from Aurora to the Country Club for the convenience and pleasure of the delegates. The arrangements were in charge of B. P. Alschuler, attorney for the A., E. & C., who was highly complimented by the members for his excellent planning.

### The Trend in Advertising the Electric Railway\*

BY E. E. SOULES

Manager of Publicity Illinois Traction System, Peoria, Ill.

JUST as there have been changes in types of equipment and methods of operation in the electric railway business, so has the advertising of electric railways undergone many experiences that have required readjustments and changed tactics in recent years. First came the early days of the industry when the newly built electric railway, emulating the example of its only competitor, adopted the methods of the old-time steam railway. Those were the days of the flaring poster and hand-bill heralding cut-rate excursions, "knocking" the service and facilities of the other fellow's line and offering a dollar's worth of transportation for a half-dollar's worth of coin.

The electric railway, however, soon found that its contact with the public was much closer than that of the steam road. Its cars passed the door of the merchant, the newspaper man and the home of the best (as well as the worst) citizens in the cities and villages along its lines. It had a new and interest-

ingly different story to tell. It had a personal contact to maintain with the folks in the towns along its lines and the medium through which the desired *entente cordiale* could best be established and maintained was the newspaper. Coincidentally with this, the advertising departments became known as "publicity" departments.

Then, after a few years of "publicity work," during which the public was being introduced to the electric railway, and the newspaper editors and operating officials had become accustomed to calling each other by their first names, the period of increasing fares put the newspaper men in an embarrassing position with their readers. Our newspaper men began to show signs of fading friendship and lack of understanding of our situation. Those of us who knew the newspaper men, however, could see the reason for their position on the utility question. So, again the wise ones in the operating field sensed a new angle and the period of "public relations" publicity was at hand.

The work of acquainting the public with the truth concerning the utility industry is still an important part of the advertising policy of the electric railway, as every operator is aware. But, there is a new problem that needs attention. And this leads to what I am going to refer to as the fourth, or present-day cycle in electric railway advertising.

#### MERCHANDISING ADVERTISING NOW NEEDED

The merchandising of electric railway transportation is today the new problem of the electric railway. The advent of the automobile and the hard road has opened a new competition which must be met by vigorous tactics if the electric railway is to survive. It is not necessary to tell electric railway men what the automobile and the hard road mean. Both city and interurban operators have felt the effect in decreased passenger receipts and can see what is going to happen to freight revenues unless new and convincing methods are devised in combating the new competition.

Naturally, this situation seems to be one to trouble the traffic department, but in my judgment it should also be first in the mind of those responsible for the advertising policies of the electric railways. In the final analysis, what is advertising but merchandising? Advertising, strictly speaking, is one of the means by which a product is marketed to the public. If the merchandising policy behind the advertising is weak or lagging, the advertising cannot and will not produce results. So, it appears to the men on the advertising end of the industry that concerted action on the part of the traffic officials with the idea in view of building a strong and convincing merchandising plan with which to meet the new competition is the most urgent need of the electric railway.

We thought we had competition in the past, but in the broad sense of the

word the electric railway has had no real, active, virile competition such as that now offered by the automobile and its chief ally, the hard road. The problems of the electric railway to date have been those of operating, engineering and public policy. The problem today is that of selling a service to the public, and selling it so well that the public will select it in preference to that of all competitors. It is a question of merchandising in the truest sense of the word.

Many individual companies have already anticipated the changed conditions and have laid a foundation for merchandising their product. From them we can gain ideas that will help build up a broad merchandising policy for the electric railways in this territory.

### American Society for Municipal Improvements to Meet in Baltimore

THE twenty-seventh annual convention of the American Society for Municipal Improvements will be held at Baltimore, Md., on Oct. 25, 26, 27 and 28, with headquarters at the Southern Hotel.

An extensive program has been planned to include, among other things, on Tuesday, Oct. 25, a paper on Public Service Relations by Major Ezra B. Whitman, of the Maryland Public Service Commission; on Wednesday, Oct. 26, the report of the general committee on city planning and its sub-committee on utilities; on Thursday, Oct. 27, the report of the general committee on street paving, street design, street maintenance and street railway construction and its sub-committee on street railway construction, as well as many other papers and reports on paving, especially one on specifications of street railway pavements, including track construction; and on Friday, Oct. 28, the report of the committee on transportation and traffic, and a paper on subways for city transportation.

The program of the convention is a heavy one and contains much else of interest to municipal engineers as well as many entertainment features.

### Railroad Division of A. S. M. E.

THE Railroad Division of the American Society of Mechanical Engineers will discuss the elimination of waste on railroads in connection with the general consideration of that topic at the annual meeting of the society. Three papers will be presented, as follows: "Avoidable Waste in Locomotives as Affected by Design," by James Partington, American Locomotive Company; "Avoidable Waste in Operation of Locomotives and Cars," by William Elmer, Pennsylvania Railroad; "Avoiding Waste in Car Operation—The Container Car," by W. C. Sanders, New York Central. The meeting will be held at 29 West Thirty-ninth Street, New York, on the morning of Dec. 9.

\*Abstract of paper read before Illinois Electric Railway Association at Aurora, Ill., Oct. 14, 1921.

# News of the Electric Railways

FINANCIAL AND CORPORATE :: TRAFFIC AND TRANSPORTATION  
PERSONAL MENTION

## Service Ordered Resumed

Electric Railway Service Will Be Restored in Des Moines on Passage of New Franchise

Early resumption of railway service in Des Moines is in prospect, for Judge Martin J. Wade of the federal court on Oct. 17 ordered the receivers for the Des Moines City Railway to resume service on the day that the City Council finally passes the proposed franchise ordinance.

By suspension of rules the City Council on Oct. 17 passed the franchise for its first and second readings, but under the Iowa law such ordinances must lie over for one week in the form in which they are to be finally passed. If the ordinance now before the Council is not amended it would therefore be possible for the franchise to be passed finally on Oct. 24. This would permit service to be resumed the following day. At the present time it would seem that there is little chance for further amendment of the franchise draft.

Judge Wade's memorandum and order states that the trustees for the bondholders under whose plea service was ordered abandoned would not consent to furnish the money necessary for the resumption until the City Council has finished with the franchise. Judge Wade further stated that the trustees had agreed to furnish the financial resources to permit of resumption of service, but was not specific as to what degree of service it is proposed to give on the resumption of service.

Further encouragement was given by the union employees of the company, who on Oct. 17 announced that they had agreed to accept a cut in wages of 7 cents an hour. The men claim that this cut will reduce operating expenses approximately \$125,000 a year and will act to increase the cushion fund provided for under the new franchise and thus tend to an early reduction in the fares.

Upon news of Judge Wade's order the City Council was called in special session and hurriedly passed a resolution barring the buses from streets where there are railway lines. This provision will be effective from the day that service is restored by the railway.

Previous to the developments of Oct. 17 Judge Wade had called a meeting of those interested in the railway controversy, but in his memorandum issued simultaneously with his order he stated that he considered such a meeting at this time inadvisable, in view of the developments.

With the exception of the power clause, there were few changes in the franchise draft as passed by the Council on Oct. 17. It has the approval

of Corporation Counsel Miller and two attorneys named by the Greater Des Moines committee to assist Judge Miller in handling the franchise. Agreement upon the power clause was reached after many conferences, which did not end until late Sunday night. The clause has been changed so that the Des Moines City Railway is now empowered to "sell energy to interurban railways for the operation of interurban railways and for the transaction of their business." It will be recalled that the power clause was proposed by the Harris interests controlling the railway and that its presentation resulted in delaying the negotiation.

The principal features of the franchise as passed on Oct. 17 are as follows:

**Fare.**—A sliding scale fare starting at 8 cents and tapering off as the earnings of the company increase to a low point of 5 cents.

**Tenure.**—The grant is exclusive for a period of twenty-five years in so far as electric railway operation is considered.

**Extensions.**—Provides for extensions of lines when it is proved that such extensions will at least pay cost of operation together with reasonable depreciation.

**One-Man Car.**—Omits the two-man car provision of the former contract and gives the company the right to operate one-man cars under certain conditions.

**Arbitration.**—The franchise makes the Iowa Board of Railroad Commissioners the arbitration board and in case they refuse to serve provides for the appointment of three non-residents of Des Moines by the justice of the Iowa Supreme Court and two associate justices.

**Dividends.**—No dividends are to be paid upon the common stock until the cash fare is reduced to 7 cents. At 7 cents a 3 per cent dividend is authorized; at 6 cents a  $4\frac{1}{2}$  per cent dividend; at 5 cents a 6 per cent dividend, and at a 5-cent cash fare with ten tickets for 45 cents, 7 per cent is authorized.

**Buses.**—Buses are abolished from car line streets except in crossing bridges.

**Owl Cars.**—Owl cars are to be provided at a fare twice that of the day fare.

## New Haven Adopts the Motor Car

Self-propelled motor cars are to be used by the New York, New Haven & Hartford Railroad on some of its branch lines. A preliminary announcement to this effect was made from the company's headquarters in New Haven on Oct. 14. It is understood that the initial order calls for supplying three of these vehicles. They will be furnished by the International Motor Company. The first of them will be placed in service on lines between New Haven and Hartford and between Middletown and Willimantic. Others will be placed in service in the Rhode Island and Cape Cod country. The actual routes of the new vehicles have not yet, however, been determined. A statement giving the details with respect to the service which it is proposed to establish with the new motor cars is expected to be made within a few days from the office of President Pearson.

## Court's Aid Invoked

Despite This Action Prospects Appear Better for Early Settlement in New Orleans

The State Supreme Court of Louisiana on Oct. 4 took under advisement the opposition of Assistant Attorney General Luther E. Hall to the injunction granted by Judge Provosty of the Supreme Court in the so-called railway case. The injunction lifted the order obtained some months ago by Assistant Attorney General Hall in the Civil District Court against the Commission Council seeking to prevent that body from carrying out its reported intentions of giving the railway a return of 8 per cent on a valuation of \$44,000,000 and fixing a rate of fare.

The Assistant Attorney General, it will be remembered, alleged that one Supreme Court Judge alone was without authority to set aside the order of Judge King, of the Civil District Court.

It is possible that the delay in reaching a settlement of the railway troubles of New Orleans on the plan submitted by Commissioner Maloney, of the Department of Public Utilities, which appears to have been ironed out to the satisfaction of both the Commissioners, the Mayor and the representative of the eastern security holders, may be waiting the action of the court of last resort. One thing is quite certain, it is still hanging fire and has not as yet been submitted to the Commission Council.

The reason given for the delay has been the illness of Mayor McShane. The commissioners themselves are unwilling even to venture a prediction when the matter will come up.

Two bills were introduced in the Legislature during the week having a bearing on the New Orleans Railway & Light Company.

One of these seeks to clothe the Commission Council of New Orleans with a rate fixing power over public utilities and defines the power of the Commission Council in fixing the rates.

The other bill grants indeterminate permits for the use of streets to railway, gas and electric light companies in cities of 100,000 inhabitants or more.

## Eureka Takes Over Street Railway System

The Eureka Street Railway, the successor to the Humboldt Transit Company, Eureka, Cal., is now operating the railway system in the City of Eureka. Under municipal ownership the management passes into the hands of the Superintendent of Public Works, John Griffiths. There was no change in the personnel except the pay of platform men has been reduced from 50 to 45 cents an hour.

## \$5,787,196 Is Being Spent for Improvements in Columbus

By the end of the current year, the Columbus Railway, Power & Light Company will have expended \$5,787,196 in new construction work and betterments, in connection with the lighting and railways services. This includes a total of \$3,584,719 in power plant, substation and transmission line construction, \$471,777 in new underground conduit lines, \$182,000 in extending street-car lines, and \$1,398,700 in new track construction, special trackwork and other work incident to this.

This extensive rehabilitation and new construction program has been instigated under the presidency of Charles L. Kurtz, and while some of the planned work has recently had to be postponed on account of the general business situation, the physical property of the company in both the railway and lighting services will have been greatly improved by the end of the year, placing the property in a much better condition to meet the demands of the community.

Owing to the exceedingly low rate of fare which prevailed in Columbus prior to the war, and in fact until some time thereafter, the physical condition of the railway property became very bad. This gave rise to the demand for the extensive rehabilitation and construction program in the railway.

