

Electric Railway Journal

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Brooklyn Strike Is in Every Way Unjustifiable

AS THIS issue goes to press Brooklyn, N. Y., is in the throes of a strike which spread so rapidly that the police force available in the borough could not be expanded immediately to furnish the needed protection and service was hampered for a time. With proper protection the company will undoubtedly be able to cope with the situation as there is no apparent justification for a strike now. The weakness of the men's case is shown by the attempt to employ intimidation to force loyal workers to quit work in spite of themselves. The public has little sympathy with the insurgent element among the men. Its attitude is reflected by the *New York Times* thus:

When the strikers make recognition of their union their first demand it appears that they are putting the increase of their powers of offense against the community and their employers over betterment of working conditions, and are reckless about the manner in which they press their demands. A strike of that sort becomes more difficult to win in proportion that it results in disorderly conduct, and inconveniences the community, without whose support strikes are predestined to failure.

Receiver Lindsley M. Garrison is perfectly willing to consider any grievances transmitted by employees of the company through their own representatives, including the question of the adequacy of wages, but properly refuses to have the property dominated by outside interests or to be intimidated by violence.

When and Where Publicity Is Successful

DESPITE all that has been said as to the need of greater publicity for utilities, there are persons—some of them operators of long experience—who still express grave doubts of its value. A recent issue of the *Doherty News* calls attention editorially to a discussion on this subject at a gathering of public utility men, and a few of their arguments against publicity are set forth. Some of these "standpatters" contend that a majority cannot be made to understand the utilities' case. Others argue that full publicity is likely to leave a loophole which will give the opposition a chance to "come back." Frankly, we do not believe that either of these claims will "hold water." We assume, for instance, that a utility company seeking to make the public understand its position is willing, first of all, to set its own house in order and invite full investigation. If this is not contemplated, the publicity director would do well to exercise proper discretion in choosing the material through which he hopes to win friends for the corporation.

As we have said before, publicity is a two-edged sword, and he who would use it must be careful that it

does not cut the wrong way. The case is much like that of a person who is seeking cure from a serious ailment and yet is unwilling to take his doctor into his full confidence. If a company has nothing to conceal, it will not fear leaving a loophole to opponents through publicity. If the contrary is true, the management has no claim against the effectiveness of publicity except in so much as its own case is concerned.

As to the point that is impossible to make a majority understand, we can only say that it takes time to show whether this is true, and while time is passing more friends should be gained if the material used in a campaign is worth while.

The writer in the *Doherty News* hits the nail on the head when he suggests that some publicity directors are to blame for using publicity only when an emergency is at hand or when they want something in a hurry and then have to use hasty and ill-advised material. This is too often the case, as was indicated in numerous replies to a questionnaire sent out by this paper and abstracted in various subsequent issues in the early part of this year. There is no reason why a public utility should not have a continuous, perennial publicity campaign, not necessarily paying for newspaper or poster space every day, but by having every employee an advertiser for the company.

There has been much talk lately of "open covenants." Too often the railway executive keeps from his own staff information which might be making friends for the company if properly distributed. Too often also the superintendent or other minor official fails to let his platform men "in on" certain particulars of the company's business which could be best passed along to the daily patrons by such employees. Then, too, the possibilities of winning friends for the company through courteous trainmen are frequently overlooked.

All in all, it occurs to us that the arguments used against the advisability of publicity are not arguments against publicity itself, but an excuse for self-defense. If frank advertising, well directed, does not gain all it seeks it at least should make friends for the company.

Washington Hearings Should Receive Closest Attention

THE great importance of the hearings of the Federal Electric Railway Commission to the industry hardly needs emphasizing. Yet the volume of matter read into the record on the railway side is so great that it would take a long time for anyone simply to read all of the evidence and still longer to digest it. Hence, we have endeavored to aid the busy electric railway men in securing easily a broad view of the proceedings by presenting on another page of this issue the gist of the thought addressed thus far to the commissioners.

The predominating intent of the railway testimony was to secure immediate temporary relief for the burdened companies through a general increase in fares, this to be followed by the cancellation of existing fixed fare franchises and the substitution of service-at-cost permits, the working out of new economies, more equitable systems of fare collection, schemes for increasing the number of riders, and so on. But all of these future plans are based on an immediate restoration of credit without which the testimony has indicated there is no use discussing the permanent settlement.

Beginning next week, the hearings will be open to the other side of the question. The electric railway men can well give the closest attention to what will then be addressed to the commission, for it may throw light on what may be expected in the future. This is also the side of the question about which the railway men know least and can learn most, so it is to be hoped that they will be well represented at the coming hearings and will thoroughly study the testimony, having in mind the principal points made by the railway witnesses.

Enter, the Transfer-less Zone System at Last!

IT MUST BE something extraordinary indeed, in these days of lightning changes in the electric railway industry, that can give a new sensation to the electric railway operator. Yet, we venture to assert that such an extraordinary sensation is afforded by the announcement that the Public Service Railway of New Jersey is going to try a clean-cut zone fare system with a 3-cent minimum charge without transfers within the next few weeks.

Our readers are familiar with the fact that following a most elaborate survey of its traffic and a study of such fragmentary zone systems as the United States had to offer, the Public Service Railway submitted to the Board of Public Utility Commissioners of New Jersey last March a fare plan whereby 5 cents was to be charged for the first zone and 1 cent a zone thereafter for all one-car passengers; and 2 cents was to be charged for the first zone on a transfer car with 1 cent additional for each zone thereafter. This submission of a zone plan was made at the commission's request in the hope that it would retain the short rider and bring more revenue than an increased flat fare.

The company, it will be remembered, arrived at the 5-cent and 1-cent figures by allocating the costs of transporting a passenger on the basis of stand-by and movement charges. The stand-by cost, in which was absorbed a portion of the expense of handling transfer passengers, was 4.03811 cents and the movement cost was 0.99007 per rider per mile. Subsequent to the filing of the zone report five months ago the National War Labor Board ordered a further wage increase for the company's employees and the cost of power advanced, the increases in the two items amounting to \$1,480,000. This large addition to the company's operating expenses necessarily affected the zone report figures relating to stand-by and movement costs. Practically all of the increase is chargeable to movement cost and therefore raised this cost materially above 1 cent per passenger per mile. On the other hand the abolition of transfers enabled the company to reduce its stand-by cost per passenger thus making possible the 3-cent initial fare with a 2-cent zone fare.

The testimony at the hearing developed the fact that jitney competition had increased tremendously since the 7-cent fare had been introduced. During the first six months of 1919 the jitneys of Newark alone carried 16,237,719 passengers who paid \$811,885 in fares. These jitneys, of course, cater principally to the short distance riders, and it is quite likely that the company's new low initial fare will have considerable influence in reducing jitney traffic.

In view of changed conditions the company asked permission to amend its application. It submitted two new zone plans and one 9-cent unit fare plan, the last being submitted largely to show what a serious effect it would have upon the utility of the railway to the public. Of the zone fares suggested, the commission has approved for trial the one which calls for a charge of 3 cents for the first mile-zone and 2 cents thereafter for each additional mile-zone or fraction thereof ridden in. This, of course, eliminates the transfer and places the Public Service plan on a logical zone basis. In accordance with general zone fare practice abroad, the distances for a given increment will not be hard and fast but be adjusted, where feasible, to take in heavy traffic points.

With only about six weeks time in which to make this radical change in fare system, the apparatus evolved by the company as its final solution to the difficult problem of zone fare collection obviously will not be available. The temporary plans for collecting the fares, outlined elsewhere in this issue, appear to have been developed along sane business lines and the operating department of the company is confident that it will have little difficulty with this feature of the problem.

Zone fare systems of several types have been in operation in this country to a very limited extent for several years. The Public Service Railway is the pioneer, however, in the application of a fare system, built up on a logical and scientific basis, to a great system of urban and suburban lines. We wish all success to this radical departure from the unit fare and trust that in combination with frequent service and wide publicity, the zone fare of the Public Service Railway will help to inaugurate a more business-like, more prosperous and more useful period for the American city railway.

No Strike Can Be Won Against Public Opinion

YOUR fight in this case is not with the companies. It is with the public." Scorning this hint from their leaders, the trainmen of the surface and elevated lines in Chicago early last week voted for immediate strike, and for four days the people of that city were subjected to all the inconveniences which a tie-up of an important transportation agency involves. The outcome was just as predicted. A majority of the men of the combined unions were glad to accept the generous terms previously rejected by shouting radicals at a mass meeting. The cars were again put in operation. The public returned, happily to their regular methods of travel, none too friendly toward the uniformed men who had put them to so much trouble, but with an appreciation of the value of car service which boded well for an increase of revenue for the companies.

The Chicago developments prove again that a strike which cannot claim sympathy from the public is lost from the start. When it was evident that the people in general did not consider the men justified in their action it became only a question of the number of days which

would elapse before the men returned to work. The strike period showed that the strikers had lost much of the sympathy which they once had. It was noticeable too, during the several days of jitney reign, that trainmen in uniform were not much in evidence about the streets. The sorely tried traveling public was in no mood to be trifled with.

Local comment during the strike showed plainly that the people realized this was their battle. There was no question but that the companies were unable to meet any such terms as the men demanded, and when every additional dollar which had to be raised was to come from the pockets of the car riders the later naturally eagerly watched the negotiations to see that they were not forced to sustain an unreasonable settlement. The union tried to gain sympathy by comparing its wage demands with even higher rates paid to electricians and other skilled workers. It did not speak so loudly about the comparative annual earnings of the various trade unions. They bewailed the hardships of a working day exceeding eight hours, but did not tell how eager is the contest for runs paying more time.

Nobody will begrudge electric railway employees the enjoyment of an increased income during this period of high prices, least of all their employers, but it should be remembered that capital is equally entitled to remuneration, and until fares are raised to recompense adequately both capital and labor, and it has been proved that the public will pay these increased fares, stockholders and employees must be patient. Railways can charge only what the traffic will bear, and until the public gets accustomed to rates of fare in excess of old standards, the employees should be satisfied with wages which on an annual basis are in excess of the income of workers in many other occupations. By loyal co-operation, the trainmen everywhere can help to put the case of the companies in such a light that revenue will be more nearly adequate for growing expenses.

Wage and Rate Problems Recognized as Inter-Dependent

THE chief executive of the nation has asked Congress to create a tribunal which shall have power not only to fix the wages of railway employees, but which shall also have mandatory power over the rate-making body to provide increased rates to take care of the increases in wages. For the first time, thereby, the government has recognized that these two functions are parts of the same problem and the fact that the railway brotherhoods have announced their absolute disapproval of Mr. Wilson's program, does not detract from the significance of this recognition. The Interstate Commerce Commission and other governmental agencies have granted a few rate increases, but heretofore this question has been a consideration entirely divorced from the wage question. The War Labor Board had no authority and little influence over the matter of rates although as a body it did recognize the injustice of the one without the other and so went on record in its recommendations.

But now, as an operator, the government has had brought home to it the absolute impossibility of making wage adjustments upward without a corresponding adjustment of the earning power of the carrier. So we cannot credit the request of the President to any particularly altruistic interest in the welfare of the railroads. But perhaps his pronouncement and the action

of Congress which may follow will establish a precedent helpful to the electric railway common carriers that have suffered so materially as the result of this one-sided treatment of the wage-rate question. It may serve to bolster up state and local rate regulating bodies in decisions helpful to the utilities in their difficulties and thereby add to the recommendations along this line which it is hoped will be forthcoming from the Federal Electric Railway Commission, the further influence of higher authority.

Words of Wisdom from the Pennsylvania Commission

IT IS a matter of ordinary business prudence and sagacity that the public generally should come to an appreciative understanding of what service means to the industrial and commercial life of the state and to each locality within it, and to recognize that the terms upon which it can be continued for their use and enjoyment are that it shall receive at their hands, as ratepayers, revenues sufficient to furnish it."

We quote the above from a recent report of the Pennsylvania public service commission as an example of enlightened commission opinion, altogether too rare in these days of political blindness in situations where the fate of railway utilities is concerned. The opinion was given in the case of the Waverly, Sayre & Athens Traction Company whose advanced rates had just been approved, and Chairman Ainey, speaking for the rest of the commission, also said: "To expect public service of these carriers without permitting them sufficient revenues to produce it, is as fallacious an economic suggestion as to demand bricks without straw or to require faithful toil from the muzzled ox."

The decision apparently turned on the question whether the public wanted to be adequately served. There have been sufficient miles of electric railways abandoned in the past few years to convince at least the people of the communities affected that local transportation is essential for their well being and prosperity. Reduced service in hundreds of other localities, due to lack of revenues, must have made thousands of other converts to this view of the situation. At the recent Washington hearing Mr. Storrs of the Connecticut Company painted a vivid picture of value of electric railways when he told of the dependency of one community upon another and of the efforts of the communities along abandoned interurban lines to have them put again in operation. Too often we hear of the bonanzas of early railroading and the great fortunes made by pioneer promoters, and little is said of the indirect participation in profits by those whose real estate was made more valuable or whose business was made prosperous thereby.