The financing of this work was extremely difficult owing to indebtedness accumulated under the low rate of fare. It was finally done through an issue of \$3,000,000 of three-year 8 per cent bonds, attended by two restrictive features. One of these was that a \$50,000 monthly sinking fund must be set aside to liquidate the debt. The other was that the company is obligated to secure the consent of the underwriters before any additional securities can be sold.

These and other matters included in the program were referred to in the *ELECTRIC RAILWAY JOURNAL* of April 19, shortly after their inception.

## Peter Witt Retained in Seattle

The Seattle City Council has employed Peter Witt, Cleveland, to make a survey of the municipal railway with a view to effecting economies in operation. Mr. Witt expects to conclude his survey by Dec. 17, and the City Council has indicated that it will await the completion of his work before taking any important steps toward reducing fares.

The Council is also awaiting the return from the East of D. W. Henderson, superintendent of railways, who attended the meeting of the American Electric Railway Association in Atlantic City, visited the installation of the trackless trolley on Staten Island and studied transportation problems elsewhere en route.

Other developments in the railway situation in Seattle include the enactment of an ordinance appropriating

\$50,000 for municipal buses to serve Cowen Park, South Beacon Hill and other suburban districts; passage of the \$680,000 ordinance for retracking First Avenue and other betterments; adoption of an ordinance under which buses may operate in connection with the street railway, on a 10-cent fare with transfer privileges, and a 50-50 basis with city cars. The vote on Councilman C. B. Fitzgerald's 5-cent fare ordinance has been postponed until after the return of Mr. Henderson.

The \$680,000 bond ordinance passed provides for renewing the tracks on First Avenue, purchase of twenty-five new street cars, and payment of the Western Washington Power Company for the Greenwood Avenue car line bought last year by the city.

## "Boycott" Started in Hyde Park District

Agitation of Long Standing Renewed in Effort to Secure Lower Fare

A boycott has been started against the Eastern Massachusetts Street Railway by the residents of Hyde Park for the purpose of forcing a reduction in fares to Boston.

Without giving the company any formal notice of their intention to take such action some individuals in Hyde Park, assisted by the Board of Trade of the town, started to operate a free jitney service from Cleary square and the boundary line between Hyde Park and Boston. For about a week they operated touring cars and buses for the free use of the public, and have now established a nominal rate of fare, selling tickets that are good for a week. They are giving this jitney service, at less than cost, not only over the line to Boston but along all the other lines which the Eastern Massachusetts Railway is operating in Hyde Park, in the hope that this course will induce the railway to reduce its fare from 10 cents to 5 cents.

Thus far the Eastern Massachusetts Street Railway has taken no notice of the boycott. It is operating as usual on a fifteen-minute schedule during the ordinary hours of traffic and on a ten-minute schedule during the rush hours on the Boston line. It has not reduced the fare and has no present intentions of making a reduction.

The boycott is aimed at one of the companies maintaining one section of service between Boston and Hyde Park. The Boston Elevated Railway maintains the other section, the two companies meeting on the boundary line and each of them charging 10 cents for the part it operates. The main and ultimate object of the Hyde Park Board of Trade is not to reduce the fare on the particular company against which it has started a boycott, but to establish a 10-cent fare between Boston and Hyde Park, where the combined fare of the two companies today is 20 cents.

## Subway and Elevated With Steam Suburban Service Recommended

A rapid transit system consisting of a subway and elevated line and a new steam suburban service which would greatly build up the city of St. Louis and increase the population is suggested in the extract from the annual report of the Department of Public Utilities pertaining to Rapid Transit System. The report is for the year ended April 11, 1921. It is signed by Engineer Charles S. Butts.

In the matter of steam service the report recommends the operation of suburban trains from the east side of the Mississippi River and the establishment of a suburban station at Twelfth and Market Streets.

On the elevated and subway development the elevation of the Hodiament line is recommended. The distance to be elevated from Maple Avenue to Spring Avenue is about 3½ miles; length of subway from Spring Avenue to the new station at Broadway and Lucas Avenue is 2½ miles. The entire project might be constructed for \$3,000,000.

The report further recommends that plans for other subway lines should be developed in districts not available to the present proposed system and some means devised to build them as soon as possible.

The report states that with the above elevated and subway system installed with a station at Broadway and Lucas Avenue, and the installation of a steam railroad suburban system, with a suburban station at Twelfth and Market Streets, it will be a step in the right direction and will give a large part of the city and county a rapid transit system. It says: "We cannot hope to build up our city, especially in the outlying districts, without a more rapid system of transportation than that which is given by the surface lines."

## Railway Men Win State Championship

Athletics have proved a popular organization program in the Kansas City Railways this summer and fall. The eight baseball teams which constitute the league of the company's divisions and departments completed their schedules on Sept. 15. The attendance at the games was far larger than in any previous year.

Baseball enthusiasm was further stimulated by the success of the "Tramways," the team representing the company in the Independent Semi-Pro. League of the State. The Tramways justified the fine support given by the organization by winning the championship of the state. The final game in this series was scheduled for Oct. 9, but the pennant had been won before that date.

As the baseball season closes, plans are being made for organizing a basket ball league, to continue the interest in athletics through the winter season.

### Connecticut Men Cut

Wages Reduced 8½ per Cent by Arbitration Board—Company Arbitrator Dissents

A reduction of 8½ per cent in the wages of trainmen employed by the Connecticut Company, operating more than 500 miles of line, has been decided upon by the board of arbitration. The official decision of the board was written late during the week ended Oct. 15 by Judge John K. Beach, New Haven, and has the approval of James H. Vahey, Boston, attorney for the men. Joseph H. Berry, Hartford, the third member of the board and representative of the Connecticut Company, disagreed with the majority opinion. He maintained that a reduction of at least 15 per cent should be authorized.

At the old scale, the men received 54, 57 and 60 cents an hour, the wage increasing to the maximum with three years' service. One-man car operators received 15 cents in excess of this scale.

The arbitration decision establishes a wage of 47 cents for the first three months of service with 51 cents for the next nine months and 55 cents thereafter. The latter figure, reached after one year's service, is the maximum. One-man car operators will receive 10 cents over this scale. On the matter of the guarantee to spare men the contention of the men was allowed with reservations.

The application of the principle of a reduced scale for the first three months is an innovation on the Connecticut Company lines.

Judge Beach, in writing his decision, found that the uncertainty of the reduction in living costs, reported in the last year, would not justify a more drastic reduction than that given. He did not agree with the company's contention that a cut of at least 10 per cent should be made. Mr. Berry cited figures to show there has been a decrease in living costs of 20.8 per cent in the last year.

The company has agreed to abide by the decision of the Arbitration Board. The new wage scale will be retroactive to June and an agreement will later be made to reimburse the company for the excess over the new scale, which has been paid since last June. The agreement for arbitration provides that if the company and employees cannot themselves reach an understanding as to how the retroactive feature of the award is to be put into effect, it shall be decided by Judge John K. Beach.

The text of Joseph F. Berry's dissenting opinion shows the company officially asked for a 17½ per cent reduction as compared with an 8½ per cent cut decided on by Judge Beach and Mr. Vahey.

The position of the company on the various points in dispute may be taken to be pretty accurately reflected in the minority opinion of Mr. Berry, who found himself unable to concur in the views of his associates with reference to the wage scale. He concurred in the award of 10 cents an hour additional over regular rates to one-man

car operators and in the spread of the graduated scale, although this is against the company's contention. He said in part:

As to the wage scale, I cannot accept the conclusions of the majority. The logic of their reasoning leads to a greater reduction than from 60 to 55 cents for the maximum hourly rate, about 8½ per cent. The application of the cold, clear laws of logic would call for a reduction of about 20 per cent; that is, from 60 cents to 48 cents. The company has not asked this. It recognizes, as I do, that there should, in fairness, be a margin to cover possible increase in the cost of living, and so that the men may not lose all that they have earned in improved standard of living.

A reduction of 17½ per cent, from 60 cents to 49½ cents (say 50 cents), would still leave a margin of 2½ per cent for this purpose, or 1½ cents an hour. Every cent means approximately \$90,000 a year to the company.

The majority, however, awards 55 cents, a reduction of about 8½ per cent. A reduction of, say, 15 per cent or to 51 cents an hour, should in my opinion be made at the least, not only in justice to the company, but to the public, whose demand for lower fares cannot be met without greater relief from the high wages of war time.

The payroll now exceeds 54 per cent of the company's gross receipts. Capital, as well as labor, is entitled to a fair living wage.

The questions submitted were not defined in the original submission, but were later formulated as follows:

1. The wage rate to be paid by the company to its motormen, conductors and other employees for the twelve months beginning June 1, 1921, including the length of the graduated scale.

2. The differential in excess of the regular rate to be paid to operators of one-man cars for the same period.

3. The guaranty to be established for the extra or spare motormen and conductors for the same period.

The first and most important question was the rate to be paid the motormen and conductors, called the blue uniform men. It was agreed that if any reduction were made in the maximum rate paid to them, the wage rates of all other employees represented by the committee should be readjusted by applying the same percentage of reduction.

### Cost Details Stated

In his report to the Board of Public Works outlining in detail the San Francisco (Cal.) Municipal Railway extensions and improvements, M. M. O'Shaughnessy, city engineer, included the accompanying table of costs. This table gives a comparison of costs of four routes for electric railways into Sunset District, Forty-ninth Avenue and Judah Street Terminus referred to previously in the ELECTRIC RAILWAY JOURNAL.

	Cost of Track	Cost of Tunnel	Total Cost	Annual Cost of Operation and Interest on Railway Cost	Miles New D. T.	Distance Ferry to (Ocean miles)	Running Time (minutes)	Tunnel Length	Grade in Tunnel (per cent)	Heaviest Grade on Line (per cent)
Grove Street ...	\$850,000	\$450,000	\$1,300,000	\$350,000	5.65	7.75	47	1,350	2.6	9.5
Duboce Avenue	567,000	1,900,000	2,467,000	307,000	4.54	7.24	39	4,200	2.85	7.0
Eureka Valley.	500,000	1,400,000	1,900,000	311,000	3.91	7.53	40	3,400	4.0	5.4
Laguna Honda	464,000	300,000	914,000	314,671	3.48	8.48	42	900	4.0	4.2
Change in road		150,000								
For comparison: Market Street Railway, No. 7 (Haight Street line)					7.24	43	No tunnel			12.1

### D. U. R. Case Presented

Company Goes Direct to Public With Statement of Its Attitude on Proposed Ouster

Allen F. Edwards, vice-president of the Detroit (Mich.) United Railway, has made a statement to the public with a view to fully informing the voters of the exact situation before they go to the poles to vote on the ouster ordinance. The company's stand is reiterated relative to selling the Foru Street and Woodward Avenue tracks to the city on sections where franchises have expired. Mr. Edwards stated that in as much as doubt seemed to exist regarding the position of the company in connection with the so-called ouster ordinance to be voted on at the municipal election on Nov. 8, he felt called upon to state the company's position clearly.

### OUSTER ORDINANCE AFFECTS WOODWARD AVENUE

He cites that the ouster ordinance affects directly the Woodward line from the Grand Belt line to the river and the Fort and West Jefferson lines from Artillery Avenue to the east, including the extensive turning facilities in Cadillac Square. If the city through the Street Railway Commission desires to obtain possession of these parts of lines through purchase by direct agreement or through the process of a board of arbitration, the company stands willing to co-operate with the city to that end.

He further states that if, on the other hand, the Street Railway Commission insists that the company must accept the outrageously low offer of \$388,000 for these parts of lines or quit service and remove its rails and other property from the streets, there is absolutely and unqualifiedly no other course for the company to follow than to abandon service thereon and take up the tracks. Under no circumstances will it be possible for the company to accept the inadequate and unfair offer of \$388,000 for more than 23 miles of track together with overhead and underground equipment.

The trackless transportation amendment to the city charter, on the ballot on Oct. 11, failed to receive the necessary 60 per cent vote for its approval. About a 59 per cent vote was cast in favor of the amendment. It was announced immediately following the canvas of the votes that if there were no barriers due to lack of sufficient

time, the proposed amendment would be put upon the Nov. 8 ballot. The amendment would empower the Street Railway Commission to establish trackless trolley systems in the city.

City officials have expressed the belief that the questions covered in the amendment were not thoroughly explained to the voters and on this is based the opinion that if again presented to the people the amendment would carry. It is explained that the amendment does not call for any new appropriation of money, but that all such equipment for trackless transportation lines will be purchased with a part of the \$15,000,000 bond issue authorized in 1920. Mayor Couzens and the councilmen are in favor of the provision of the amendment, believing that it is important that the city be empowered to utilize the new development in transportation methods.

As another step in the working out of the plans for the election in November Daniel W. Smith has been nominated to oppose James Couzens in the coming mayoralty race, Mr. Smith's eligibility as a candidate having been definitely established. The fact that he has recently resided and voted outside of the city of Detroit was not considered as grounds for declaring him ineligible in the courts.

### Service Crippled by Power Plant Accident

By a series of unavoidable accidents the Tri-City Railway & Light Company, Davenport, Iowa, was hard hit on Sept. 21. The 20,000-kw. turbine of the company had broken down a few days before and part of it had been sent to Pittsburgh for repairs, so the plant was short its main reliance. On the night of Sept. 20 there was a severe electrical storm and the second machine, a 15,000-kw. turbine, was put out of service.

This left the station with two old machines which had been kept merely for emergency purposes, a 9,000 and a 3,000 kw. But at 7:10 on the morning of Sept. 21, when these two machines were being tuned up to shoulder the peak load, the spindle on the governor of the 9,000 kw. broke.

In this emergency the old 3,000 machine and the hydro-electric plant at Sears were called on for their last drop of "juice" and until repairs were made on the 9,000-kw. machine the plant was hard hit to supply enough power to run cars and the power and lighting circuits.

The lighting circuit was not interfered with. Power circuits were restored in Davenport, Iowa, at 11 o'clock and in Rock Island and Moline, Ill., at noon. The generator in the steam plant at Davenport was called on, this auxiliary being available because the plant was being tested out preparatory to furnishing its steam service through the winter months. By the use of this auxiliary the power and lighting circuits were kept going and a few street cars were operated.

The crippled service affected the

Muscatine, Iowa, street cars and the interurban cars operated between Clinton, Davenport and Muscatine.

### New York Would Install More Trackless Trolleys

Municipal "trackless trolleys" operation between Richmond and Tottenville, Staten Island, a distance of about 9 miles, was proposed by Grover A. Whalen, Commissioner of Plant and Structures of the city of New York, in a report submitted on Oct. 18 to the Board of Estimate. Commissioner Whalen asks that \$177,700 be appropriated to establish the new line. Commissioner Whalen's recommendations are:

That this department be authorized to establish a trackless trolley system between Richmond and Tottenville, to be operated by electric current generated at the Sea View Hospital power plant.

That corporate stock in the amount of \$177,700 be authorized for such installation.

The estimated cost includes the erection of a double overhead trolley system 9 miles long, construction of 7 trackless trolley cars, erection of transmission line from Sea View power house to Richmond, feeder lines along the route, automatic substation, electric generator to increase power output at Sea View and shelter for cars and spare parts.

Mr. Whalen said:

It is now my duty to report to you that these trackless trolley systems have been installed and are in successful operation between Meier's Corners and Linoleumville and Meier's Corners and Sea View Hospital.

This installation was described in detail in the ELECTRIC RAILWAY JOURNAL for Oct. 15.

### Berkshire Men Accept Cut

Motormen and conductors employed by the Berkshire Street Railway, Pittsfield, Mass., will accept a wage reduction of 8½ per cent, retroactive to June 1. The reduction follows an agreement between the union and the company, a few months ago, that the Berkshire employees would abide by the decision of the arbitration board in the case of the Connecticut Company and its employees. This latter board recently announced its findings for a reduction of 8½ per cent.

### Hearing on Transit Plan Postponed

Nov. 10 has been set as the date for the first hearing before the New York Transit Commission on the outline of its proposed transit plan, reviewed at length in the ELECTRIC RAILWAY JOURNAL for Oct. 1, page 557. It was originally proposed to start the hearing during the week commencing Oct. 17. A statement by the commission follows:

The outline of the plan published by the commission at the end of September, was given out at the earliest date at which it could be completed, in order to inform the public of the progress made, and to furnish a basis for study in advance of the hearings. The reception given the report by the press and the discussion that has followed have been gratifying. But while much of the criticism has been constructive and of a helpful tendency,

there has been a pronounced disposition in some quarters to make the transit plan a football of politics, employing prejudiced misrepresentation and abuse in place of dispassionate inquiry.

It has become increasingly evident that such an attitude makes it futile to attempt to develop the plan through the medium of the examinations proposed while the campaign is on.

The commission's program has nothing to do with politics, and its action will not be affected either one way or the other by the issue of the election. Its function is to work out a reorganization based on sound economic principles, to repair as far as it can the damage that has been done and to relieve the present intolerable conditions as soon as possible with the degree of sureness required.

The commission believes, therefore, that a short delay in beginning its series of hearings—which could in no event be finished until a considerable time after election—will be more than compensated for by the better progress that will be made when the whole matter may be approached free from the biased and unreasoning spirit engendered by a political contest.

### Richmond Wages Continue Unchanged

No change in the wages paid employees of the Virginia Railway & Power Company in Richmond, Petersburg, Norfolk and Portsmouth is to be made at this time, and the same working agreement between the men and the company is to continue in force until further notice, though it will not be renewed for another year. Announcement to this effect was made on Oct. 5 at the conclusion of a conference between representatives of the employees and officers of the railway company.

All relations between the men and the company are to continue as they now exist until some further decision is made, dependent upon conditions in the four cities. This solution of the problem was said to have been satisfactory to both interests. The present agreement made for one year expired on Oct. 16.

President Thomas S. Wheelwright, of the company, issued the following statement:

Officials of the Virginia Railway & Power Company were in conference yesterday and this morning with representatives of employees of the company in the matter of contract covering wages for another twelve months' period, the present contract expiring on Oct. 16.

The company advised the representatives of the employees present that owing to the unsatisfactory conditions prevailing in the street railway field and the uncertainty as to what action looking towards relief might be taken by the councils in the respective cities concerned, it would not see its way clear to renew the contract as to wages for any definite period. It is the company's intention, of course, to live up to any outstanding agreements affecting wages, either verbally or in writing.

**Railway Will Be Rebuilt.**—In accordance with an agreement reached with A. B. Anderson, Judge of the United States District Court at Indianapolis, and the city of Lafayette, employees of the Terre Haute, Indianapolis & Eastern Traction Company have replaced the connecting track at East Main and Kossuth Streets to permit interurban cars of the traction company to enter the business district of Lafayette. Three months ago the city tore up the connecting track in Lafayette and since then the cars operated on the interurban railway have been stopping at the city limits.

## Financial and Corporate

### Consolidation Not Obligatory

Legislation Now Being Worked Out Covering Merger of Lines in Washington

Uncertainty as to what the railways in the District of Columbia may expect in the way of legislation was increased by the recent action of the House in voting overwhelmingly to recommit the bill of its District of Columbia committee which was intended to facilitate the consolidation of the Washington Railway & Electric Company and the Capital Traction Company. It is very certain that this rebuff will not deter the committee from reporting out further legislation.

In the discussion of the legislation it was made very clear that nothing in the committee's bill would compel consolidation. It was stated that the object was to remove the obstacle to consolidation and to equalize returns in such a manner as to make it desirable to effect the consolidation. The committee proposed to amend the existing law which provides a tax of 4 per cent on gross receipts and provide a tax of 1 per cent on gross receipts coupled with a tax of 50 per cent on all earnings in excess of 7 per cent on the fair value of the property. In the new bill introduced by Representative Woods, the 50 per cent tax would apply to all earnings in excess of 6 per cent.

It was shown during the debate that the receipts of the two companies are practically the same. Each carries between 75,000,000 and 80,000,000 passengers a year. The difficulties lie in the fact that the Washington Railway & Electric Company carries that number of passengers on 133 miles of track, whereas the Capital Traction Company carries that number on 63 miles of track. The result, it was stated, was that a year ago one company made 11 per cent and the other less than 4 per cent on its valuation. It was pointed out that at present the difference has diminished so that the Capital Traction Company is earning about 10½ per cent and the Washington Railway & Electric Company a fraction more than 5 per cent on their ascertained values.

### Merger Under Reorganization Approved

A merger of the Olean, Bradford & Salamanca Railway with the Bradford Electric Railway, Bradford, Pa., has been approved by the New York Public Service Commission. The new company formed by the merger is known as the Olean, Bradford & Salamanca Railway, with headquarters in Olean. Authority has also been granted to issue common and preferred stock to the amount of \$3,808,000, with the understanding that rates to be charged

by the company shall be subject to the direction of the Public Service Commission. The basis on which the reorganization of the properties following foreclosure is to be carried out was reviewed at length in the *ELECTRIC RAILWAY JOURNAL* for Oct. 1, page 567.

### Ford After Electrics

Automobile Manufacturer Negotiating for Interurbans to Tie In with Steam Line

An option on the line of the Cincinnati, Milford & Blanchester Traction Company, Cincinnati, Ohio, has been taken by Henry Ford, Detroit automobile manufacturer. B. H. Kroger, Cincinnati banker, who is one of the principal owners of the traction company, commonly known as the Kroger Line, said that Henry Ford, while on a visit to Cincinnati, recently opened negotiations for the purchase of this line.

The traction company operates an electric railway between Madisonville and Blanchester, Ohio, a distance of 25 miles. It is said that Mr. Ford wants to connect this line with the Detroit, Toledo & Ironton Railroad, purchased by him some time ago. While the Kroger line is an interurban, its right-of-way could be used for the operation of steam trains and that is what Mr. Ford wants, officials of the traction company said.

Representatives of the Cincinnati, Milford & Blanchester Traction Company have been in Detroit conferring with Ford officials on details of the transfer, but so far nothing of a definite nature has developed. It is known that Ford engineers also have been investigating possible purchase of the Cincinnati, Georgetown & Portsmouth Railroad, which extends east of Cincinnati toward Portsmouth, with the idea of connecting Ironton, the present terminal of the Detroit, Toledo & Ironton Railroad, and Cincinnati, with a direct Ohio River Valley line.

If Mr. Ford obtains title to the great Muscle Shoals nitrate plant in Alabama it is believed to be his plan to push an all-Ford direct rail connecting with Detroit and Muscle Shoals with a southern extension to Mobile, Ala., which would give the automobile manufacturer a direct line from his plants at Detroit to tidewater at the Gulf of Mexico tapping his West Virginia and Kentucky coal properties, Muscle Shoals and the Birmingham, Ala., iron and steel districts.

In the event that Ford purchases the Cincinnati, Milford & Blanchester Traction line he will probably connect it with the Detroit, Toledo & Ironton Railroad at Kingman or Washington Court House, Ohio.

### Toledo Reports Surplus

September First Month Under Service-at-Cost That Receipts Exceeded Expenditures

For the first time since the cost-of-service plan was adopted in Toledo last February a report showing an operating surplus rather than a deficit has been turned in to members of the board of control by Street Railway Commissioner Wilfred E. Cann. The report for the month of September has shown that income exceeded expenditures and credits to various funds by \$11,110, which compared with a deficit of \$20,098 for the previous month.

The report for the eighth month of operation under the Toledo plan came soon after President Frank R. Coates of the Community Traction Company had rescinded his order to increase fares to straight 7 cents.

#### PEAK IN FARES PROBABLY REACHED

It is believed by the commissioner that the peak in fares has been reached and that in a few months the stabilizing fund will be built up to normal and fares may start down again.

The deficits in all funds except the sinking fund and stabilizing fund have now been wiped out and only book values are found in those two funds. The deficit to the sinking fund will be cleared away this month. This will allow the city to acquire ownership of the lines at a rate of \$17,708 a month.

During September the total number of revenue passengers carried was 4,521,868 and the daily average was 150,429, a gain from August, for which month the daily average was 148,658. Total earnings for September amounted to \$260,363.

Mr. Cann said:

During the month operation has been curtailed to the extent of 49,921 car miles, the decrease being attributable to one day less of operation, to the cut in service to Toledo Beach, and to reduction in our mileage due to increased speed.