The sale of Liberty bonds is known to have interested millions of persons in the United States who never knew before what investment meant. It may be a slow process to await the awakening of these persons to a sense of fairness towards legitimate investment of all kinds, but we are of the opinion that this will be one of the potent factors in winning future support for the cause of the electric railways. The facts are so evident to intelligent persons who have an open mind that we believe a considerable influence will be exerted through the publicity given the recent hearings in Washington and later through the report of the federal commission. The only danger is that the arousing of public sentiment will come too late.

The Zone Fare in Practice

London County Council—Part II

In May and June, 1918, Fares Were Increased Chiefly by Introducing a Three-Section Penny Stage Averaging 1.8 Miles and by Abolishing Children's and Fractional Fare Tickets—Maximum Fare Fixed at 4d.—Latest Increase Cuts Penny Ride to 1½ Miles Because of Forty-eight-Hour Week

By WALTER JACKSON



THAMES EMBANKMENT WITH HOTEL CECIL AND CLEOPATRA'S NEEDLE

THE tramways committee of the London County Council Tramways, the equipment and service of which were described in the *ELECTRIC RAILWAY JOURNAL* of Aug. 2, reported on April 25, 1918, that increased costs made it necessary to raise fares. The most rigid economy had failed to meet the situation. For the year 1913-1914 the operating expenses per car-mile had been only 6.47d., but for 1917-1918 they were 10.38d. In 1919, it was said, the costs would be still higher. For nearly three years no revisions had been made in fares beyond the suspension of ½d. tickets and ordinary return tickets on May 22, 1917. This had brought the increased revenue anticipated, but the gain was £205,290 short of the requirements for 1918-1919; without regard to £125,000 urgently needed for renewals, as recommended by A. L. C. Fell, general manager. The committee, therefore, recommended the following revisions, which became effective in May and June, 1918:

1—That the average length of the 1d. stage should be reduced from approximately 2 miles to 1.8 miles. To avoid hardship, the stages would be divided into three sections in every case. The length of the 2d. stage should be six of such sections, of the 3d. stage nine of such sections, but for 4d. the passenger should be entitled to any number of sections. (Before the revision recommended, the lengths of ride for 1d. varied greatly over different parts of the system, some being four to five sections long. With the changes recommended, particular care was taken to have the fare stages at points most convenient to the patrons.)

2—That the 1½d. and 2½d. fares should be suspended.

3—That ordinary transfer fares should be suspended.

4—That children's reduced fares should be suspended.

5—That workmen's single tickets should be issued at 1d.

for four consecutive sections on one car, and at 2d. for any distance on one car with transfers as then given for 1d. single. Return tickets should be issued at 2d. for a journey in each direction over four consecutive sections on one car, both trips to be made over the same sections. Return tickets should be issued at 3d. for any distance on one car, with transfers as then given for 2d. return, the availability of return tickets remaining unaltered. The division of the Woolwich route into sections was also to be retained, but 3d. would be paid by former 2d. passengers and 6d. by former 4d. passengers. The average distance that a 1d. single workman could travel would be 2.4 miles, or 4.8 miles for a 2d. return ticket—in short, for less than 1 cent a mile.

As to the reduction of the average length of the three-section stage from 2 to 1.8 miles, the sections were carefully determined in accordance with traffic-gathering conditions. Hence they were not of equal length. On one route, the sections varied from 0.39 mile to 0.94 mile, but the limits in general lay between 0.4 and 0.8 mile. If one section was unusually short, an endeavor was made to have a section of extra length adjoining so that the passenger would be sure to get at least 1 mile for his penny. The difficulty of collecting all the money due within a half-mile also had to be considered in fixing the length of sections. It might have been more attractive to the passenger to have the overlaps shorter still, but it would have been anything but attractive for the conductor on big busy cars. The plan adopted, therefore, represented the best compromise that could be worked out to keep the passenger from becoming a walker. The variations in length of section on particular routes under the three-lap stages are illustrated.

As to the suspension of 1½d. and 2½d. fares, this was in accordance with the action taken by other surface transport operators in the London area. It eliminated inconvenient fare units, simplified the ticket system and brought in more revenue.

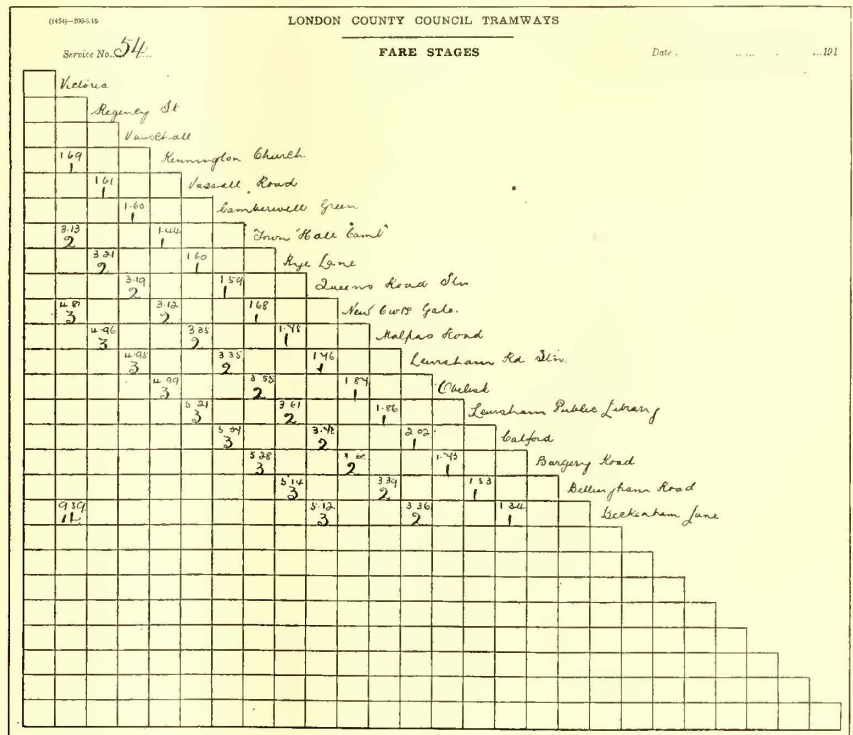
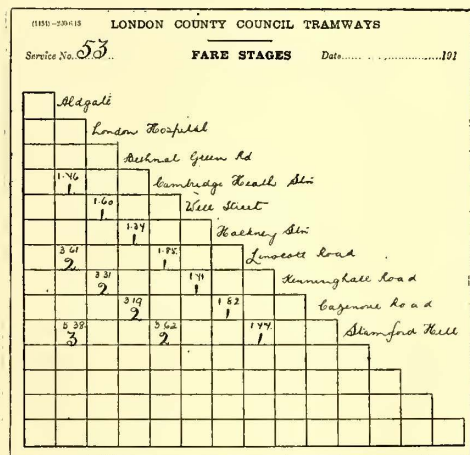
As to the suspension of transfers, this was another big step in simplifying the ticket system. At one time transfer tickets were issued to passengers even if they could reach the desired destination by a direct route. These tickets did not indicate the point of transfer, so that it was quite possible for a passenger to double-back, an abuse which need not be explained to the American operator. The first improvement of the transfer system was made in November, 1917, when the use of such tickets was limited to definite transfer points and transfers were issued only in cases where no direct service was available. Although the elimination of a transfer meant two tickets for one, the increase in revenue more than justified the extra cost. The remaining types of transfers, issued only to facilitate the movement of workmen, are described later.

As to the suspension of children's reduced fares, it may be said that when the original concessions for half-rate tickets for children under fourteen years of age were made, it was anticipated that practically all of this riding would come during off hours. With the arrival of war, the number of juvenile workers was greatly augmented. Hence it was deemed unnecessary to grant below-cost transit to youngsters who were not only making money but were doing their riding during the rush hours. The L. C. C. education committee, however, is still allowed to purchase ½d. tokens good for any length of ride for children traveling to and from medical centers, public baths, lectures and the

The fixing of 4d. as the maximum ordinary one-way fare greatly improved the ticket system without loss of revenue, as the passengers who paid more than 4d. were not enough to justify special tickets. Up to this rate, the competing buses granted the same distance for the same fare. It should be noted, however, that where buses have no competition, their rates are about 30 per cent higher.

A typical classification of passengers according to fare paid is presented in the following table, derived from a week late in 1918 when about 12,500,000 passengers were carried:

Fares in Pence	Per Cent. of Passengers	Per Cent. of Revenue
½ childrens'.....	0.34	0.13
1 childrens'.....	0.05	0.04
1½ childrens'.....	0.01	0.01
2 childrens'.....	0.00	0.00
1 ordinary.....	63.01	47.22
1½ ordinary.....	0.41	0.47
2 ordinary.....	16.25	24.36
2½ ordinary.....	0.06	0.11
3 ordinary.....	4.34	9.75
3½ ordinary.....	0.00	0.00
4 ordinary.....	1.61	4.84
4½ ordinary.....	0.00	0.00
5 ordinary.....	0.03	0.09
1 workmen's.....	5.06	3.79
2 workmen's.....	0.25	0.37
3 workmen's.....	0.01	0.01
2 workmen's return.....	2.83	2.12
3 workmen's return.....	5.50	6.19
4 workmen's return.....	0.03	0.06
5 workmen's return.....	0.07	0.12
6 workmen's return.....	0.14	0.32
	100.00	100.00



VARIATIONS IN LENGTHS OF L. C. C. STAGES WHEN AVERAGE PENNY RIDE COVERED THREE SECTIONS TOTALING 1.8 MILES

like. The only children's ordinary fares now handled on the London County Council Tramways are those which are issued in accordance with the local rules of the adjoining systems over which L. C. C. cars are operated.

As to the revision of workmen's tickets, the various changes still left such tickets to be sold at less than cost. Since the workmen's ticket harks back to the tramways act of 1870, there cannot be much basis for the oft-repeated assertion that unsatisfactory housing is due largely to the graduated fare.

This table indicates that the children's rate had been practically abolished, but that 13.89 per cent of the riders were still traveling at the workmen's rate—a Parliamentary imposition not applying to the motor bus. The enormous amount of pick-up travel is indicated by the fact that 63 per cent of the traffic was within the 1.8-mile penny limit. A similar condition is revealed in the accompanying diagram of traffic from May, 1918, to January, 1919.

Although the car mileage for the year ended March 31, 1919, was 2½ per cent (more than 1,000,000 miles)

below that of the preceding year, the number of passengers carried was 50,000,000 in excess of the 586,000,000 carried during the fiscal year 1916-1917, which was quite clear of fare increases. The ratio of short riders was fully maintained, which indicates the judicious re-arrangement of stages when it was found necessary to increase fares.

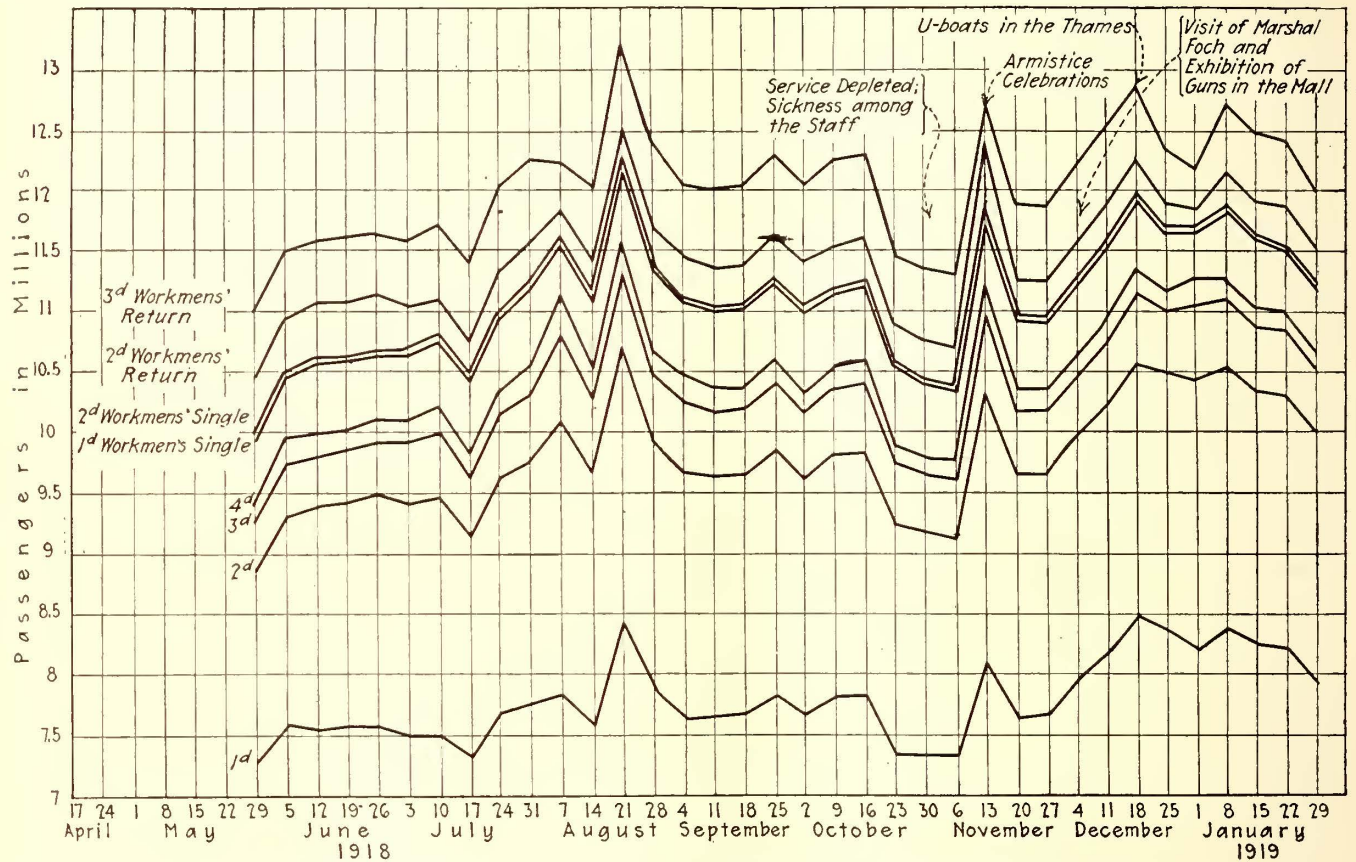
PENNY DISTANCE CUT TO 1.5 MILES

With the adoption, in May, 1919, of a forty-eight-hour week at fifty-four hours' pay, the resourcefulness of the London County Council Tramways management was put to new tests. The annual cost of giving effect to this agreement with the National Transport Workers Federation is estimated at £360,000. The only alleviating feature is that the provisions of the agreement are

paving which had been impossible during the war owing to the shortage of labor and the impossibility of obtaining the necessary materials. On March 31, 1918, the renewals fund amounted to £324,451 as compared to

Year	Car Miles	Operating Expenses— (Including war service allowances)	
		Total	Per Car Mile
1913-14	59,209,289	£1,585,251	d. 6.50
1914-15	58,978,792	1,684,243	6.89
1915-16	47,879,675	1,683,660	8.44
1916-17	49,478,973	1,817,693	8.82
1917-18	49,189,866	2,128,685	10.38
1918-19 (estimated)	48,052,801	2,811,465	14.04
1919-20 (estimated)	53,000,000	3,521,925	15.94

£539,749 on March 31, 1914. Up to 1911-1912 full provision for this fund was made out of the revenues of the undertaking on the basis (approved on June 23,



TOTAL PASSENGERS CARRIED ON L. C. C. LINES WITH PROPORTION AT EACH RATE OF FARE

dependent upon the grant of power before June 30, 1919, by the proper authority to increase fares which are now limited by statute or otherwise. Without the grant of such power by that date, the agreement is terminable upon one month's notice by either side.

Under date of April 10, 1919, the highways committee stated that in the fiscal year 1913-1914 the total wage bill was £1,102,220 for operating 59,209,289 car-miles, whereas in 1918-1919 the amount was £1,888,600 for 48,052,801 car-miles. For the year 1919-1920 it was estimated that 53,000,000 car-miles would cost £2,421,250. War allowances to tramway men during 1918-1919 amounted to £180,000, and the estimate for 1919-1920 for the reduced number of men still on war service was £50,000. Continuing, the highways committee showed that the increase in operating expenses since 1913-1914 would be as shown in the accompanying table.

Another factor which had to be considered was the urgent necessity for carrying out renewals of track and

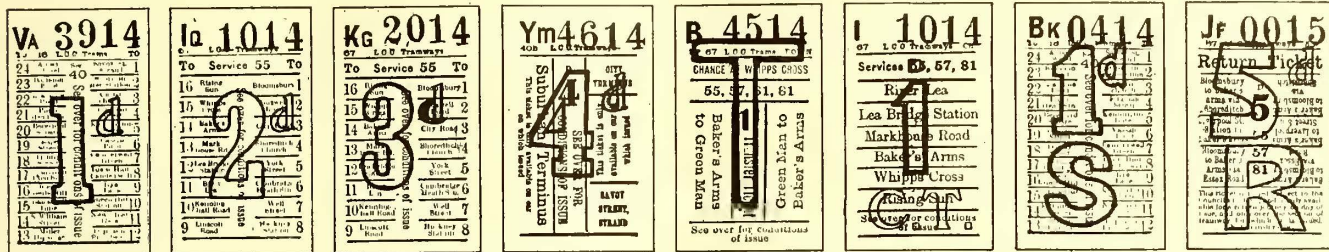
1908) of two-thirds of a penny for each car-mile run, but the financial results of operation during the last six years did not enable provision to be made on this basis. During this period the available surpluses were paid into this fund. The general reserve fund on March 31, 1918, amounted to £74,667 as compared to £190,596 on March 31, 1914.

The highways committee then observed that the estimates of expenditures (including renewals) for 1919-1920 showed that if the present balance of the renewals and reserve funds (£392,000) was to be preserved, the revenue must be increased from £3,629,000 (the approximate actual receipts for 1918-1919) to £4,668,000. This would be more than £1,000,000 in excess of the receipts for 1918-1919, which were £600,000 more than those for 1917-1918. If the assumptions on which the estimates were based were realized, it was anticipated that nearly one-half the extra revenue required would be derived by running an additional 5,000,000 car-miles

and obtaining somewhat higher average receipts, leaving a sum of about £566,000 to be raised by other means. In order to obtain so large a sum it would be necessary to increase fares, but in considering the extent to which this was practicable the committee remembered that there is a point beyond which an increase in fares may cause a reduction of revenue.

collection. As regards the workmen's fares, the annual loss on workmen's tickets will be reduced from £160,000 to £105,000 a year.

Even with these changes the highways committee anticipates that it will be necessary to draw upon the renewals fund to the extent of approximately £150,000 in order to meet the expenditure of £371,480 proposed



TYPES OF L. C. C. FARE RECEIPTS, WITH BOTH STAGE NAMES AND NUMBERS, TOGETHER WITH SERVICE NUMBERS

Proposals, therefore, were recommended and adopted as of May, 1919, as follows:

1. That the average distance for 1d. should be reduced from 1.8 miles to 1.5, with a single overlap in place of the present double overlap. This would involve each route being divided into two sections to be traversed for a penny, four for 2d., six for 3d. and eight or more for 4d.
2. That the following scale should be adopted for workmen's return tickets, and this scale should also be applied to the Woolwich route:
 - a.—A 2d. ticket for a return journey over a stage of 2 miles (total journey, 4 miles).
 - b.—A 3d. ticket for a return journey over a stage of 3 miles (total journey, 6 miles).
 - c.—A 4d. ticket for a return journey over a stage of 4 miles (total journey, 8 miles).
 - d.—A 5d. ticket above 8 miles (total journey), with transfer facilities.

to be incurred for renewals during 1919-1920. The latest fare revisions will be reconsidered in six months' time, when information will be available as to their financial results.

As the London County Council Tramways system prints its own tickets, not more than a week's supply of the popular denominations is made up. The printing plant adjoins the ticket department and is prepared to deliver new tickets within twelve hours. Contrary to common practice, the L. C. C. tickets are stitched rather than nailed together.

The various changes in fares were accompanied by a standardization of tickets with the twofold purpose of serving the convenience of all concerned and of saving

In regard to the revision of the ordinary fare stage, it was not deemed desirable to continue the system of dividing each penny fare stage into three sections. Since with shortened zones this would mean a reduction in the length of each section to 0.5 mile. Under the three-lap plan used before May, 1919, a large amount of revenue was being lost owing to the inability of conductors to collect all the fares. With the lengthening of the sections from an average of 0.6 mile to 0.75 mile, it is considered that a great proportion of the revenue earned will be collected. It also seems reasonable to expect more efficiency from the staff as a result of the reduction in hours, for which allowance has been made, and it is estimated that £40,000 a year will be forthcoming on account of the improved collection.

TRANSFERS GRANTED ONLY WITH HIGHER FARES

Under the altered workmen's rates the average total distance which a workman can travel for 2d. return is reduced from 4.8 miles to 4 miles, or about 1 mile in excess of the distance covered by the new ordinary 2d. fare. The superseded charge for a workman's return ticket in excess of 4.8 miles was 3d. As now changed, this charge operates only between 4 and 6 miles, the fare being raised by 1d. for each additional 2 miles or part thereof beyond the latter distance with a maximum of 5d. Transfer facilities are now granted for only 5d. return tickets.

The increased revenue to be derived from the revised fares is estimated at £416,000. Of this amount £321,000 is expected from ordinary passengers, £55,000 from workmen passengers and £40,000 from improved fare

ORD L.C.C.T.—Way-bill of Route No.		Date	191	Car No.	Service No.				
Identity No.	Letter	Quantity issued to Conductor	Tickets issued with Way-bill To	From	First numbers returned	Quantity sold	Fare	s	d
							1d		
							2d		
							3d		
							4d		
							5d		
							1d		
							2d		
							3d		
							4d		
							2d		
							1d		
							1d		
Tickets as shown above, Punched, Cancelling Machine, 3/6 Change received							Total		
Conductor's signature			Punch register		Way-bill checked as to tickets returned and arithmetic correct				
Received from Conductor—Punch, Cancelling Machine, 3/6 Change, 2-journey Tickets not used			Records of clippings—		Punch No.				
CASH, £:	s	d	s	d	Out		In	Club short	Amount
Notes								over	
Silver								Tickets not returned	
Copper								Punch change	
Tokens								over	
Total								short	
Short									
Receiving Clerk's signature			Over		Punch Checker's Signature				

paper. All tickets are 2½ in. x 1¼ in. Since colored stock is so expensive, the most popular or penny ticket is printed on white paper. Most of the others are colored on the sides by the original 4-in. x 14-in. ticket strips being passed through inked rollers. In the near future this coloring may be done more effectively and cheaply by means of an aërograph process.

The price of the ticket is usually indicated by a large red overprint alone or with a smaller black figure in addition. The overprint "S" means workmen's single, the "R" workmen's return or round trip. On all excepting end-to-end tickets both stage numbers and stage names appear. The enormous number (1,750,000) of tickets printed and used daily makes it desirable to go further with the markings than the usual letters and serial numbers. Consequently the route or service number is added. In some cases, several routes make use of the same ticket. The 4d. ticket is the simplest, as it is available for the longest ride on any route.

Transfers within the L. C. C. area are confined to workmen's tickets. They do not necessarily give a

longer ride for the money but offer alternative facilities. They are intended to permit a passenger to return in a car of different "service" number (but not of different routing) because the service used in the morning does not happen to be available for all or part of the afternoon hours. Return tickets

giving him his tickets from the same 10,000 serials cannot be followed, although it is considered desirable to do so. It is customary, however, to have conductors work off the remainders of their pads when the same box is returned to them on the third day. Each box contains the usual make-up of tickets, counting punch, special non-counting punch and waybill. In addition, the depot inspector may give the conductor 3s. 6d. for change.

The standard waybill is shown on page 273. On this the clerk in the ticket department fills in only the columns covering "Identity No.," "Letter," "Quantity Issued to Conductor," and "Tickets Issued with Waybill to and from." The closing numbers or "First Numbers Returned" are written in by the conductor, and the "Quantity Sold" and money turned in are recorded by the depot inspector. The count is made in the presence of the conductor, who is at liberty to make up any shorts on the spot. When conductors made the extensions on the waybills themselves, errors were so frequent that the practice had to be discontinued. Conductors may hold on to their cash all day, but if they prefer they may "pay in" during their period of relief.

The back of the waybill is used by the conductor to fill in his terminal times and the number of each class of ticket used on the individual journey. The reference to "2d. Lug." is to a luggage ticket. This is a standard 2d. passenger ticket which is punched in the serial number instead of the stage to indicate that it is good for any distance.

The bottom of the waybill shows the space reserved for the signature of the conductor when the depot inspector gives him his punch and ticket box; the depot inspector's accounting of the money and other items received from the conductor; and the reports of the clerks in the ticket department, including the record of punchings or clippings counted, if such count is made.

At present not more than two dozen punches out of 2000 in daily use are checked by counting the punchings. Even this is more than in pre-war days when the conductors as a class had greater experience. If there is a discrepancy of four or more, a count is made. Particular care is taken to see that the register itself is not out of order. Part of the punches were purchased from the Bell Punch & Ticket Company after having been on a rental basis for some years, but repairs are still made directly by the manufacturer. In addition to the 2000 Bell punches there are 3000 hand punches of special design somewhat lighter than the Bell but without a seal. The Bell punches are reset to 0 and resealed daily; the hand punches have a series of dials like a gas meter and the numbering goes on indefinitely.