Rent from tracks and terminals shows a decrease of \$4,300, the major portion of which is due to the adjustment made in the rate per car mile charged to interurban lines for use of the city tracks. Revenue from rent of equipment fell off about \$500 and is due to the discontinuance of Beach line service.

Revenue per car mile shows an increase over previous month of 3.28 cents, while operating expense has decreased 0.26 cents and maintenance expense has been decreased 0.17 cent. Ratio of operating expense to income has been reduced 1.57 per cent.

Several changes in routes were made by Commissioner Cann on Oct. 16.

During seven months of the operation of the cost-of-service plan the car riders of the city of Toledo have been saved \$231,741 by the reduced fare and cost of transfers put into effect at the time the ordinance was adopted. The computations were made by Harold Bailey-Stokes, accountant and auditor for Commissioner Cann. They are based upon passengers carried since Feb. 1. The ownership of the city in the railway property is \$123,958. If this were added to the savings the total would be \$455,700 gain by the city since the plan has been in operation. These figures do not include the returns for the month of September.

### Results of Increased Fare Disappointing

The 7-cent fare which has been in effect on the lines of the Louisville (Ky.) Railway since Feb. 21 has failed to increase earnings in the proportion anticipated, the increase having been only about \$200,000 for the period, whereas the company had expected that it would add about \$1,000,000 annually to the revenue. A 2-cent increase, it was figured, would increase earnings about 20 per cent.

James P. Barnes, president of the Louisville Railway, reports that a complete survey of the company and its operations will probably be ready by Nov. 15. This survey will deal in part with improved service and reduced cost of operation where possible. Consideration will be given to increased number of one-man cars, two-car trains and of rerouting certain lines.

### Decrease in Car Riding in Pittsburgh

There has been a great decrease in car riding on the lines of the Pittsburgh (Pa.) Railways as shown in a comparison of September, 1921, and September, 1920. The present 10-cent fare with three metal tickets for 25 cents went into effect in September, 1920.

In September of this year 24,910,047 passengers were carried against 25,848,563 in the same month a year ago. The receipts in September of this year fell below the receipts for September, 1920, by \$126,745.

In July and August of this year there was a greater falling off in the number of rides compared with the same months of last year. Though in those months of this year the fare was 8½ cents and in the same months last year 7½ cents, the receipts were less under the higher fare than under the lower rate of a year ago.

The figures were compiled by the receivers for the city authorities.

### Net Earnings Good—Fares Reduced

The Cincinnati (Ohio) Traction Company will reduce fares ½ cent to 7½ cents on all its lines effective Nov. 1. This announcement was made following the receipt of financial reports for August and September of the traction company by William Jerome Kuertz, Director of Street Railways. The traction company's action is based on the report of earnings for these months, showing a net balance of \$3,671.90. For the month of August the company had a deficit of \$9,722.90, due chiefly to the fact that during that time it had the heaviest ways and construction accounts for any month in several years. This was more than offset, however, by the September report, which showed a balance of \$13,394.80.

The big item that tended to produce a surplus in September was the reduction in platform cost, \$13,445, or

from \$211,146.35 in August to \$197,699.64 in September. Revenue passengers for August numbered 8,659,835 and for September 8,489,125.

### Springfield Line Going Behind

Manager of Ohio Property States Company's Losses in Commenting on Wage Reduction

P. E. O'Brien, general manager of the Springfield (Ohio) Railway, has filed with the City Commission a statement dealing with the recent readjustment of the wages of its men and reviewing briefly the financial condition of the company. It will be recalled that the men accepted voluntarily a reduction in wages effective Oct. 1 of 11 cents an hour, or from 53, 55 and 57 cents to 42, 44 and 46 cents. Mr. O'Brien said in part:

During 1921 up to Sept. 1, we carried 1,250,000 fewer passengers than in 1920. The new wage scale is as yet 100 per cent increase over Jan. 1, 1916. We have been so pressed for cash that we have been unable to pay our June taxes, notwithstanding the accruing penalties.

The unpaid debts for street paving and reconstruction total \$90,000 and are fully shown by the city records. Our monthly deficit has grown from a small amount to more than \$11,000 per month for September of this year.

Our pay roll reductions and any other economies cover only a part of the monthly deficit. We can only hold on and hope for business improvement, in which event we hope to readjust all our relations with the city.

Of course no earnings have been available for stockholders for years. Even the preferred stock, which was sold to erect the new carhouse and purchase cars in 1913, has been in default for dividend for seven years.

Our borrowing capacity is exhausted, owing to the fact that our mortgage bonds have been offered as low as 55 cents on the dollar with no buyers.

Attached was a detailed statement showing the wages received by the motormen and conductors from 1916 up to the present time. On Jan. 1, 1916, they received from 20 to 25 cents an hour. On Oct. 1, 1919, the men were increased from 38, 40 and 42 cents an hour to 43, 45 and 47 cents.

The financial statement showed that for eight months in 1920 there were carried 7,868,900 revenue passengers and in 1921 the number carried during the same period was 6,569,984, or a loss of 1,298,916 passengers. The receipts for eight months from passengers in 1920 were \$449,542. In 1921 during the similar period the revenue was \$425,475. After deducting expenses in 1920 the company's net gain was \$11,350, while in 1921 the statement shows that the company sustained a loss of \$67,999. Mention is made that no provision was made in either year for dividends on preferred stock.

The report shows that the total reduction per year as a result of the wage readjustment will amount to approximately \$55,227, and of that \$45,874 is the reduction in the wages of the trainmen. The operating expenses in 1920 for eight months amounted to \$338,157, while the cost of operating during the same period in 1921 was \$367,850.

### Interurban to Abandon 60 Miles

The abandonment of 60 miles of interurban lines constituting the Lima-Defiance, Medway-New Carlisle, and the Columbus-Orient branches of the Indiana, Columbus & Eastern Traction Company was approved by Federal Judge John M. Killits in court at Toledo on Oct. 18.

Application for the action was made by the receivers on the grounds that the lines do not pay. J. H. McClure, receiver, appeared in person before the court and declared that the unprofitable operation was hindering the business of the main line. Before the abandonment can be actually put into effect the company must also have the sanction of the Ohio Public Utilities Commission. It is expected that several towns and cities will make a vigorous fight before the commission when the interurbans seek to do away with the service.

### Grafton Properties Sold

Dr. T. F. Lanham, the trustee of the bankrupt Grafton Light & Power Company, offered the entire property for sale recently at Grafton, W. Va., in its various classifications as set forth in the legal publication of the sale. When he offered the entire traction line, including all real estate and certain personal property that had not been offered separately, he received a bid of \$14,000, then \$15,000 and after a little Mr. Faris, trustee of the Citizens' Bank, Charleston, bid \$16,000. The property was knocked down to him.

Dr. Lanham then offered the entire power plant on the south side, or all property comprised in schedule H of the advertisement. The bidding started at \$20,000, and it quickly ran up by bids of \$5,000 and \$10,000 to \$60,000. The auctioneer cried the property for some time and no further bids being offered he knocked the property down to N. M. Argabrite, New York, for \$62,000.

The local property will be operated in conjunction with the plant which New Yorkers are now planning to erect on the Cheat River at Caddell just below Kingwood. Mr. Argabrite was accompanied by P. H. Powers, his electrical engineer and assistant, and their counsel P. C. Madera, Philadelphia, and Col. Carlton C. Pierce, Kingwood.

Arrangements were made with the trustee to continue operation of the electric railway until the property is turned over to Mr. Faris by the court. He indicated that he intends to continue the operation of the line indefinitely.

**City Buys Railway.**—The city of Goldsboro, N. C., recently bought all the outstanding stock in the Goldsboro Street Railway, and this railway will be operated in the future under municipal management. The line was discontinued in October, 1920. New equipment has been ordered.



# Traffic and Transportation

## Jersey Charging 8 Cents

**Public Service Railway Has Put New Rate Into Effect Under Court's Restraining Order**

Another step has been taken toward securing the advance in fares sought by the Public Service Railway, Newark, N. J. The decree has been signed by the court putting into effect the temporary injunction against the Public Service Commission. The order of the court restrains that body from interfering with the company collecting an 8-cent cash fare or four tickets for 30 cents with 1 cent for transfers, pending final decision by Federal Judges Wooley, Davis and Rellstab of the adequacy of the rate of 7 cents with 2 cents for transfers allowed by the commission under its recent ruling. The company is seeking a 10-cent fare.

### NEW FARES CHARGED ON OCT. 20

The railway put the advance into effect on Oct. 20, or just as soon as the company could arrange to comply with the provisions laid down by the court. Under these provisions the company is required to give a bond of \$250,000 to guarantee riders a refund in the event the new rate of 8 cents is reversed. Rebate slips must be issued while the new fare is collected. In the event that the final decision of the court is not rendered in two months the company must supply additional bond.

The hearing at which the details were fixed by the court for putting its order into effect was held at Trenton on Oct. 18. Robert H. McCarter of counsel for the company opposed either impounding the extra pennies the company will collect or the filing of a bond. He said either practice would be "irk-some and hard for us." He said the money, if used to renew the property of the company, would be protecting the public to better advantage than if it were impounded and saved.

President Thomas N. McCarter of the company suggested that the tokens to be sold be restricted to use by non-transfer riders and that persons paying the straight fare of 8 cents and 1 cent for a transfer be refused refund slips so that they would pay the same as they have recently been paying.

### MASTER TO BE APPOINTED

Judge Rellstab wants to have submitted to him by Oct. 27 the names of several men who might qualify as masters to hear the testimony in the final determination of the case. He will then assign the man to sit for the court.

In the meantime the state is rushing its preparations for an appeal at Washington.

The session at which the decree was framed and signed was not held with

the formality of a court sitting. It was merely a conference. One of the outstanding features was that while Judge Davis was present, he took no part in the discussion between counsel and members of the court. He had filed a dissenting opinion and Judge Wooley several times explained to the audience that he left Judge Davis out of the conversation because Judge Rellstab and himself were responsible for the granting of the injunction and felt that they should bear the full responsibility for the carrying out of the decree.

## Formal Bus Proposals in Saginaw

Six proposals for motor bus service were made to the City Council of Saginaw, Mich., on Oct. 19 by companies offering to organize transportation companies or sell buses to the city to replace the service formerly rendered by its bankrupt street railway system, known as the Saginaw-Bay City Railway. The proposals covering the formation of a company to serve the city suggested a corporation with a capitalization averaging \$350,000 and operating a number of buses varying from thirty to sixty cars in the various plans.

All of the proposals for organizing companies asked aid from the city or local business interests, the plan of the Wolverine Transit Company, Detroit, asking that local people subscribe for \$125,000 of advance transportation. The proposals were taken under advisement by the Council, which was to meet again Oct. 20 to give them further consideration.

## Miss Safety First Trips to Buffalo

Plans for an extensive safety first campaign in the public schools of the city have been outlined by the International Railway, Buffalo, N. Y. A woman who formerly worked in Philadelphia for the Mitten interests has been employed by the International and will be known as Miss Safety First. The co-operation of the municipal authorities and the city school department is sought so that she can deliver lectures and safety first talks in the schools.

Explaining the plans of the traction company, Herbert G. Tulley, president of the International, said the word "don't" will be taboo in the safety first campaign and that instead of telling the pupils in the schools not to do this and not to do that, Miss Safety First will tell them to cross at corners, etc. will tell them before crossing, etc.

Signs have been placed in the street cars advising children of the appearance of Miss Safety First and urging them to use caution to avoid accidents in the streets.

## City's Case Closed

**Chicago Rests Its Argument for a Decrease of Surface Line Fares to Five Cents**

The city of Chicago on Oct. 14 closed its case against the Chicago Surface Lines before the Illinois Commerce Commission. This is the proceeding in which the commission is being urged to reduce the rate of fare from 8 cents to 5 cents. A continuance was taken until Oct. 25 so that the lawyers might go to Washington and argue another branch of the fare case before the companies start putting in their evidence.