The form used for the explanation of ticket shorts is shown herewith. In the case of overs, the conductor

LONDON COUNTY COUNCIL TRAMWAYS
(1149a)
DEFICIENCY in ORDINARY TICKETS

.....191

From HEAD OFFICE, 23 Belvedere Road, S.E. 1

To Conductor.....

.....Depot

On comparing the tickets returned by you on191, with your cash takings and waybills, a deficit of.....d. tickets, numbered.....to..... to the value of : : was found.

Any explanation you may have to offer as to the deficiency must be given on the back hereof and forthwith returned to Head Office.

J. K. BRUCE, Traffic Manager.

EXPLANATION FORM FOR TICKET SHORTAGE

are used in the same way. Return tickets are not given up for an exchange ticket but are cancelled by the conductor with an auxiliary non-counting punch. This saves special tickets and accounting detail.

Formerly transfer tickets had overprinted letters which corresponded to certain days of the week in accordance with a code. It was found that this restriction caused too great a complication to make the trouble worth while. There is nothing to prevent the use of the return privilege on some other day, but in effect this is not a serious consideration because the passenger is simply postponing the use of a privilege. In any event, the transfer problem now counts for little.

In addition to the several types of printed tickets shown, celluloid tokens are sold at face value to the post office, merchants, municipal departments and others in quantities of hundreds and thousands.

HOW THE TICKET DEPARTMENT WORKS

The ticket department is responsible for the daily replenishment of the conductors' ticket boxes as returned by the depots. Owing to lack of space the plan of having a separate bin for each conductor and of

L.C.C. TRAMWAYS. Service No.....

Conductor's Name.....

Route..... Car..... Jour-
No..... No..... ney.....

Date.....

First Nos.	Last Nos.	
		1d
		2d
		2d Return
		3d "
		6d "
		1d
		2d
		3d
		4d

Time.....a.m.....p.m.

MEMORANDUM TO RELIEF CONDUCTOR FOR CHECKING PASSENGERS

gets a refund if he puts in a prompt claim that he has discovered a shortage in his personal cash. Likewise, if he has issued a wrong ticket, he receives a refund upon turning this in with the name and the address of the passenger concerned.

The second blank reproduced on page 274 is a form used in connection with the ticket system. It is a memorandum from a conductor to his relief to enable the latter to check the passengers already on the car.

The ticket department, which handles no cash, is operated entirely by women and girls. Out of a total of 138, 125 are on duty at any one time. Of the latter number, six are supervisors, eighteen are summary clerks, thirty-two are punch clerks and sixty-eight stock the ticket and punch boxes.

The trail of the cash is entirely separate from that of the returned tickets. When the depot clerk accepts money from a conductor, he gives him a receipt, of which a copy remains in his receipt book. He does not send these individual returns to the cashier but makes up the money first into bags according to denominations, as 6d. pieces into £5 bags, pennies into 5s. rolls, etc. With these bags he forwards the "Cash Return" summary (shown herewith), which should check with the total of the individual receipts issued to the conductors. The receipt book, of course, goes along with this form.

Upon counting the cash, the office of the chief cashier advises the ticket department that certain total amounts

have been received from certain depot inspectors, which totals should check against the summaries prepared by the ticket department. The cashiers handle £9,000 to £10,000 daily, including 3 to 4 tons of copper! At one time, the banks refused to carry away the copper themselves, but nowadays they are glad to collect it at their own expense. The staff of the chief cashier numbers ten, exclusive of himself.

The waybills do not go to the chief cashier

ing to those of traffic inspectors in the United States, three specimen reports are appended:

Car 1513 jumped the track at the switch point because of a pile of refuse in the point at _____ Bridge on down track. Eight minutes delay to both tracks. Head office informed.

Attached tickets punched on wrong side. Seventeen in. Nine out. No excuse offered.

As this car was being ploughed by _____, the plough rose, striking the carrier bolt and buckling the plough. Two minutes delay.

The accompanying illustration gives a part reproduction of the standard style of ticket inspector's report covering the cars boarded.

LONDON COUNTY COUNCIL TRAMWAYS

Ticket Inspector's Report

For Monday day the 12th day of February 1919.

Car No.	Route No.	Time boarded car		Time left car		Driver's name	Conductor's name	Joined car at	Left car at	Up	Down
		H.	M.	H.	M.						
207	5B	8	6	8	7	Baker	J. Callister	Suburban Stn	Suburban Stn		✓
170F	5F		14		21	Cookson	J. Price	Suburban Stn	Suburban Stn		✓
1713	5F		24		31	Lombard	J. May	Suburban Stn	Friser Stn		✓
1702	5F		32		40	Taylor	A. Tolly	Friser Stn	Suburban Stn		✓

Ticket Inspector..... Section..... Division.....

TICKET INSPECTOR'S SUMMARY OF CARS BOARDED

The printing plant of the London County Council Tramways is handled as an undertaking entirely separate from the cost of "ticket check." The division of "ticket check" in the annual report of the London County Council Tramways for the year 1917-1918 included the following items:

Punches.....	£974
Inspectors wages (road check).....	14,508
Ticket Department (office check).....	8,577
Apportionment of salaries of senior officials.....	122
	£24,181

Power Plant Improvements at "St. Joe," Mo.

A new 10,000-kw. General Electric turbine with Alberger surface condenser is being installed in the plant of the St. Joseph (Mo.) Railway, Light, Heat & Power Company. The new equipment also includes two 1000-hp. Hornsby-Bigelow boilers. G. W. Saathoff is the engineer in charge of the work, which is being done by the company.

The entire St. Joseph plant will be converted for oil burning at once. In this connection a 30,000-gal. oil storage tank is being erected. With the completion of this work, which will probably be in the fall so that the new turbine will be ready for the full load, the St. Joseph plant will be provided with 22,600-kw. of generator capacity, and 9600 rated horsepower of boiler capacity.

After suspension of publication during the war period, *Les Chemins de Fer & Les Tramways*, Paris, has resumed monthly publication. This periodical covers the fields of steam and electric railways. In the opening, or rather reopening issue, considerable space is given to heavy electric traction, in particular the present status of the various electrification projects under way in France.

300/100-9.18

LONDON COUNTY COUNCIL TRAMWAYS

(184) **CASH RETURN**

To the ACCOUNTANT, 23 Belvedere Road, S.E.

Reference No. 33200

No 33200 From..... Depot
Date..... 191.....

	£	s.	d.
Notes			
Gold			
Silver			
Coppers and stamps			
TOTAL CASH			
Tokens (Public) 6d.—Dark Blue, Green, Red and Yellow			
.. (Staff) 6d.—White and Light Blue, and 2d. (Special)			
.. (Special Constabulary)			
.. (M.E.T.)			
Medical Centre Tickets			
Sectional Tickets			
Croydon Transfer Tickets			
TOTAL			
TOTAL FROM RECEIPT BOOK —			
Signature of Night Inspector.....			
Initials of Cashier.....			

CASH RETURN TO CASHIER MADE BY EACH DEPOT

but are returned to the ticket department with the unsold tickets. After serving their purposes there, they are turned over to the operating statistics department.

In totalizing the work of the employees connected with the ticket system, it is proper to include, except in the case of depot inspectors, all the time of the employees in the ticket department. As a proof that ticket inspectors, however, have many duties correspond-

Side Lights on the Zone Fare— Congestion or Diffusion?

Foreign and American Examples Indicate that Rate of Fare or Method of Fare Charging Is Not the Determining Factor

BY WALTER JACKSON

OF ALL the poll-parrot assertions concerning the graduated fare system, the congestion indictment predominates. Yet curiously enough the two most striking examples of congestion or density of population are afforded by the two cities—Glasgow and New York—in which the zone and flat fares respectively give the greatest value for the money. Surely, this phenomenon ought to give us a hint that local topography, municipal characteristics and other factors may have something to do with the case—and they have.

First, let us consider Glasgow. Go where we will in that city, be it in the center or on the outskirts, we find that the prevailing type of dwelling is a three or four-story multi-family house. On inquiring into the reason for this, the student is told that this form of construction came over centuries ago from France; that Scottish people took to this gregarious mode of life and that they retained it as a habit long after the arrival of modern transportation. In any event, neither the resident of Edinburgh nor Glasgow seems to have the same strong urge to isolate himself in the way that is so characteristic of the Englishman.

And there is New York with its enormous length of ride for 5 cents. Instead of bringing a house and garden to those who move from Manhattan, the central borough, the rapid transit lines have actually brought the monster tenement house (euphemistically termed "apartments") into sections that had hardly a speaking acquaintance with it before! This seems like a paradox, but it isn't. Rapid transit simply brought into the Borough of the Bronx, the Borough of Brooklyn and even the wide spaces of the Borough of Queens a vast influx of people who had become accustomed to the tenement house life of Manhattan. These people were not seeking a home with individual furnace, garden and other work-making appurtenances. They simply wanted a more luxurious form of house in which they would have still fewer housekeeping cares than in the other dwellings. In other words, life with the janitor, steam radiator and dumbwaiter had be-

come a habit which no "breezy call for incense-breathing morn" could eradicate except in the case of a few—and those few sought their ideal of chicken coop and rabbit hutch by moving out along a steam railroad reached only by paying fare on the distance system!

If local and national peculiarities were not so controlling a force, how are we to explain the presence of the skyscraper on the endless plains of Texas and the absence of elevator height buildings almost everywhere in compact Britain? It is distressing that we failed to go to the bottom of this phenomenon sooner, for every argument hitherto made for the flat fare has simply ascribed congestion to zone fares as a matter of course and thus bolstered up the fortunes of the real estate operator. To summarize an editorial appearing in the issue of March 2, 1918, of this paper that "Zone Fares Are Not a Primary Cause of Congestion":

The topography of a city, the relative location of industrial and home sections, the cost of land, building materials and fuel, and the habits of the people are much more important factors of the amount of riding which is done than the rate of fare. In the 70's and 80's, when the combined fares by different companies in the same city for a present 5-cent ride were 10, 15 or even 20 cents, American cities had a larger proportion of homes with gardens than now. If the people in those times when the nickel was real money refused to huddle in crowds, they will not be deterred in these days of 15-cent milk from paying a zone charge of 2 to 5 cents more if they prefer life in the suburbs.



VIEW OF TYPICAL BLOCK NEAR NORTHERN END OF BROADWAY DIVISION, INTERBOROUGH RAPID TRANSIT COMPANY, SHOWING THAT A PRACTICALLY UNLIMITED RIDE FOR FIVE CENTS DOES NOT PREVENT CONGESTION

Coasting Results on the Chicago Elevated

First Year of Operation Shows a Saving of 21,162,217 Kw.-Hrs. or 11.3 Per Cent—Coasting Has Been Increased to 35 Per Cent.

By H. A. JOHNSON

Master Mechanic Chicago Elevated Railroads

COASTING and efficient operation of trains by motormen have received considerable attention on the Chicago Elevated Railroads for many years. All trains are equipped with multiple-unit control apparatus with automatic acceleration which takes the control of the rate of acceleration out of the hands of the motormen. The limit switches controlling the acceleration were set as high as the capacity of the motors would permit, and some time ago coasting boards were installed between all stations and the motormen were instructed to shut off power at these points whenever it was possible to do so. The regular service inspectors devoted considerable time to coaching the motormen in the matter of coasting and power saving, and special coasting instructors who devoted their entire time to this one subject were put on.

We felt that a great deal had been accomplished by this power-saving campaign, but the summer of 1917 brought about a new situation. The United States had entered the world war and the Fuel Administration asked the electric railways to do everything in their power to save fuel during the coming winter. In addition to this one of our power plants was being dismantled and would not be in service the following winter. For a number of years this plant had been operated during the winter months for a few hours during the morning and evening rush periods, when the demand for power was at a maximum. With this plant out of commission it became highly desirable to reduce the amount of power required to operate the system during the maximum loading hours, so that additional generating equipment would not have to be provided to replace that which was discarded.

After careful study it was decided that, although we had before given considerable attention to coasting and efficient operation of trains, much more could be accomplished by installing on all trains a power-checking device which would show the motormen the results of their efforts, and by providing additional coasting instructors to ride with and assist motormen and conductors in the efficient operation of their trains. After investigating the various devices available and their adaptability to the operating conditions on our property, Rico coasting recorders were purchased. They were received and installed so that by Dec. 1, 1917, each train was equipped, the coasting instructors had been appointed and instructed, the coasting department for handling the records and reports had been organized and the campaign to save power and coal was in full swing.

Great credit is due the employees for their co-operation with the management in making the campaign a success. In sending out the bulletin notices in reference to the operation of the coasting recorders, M. J. Feron, general superintendent of transportation, explained in a frank manner that the management sought the help

of every employee in saving coal and power during the war, that this had been requested by the United States Fuel Administration as a patriotic duty, and that the coasting recorders were being installed to assist the motormen to accomplish this end. Mr. Feron also stated that he had personally operated trains equipped with these devices, that he had found them to be of great assistance and that he felt sure that the men would agree with him in this after they had become familiar with the recorders. President Britton I. Budd

FORM NO. 201

RUNNING TIME CARD

Key No. 955

Name JOHN DOE Run No. A 18

Branch CHI. & OAK PK Date 3-12-19

STATION	TRIP NO.	TIME	ARRIVE	LEAVE
LEAVE			7:05	
ARRIVE	91	1		6:55
ARRIVE		29'	7:36	
LEAVE		17'		7:05
ARRIVE	91	2		7:54
LEAVE		10'		7:36
ARRIVE	91	3		9:00
LEAVE		54'		8:03
ARRIVE	91	4		9:55
LEAVE		45'		9:09
ARRIVE	91	5		11:12
LEAVE		67'		12:05
ARRIVE	91	6		12:54
LEAVE		22'		1:29
ARRIVE	91	7		
LEAVE		30'		
ARRIVE	91	8		
LEAVE				

Running Time Minutes 30.8

Coasting Time Minutes 126.0

over

CHICAGO ELEVATED RAILROADS

DELAYS

TRIP NO.	NUMBER DELAYS	CAUSE
2	2	NO. 18 TOWER
4	3	BRIDGE
5	1	AUSTIN AV. TARGET

Motorman must record all delays of one minute or more.

ENVELOPE FOR RECORD SLIPS SHOWS LEAVING AND ARRIVING TIME FOR EACH TRIP; BACK OF ENVELOPE IS USED FOR EXPLANATION OF DELAYS

addressed a personal letter to each motorman on the system, asking his support and earnest endeavor in giving safe and efficient transportation service to the people of Chicago during the war.

At our company section meeting preceding the date of placing the recorders in service, the supervisory force listened to talks explaining the mechanism of the recorders, the taking of the record slips and such other train data as were wanted, and how the results would be worked up and tabulated on reports to be posted in train rooms. A talk was also given which showed how coasting could be increased by proper operation by the motormen and by prompt, efficient work of the trainmen in unloading and loading passengers at stations; and how increased coasting might be turned into a saving in power.

Seven motormen, who were old in the service, efficient in the performance of their duties and well-liked by their fellow employees, were chosen as coasting instructors. Each was assigned to a certain division of the system and he studied the conditions peculiar to that

division. The instructors received instructions from the general superintendent, from their local superintendent and from the mechanical department. These seven men devote practically their entire time to the work.

With this preparatory work completed, the recorders on the entire system were placed in service. Weekly reports showing the standing of the motormen on each division were posted. A substantial saving in power was immediately obtained due to the remarkable co-operation and interest of the motormen and trainmen.

After the week has passed the envelopes of each motorman are removed from the file and the running time and coasting time are entered on the motorman's record sheet reproduced. This sheet is placed in a split column adding machine which prints and adds the running time and coasting time and prints the totals for the week. The percentage of coasting for the week is then figured by slide rule and entered by hand.

The sheets of all motormen operating on a given branch of the system are grouped together and a weekly report made out showing the standings of the men as to coasting, in order of achievement. Copies of this list are posted on the bulletin boards in the trainrooms and sent to the coasting instructors. The instructors then endeavor to assist those with low ratings. The instructors work with a spirit of assistance and helpfulness and not with a spirit of criticism and they expect or ask a man to do any better than they themselves can do under similar conditions.

FIRST YEAR OF OPERATION SHOWS SAVING OF 30,900 TONS OF COAL

The first year of the operation of coasting recorders ended Dec. 1, 1918. This period showed a reduction in the total consumption of electrical energy from 182,353,279 kw.-hr. to 161,191,080 kw.-hr., a saving of 21,162,217 kw.-hr. over the previous year. In other terms, the consumption was reduced from 3.437 kw.-hr. per car-mile to 3.048 kw.-hr. per car-mile, or 11.3 per cent. Working the saving in kilowatt-hours into an equivalent saving in coal we find that 30,900 tons of coal were saved during the first year of operation of coasting recorders.

As we do not separate the power for traction from the total output, the above figures include power for lighting, car heating and all miscellaneous uses, which are not affected by coasting. During the summer months of 1918 when no power was used for heating and a minimum was consumed for lighting and miscellaneous uses, the consumption in kilowatt-hours per car-mile was 13.3 per cent less than for the same period in 1917. This shows that if it was possible to segregate the power used for traction only, the percentage saving in power for traction would be still greater.

The average coasting for the system was increased from approximately 10 per cent before the coasting recorders were installed to 35 per cent. The running time has not been changed to any extent, although some minor adjustments in the schedules have been made. Crews are more prompt and trains are run closer to schedule than before the coasting recorders were installed.

In securing this increased coasting and saving in power, one would naturally expect to find savings in equipment maintenance, brakeshoes, etc. While it is almost impossible to locate definitely the savings in equipment maintenance and to give figures, we are satisfied that the increased coasting has resulted in less wear-and-tear on car equipment which will be reflected in maintenance costs. As an example, the number of brakeshoes used during the first year of operation with coasting recorders was 31,806 as compared with 40,421 for the previous year. This shows a saving of 8615 brakeshoes or 21.3 per cent. There was also a small reduction in car-miles operated, but the net saving in brakeshoes was about 20 per cent.

Chicago & Oak Park Elevated Railroad Co.						
NAME		Doe, John.		BRANCH		KEY NO.
		Oak Park				955
DATE	1919		1919		1919	
	JAN.	FEB.	MAR.	JAN.	FEB.	MAR.
	RUNNING TIME	COASTING TIME	RUNNING TIME	COASTING TIME	RUNNING TIME	COASTING TIME
1	4 21	19 30	4 91	17 80	4 72	16 65
2	5 01	12 80	4 10	19 40		
3	5 12	16 30	4 62	19 70	5 43	19 80
4	4 21	19 30	5 41	20 40	4 88	18 80
5	5 27	15 00	4 77	19 40	4 66	17 50
6	4 95	16 90	4 79	21 50	4 73	18 80
7	4 26	16 40	3 95	17 00	4 72	20 40
TOTAL FIRST WEEK	28 52	96 70	32 55	135 20	29 14	111 95
	PER CENT	33.6	PER CENT	41.5	PER CENT	38.4
8	4 80	18 00	4 82	18 10	4 98	17 50
28	5 39	17 90	4 82	21 40		
TOTAL FOURTH WEEK	35 13	128 90	3 390	143 00		
	PER CENT	36.7	PER CENT	42.2	PER CENT	
29	4 91	17 20				
30	4 76	19 20				
31	3 09	12 40				
TOTAL FOR MONTH	138 44	514 15	127 85	521 85		
	PER CENT	37.2	PER CENT	40.8	PER CENT	

MOTORMAN'S RECORD SHEET SHOWS RUNNING AND COASTING TIME WITH PER CENT COASTING FOR WEEK AND MONTH

There was a reduction in the maximum kilowatt-hours required during the rush hours, as well as a reduction in the total kilowatt-hours per day. This reduction in maximum kilowatt-hours in connection with reductions made along other lines, was sufficiently large to render unnecessary the providing of equipment to replace the power plant dismantled during the summer of 1917.

CLERICAL WORK REDUCED TO A MINIMUM

The clerical work of figuring the coasting percentages, entering them on each motorman's individual record and getting out weekly reports showing the comparative standing of the motormen on each branch of the system, is taken care of by five clerks, the labor cost of keeping the records amounting to 50 cents per month per motorman. This work has been reduced to a minimum. Each motorman is provided with an envelope, 4 in. x 7½ in., shown in an accompanying illustration, for the day's work. He fills in the blanks at the top and enters the leaving and arriving times for Trip No. 1, Trip No. 2, etc. He removes a record slip from the coasting recorder for each trip, marks the number of the trip upon the slip and puts it in the envelope. Any unusual delays may be explained on the back of the envelope.

When his day's work is completed, the motorman seals his envelope and leaves it with his dispatcher. It is then forwarded to the coasting department. The running time and coasting time are calculated and entered in the blank space beside each trip number, and the total running time and coasting time for the day are entered in spaces provided at the bottom of the envelope. The envelope is now filed under the motorman's name until the end of the week.

During the first year the maintenance cost of the coasting recorders has been very low. The cost of operation of the coasting campaign for the year has been obtained by including interest on the investment at 7 per cent, depreciation of the coasting recorder equipment at 10 per cent (which we consider high), the entire salaries of the coasting instructors, salaries of the record clerks, cost of stationery and an estimated cost of the maintenance of recorders, which figure also has purposely been made high. After deducting the operating cost as thus found, the net yearly saving due to the coasting campaign is two and one-half times the total cost of the installation of the coasting recorder equipment.

Making American Citizens at Minneapolis

Twin City Foreign-Born Employees Take Four Months' Course in Americanization to Become Citizens of the United States

THE Twin City Rapid Transit Company was one of those to respond promptly to the request of the federal government that employers ascertain which of their employees were not citizens and co-operate with educational agencies in making citizens of them. The result was chronicled briefly in a news article on page 1185 of the issue of this paper for June 14. To

supplement this note the following information has been secured from the company:

Following the government's request the company, through F. A. Anderson, secretary of the welfare association, sent out to all of its male employees cards, like that reproduced herewith, to be filled out and returned by those who were not citizens.

Next a short talk was given the men who responded, in small gatherings, making plain to them that they should all be citizens of the United States and that if they did not wish to do this neither the Twin City Lines nor the United States was any place for them to remain. As a result every man who was not a citizen signified his desire to become such and when all the cards were returned the local Board of Education volunteered to conduct classes to train the men for the duties of citizenship.

Classes were organized early in January. For the trainmen these were held in the clubrooms at the various carhouses, and for the shopmen in a classroom fitted up at the shops. The track men were so scattered that they were referred to the community center nearest their homes, where classes were conducted by the school board. The initial enrollment in the Minneapolis classes included 163 students and that in the St. Paul classes 275. Classes were held once a week, in the morning, the recitation taking up about forty-five minutes and the whole period lasting from one to one and one-half hours. The company co-operated by giving



THESE GRADUATION EXERCISES WERE HELD IN ONE OF THE ST. PAUL CARHOUSES

the trainmen runs such that they could attend classes regularly.

Two text-books were used, one furnished by the government and the other by the school board. The work included a careful study of the United States Constitution; of United States history leading up to and including the Declaration of Independence; of the three

opened with the singing of the "Star Spangled Banner." The Mayor of the city, President Lowry of the company, and several other influential men spoke and then all present took the pledge of allegiance to the flag.

The diplomas given to the men signify a successful completion of the prescribed course and enable them to become naturalized citizens without the usual examination. The diplomas were signed by Secretary of Labor Wilson, Commissioner of Labor Campbell, Chief Naturalization Examiner Coleman, and the superintendent of the city schools.



CLASS IN AMERICAN CITIZENSHIP AT MINNEAPOLIS

forms of government under which we live, namely, municipal, state and national; of the Senate and the House of Representatives, methods of election and functions; of the three departments of government, namely, executive, legislative and law enforcing, etc. The instruction lasted for a period of four months and early in June 125 men graduated from the Minneapolis classes and the following week a corresponding number from the St. Paul classes.

Some of the men included in the original enrollment had previously made application for their second papers and received them before the classes were completed,

The following questions are to be answered by all employees who are not citizens.

- 1. Name..... Age.....
- 2. Address
- 3. Have you taken out your first naturalization papers?
- 4. Have you made application for your second naturalization papers?.....
- 5. If you have not taken out your first papers, state what country you are a subject of.....
- 6. Will you join a class for the purpose of preparing yourself for citizenship?.....

REGISTRATION CARD FOR CITIZENSHIP CLASS, TWIN CITY RAPID TRANSIT COMPANY

and others left the employ of the company, but the attendance throughout the classes was more than 75 per cent. The graduating exercises were held in the assembly rooms at one of the carhouses in St. Paul on June 19, as shown in the accompanying view, and some 500 of the friends and relatives of the men were present to witness the award of diplomas. Small American flags were distributed among the audience, and the exercises

Effect of Electrification Upon Signaling

Railway electrification and its influence on signaling forms the basis of an interesting editorial comment published in a recent issue of the *Electrical Review*, London. In this discussion it is stated that while formerly British signaling was considered the best in the world, to-day it is outclassed by American. The main difference between British and American signaling is that the former is based mainly on manual operation and human control, while the latter is based on power operation and electrical control. One of the reasons given for the slow progress in Great Britain is that on most British railways signaling is actually divided into two separate and distinct departments, one of these having to do mostly with the mechanical end of the work being assigned to one department, and the other having to do with the electrical being assigned to another department. Further, it often happens that the heads of these departments are responsible to different main operating heads or possibly to the general manager himself. The result of this type of organization has not been fortunate.