John T. Fanning, an engineer, was one of the city's principal witnesses. He claimed that the operating expenses could be reduced to \$31,199,500 by conducting business at a cost of \$2.40 an hour as follows:

Item	Per Car Hour	Total Cost
Platform expense.....	\$1.60	\$20,800,000
Supervisors, checkers, etc. (500 men).....	.085	1,105,000
Repairs (400 men).....	.039	507,000
Clerks (150).....	.0275	357,500
Power.....	.25	3,250,000
Maintenance and renewals.....	.28	3,640,000
Administration and office.....	.0385	500,000
Compensation and damages.....	.08	1,040,000
Total.....	\$2.40	\$31,199,500

The city did not care to take the burden of saying that wages should be reduced and this witness was embarrassed at times to explain how he could operate without any allowance for reporting time, overtime or any thing other than actual running time.

Another city witness was Special Engineer George W. Jackson, who also was subjected to a long cross-examination. Among other things Engineer Jackson stated that he could save \$18,000,000 a year and that he could take care of 2,000,000 additional cash passengers without extra equipment. His system contemplates the abandonment of 8 miles of present special work in the downtown district and the use of single track curves. By simplification of the looping system he said the downtown speed could be increased from 4 m.p.h. to 8 m.p.h. and the speed for the system from 10 to 13 m.p.h. He would also make other changes.

The city is contending that a considerable profit can be made under operation at a 5-cent fare and insisted that even if this were not true the companies should be content with a loss during the remaining five years of the ordinance because of profits in the past.

## Courtesy Not "A Lost Art"

The "Civility" Campaign launched the first part of October by the Northern Ohio Traction & Light Company, Akron, Ohio, is proving a big success and has become the watchword of the employees. In a letter addressed to the employees of the railway and invited to be read by patrons of the line, D. A. Scanlon, general superintendent, says: "There is no real justification for insolence from a platform man to a patron, nor from a patron to a man in charge of a car."

## Zones Suggested for Los Angeles

Commission Engineer Recommends Two Six-Cent Units for Pacific Electric Railway—Company Carefully Managed

The Pacific Electric Railway's application to the California State Railroad Commission was reheard in Los Angeles on Oct. 11. The appeal is for an increase in rates, which is considered a substantiation of the emergency raise granted the company during July, 1920, by the commission to tide the company through the abnormal cost of materials and labor. From testimony given by Chief Engineer Richard Sachse of the commission, it would seem that radical changes in railway service of various cities in southern California as served by the Pacific Electric lines will be necessary to put the system back on a profitable footing.

**M**R. SACHSE filed a service survey report of three volumes or a total of approximately 600 pages, prepared by the Railroad Commission's engineers after a study of the situation extending over a period of fourteen months.

Since Mr. Sachse's valuation report of the company's property has been previously made known, the railway company's attorneys at the opening of the hearing expressed a desire to file several exceptions to the valuation figures. The first contention of the railway was against the commission's item of engineering; namely, 5 per cent. The company contended that 6 per cent was the reasonable figure for this particular item. The railway also took exceptions to the multiple ratio used by the commission in arriving at the value of the company's right-of-way, claiming too low a value was allowed.

The item of interest was contested. Whereas the commission in one of its estimates figured it at 6 per cent, the company contended it should be allowed at least 8 per cent in order to take care of its amortization of the bonds. Exception was also taken to the commission's method of treatment of allowing interest on funds during construction period and to the commission's report of the valuation of the company's park and resort property. The commission set aside this property at its valuation cost of some \$449,000 as non-operative property. The company contends that this should be included in the operative property.

### NON-PAYING LINES SHOULD SHUT DOWN

Chief Engineer Sachse of the commission was on the stand the entire day reviewing in general his service survey report, but the attorneys for the various municipalities pleaded for a further continuance of the case until they could study his report and be prepared to present their objections. Nov. 14 was set as the date to continue the case, while Oct. 11 and 13 were devoted to hearing Mr. Sachse testify in general as to the contents of the report and his recommendations to remedy the Pacific Electric's financial condition.

Mr. Sachse recommended that many non-paying lines be discontinued. In his report he states that the entire system now shows a gross deficit of \$13,443,444, and is in default on bond interest to the extent of \$5,000,000. The company has been operating at a loss of \$500,000 to \$1,000,000 annually; and

under these conditions, the engineers find, the company faces being delivered in the hands of receivers.

The commission's engineer ascribes the present condition of the railroad's finances largely to the "cut-throat bus competition." The motor bus competition involves the big issue of the present hearing and from the report of the commission's engineers it is indicated that a new case at which this particular situation will be threshed out is looming up at this time. Present conditions are believed to show that southern California is going to be the battle ground for the settlement of the motor bus and electric line competition which has rapidly been growing into one of the biggest transportation problems of the country. Engineer Sachse in his report estimated that the bus lines were cutting into the revenue of the company to the extent of \$1,000,000 annually. Referring to the federal census of 1920, the commission's engineers point out that while the population in the four counties served by the Pacific Electric Lines increased 78 per cent over that of 1910, passenger travel showed an increase of only 16.5 per cent over the totals of 1914.

The engineers stated that the rates had only increased 38 per cent during the past four years while operating expenses of the railway have increased more than 100 per cent.

Mr. Sachse in his testimony relative to the bus situation stated that it is up to the people to decide which form of transportation they desire, and that he will present to the commission the cost of operation of the interurban lines and the cost of operation of the bus lines. He claims that the bus lines' figures of their cost of operation are not presented to the commission in the proper shape, but that after a thorough study of their operations he has found that it is costing the bus lines a great deal more to operate than they report to the commission.

Mr. Sachse states that the Pacific Electric Lines has invested more than \$2,000,000 in street pavement and annually spends more than \$400,000 maintaining this street pavement. He recommends that the railway be relieved of the financial burden of street pavement assessments.

With reference to deferred maintenance, Mr. Sachse in his report recommends that within the next three years the Pacific Electric spend \$3,000,000 for

deferred maintenance, of which amount \$1,500,000 represents deferred maintenance of ways and structures, while \$1,500,000 represents deferred maintenance of equipment.

In the year 1910 the company carried 50,000,000 passengers, and as the population doubled Engineer Sachse claimed the passenger haul should have quadrupled in the year 1920 or the company should have carried 200,000,000 passengers, but the company carried only 96,000,000, although from 1910 to 1920 inclusive, the system increased its service 3,000,000 car miles.

### TWO SIX-CENT ZONES SUGGESTED

The commission's engineers in their report recommended the creation of a two-fare zone in the city of Los Angeles, with a 6-cent fare for each zone and a fare from 10 to 12 cents in riding from one zone into another. Several plans for collection of fares under the zoning system were included in the report. In each case the inner zone boundary would have a radius of 4½ miles from a given center of the city. The outer zone would average 3 miles across the city limits. Under the first plan the business section of Los Angeles would constitute one zone and the outlying residence section the second. Tokens would be sold at the rate of 10 for 50 cents, each token being good for a ride within a zone.

As an alternative for the zone system Mr. Sachse suggested that a flat increase in local fares on the Pacific Electric city lines to 8 cents might be made, but it was pointed out that this plan would be unfair to patrons riding only a few blocks. A proposal was also made to charge 1 cent for each transfer issued.

Among the increases asked for by the company are: Increase mileage rate for thirty-ride family commutation tickets from 1.8 to 2 cents per mile, or 11 1/9 per cent increase; 20 per cent increase in daily commutation sixty-ride ticket; in cities outside of Los Angeles, 10-cent local fare.

At this time the freight earnings represent 30 per cent of the gross income. Mr. Sachse recommended that this freight business must continue.

### PROPERTY CAREFULLY MANAGED

Mr. Sachse stated that the company's organization was being handled most efficiently and economically.

Since Mr. Sachse testified that in his opinion no increase in fares on the Pacific Electric lines would be necessary if the electric lines enjoyed the patronage given competitive motor freight and passenger carrying lines, the bus interests are battling against any action that might involve their franchises and operating certificates.

### Taxes on Transportation Repealed.—

The U. S. Senate agreed recently to the repeal of taxes on freight, passenger, Pullman and express transportation, effective Jan. 1. The repeal was made without a record vote.

## Buses to Extend Railway

According to a recent announcement of Meade Frierson, general manager of the Nashville (Tenn.) Interurban Railway, an extension of the line via truck and bus will be made to Columbia. The Nashville Interurban connects Brentwood, Nashville and Franklin.

It is planned to maintain a two-hour schedule between Nashville and Columbia. Passengers will be taken from Columbia to the interurban station at Franklin where they will be transferred to the electric road.

This extension will give to Columbia and Maury County the choice of two carriers for the transfer of freight and passenger traffic, the Louisville & Nashville Railroad (steam) being the other property which maintains a service between Nashville and Columbia.

## Adopts Heart-to-Heart Discussion

Richard Meriwether, vice-president and general manager of the Dallas (Tex.) Railway, has adopted a plan of meeting with the trainmen in their various gatherings and discussing with them in a heart-to-heart manner the problems that affect them as well as the company's interests.

In a recent issue of "Partners," the official publication of the railway, some remarks of Mr. Meriwether on his meeting with the employees at the East Dallas carhouse are quoted. In part his talk follows:

I am fighting for you on the one side and the stockholders of the company on the other. I am the trustee, so to speak. I protect you first and then I scan the books in an endeavor to pay a little interest to the people who have invested their life savings in our company.

Mr. Meriwether said his door was open at all times to men who might seek information about the affairs of the company. He also invited suggestions from the men whenever they saw fit to make them.

## To Teach Safety in New Way

Teaching safety, through childhood fairy tales, is a new plan which has recently been started by the Los Angeles (Cal.) Railway, in co-operation with the Board of Education. More than 300,000 copies of folklore classics are being distributed to school children, from the first to fifth grades, inclusive. The back page of the booklets is devoted to pictures and verse, showing how automobile and street car accidents happen, and how they can be avoided.

It is the hope of Mrs. Susan M. Dorsey, superintendent of schools, and agencies working with the Board of Education in accident prevention, that the children will take the little books home to their parents, and incidentally interest them in the move for greater safety. Each book contains eight pages, with colored illustrations. Sixteen different books are included in the series, and each child will receive eight, according to his grade in school. The distribution will cover a period of two months.

The safety suggestions on the backs of the books are not confined to street

cars, but include automobiles and general traffic conditions. They do not carry the name of the street railway.

## Rerouting Proposed

### Best Features of Many Proposed Plans Adopted for Application in Milwaukee

The Milwaukee Electric Railway & Light Company has been directed by the Wisconsin Railroad Commission to reroute certain of its railway lines in the downtown district to effect a reduction in the traffic congestion on Grand Avenue, the city's principal business and amusement center.

The principal change to be made will be the shifting of the Wells-Downer line from Grand Avenue to Wells Street, a parallel east and west thoroughfare. Stretches of track on Wells Street are owned and operated by two other electric railways, the Milwaukee Northern Railway and the Chicago, North Shore & Milwaukee Electric Railway. The shift in the route of the Wells-Downer line will therefore necessitate the joint use of track by the Milwaukee Electric Railway & Light Company, and the two other roads involved. The commission's order requires that the change in the route of the Wells-Downer line be effected within sixty days from date of issuance of the order, that is by Nov. 1, 1921.

Other changes in routing to be made are to be effected within ninety days and will involve the State, National, Third, Vliet and Walnut lines. The purpose of these changes is to eliminate certain objectionable turning movements and reduce the number of street cars passing certain points in the downtown district which appeared at present to be equally as congested as Grand Avenue under present routing. In this connection the commission pointed out that the operation of street cars on the streets should be considered as only one element in the congestion complained of. Many things conspire to create this congestion, it said, and any rerouting of cars can be expected to relieve the condition only partially.

Original action in the case was taken in 1913 when the commission on Dec. 1, 1913, ordered the joint use of tracks on Wells Street owned by the Milwaukee Northern Railway and the Chicago & Milwaukee Electric Railway, now known as the Chicago, North Shore & Milwaukee Electric Railway, by the Milwaukee Electric Railway & Light Company and fixed the terms and conditions of such use. The owners of the track appealed to the Circuit Court of Dane County, which held that the commission's orders were unreasonable in that they permitted the companies having joint use of tracks to examine each other's books and records. In orders issued Jan. 26, 1921, the commission corrected its original orders to meet the court's objections and retained jurisdiction to make further investiga-

tion of the question of the proper method of compensation upon application by any interested party. Following this the city of Milwaukee petitioned the commission for an order requiring the Milwaukee Electric Railway & Light Company to reroute certain of its cars from Grand Avenue to other streets. Similar petitions were received from the Milwaukee Safety Commission, Milwaukee Real Estate Board and various civic organizations.