It is pointed out that with the advent of electrification the signaling work will necessarily have to be grouped under a single engineer, preferably one having had electrical training. It is further noted that the present direct-current track circuits will have to be changed to those of the alternating-current type, and that this change will involve the use of impedance bonds of the general type so commonly used in this country. It is noted, however, that whereas bonds of very low impedance, one ohm or less, have proved quite satisfactory in connection with the heavy axles of the rolling stock used here, the conditions in England are not quite the same, as the rail-to-rail resistance of the axles of some of the light vehicles used there is high as compared with the resistance of the permanent shunt-circuit through the track ballast. It is added further that the manual block system under present traffic conditions is becoming very complicated, and that the time is ripe for a change to a simpler and more direct method of signaling. In fact, this latter phase of the question is becoming so important that the electrification of main-line signaling is beginning to seem a necessity, apart altogether from the general question of railway electrification.

United States Consul-General Sammons, Shanghai, China, reports that the Shanghai Tramways have decided to build their own street cars, for which purpose a special building is to be erected. Operations will begin with fifteen cars for use on rails and seven for use in connection with railless operation.

Getting the Personal Touch in Accident-Reduction Campaigns

Experience of Shore Line Shows that a Good Record Can Be Bettered by Enlisting Thoroughgoing Co-operation

ALTHOUGH the Shore Line Electric Railway, Norwich, Conn., has had a very creditable accident record in the past, J. H. Cain, when he became superintendent of transportation of the company, knowing that united effort toward accident reduction is always productive of good results, about two years ago inaugurated a safety campaign the principal feature of which was the securing of greater co-operation on the part of employees. This he has brought about partly through the use of monthly circular letters giving data as to the results secured during the preceding months

	1917-1918					1918-1919				
	Accidents	Revenue Passengers	Car Miles	1,000,000 Passengers	100,000 Car-miles	Accidents	Revenue Passengers	Car Miles	1,000,000 Passengers	100,000 Car-miles
September...	41	1393	392.4	29.4	10.5	35	1443	335.6	24.2	10.4
October.....	61	1112	392.2	54.9	15.5	35	1041	313.7	33.6	11.2
November....	44	1065	377.2	41.3	11.7	46	1165	300.9	39.5	15.3
December....	50	1148	382.2	43.5	13.1	32	1223	317.3	26.2	10.1
January.....	37	990	310.7	37.4	11.9	24	1211	313.0	19.6	7.7
February....	33	802	207.6	41.2	15.9	24	1099	271.8	21.8	8.5
March.....	30	1067	296.2	28.1	10.1	29	1221	301.9	23.8	9.7
April.....	27	1064	300.8	25.4	9.0					
May.....	43	1205	383.1	35.7	11.2					
June.....	42	1264	332.2	33.2	12.6					
July.....	52	1520	362.4	34.2	14.3					
August.....	28	1782	365.4	16.2	7.7					

as compared with those of the corresponding months a year earlier. In addition, there is brief and interesting comment, analyzing the records and the conditions of operation during the months in question, with suggestions as to how the records can be improved. A "bogey" is set informally for each month so that performance can be compared with what in advance would seem to be reasonable in view of previous records, probable business conditions and predicted weather conditions.

In his circular letters, Mr. Cain uses an informal style, is brief and to the point, and backs up the letters by personal co-operation directly and indirectly through the division superintendents.

As an example, a recent circular letter is given below:

CIRCULAR LETTER NO. 112

March 11, 1919.

Monthly Accident Report for February is given below—

February, February, 1918 1919

Collisions between cars	0	3
Pedestrians killed	0	1
Collisions with pedestrians.....	2	1
Collisions with vehicles.....	13	2
Passengers boarding and alighting from moving cars	4	7
Derailments and split switches.....	13	5
Miscellaneous	1	5
	33	24

Distribution to carhouses.

Dayville	4	0
Greenville	9	9
South Coventry	0	0
New London	10	10
Saybrook	8	2
Westerly	2	3
	33	24

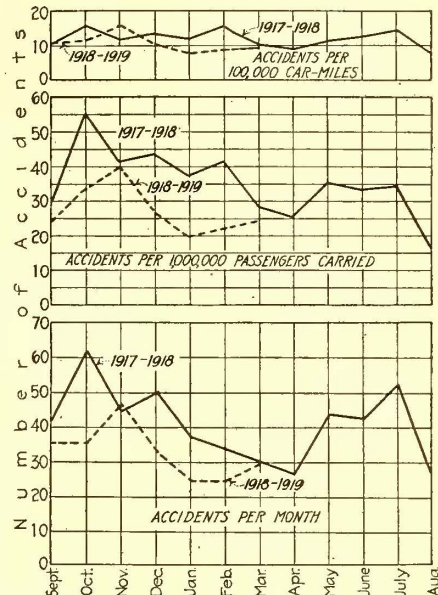
have a pretty good report. However, I would like to review it with you just a bit to point out that the largest number of accidents was caused by passengers boarding and alighting from moving cars. This hits the conductors a little bit hard, and while there were cases that conductors could not avoid, in all cases where the conductor is on the back platform this should be absolutely prevented by the conductors putting their hands across the doorway, or, if necessary, taking hold of the person who is about to jump from the car, and, in all cases, preventing the passengers from jumping off moving cars. This applies more particularly, of course, to women and children. I realize that men will step off moving cars, and that it is pretty difficult to stop them; however, you can caution them; you can be prepared to go on the witness stand, and say, "I told this man to wait until the car stopped." That would be very helpful in the event that a damage case was brought against us — you could bring witnesses in who could sustain the statement that you warned the passenger not to step off the car while it was in motion, and if you could do that, we would unquestionably win the case for the company. In the matter of women, try to get in front of them in the doorway and, putting your arm across, insist that they wait until the car stops.

In the case of passengers boarding cars, conductors will take time to know passengers are on. Do not take, altogether, except when it is impossible to do otherwise, statements from passengers on the rear of the car, that everybody is on. When you call out, "All right back there?" somebody is liable to say yes, and not care particularly whether they are on or not. Try to determine, in so far as possible, that all passengers are on before giving the starting signal. For the month of March last year, we had a total of thirty accidents. It looks as though we were going to have good weather this month and good operating conditions. Try and have a good operating record.

J. H. CAIN, Superintendent Transportation,
The Shore Line Electric Railway Company.

In the office of the superintendent of transportation at Norwich the accident records are kept in graphical and tabular form. The record from October, 1917, to April 1, 1919, is shown in the diagrams and table.

In addition to the above, standard code rules have been introduced and Mr. Cain has prepared a very complete text-book for use in insuring familiarity on the part of the men with the principles of the equipment which they operate, the usual difficulties they are required to overcome in handling the same, and advice and instruction for their guidance in fare collection and accounting, handling the public, and the interpretation of train orders and train movement. In fact, the subject matter of this book pretty thoroughly covers the complete daily duties of a conductor or motorman, and is based upon, and is prepared in accordance with methods and practices derived from many years of practical experience and which have been productive of good results. This little book is not published but Mr. Cain will be pleased to send copies to superintendents of other companies who are interested in it.



GRAPHICAL RECORD OF ACCIDENTS, SHORE LINE ELECTRIC RAILWAY

Notwithstanding the fact that we went over our permissible quota by two in the month of February, we still

Revolutionary Change in Public Service Railway Fare System

Mile Zones, Low Initial Zone Charge and the Elimination of Transfers Are the Important Elements in the New System

COMING as it has contemporary with the Federal Electric Railway Commission hearings where so many questions have been asked relative to zone fares and including as it does so many radical changes the order handed down by the Board of Public Utility Commissioners of New Jersey relative to the zone fare plan of the Public Service Railway is of especial interest. The order was handed down at Trenton, August 1, and a brief résumé of the main features of the order was published in the news columns of our issue for last week. The hearings of which the order is a result have been proceeding on a more or less regular schedule ever since March 11, when the Public Service Railway report on zone fares was presented to the commission. This report which dealt at length with the results of zone fares on other systems, operating conditions on the Public Service Railway, traffic characteristics and the theory, application and collection of zone fares was abstracted in the ELECTRIC RAILWAY JOURNAL shortly after its presentation.

As the Public Service Railway furnishes transportation to 141 municipalities and over 2,100,000 people, it is by far the largest property involving urban and suburban traffic to which an attempt has been made to apply a distance fare system. The company's 850 miles of track are scattered over the State of New Jersey, from the metropolitan district on the opposite bank of the Hudson from New York to the cities of Camden and Gloucester on the opposite bank of the Delaware River from Philadelphia. Owing to the configuration of the system the central fare zone so commonly used in the zone fare layouts was obviously impossible. The original zone plan presented by the company was based on a zone one mile in length. As was noted in the news columns of our issue for last week, the company's plan to charge 5 cents for the first zone mile and 1 cent for each zone mile thereafter, with 1 cent for transfer was upset by the additional wage and power cost burdens recently imposed on the company.

RECENT FARE HISTORY ON THE PUBLIC SERVICE

In its order the commission sets forth the various changes in fares which have taken place on the Public Service Railway within the last year, together with the causes incident to these changes. Briefly summarized the changes are as follows: Beginning with Aug. 1, 1918, a charge of 1 cent on all initial transfers issued by the company to its passengers was made. By another order dated Sept. 25, 1918, the fare was increased from 5 cents to 7 cents with a 1-cent transfer charge, the increase being effective Oct. 15, 1918. Under this order the fare was automatically decreased to 6 cents with a 1-cent transfer charge beginning April 1, 1919. After a further hearing the order of Sept. 25 was modified, and the 7-cent fare with a 1-cent transfer charge again became effective May 2, 1919. Insufficient revenue was the underlying cause of the fare increases.

Relative to the zone fare report the order of the commission states: "The report is very comprehensive, and is the result of exhaustive investigation. It includes investigation of all zone systems extant in the United States, as well as electric railway systems operated under zone plans abroad. The traffic conditions in the territory served by the company, and their influence upon the formulation of a zone plan were investigated. A study of the distribution of the population tributary to the lines of the company was made as well as the location of factories, theaters, railway depots, shipping districts, parks, and other centers controlling and creating traffic. The tendencies of development were investigated both as to residential districts in cities and towns as well as industrial districts. The rates of fare on competitive steam roads were studied for the purpose of fare comparisons and frequency of service. Estimates were made of the expected losses in traffic due to the operation of competing steam railroads, jitneys and decreases in riding resulting from higher fares of a zone system. The cost of service was estimated and analyzed, and was divided between the two classes, viz., fixed or standby costs and variable or movement costs. In the determination of the cost of service there was included a return upon the outstanding stock of the company. This necessarily involved the valuation of the company's property used and useful in the service of the public and it therefore became necessary for the board to determine the fair value of the property. The proceedings to determine the fair value of the property as well as the reasonableness of the plan proposed, and the rates to be charged thereunder, which necessarily includes an analysis of the fixed charges, rentals and operating expenses have not been concluded."

ALTERNATIVE PLANS PROPOSED

For the reason indicated in the last sentence the order of the commission is necessarily of a temporary nature although no time limit is specified. The action was taken to afford immediate relief because of the financial demands imposed on the company as result of the wage increase of \$1,175,000 granted by the National War Labor Board in its decision of July 2, 1919, and of an increase of \$305,000 in the cost of power. This increase in operating charges of \$1,480,000, practically all of which was chargeable to passenger movement, made the movement charge proposed in the original zone plan altogether too low. To facilitate action in getting the relief necessary the company submitted for the consideration of the Board of Public Utility Commissioners the following three schedules of rates:

1. A charge of 9 cents flat fare instead of the 7 cents now being charged, together with 1 cent for each initial transfer.
2. A system of charges based upon the zone plan as submitted, modifying the charges therein proposed as follows: 5 cents for the first two zone miles and 2 cents

per zone mile thereafter, with 1 cent for each transfer.

3. A system of charges based upon the zone plan as submitted, modifying the charges therein proposed as follows: 3 cents for the first zone mile and 2 cents for each zone mile thereafter without transfers.

The only exceptions to the above plans were the zones between Edgewater Ferry and Grantwood Junction, Edgewater Ferry and Bluff Road, and between Harrison and Eagle Rock Avenues and Mountain Avenue and Murray Street on the Eagle Rock Line, West Orange. On these zones the fare was specified as 5 cents. Presumably local conditions dictated these exceptions, as each line mentioned serves a mountain pleasure park.

The original zone plan called for fares based on a movement charge of 1 cent per passenger per mile and a standby charge of 4 cents. For transfer passengers the standby charge was 1 cent and the movement was 1 cent per passenger per mile. The increase in the movement charges of the zone plans noted above was doubtless due to the great increase in operating charges. Likewise, the elimination of the transfer privilege in the third schedule was likely responsible for the low initial zone charge.

In setting forth the reasons for the order and its tentative nature, the order states: "The proceedings under the plan for a zone system of fares not having been completed, precludes the adoption by the board at this time of any permanent plan, or any of the rates proposed to be charged thereunder. As the hearings progressed, however, it became manifest to the board that the plans and operations thereunder and estimates of revenue expected to be derived therefrom are uncertain.

The allocation of cost to the standby and movement classes of the original zone plan were the subject of very strenuous attack by experts produced on behalf of the municipality. The traffic losses estimated by the company's witnesses were also severely assailed. The most pronounced objection, perhaps, to the original zone plan was the imposition of the cost in such a manner as to result in a high charge for the first zone mile."

In connection with the objection noted in the last sentence the order states, "The board is impressed with the contention of the municipality. Its criticism of the proposed charge for the first zone mile has much merit. It is to the public interest that riding be encouraged rather than discouraged because the loss of each rider must necessarily increase the charge to the other patrons of the company. The establishment of a lower base charge will undoubtedly tend to increase riding on the cars of the company. Increasing the riding habit has the tendency ultimately to decrease fares."

HOW THE NEW FARES COMPARE WITH THE OLD

With these objections in mind, and with the thought that the trial of one of the proposed plans would be of help in the final determination of a permanent plan, the Board of Commissioners ruled in favor of the fare plan which involves a 3-cent charge for the initial zone mile with 2 cents for each additional mile thereafter traversed on the same car and no transfers. Believing that there is a possibility that certain of the transfer points and heavy loading points will require adjustment of some of the zone mile limits the board reserves the right without formal order to make such adjustments as are necessary from time to time. In order to determine the feasibility of the plan as a permanent solu-

tion to the problem the company is required to file monthly reports of wages, salaries and revenues all properly classified.

COMPARISON OF PRESENT FLAT FARE AND ZONE FARES

Number of Zones	Present Flat Fare Cents	Original Zone System Fare Cents	Approved Zone System Fare Cents
1	7	5	3
2	7	6	5
3	7	7	7
4	7	8	9
5	7	9	11
6	7	10	13
7	7	11	15
8	7	12	17
9	7	13	19
10	7	14	21

In the accompanying table is shown the comparison of the cost of a straight ride with the present flat fare, the originally proposed zone fare, and the new zone fare. It is worthy of note that only three out of the more than 100 lines of the company enable passengers to ride ten zones under the present 7-cent fare and that two-thirds of the car riders will ride either for the same fare or for one less than they are now paying.

As indicative of the changes made in suburban fares the following list is of interest. The point of origin in each case is the Public Service Railway terminal in Newark and each ride is assumed as a one-car ride.

Suburban Town:	Present Fare Cents	New Zone Fare Cents
Orange Center	7	9
Bloomfield Center	7	11
Glen Ridge, past center	7	11
Montclair Center	7	15
Verona Lake	14	17
Harrison	7	5
Kearny Center	7	7
Irvington Center	7	7

Passengers between Newark and Trenton under the new order will pay the zone fare when riding over the tracks of the Public Service Railway Company and the present rate of interurban fare when traveling on the Public Service Railroad. The zone fare system will also be applied on the Fast Line trolleys between the Public Service terminal and Bayway, from Bonhamtown through New Brunswick to Milltown, and in Trenton.

HOW THE ZONE FARES WILL BE COLLECTED

As was described in the ELECTRIC RAILWAY JOURNAL for March 22, 1919, page 598, the railway company's zone fare report included an extended discussion of the method of fare collection which the company's zoning committee had worked out. This method involved many radically new ideas and a considerable amount of mechanical equipment of a new type. This equipment, the cost of which was estimated at about \$650,000, of course, cannot be procured by Sept. 14, when the new order is to take effect.

The company officials are planning to make use of temporary equipment until the new permanent equipment is available. In boarding a car the passenger will enter at the front end and receive a ticket from the motorman. The tickets will be marked with a zone number and differently colored tickets will be used for the different zones. The ticket given a passenger will indicate the zone in which he boarded the car. The tickets will be arranged in a tray conveniently placed for the motorman. The fares will be collected as the passenger leaves the car.

In the rear of the car an arrangement somewhat similar to that used on bank calendars to show the day

of the month will be used to indicate the zone in which the car is operating. An indicator of temporary construction placed on the rear bulkhead will show both the zone in which the car is operating and the fare to that zone from other zones. This is to assist the passenger in getting the proper fare ready for payment. On short lines, that is lines of four zones or less, the present fare boxes and clock registers will be retained. About 400 cars are operated on these lines and the conductors will be required to turn in the usual trip report sheets. For the balance of the cars, about 1200 in number, the company is purchasing under a special contract involving a salvage clause a modified type of the ordinary

cash register. This will be located at the same place as the present fare boxes. It will be mounted on a shelf supported by an L-shaped iron bar. Lugs on the vertical leg of the L fit into the catches which were provided originally for the fare boxes. The fare will be handed to the conductor who registers its amount. The conductors will be required to keep half-trip records of the number of passengers carried. At heavy traffic points where prepayment terminals are in use arrangements will be made to collect the fares as the passengers leave the terminals. Terminals are now in use at Edgewater, Palisades Park, Port Newark, Hoboken, the Public Service Terminal and at a number of the shipbuilding yards.

A Summing Up of the Railway Testimony

Gist of the Thought Addressed to the Federal Commission on the Causes and Remedies for the Present Emergency

THE principal contributory causes of the present predicament of the electric railway industry as presented at the railway hearings of the Federal Electric Railway Commission may be summed up as the inflexible franchise; the continually increasing service with the constant fare; the inability of most companies to make proper allowances for depreciation, renewals and replacements; the inability to attract capital except at increasingly high cost; the necessity of paying enormous taxes; the failure of commission regulation, and the decreasing purchasing power of the nickel. All of these reasons are fundamental. The vastly increased operating expenses resulting from the war are looked upon not so much as the real reason for the difficulties as the immediate agent which brought to a sudden crisis the fallacies which have been perpetuated and added to from the early days of the industry, and are now greatly accentuated in importance through their accumulated *ensemble* effect.

ANALYSIS OF THE CAUSES

In the analysis of the causes, it has been the general opinion of the witnesses at Washington that the fixed-fare, long-term (the longer the better) franchise was a mistake. While it was a real asset when made, it has come to be a boomerang returning with such force as practically to inflict the death blow in many cases. The demand for continually increasing length of ride and more frequent and better service has been acceded to in violation of the fundamental principles of merchandising, and at the expense of the proper execution of the corporation's obligations to perpetuate the physical property of the utility.

As part of the old system of bartering between the city and the company, the former always pushing further its demands for compensation for the privileges granted, there have been added to the expenditures of the latter numerous imposts and taxes. These have been accumulated until they consume 10 per cent of the gross earnings averaged over the whole industry.

Naturally, the decreasing margin of net earnings available for interest on bonds and dividends on stock was accompanied by the demand from the investors for an increasing rate of return to compensate for the

greater risk. This tendency was increased simultaneously with a decreasing market for electric railway securities until at present the market is so poor and the cost of money so high that the credit of the industry may be said to be practically lost and the cost of any new financing prohibitive.

According to several witnesses, the income from the 5-cent fare has never been adequate from the beginning to permit of the proper allowance for depreciation, renewals and replacements. In the opinion of those who testified on this point, the extent of these charges was underestimated by many of the early managers and their effect on earnings was not so apparent when the industry was expanding by leaps and bonds as when traffic had become more stabilized. In consequence of this condition the capitalization had increased more rapidly than the actual earning powers of the properties warranted.

The idea of regulation by state public service commissions has been unanimously approved and endorsed. The failure has not to do with the plan but with the weakness of the laws which in many cases have not given the commissions adequate power to perform their plain duties. There has also been much dissatisfaction with the manner in which the laws have been administered. The state commissions have been severely scored by the railway men for their dilatory procedure in the face of emergency, for their very plain favoring of the interests of the public in contrast with the interests or even rights of the corporation, and for their shifting policies. But principal of the reasons assigned to the failure of the commissions, and one which was reiterated by almost every witness, was the universally long delay which occurred before a decision could be secured.

As to the decrease in purchasing power of the nickel, this has of course been a tendency in the same direction as the increase in service. What the electric railways could afford, to furnish now for 5 cents, they could as well have supplied for 2½ cents in 1900. And this downward trend of the value of money has been progressing steadily for the last twenty years. It is a new condition now only in that the rate of retrogression in buying power has increased very

rapidly since 1914. The effect is equivalent to an extreme decrease in net earnings. A great deal of testimony was presented on this point of the higher costs of material and labor, not only by the statistician of the association but by individual operators and manufacturers.

THE PROBLEM BEFORE THE COMMISSION

Coming now to an analysis of what the problem is which is before the Federal Commission for solution, if indeed the commission can find a solution to recommend, perhaps it can best be summed up in the words of F. H. Sisson, vice-president Guaranty Trust Company, New York, as follows:

"Stripped of all complications, the question seems to be whether or not the American public is willing to pay for service rendered. The alternatives are simple—either the service will not be rendered and the growth of our communities and the comfort of our people will be denied, or the cost must be met, either directly through fares, or indirectly through taxes. The open question is whether the traveling public will continue to deny to its utilities the basis of charges which it accepts in every other line of business."

To elaborate this statement slightly, the commission has before it first the task of satisfying itself that the electric railways are working under a system of regulation which has carried them into a situation for which they as private enterprises subject to ordinary business risks are not altogether responsible, and from which to extricate themselves they are deprived of the power. Having done this, which seems to be a fact accepted almost beyond question, the commission will acknowledge the obligation of the regulatory bodies to initiate some general plan of relief. The question then arises as to what form this relief shall take. The remainder of this brief endeavors to sum up the views of the railway men as they were addressed to this question.

POSSIBLE REMEDIES SUGGESTED BY THE RAILWAY MEN

But one witness, a New York banker who appeared on behalf of the railways, openly expressed a conviction that public ownership offered the best remedy for the situation. His thought was not so much of the merits of the plan so far as the service is concerned, although he was optimistic even on this aspect, as of the fact that credit would immediately be re-established and money secured at a lower rate of yield. All other witnesses either counseled against a recommendation for public ownership or were silent on the subject, partly because it has not proved successful where tried, but primarily because the process of bringing it about is beset with so many obstacles that it cannot be accomplished soon enough to meet the present emergency, if at all. Nevertheless, while this thought prevailed there was constantly recurring expression of the opinion that if relief from the present conditions were not forthcoming, public ownership was the only alternative. Ex-Governor Foss made a radical stand for public ownership during railway hearings, but he appeared on his own behalf and not as a witness for the railway side.

As to what shall be the cure for the inflexible franchise, the railway men have expressed themselves as almost unanimously desirous of seeing in force a service-at-cost franchise, in order to settle once for all

the absolute interdependence between operating cost and the rate of fare, and forever to bury the mistaken idea of the past that an industry could go on selling its product indefinitely for the same old price. Closely coupled with this plan is the prevalent opinion favoring the inclusion of the indeterminate feature in the franchise. It was also emphasized that the success of this type of franchise was predicated on a fair valuation and a proper provision for depreciation, renewals and replacements, and upon the fixing of the proper rate of return. Great emphasis was laid on the desirability of having the fare, the rate of return and the allowance for depreciation of a flexible nature in order that they might be readily and preferably automatically adapted to future changing conditions. There was also a consensus of opinion that the service-at-cost franchise would be strengthened if it included some provision for rewarding the operators for efficient and economical management.

While there was a distinct manifestation of sentiment that some more equitable basis of charge for transportation in the city should be devised than the present flat fare, yet the zone system was not urged for the reason that its application involved the solution of many difficult problems, and it was considered uncertain whether it would bring about an immediate and substantial increase. This was looked upon rather as a probably desirable change from present practices, to be worked out through experimentation during the next year or two, provided the industry is meantime lifted out of its present condition verging on bankruptcy. The one-man car was considered in much the same light—a system offering good possibilities in increasing the number of passengers at a lower cost of haul per passenger, but requiring new money to finance its installation and postponing the date of relief.

On the matter of taxes there was practically a unanimity of opinion that the electric railways should be relieved of all those imposts which do not actually contribute to the production of transportation. This would mean the removal from the back of the street-car rider of the cost of paving, sprinkling, etc. In the new order of things hoped for, it was thought that it should be the endeavor to get the cost of the car ride down to a bed-rock basis, eliminating all items which are not legitimately a factor in the cost of producing the ride.

Practically no expression was heard indicating a desire to abolish public service commissions. The remedy for the grievance here was rather to improve upon the laws so that there would be a better continuity of policy, prompt decisions in emergency, freedom from political influence, and powers for the commission adequate to provide orders for increases in fares as well as decreases when warranted by the facts. State commissions were generally endorsed as preferable to local commissions.