A hearing was held in Milwaukee at which a number of rerouting plans were presented by various civic organizations. The Milwaukee Electric Railway & Light Company submitted its views with reference to the rerouting problem. The company's report suggested the adoption of what in its opinion seemed to be the best features of all the proposed plans as a so-called "composite" plan. Following an investigation by the commission's engineering staff and another public hearing the so-called "composite" plan was adopted by the commission. It forms, in substance, the basis of the commission's present order in the case.

It is of interest to note that the commission points out in its order that the attitude of each of the railways involved has been throughout the entire proceeding, as expressed by their representatives, that they stood ready to comply with any order for the rerouting of cars which the commission determined to be under all the circumstances appropriate and in the interests of the city of Milwaukee and the street car riding public.

## Auto Petitions Heard in Connecticut

The Connecticut Company, New Haven, Conn., has recently installed an auto bus service between the tunnel in Hartford and the Union Station as an experiment. If operation of the line is successful, it is said, other routes for a similar service will be established. The Common Council of Bridgeport has petitioned the Public Utilities Commission for additional jitney routes, and has asked the commission to touch on electric railway fares. It is understood, however, that the commission cannot give a hearing to the Bridgeport officials under the terms of the petition. The commission has already conducted hearings on the jitney question in that city.

## Auxiliary Motor Bus Service Suggested for Montreal

The establishment of an auxiliary autobus service from St. Catherine Street to Wellington Street, Montreal, Que., advocated by Ald Elie, has been favorably commented on by E. A. Robert, president of the Montreal Tramways, and Messrs. Graves and Seurt, engineers of the company and the Tramways Commission respectively. The matter is now in the hands of the Tramways Commission for decision. The length of the proposed route is about a mile and a half.

## Reduced Fares in Sight

### Seattle's City Council Will Make Thorough Study of All Transportation Problems

Following the city of Seattle's victory in the "Jitney Must Go" campaign, with the result that jitneys are now barred from all Seattle streets, the City Council is turning its attention to the problem of reducing street-car fares on the lines of the Municipal street railways. The present rates provide a 10-cent cash fare, with tokens valued at 8½ cents, for sale on street cars. A number of suggestions have been made for decreasing the present fare, and at an early session of the council as a whole, all ramifications of the city's transportation problems are to be thoroughly discussed.

Councilman C. B. Fitzgerald, chairman of the finance committee, has had introduced in the city council an ordinance that provides for a 5-cent fare, with what is virtually a 3½ cent charge for transfers. Under the proposal, a car rider would pay a nickel for one ride on any street car of the municipal street railway. If he wanted a transfer, however, he would drop in the box one of the 8½-cent tokens, which would continue to be sold on cars at three for a quarter.

Another ordinance to be considered is that of Councilman Oliver T. Erickson, who proposes that the city shall pay, out of general taxation, for maintenance and upkeep of the municipal lines, above such sum as would be netted after the Stone & Webster bond interest is paid. Councilman Erickson believes that with such a plan a car fare possibly as low as 3 cents could be maintained. Councilman Erickson's proposition is meeting with little support in the Council. It has been estimated that such a plan would double the present rate of taxes in Seattle.

Important reductions in the expense of operating the Municipal Street Railway lines are expected to be made, the largest of which will be the item of approximately \$300,000 in revenues which has been taken from the municipal lines by the operation of jitneys. Councilman Fitzgerald also proposes to eliminate an expense of \$140,000 a year now paid to extra operatives hired while employees of the street railway are on their 15-day annual vacations on full pay. Mr. Fitzgerald expresses the opinion that with a proper and economical operation of the lines, the reduction in fare will not result in a call on the general taxation funds to meet expenses. Every member of the City Council favors a reduction in fares, if such a change can be made and the operating expenses of the lines covered without resorting to general taxation.

An ordinance that is now before the City Council proposes an appropriation of \$50,000 for the purchase of municipal buses to be operated on the Cowen Park route, these cars to run direct to the city from Cowen Park

without stopping en route to pick up or discharge passengers. Residents of the district are extremely anxious to secure this service and have appeared frequently before the Council to urge their claims.

Mayor Hugh M. Caldwell, skeptical as to the advisability of reducing fares on the municipal railway to 5 cents, recently called together a group of lawyers to discuss the possible effect of a 5-cent fare. The consensus of opinion was that failure to charge an adequate fare might make the city liable to a damage suit from bondholders. Assistant Corporation Counsel J. T. Kennedy expressed the opinion, however, that there is no legal question involved until it is determined by experts and statisticians that the 5-cent fare would be inadequate to pay the interest and principal, and the cost of operating the railway. The so-called "adequate fare" clause of the railway utility bonds was defined by attorneys as requiring the city to charge a fare adequate to meet interest and redemption without any reference to cost of operation.

Under the present 8½-cent fare, the municipal railway will go on a warrant basis on or about Jan. 1, 1922, in order to accumulate sufficient funds to meet the first payment of \$833,000 to the Stone & Webster interests next March. This would mean that local banks will be asked to cash pay-warrants, and be reimbursed by the city at a time when the revenues of the railway will permit. In addition to the \$833,000 payment, on principal, there falls due next March 1 a semi-annual interest payment of \$410,000.

## Monthly Commutation Scheme in Muscatine

With the slogan "The more you ride, the less you pay" the Clinton, Davenport & Muscatine Railway will put into effect a new monthly commutation plan in Muscatine on Nov. 1.

Under the new system the frequent rider will ride cheaper than at present. The holders of a commutation ticket will be allowed to ride on any railway line in the city for 5 cents. Tickets will cost 50 cents and will be good for a period of one month. Workmen's tickets in books of fifty will continue to be sold after Nov. 1, but the price will be raised to \$2.50 a book.

The accompanying table shows the net cost per trip for from ten to one hun-

dred rides where commutation tickets are purchased.

Individuals who will not benefit under the new commutation ticket plan are the occasional traction line patrons. If a man uses a street car ten times per month or less, it will not pay him to invest in the monthly tickets. He will have to pay the full 10-cent fare.

## Illinois Commission Denies Certificate to Competing Bus Company

A certificate of convenience and necessity has been denied to the Argo Motor Bus Company by the Illinois Commerce Commission. The company sought to operate a motor bus line in competition with the Chicago & Joliet Electric Railway. This is one of the first orders issued by the new commission in considering a large number of such petitions now pending before it.

The Argo Motor Bus Company started operation on March 18, 1921, without a permit. The Chicago & Joliet Electric Railway filed a complaint with the commission, which ordered the bus company to discontinue operation. The latter failed to obey the order, and the matter was referred to the Attorney General, who applied for an injunction in the Circuit Court. In the meantime the parties who operated the buses incorporated and filed application with the commission for a certificate. The court thereafter refused the injunction on the grounds that an application had been duly made to the commission for a permit and the date for the hearing had been set.

As the result of the hearing before the commission, an order was issued denying the permit on the grounds that the service rendered by the bus company was unreliable and uncertain and that no regular scheduled service was maintained, that no necessity existed for the operation of motor vehicles between the point specified by the application, that the applicant had not complied with the requirements of the law, and that the electric railway was supplying sufficient and adequate transportation facilities.

The commission also stated that to grant the application would result in depriving the public of adequate and sufficient transportation facilities, since it would become necessary for the electric railway to discontinue some of its present service in order to pay operating expenses. The public would be required to pay a higher rate of fare if both motor vehicle and electric interurban transportation were maintained.

The bus company has been operating from the Chicago terminal of the Chicago & Joliet Electric Railway at Cicero Avenue, paralleling the interurban line to a point known as Argo, a few miles outside of Chicago. Now that the commission has issued an order denying the permit, the court will undoubtedly grant an order restraining the bus company from operating if the latter continues.

Rides Month	Ticket Cost	Fare Paid	Total	Net Fare
10	0.50	0.50	1.00	10c.
11	0.50	0.55	1.05	9.54
12	0.50	0.60	1.10	9.16
13	0.50	0.65	1.15	8.84
14	0.50	0.70	1.20	8.57
15	0.50	0.75	1.25	8.33
20	0.50	1.00	1.50	7.50
25	0.50	1.25	1.75	7.00
30	0.50	1.50	2.00	6.67
40	0.50	2.00	2.50	6.25
50	0.50	2.50	3.00	6.00
60	0.50	3.00	3.50	5.83
70	0.50	3.50	4.00	5.71
80	0.50	4.00	4.50	5.62
90	0.50	4.05	5.00	5.55
100	0.50	5.00	5.50	5.50

## Fare Reductions Sought

Connecticut Cities Seek to Return to the Five-Cent Unit—Company Behind 1916 Record

At a hearing before the Public Utilities Commission of Connecticut on Oct. 18 officials of the city of Norwalk asked for a 5-cent fare on the lines of the Connecticut Company only between certain points. Evidence, however, disclosed an attitude in favor of a general reduction in fares.

L. S. Storrs, president of the company, said the recent reduction of 8½ per cent in the wages of trainmen would probably not amount to more than one-third of a cent per passenger on an estimated number of passengers for 1921 including the next two months. The company set up as a standard for comparison the figures of 1916, the company's best year. Even with jitney competition removed, the advance in the number of passengers carried in Norwalk in 1921 over 1916 was only 25 per cent. President Storrs said that a general statement would be made for the company in a few days when the results of the decrease in the wages of the men had been figured out.

Norwalk officials introduced evidence to show that traffic had increased 88 per cent over 1920 since jittneys were eliminated, but the company insisted on 1916 figures as a basis for comparison for reducing fares.

At the hearing on Oct. 18 on petition of the city of New Britain for reduced fares testimony was given indicating a decrease of more than 1,000,000 passengers on that division, between November, 1920, and September, 1921, under a 10-cent fare as compared with the number carried in the same period in 1915-1916 under a 5-cent fare.

The report, however, shows that since July 15, when jitney competition was restricted under the new State jitney law, the average increase in revenue passengers on the New Britain division has been 10.3 per cent. The weekly increase in revenue passengers between July 15 and Aug. 25, according to the figures presented, has ranged from approximately 5,000 to 10,000 passengers.

Under the 5-cent rate during the 1915-1916 period 5,446,467 passengers were carried as against 4,140,757 passengers in the 1920-1921 period under the 10-cent rate. Under the 5-cent rate the fares collected totaled \$273,323, while under the 10-cent rate the total passenger revenue was \$414,075.

Mayor Barton of Norwalk and Corporation Counsel William K. Tammany favored fare reductions for the city. The Mayor declared that the jittneys carried more than twice the number carried by the trolleys. He said: "It looks to me like good business for the trolley company to reduce the fare to 5 cents and double the number of passengers."

It was his idea that solid popular support for the company would accompany such a reduction.

Mayor Barton said popular feeling would prefer the trolleys to the jittneys

if the company reduced fares as this would prove it wanted to serve the public and meet its demands satisfactorily. He urged a trial period at a reduced rate, at least. If the company finds a return to the 5-cent fare to be unprofitable, the people of Norwalk are willing to have the question reopened.

It is generally understood that other cities in the State, where the Connecticut Company operates, have prepared petitions asking for fare reductions. These have been held in abeyance, however, pending a decision on the matter dealing with the two cities mentioned by the Public Utilities Commission.

## Jitney Problem Acute in Tacoma

City officials and business men of Tacoma, Wash., fearing the invasion of the jittneys, and looking upon Seattle's long fight as an example, are taking steps to curb the jitney before they become too strongly entrenched. An ordinance providing for strict regulation of jitney operation in the city has been introduced in Council, discussed at length, and put over for further investigation. The ordinance is similar in form to previous measures, except that in the old one, the Council was constrained to give a license upon application, whereas in the new ordinance, the Council may prescribe conditions and refuse a permit if it deems advisable.

Commissioner Silver urged that before an ordinance be passed "swatting the jitney," the Tacoma Railway & Power Company should be required to state what it will give in the way of improved service or extensions in return for elimination of the jitney competition from its earnings. Mayor Riddell favored the immediate passage of the ordinance, which is patterned after the Seattle ordinance, and which, if enforced, will mean the possible elimination of jittneys from Tacoma streets. Commissioner Silver pointed out that conditions are different in Tacoma from those in Seattle, where the street car system is municipally owned.

An interesting feature of the move against the jittneys was the request from the local association of street car men that the ordinance be amended to compel jittneys operating in the city to operate on streets at least one block away from car lines, except in the downtown business section, where this would be impossible.

According to the monthly report of George W. Rounds, superintendent to the Washington Department of Public Works at Olympia, jitney competition is becoming an active factor in cutting down the number of passengers carried and the revenue derived by the Pacific Traction Company and the Tacoma Railway & Power Company on their Tacoma lines.

The month of August which rounded out the first year for the Tacoma Railway & Power Company's city lines under the 10-cent fare, witnessed a decrease in revenues of \$15,169.81

from the same month last year. The total passenger fares paid on city lines in August, 1921, was \$131,103.88, as against \$146,273.69 in 1920. The total number of passengers carried on the city lines in August, 1921, was 2,004,522, whereas in 1920 the total was 2,268,458.

## Transportation News Notes

**Seven-Cent Fare Stands.**—The Public Service Commission of Pennsylvania has dismissed petitions of various Philadelphia improvement associations and civic bodies for reinstatement of the 5-cent fare on Philadelphia Rapid Transit lines. The commission recently ruled that the 7-cent fare would be continued pending completion of valuation proceedings.

**One-Man Cars in Use.**—The International Railway, Buffalo, N. Y., has started the operation of one-man cars on the Connecticut Street line. The company has rebuilt several of its short double-truck cars of an old type into one-man cars. The Connecticut line is the shortest line in the city and does an extensive transfer business. No opposition developed on the part of the city or the union platform employees similar to the trouble experienced by the company when this type of cars was introduced into Lockport.

**Increased Rates Suspended.**—The Public Service Commission recently suspended the application for increased rates on the railway in Salem, Eugene, West Linn and Astoria, Ore., until Jan. 1 of next year. The Southern Pacific Company, which owns the lines operating in Eugene, Salem and West Linn, and the Portland Railway, Light & Power Company, which operates cars in Astoria, last July filed tariffs with the commission increasing the prevailing fares from 5 to 8 cents. The commission later suspended the tariffs temporarily, pending an investigation which has not been completed.

**Co-ordination Again Urged.**—Not until the American railway man understands that the motor bus is not going to replace the railway but merely to help it to operate in thin-traffic routes to a better advantage than on a railway track, the transportation problem will remain unsolved. This opinion was recently expressed by Walter Jackson, electric railway and motor bus expert, speaking before the Boosters' Club at Danbury, Conn., on the subject of "Trackless Transportation." It was on the suggestion of Judge J. Moss Ives that Mr. Jackson addressed the meeting. He praised the service and equipment of the Danbury & Bethel Street Railway and also Receiver Ives' efforts to employ his facilities to the utmost advantage.

## Personal Mention

### Mr. Potter Again President

Elected Head of United Electric Railway, Providence, with Termination of Receivership

Albert E. Potter, for thirty years identified with the traction company of greater Providence, R. I., has been elected president and general manager of the United Electric Railway. This corporation was organized early this year and last July took over the traction properties of the Rhode Island Company under the reorganization plan, following a receivership of nearly two years.

Mr. Potter assumed his duties on Oct. 1, succeeding Zenas W. Bliss, who was made temporary president of the



ALBERT E. POTTER

corporation pending its taking over of the actual control and operation of the trolley lines in Providence and adjacent territory. Mr. Bliss resigned some weeks ago when the receivership was terminated.

Mr. Potter is a unique figure in the Rhode Island traction system. For years he was president and general manager of the old Rhode Island Company. He follows in the footsteps of his father, the late Albert T. Potter, who was head of the trolley lines for many years.

Throughout the entire period when the Rhode Island Company was under fire and the public was criticising the company and the Mellen régime, Mr. Potter retained full confidence of the public. It was considered remarkable how the public always stood behind father and son in the management of the trolley lines while it condemned the holding companies for its policies.

Clifford Whipple, general counsel of the road, has been made vice-president and R. Roscoe Anderson is continued in the capacity of the superintendent of transportation. The same personnel in the department heads is also retained.

Following his election as president Mr. Potter was elected a director of the company, taking the place of Richard B. Comstock, who resigned. This change was made necessary under the company's charter, which requires that the president shall be chosen from among the directors of the road.

The new president has been identified with the trolley company since boyhood. Born in Cranston, R. I., in 1873, a son of Albert T. Potter, Mr. Potter received his education in the schools of that town and was graduated from the Bryant & Stratton Commercial School. In 1892 he went to work in the track department of the Union Railroad. For three years he was roadmaster, and in 1895 was made superintendent of conductors and motormen.

He was made superintendent of transportation in 1900 and in 1906 became general manager of the Rhode Island Company. In 1914 he was made president of the Rhode Island Company, serving until that road went into the hands of the federal trustees. From that time on he remained as general manager of the company.

### C. C. McChord Is Made Chairman of I. C. C.

Charles C. McChord, Kentucky, was selected on Oct. 3 to be chairman of the Interstate Commerce Commission for a term ending on Dec. 21, 1922. Commissioner McChord, who is one of the older members of the commission, will complete the term of Edgar E. Clark, who resigned both as chairman and as commissioner several weeks ago.

### Youngstown Manager Resigns

A. W. Hartford, since 1912 general manager of the Youngstown & Suburban Railway, Youngstown, Ohio., recently announced his resignation, effective Oct. 30. He will spend the winter in Florida.

A. L. Reynolds, who has been associated in the management since Day & Zimmerman of Philadelphia acquired an interest in the property about two years ago, will succeed Mr. Hartford. Mr. Reynolds was appointed general superintendent of the Youngstown property in March of this year. He was formerly in the operating department of the Twin City Rapid Transit Company. An extended review of Mr. Reynolds' career was given in the issue of the ELECTRIC RAILWAY JOURNAL for March 26, 1921.

S. J. Keenan, general passenger agent of the Hudson Valley Railway, Glens Falls, N. Y., now has the title of general freight and passenger agent, having taken over the duties of the former general freight agent F. F. Newberry.

### Mr. Oakley Elected Head of Pacific Claims Association

As was noted several weeks ago, Frank D. Oakley was elected president of the Pacific Claim Agents Association at its annual meeting held at Butte, Mont. He succeeds C. A. Blackburn, who is claim agent of the Butte (Mont.) Electric Railway.

Mr. Oakley is attorney for the Tacoma Railway & Power Company, the Puget Sound Electric Railway and the Pacific Traction Company. Previous to his connection with these interests as attorney in 1912 Mr. Oakley had been engaged in the general practice of law since he came to Tacoma in 1905. Mr. Oakley has never been connected with any electric railway in any capacity other than that of attorney. For the past three years he has held the office of vice-president of the Pacific Claim Agents Association.

Mr. Oakley was born in Chicago on April 25, 1876, where he attended the



FRANK D. OAKLEY

Northwestern University and subsequently the University of Michigan.

The other officers who were elected for the ensuing year are first vice-president, C. M. McRoberts, Los Angeles (Cal.) Railway; second vice-president, P. O. Solon, Tacoma Railway & Power Company, Tacoma, Wash.; third vice-president, J. W. Grace, Sacramento (Cal.) Northern Railway.

### Dan Fisher Leaves the Strickland Interests in Texas

Dan Fisher, assistant to the president and in charge of publicity of the Dallas (Tex.) Railway, Texas Electric Railways, Texas Power & Light Company and other Strickland interests in Dallas, Tex., has tendered his resignation from the companies.

Mr. Fisher has been confidential man for the late Col. J. F. Strickland for thirteen years and had held the position as head of the publicity department of the Strickland interests for more than three years. A successor to Mr. Fisher has not yet been chosen.

John S. Hester, superintendent of overhead and transportation of the Laurel Light & Railway Company, Laurel, Miss., has been promoted to general superintendent, since A. B. Coryell has resigned as superintendent of power. In connection with his other duties, Mr. Hester will supervise the operation of the power plant. Mr. Coryell has been appointed general superintendent of the Muskogee (Okla.) Electric Traction Company and the Shawnee & Tecumseh Traction Company as was noted in the *ELECTRIC RAILWAY JOURNAL* for Sept. 17.

J. W. Hale, general manager of the Humboldt Transit Company, Eureka, Cal., was succeeded by John Griffiths, superintendent of Public Works, with the transfer of the property to the city of Eureka. It is the intention of Mr. Griffiths to make numerous extensions just as soon as the municipal organization has been completed. The only changes made in the personnel of the company so far were in the positions of inspector, electrician and shop foreman, track foreman and clerk and time keepers. For these positions Superintendent of Public Works Griffiths submitted the names of Mitchell Russell for inspector, H. L. Duncan for electrician and shop foreman, I. A. Malone for track foreman and Paul Humphries for clerk and time keeper. These appointments were confirmed by the city council.

## Obituary

James K. King, sixty-four years old, of the legal department of the Indianapolis (Ind.) Street Railway, died at his home in Indianapolis recently.

Charles W. Davis, vice-president and general sales manager of the Standard Underground Cable Company, Pittsburgh, Pa., died in New York recently. Mr. Davis had been connected with the company for the past twenty years.

Jacob Brenner, receiver of the Staten Island (N. Y.) Midland Railway, died suddenly on Oct. 16. Mr. Brenner, who was also commissioner of jurors of Kings County and a veteran Republican leader of the Eighth Assembly District in Brooklyn, and for a generation had been in the forefront of Republican politics in Kings County. He was born sixty-four years ago on the east side of Manhattan, but had resided since babyhood in Brooklyn, his home at the time of his death being 252 Charles Street. By profession a lawyer, he had been the junior partner of Bearn & Brenner since 1891, having founded his own firm after twenty years' experience in the office of Smith, Woodward & Buckley. In 1893 he was appointed counsel to the Police Department of the old city of Brooklyn, and served through two administrations. From 1897 to 1902 he was a city magistrate.

# Manufactures and the Markets

DISCUSSIONS OF MARKET AND TRADE CONDITIONS FOR THE  
MANUFACTURER, SALESMAN AND PURCHASING AGENT

ROLLING STOCK PURCHASES

BUSINESS ANNOUNCEMENTS

## Toronto Commission Seeking Buyers for Old Rolling Stock

The Toronto Transportation Commission, in the course of rehabilitating and revamping the Toronto Railway, which it has been operating since Sept. 1, has recently taken steps to dispose of 340 single-end city-service street cars. The majority of these cars are single and double-truck closed motor cars, although there are some single-truck trail cars. The motor cars are equipped with either G. E. 67, G. E. 80 or G. E. 1,000 motors and K-6 or K-10 controllers. The commission also has a stock of spare equipment which will also be sold. The wheel gage of the cars is 4 ft. 10 $\frac{1}{2}$  in.

Tenders should be addressed to the chairman of the commission.

## Porcelain Insulator Market

Although prices on high-tension porcelain insulators of both the pin and strain types have been reduced only 10 per cent within the last year, there appears to be little likelihood of any further material reductions in the near future. Insulator manufacturers state that in their processes of manufacture it is essential that the personnel of the workmen be changed as little as possible in order to maintain a uniformly standard product. Reductions in labor costs have been very small, and these have been offset by increased charges for freight on both raw material and finished products. Comparison of present prices with those on a pre-war basis is difficult because of changes and developments in materials and design and the different requirements for both types of high-tension insulators.

The domestic market is fairly quiet. Most sales are small and appear to be for replacement and maintenance purposes. Few long extensions are being made and this has naturally curtailed the demand.

Foreign sales are holding up well, and manufacturers report that many European countries have a decided preference for American insulators because their serviceability has been demonstrated in actual practice here. In some countries German competition has appeared, but is not regarded as serious except in the case of insulators for the lower transmission voltages.

## Direct Current Recommended for Netherlands

The commission appointed in January, 1920, to study the desirability of electrification of all railways in Holland has prepared a report which, it is understood, not only favors such a scheme but recommends the use of 1,500 volts

direct current. It is also recommended that the electrification be made in connection with the proposed unification of electric light and power service throughout the country. There is no indication, however, that this work will be undertaken in the near future.

## Trolley Cord Quotations Higher

Recent increases in the raw cotton market have been reflected in a rise in prices for bell, register and trolley cord. Within the past three weeks increases in the various grades of cord have been in the neighborhood of 10 per cent. According to the grade desired one representative manufacturer quotes from 42 to 60 cents a pound for trolley cord while the price of bell and register cord varies between 66 and 74 cents a pound. These prices on an average are about 4 cents a pound higher than those quoted six months ago.

Buying in the trolley field is quiet and the car building field is not providing anything like normal demand though purchases for ordinary maintenance have been steady. Stocks, consequently, are in good condition both in manufacturers' and jobbers' hands and buyers will find no difficulty in having orders promptly filled.

## Large Cement Output in September

The movement of portland cement continued on a large scale throughout September, more than 11,300,000 bbl. having been shipped from mills. Shipments of portland cement during the third quarter of the year were approximately 33,970,000 bbl., establishing a record for this quarter. For the nine months ended Sept. 30, 1921, the shipments amounted to 74,045,000 bbl., which exceeds the former record volume moved in the corresponding period of 1920. Favorable operating conditions are indicated by the large September production of 10,027,000 bbl. of finished cement, which established a record for that month. The average daily production was greater than that of August.

## Pole Demand Satisfactory

The demand recently for poles of all varieties continues very satisfactory, with jobbers reporting white cedar and chestnut poles as increasingly active. One of the largest jobbers in the South reports the receipt of heavy inquiries for poles from utilities during the past several weeks. Stocks of the better class of poles in that territory are fairly good, with shipments from yards are quite prompt.

In the middle West stocks are heavy and moving slowly. A nominal quotation is \$8.60 for a 35-ft., 6-in. top Northern white cedar.

## Rolling Stock

**City Council of Seattle, Wash.**, has enacted an ordinance to appropriate \$50,000 for the purchase of municipal buses to serve Cowen Park, South Beacon Hill and other suburban districts. A separate appropriation provides for the purchase of twenty-five new street cars.

**Toronto (Ont.) Transportation Commission** has received 50 motor cars from the Canadian Car & Foundry Company on its order of 100 motor cars and 60 trailers from that company. The total number of new cars ordered was 210, an order for 50 motor cars having been placed with the Canadian Brill Company.

**Nashville (Tenn.) Railway & Light Company** lately placed an order with the Nichols-Lintern Company for a small number of mechanical sanders. This order, with others which have been given from time to time, will lead to the total equipment of their rolling stock with sanding apparatus.

**United Railways & Electric Company, Baltimore, Md.**, placed an order this week with the J. G. Brill Company for twenty-two one-man double-passageway improved safety cars. Ten cars of this type were purchased last May and the specifications of this equipment were given in the *ELECTRIC RAILWAY JOURNAL* for May 14, 1921. This type of car was fully described in the issue for Sept. 10, both as to design and operating features.

## Track and Roadway

**Hydro-Electric Power Commission Ont. Canada** has started work on the extensions to the Windsor Street Railway estimated to cost \$900,000.

**Jamestown (N. Y.) Street Railway** will lay a four-way switch in the center of the city and double tracks will be laid in Main and Third Streets.

**Boston (Mass.) Elevated Railway** will very shortly begin work on relocating the tracks on Humboldt Avenue. At the same time the city will repair the street.

**Sacramento Northern Railroad, Sacramento, Cal.**, will be rehabilitated if it is taken over by the Western Pacific Railroad. About \$3,000,000 will be spent in improving the system.

**Cincinnati (Ohio) Traction Company** will extend its East End car line to California, Ohio, if the electors at the special election which has been authorized favor the improvement.

**Key West (Fla.) Electric Company** has relaid the main divisions of its line with 80-lb. 7-in. rails replacing the old 4-in. rail on Simonton, United and Duval Streets.

**Cincinnati (Ohio) Traction Company** will install new tracks at Liberty Street, Western Avenue and Freeman Avenue to eliminate a bad turn and congestion in that section. The city will pay for the razing of buildings necessary for this improvement.

**San Jose (Cal.) Railroad** has been granted permission to remove a turnout from the line now operating on East Julian and North Eleventh Streets and to install the necessary equipment for a new turnout on North Eleventh as near as practicable to East Julian.

**Pacific Electric Railway, Los Angeles, Cal.**, has been granted permission to remove its center poles and replace them with span poles to carry its trolley feed and other wires between Orchard Avenue and Normandie Avenue on its Sixteenth Street Railroad line in Los Angeles.

**Philadelphia (Pa.) Rapid Transit Company** has recently bought about 80,000 Douglas fir ties in the far northwest, and they have been shipped by water to Philadelphia. Owing to the low water rate on shipments of this kind, the ties are said to have cost the Philadelphia Rapid Transit Company only a little more than \$1 each.

**Interborough Rapid Transit Company, New York, N. Y.**, will have its line extended from the Grand Central Station to Forty-first Street and Eighth Avenue as soon as the contract for the work has been awarded. Bids for constructing this Queensboro extension will be opened on Nov. 9 by the Transit Commission.

**Los Angeles (Cal.) Railway** has completed the installation of new track ties,

ballast and pavement on the western section of Washington Street and new ties and ballast are now being installed on the Gage Street line. At Seventh and Main the entire cross track and curve from east to north is being replaced with new material.

**Portland Railway, Light & Power Company, Portland, Ore.**, will complete within the next two months, construction work costing \$240,000. The entire Killingsworth Avenue improvement, covering 1½ miles and costing \$60,000, will be completed within two weeks. Rebuilding of the west track on Third Street from Washington to Flanders will cost \$30,000, while the new bridge over the junction of the Bull Run and Sandy Rivers will cost \$150,000.

**Toronto (Ont.) Transportation Commission** has about 2,000 men laying new lines, changing old ones, installing new intersections and making other betterments on various parts of the system. The Dundas line from Keele Street is the first to be completely overhauled for the operation of the new cars. New intersections have been installed and the operation of the cars started Sept. 24. The Coxwell Avenue extension, which is being built, consists of a new double track, a total distance of approximately 2,400 ft. The existing single track on Gerrard Street north to Danforth Avenue will be made into a double track, with doubletrack 'Y's at Gerrard Street north to Danforth Avenue, and to connections with the Danforth car house yards, a total distance of approximately 2,900 ft. of single track. The straight track will be laid with 100-lb. A.R.A. type-A rail, on ties and tie plates, on a 9 in. concrete base, with crushed stone cushion. The paving will be granite block with cement grout. The special track work will be A.E.R.A. standard 122-lb. girder and 100-lb. girder guard rail. This piece of construction will connect the Toronto Civic Railway, Danforth Avenue and Gerrard Street lines with the Toronto Railway lines at Queen Street. An intersection has been installed at the corner of Broadview Avenue and Danforth Avenue, to connect the Toronto Railway tracks with the Toronto Civic Railway, Danforth line. A large force is changing the line, repairing the pavement and doing other work on the Bathurst Street line, northerly from its connection with the Dundas Street line. A 0.75 mile extension of the Bathurst Street line to St. Clair Avenue is being built, and it is expected that it will be ready for operation in November. The tracks are being extended on Bloor Street west, from Runnymede Road to Jane Street six blocks, 2,250 ft.

## Power Houses, Shops and Buildings

**Boston (Mass.) Elevated Railway** will open up its new Arlington Street subway station in time for the rush of Christmas shoppers.

**Fort Smith Light & Traction Company, Fort Smith, Ark.**, will add a 7,000-hp. generator to its equipment early next year. The new plant will cost \$100,000 and it is expected it will be in operation by March 1.

**Indiana Service Corporation, Fort Wayne, Ind.**, has purchased two 1,000-kw. rotary converters in connection with its new substation. Transformers and switchboards have been purchased from the General Electric Company. The company has also bought three 2,500-kw. 2,300-13,000-volt and three 1,000-kw. oil-cooled outdoor transformers. Outdoor substation equipment has been purchased from the Railway Industrial Engineering Company, which, together with five outdoor oil switches and two outdoor lightning arrester equipments, will make up the outdoor substation structure. The substation cost, including equipment, building and changing feeder circuits, will be approximately \$110,000.

**Eastern Massachusetts Street Railway, Boston.** has recently converted its Quincy Point power house from a coal burning to a fuel-oil burning plant. A contract has been made by the company with the New England Refining Company for approximately 7,500,000 gal. of fuel oil per year for the Quincy plant which supplies electricity for the operation of trolley cars in four cities and nineteen towns on the Bay State System south of Boston. The substitution of oil, the company is convinced, will mean substantial saving in cost, the benefit of which under the service at cost plan will be distributed among Quincy, Brockton, Taunton and Fall River operating districts. The oil burning equip-

ment was installed by the Bethlehem Shipbuilding Corporation.

**Toronto (Ont.) Transportation Commission** has let a contract to Wells & Gray for the erection of an addition to the Toronto Civic Railway car house, Danforth and Coxwell Avenues, at an estimated cost of \$235,000. The extension will consist of three concrete car houses, with provision for offices and stores, and the contract includes alterations to the existing buildings, the plumbing and heating, and the provision of rolling steel doors. The existing car house accommodates 39 cars, and with the extension will accommodate 203. Another contract has been let to Jackson, Lewis Company, for the extension of the St. Clair car houses. The present car houses consist of two buildings, one built in 1913, the other in 1916, each being 200 ft. x 40 ft. with three tracks in each unit, housing altogether 18 cars. With the additions to the buildings and yards, 50 cars will be accommodated inside and 107 outside. The extensions to the present buildings consist of two sheds to the south, 230 ft. x 44½ ft. each containing three tracks at 13 ft. centers. On the north another section will be built, 326 ft. x 44½ ft., containing offices, trainmen's recreation rooms, lavatories, locker rooms, stores, boiler room and a two track repair bay. All the new buildings will be of reinforced concrete, with brick and tile walls. The repair section to the north will have a wood block floor, and one repair track will be equipped with hoisting machinery to raise the cars from the trucks. Wheel grinders will be installed and other smaller equipment for carrying out minor repairs. The whole group of buildings, both old and new, will be sprinklered throughout, and a 40,000 gal. tank will be erected to supplement the city pressure. The storage sheds proper will be open both ends, and each track bay will be equipped with rolling steel doors raised and lowered by individual motors. It is expected to have the new buildings completed by December. The approximate cost is \$220,000.

## Trade Notes

**Edward L. Oerter**, comptroller of the J. G. Brill Company, Philadelphia, for the past ten years, has been appointed secretary of the company to succeed Henry C. Esling, announcement of whose death was made in the Sept. 24 issue of the *ELECTRIC RAILWAY JOURNAL*.

**George L. Sawyer**, formerly sales manager of the material handling machinery for Barber-Greene Company, Aurora, Ill., has been appointed to represent the Universal Crane Company, Elyria, Ohio in the sale of Universal cranes in the New York field. His offices are at 141 Center St., New York City.

**O. B. Frink**, assistant principal engineer of the Hall Switch & Signal Company, Garwood, N. J., has been appointed representative of the Waterbury Battery Company, Waterbury, Conn., with office at 30 Church Street, New York City, and S. J. Hough field service engineer at New York, of the Waterbury Battery Company, has been appointed western representative with office at 1361 Peoples Gas Building, Chicago Ill.

**Rubber Insulated Metal Corporation, 91 William Street, New York**, now has as its president C. T. L. Huston, who was the organizer of the company, and who has taken back the control and management from the Century-Plainfield Tire Company. It is intended to pursue exclusively the manufacture of mechanical rubber goods whereby the Elchemco process is used in the manufacture of Rimco insulation for such articles as pliers, screw drivers, flexible couplings, etc. William F. Hart, who was the sales manager of the company, has resumed his former office. The executive office will be at the previously mentioned address and all business transactions will be handled there.

## New Advertising Literature

**The J. G. Brill Company, Philadelphia**, has just issued a pamphlet which describes the Brill type of electric rail-less cars, including a novel current collector and other interesting features. A description is given also of the control system which consists of a current-relay contact system with a foot master controller.