The remedy for the decreasing purchasing power of the nickel and the increasing cost of capital was of course an increase in revenue. In this connection the outstanding appeal of the whole railway testimony was for an immediate temporary relief in the way of blanket increases of the flat fare. The first object of this is to re-establish the credit of the industry, so that it may be able to attract the capital necessary to carry out a subsequent permanent plan of relief. But regardless of what measures of relief might ultimately

be worked out, an immediate fare increase was deemed the paramount consideration, and unless this were forthcoming as a temporary plan, there would be no occasion to work out the permanent settlement. The zone fare system, the one-man car, and other steps tending toward better revenue and greater economy were freely discussed and indorsed, but the opinion prevailed that nothing short of a substantial fare increase would bring help of sufficient magnitude and quickly enough to stop the procession toward bankruptcy which is now being experienced by practically all companies.

Electric Railway Mail Pay Hearings Concluded

Railways Believed to Have Established Their Case—Question of Proper Compensation Now Being Taken Up

THE final hearing of the electric railways before the Interstate Commerce Commission on the compensation for carrying United States mail took place in Washington, Aug. 4, and it is believed the railways have substantiated their case.

The hearings on this subject were begun in Washington on June 9, and were followed by seventeen regional hearings covering every section of the country. George W. Brown has acted as examiner for the commission, and has personally conducted the hearings at the different cities throughout the country. The Post Office Department has been represented by the Hon. Joseph Stewart, assistant to the attorney general, and he and his assistants have accompanied the examiner on the itinerary throughout the country. For the electric railway companies, the American Electric Railway Association has conducted the case, having engaged as special attorney S. S. Ashbaugh, who has likewise accompanied the representatives of the commission and the Post Office Department on the extended tour.

One of the steps taken by the American Association to secure a comprehensive presentation of the electric railway case was to send out a form of exhibit for the use of all of the companies. This brought about a uniform treatment of the testimony on the part of the electric railways, which was so helpful that it called forth complimentary remarks from the examiner.

In establishing their case, the electric railways have endeavored to present evidence to establish the following four points, and in this it is believed that they have been successful, judging from the absence of refutation:

1. That there has been a general increase in operating costs to the extent that it is now almost three times as much as it was when the rate of pay for carrying mail was previously fixed.

2. That there has been a very substantial growth in the amount of mail to be handled, being as much as ten times the average quantity, in some cases, which was used as the basis for the establishment of the 3-cents-per-pouch rate now in force. The principal expansion in this service has been due to the inauguration of the parcel post system, which has not only resulted in an immense increase in the amount of mail to be handled by the electric railways, but has made it necessary for these carriers to haul this mail at the expense of their own express and freight business, since numerous shipments which were formerly made by this route are now sent by mail.

3. That the side and terminal messenger service which has been provided by the electric railways under protest, as a result of a post office order, is not established in law and the railways cannot be compelled to give this service unless they are adequately compensated.

4. That it is unjust to require street railway cars to carry parcel post mail.

The general aim of the railways has of course been to establish the inadequacy of the present rate of compensation. The final hearing brought forth an attempted rebuttal on the part of Mr. Prentiss, statistician of the Post Office Department. His principal differences had to do with the action of the American Association in sending out a proposed form of exhibit to be used by the member companies in presenting their individual cases, with the method of valuating the service rendered by the electric railways, the elements of cost included in the cost of rendering the mail service, and the return on the investment involved. These contentions were answered by F. W. Doolittle, who succeeded in quickly explaining away the bases of the differences.

STEPS BEING TAKEN TO ESTABLISH SATISFACTORY RATE OF PAY

Now that the hearings are completed, the Interstate Commerce Commission is expected to act in accord with the power vested in it by virtue of an act of Congress approved July 28, 1916, and the subsequent appropriations bills, to fix the rate of compensation for the transportation of mail matter by the urban and interurban electric railways, and to prescribe the conditions of the service. In order to facilitate the work of the commission in establishing the new rate, the American Electric Railway Association has appointed a committee to work out, with the assistance of the electric railway executives of the country, a satisfactory rate of pay and code of conditions, for the consideration of the commission. The members of this committee are P. J. Kealy, C. L. S. Tingley, Victor S. Curtis, W. S. Rodger, J. W. Welsh and S. S. Ashbaugh. This committee has already had one meeting, and has prepared a letter and questionnaire which is being mailed out to the member companies, in order to give the problem the widest consideration and to bring about a recommendation of rates and conditions which will meet the requirements.

In this connection, it is pointed out that this matter is of special interest to every electric railway company, whether or not it is now carrying mail. The law provides that it shall be unlawful for any urban or interurban electric railroad to refuse to perform mail service at the rates or methods of compensation provided by the Interstate Commerce Commission, after such a hearing as has just now been completed. And it is anticipated that the Post Office Department will probably greatly extend the transportation of mail by electric railways on account of the lower cost of this service as compared with other means of transportation.

Presumably three separate rates will be worked out, one for the carrying of first, second and third class mail pouches on city cars, another for the carrying of parcel post and pouches on freight and express cars, and the third for carrying mail on independent railway post office cars.

Advertising and Publicity*

Constant Advertising Properly Directed Will Reduce Accidents, Assist in Improving Service and Cultivate Public Good Will

By T. T. WRIGHT

Auditor Little Rock (Ark.) Railway & Electric Company

IF YOU wish to know whether or not advertising costs money I can bear testimony in the affirmative as auditing bills for advertising comes under my jurisdiction. It does pay, yet modern business of any kind cannot be successfully conducted without advertising. There has been advertising in some form or other ever since men bought and sold merchandise. It is not necessarily confined to printer's ink, although in these days that is the most efficacious method, but in some form or other advertising has been done for thousands of years.

One of the earliest instances of advertising on record was in Bible times when Joseph was sold into slavery and finally became the first cornerer of corn. He advertised the fact, as there were no newspapers in those days, by sending out messengers with the word that he had corn to sell in time of famine when no one else had any supplies. His brethren and aged father heard the good word and the old man sent his sons to Joseph's market far away. That was advertising. It was letting the world know that he had to sell what the people most needed. That is also the advertising of to-day only by the medium of the newspapers more people are reached, and reached more quickly and more nearly simultaneously, than the ancients could conceive possible. But the ancient and modern ways of advertising differ only in detail.

GOOD ADVERTISING IS TRUTHFUL ADVERTISING

There is good advertising and bad advertising. An immense amount of money is spent on advertising that is profitable to the advertiser. On the other hand, there are vast sums spent on advertising that is so much money thrown away because the advertising is intrinsically bad. There are egotistical advertisers who imagine that the big thing in their copy should be their names. The opposite is true. Look at the big magazines where space costs as high as \$1,000 a page and upward. These advertisements are generally prepared by high-priced experts, and their method is to catch the attention of the prospective purchaser with the article advertised. If they succeed in that, you may trust the reader to look for the name of the seller, which is generally found in the smallest of type. To start an advertisement with the name of the seller in glaring type means nothing at all—except, of course, when the article in question is known by the maker's name, as for example the Ford car. Take a cigar advertisement put out by a new dealer or manufacturer. The name heading the advertisement would mean absolutely nothing to the casual reader. The idea is to attract the attention of the smoker, the only man you care to reach. Get his attention, and if your matter appeals to him he will find your name all right.

On the other hand, when it comes to a proprietary article, such as "Pears' Soap" or "Castoria" or "Carter's Little Liver Pills," all that is necessary is to keep the name of the article before the public. Probably not one in a thousand of buyers of "Castoria," for example, knows or cares who makes it or where it is made. The name is familiarized by consistent advertising, and it can be bought at any drug store in any city in the country.

It has been held, and I believe it to be true, that anything good or bad can be sold by clever advertising; but an article without merit cannot be sold twice to the same victim. Therefore the only good advertising is truthful advertising. The advertisement must make good. There are certain brands of watches, of cigars, of tobacco, of hoisery, of various other articles in general demand that have been on the market for generations. They remain in constant demand because they have been kept up to standard quality. Once let them deteriorate and the demand decreases and eventually dies entirely.

CONTINUITY IS AN ADVERTISING ESSENTIAL

No matter how good the article, the advertising must be kept up or the demand will decrease. This is illustrated by the following incident: One of two merchants in a firm desired to discontinue advertising as the firm name was considered well established in the minds of the firm's clientele. His partner converted him by asking who were the vice-presidents under Cleveland and Harrison, whose names the first could not recall. "Well," said the partner, "they were a lot better known than we are or ever will be."

While for many years merchants have recognized the inestimable value of advertising, it is only of recent years that utility companies have done so. The idea seemed to be that with the possession of a franchise and the patronage which in a measure necessarily accompanied it advertising expenditure was useless. Our company advertises every day in all the daily newspapers and has been doing so for several years. The proposal by our president to spend money in advertising was first not taken seriously. What was there to advertise? People had to ride the cars anyway. He finally secured consent for an appropriation for one year by way of experiment, and when that year was up the owners were so thoroughly converted to the advantages of consistent advertising that it has not only been continued by our company but has been taken up by other properties under the same ownership elsewhere.

But remember that we advertise nothing to sell. Our advertising is practically confined to the operating department, and what commercial advertising we do is not at the expense of the space taken by the operating department but in addition thereto. You may ask what benefit we derive from it. It does not increase traffic

*Abstract of paper presented before convention of Arkansas Utilities Association.

at all; that is not the object. A very large proportion is devoted to teaching people to be careful. It teaches children not to play on the streets. It teaches parents to warn their children to be cautious. It teaches the danger of crossing streets behind standing cars or to cross streets at other than street intersections. It instructs auto drivers as to traffic rules. It explains courteously just why a street car should have the paramount right of way over other traffic and cites supreme court decisions upholding that right. It suggests to passengers that they stand where the rear of the car stops so as to avoid useless delays in loading cars. It explains how the rush hour is an unavoidable problem which the best thought of the whole civilized world has been unable to solve and suggests means of decreasing the evil by shoppers going home before the hour when all the workers quit simultaneously.

When the six-cent fare was proposed we started a campaign to show the people how impossible it was for utility companies to pay the tremendously increased cost of materials and labor and get no more compensation than that fixed by franchises made years before war was even deemed possible. After untold difficulties incident to accommodating Camp Pike, the company took the public fully into its confidence, even to its financial embarrassments and went into the whole subject exhaustively in a series of advertisements running over nearly a month. Past difficulties were explained and future prospects outlined.

The advantages visible from this policy of daily advertising include a smaller percentage of accidents in ratio of passengers carried, greater care by pedestrians, drivers of vehicles and passengers, saving of time and doubtless the effect of constant warnings and reiterations of the traffic rules has had its bearing on juries trying damage suits wherein the plaintiff has at least been guilty of contributory negligence. What is one of the most valuable results is the fact that the company has cultivated the good will of the public, in large measure overcoming the senseless prejudice against public utilities of all kinds.

Federal Commission Notes

Hearings to Be Resumed at 10 a.m. Aug. 11—The Secretary of War to Be the First Witness

NEWTON D. BAKER, secretary of war, will be the first witness, it is expected, at the re-opening of the hearings of the Federal Electric Railway Commission in the Interstate Commerce Commission Building, Washington, Aug. 11 at 10 a. m. He will be followed by several prominent economists. A number of mayors have accepted the invitation of the commission to appear and also the representatives of several governors.

In addition to the list of witnesses published on page 227 of last week's *ELECTRIC RAILWAY JOURNAL*, who had expressed their intention to appear, the commission has received similar word from Mayor Gainer, Providence, R. I.; Grenville S. MacFarland, Boston; LeRoy J. Williams, public service commissioner of Colorado; William P. Burr, corporation counsel, New York, N. Y.; Lewis Nixon, public service commissioner on regulation of New York; W. D. B. Ainey, chairman, public service commission of Pennsylvania; E. I. Lewis, chairman, public service commission of Indiana; Fielder San-

ders, street railroad commissioner of Cleveland, Ohio.; William C. Bliss, chairman, public service commission of Rhode Island; Prof. Dugald C. Jackson, Massachusetts Institute of Technology, and Col. Charles W. Kutz, public utilities commissioner of Washington, D. C. Other prominent men have been invited and will no doubt appear during the week. The hearings will probably continue well through the week.

Word was received in Washington that Commissioner Louis B. Wehle, who has been ill for the past three weeks, is on the road to recovery at Bar Harbor, Me.

In the news account published last week it was inferred that Bentley W. Warren would not be present at the hearings next week and that Charlton Ogburn would act as counsel for the railways in his absence. This was in error due to a misunderstanding of information received from Washington. Mr. Warren does expect to be present. Mr. Ogburn will probably act as counsel for the public (instead of the railways) and prepare the program and the case for the witnesses on the public's side.

Association News

ATLANTIC CITY CONVENTION, OCT. 6 TO 10

"Hall of Engineers" at Atlantic City

Geo. W. Wells, director of exhibits for the Atlantic City convention, states that a new feature this year will be a "Hall of Engineers," in one of the most attractive exhibition halls on the pier. Two sides of this open on the ocean and have a large window area, insuring plenty of light and a fine view. The hall will be suitably decorated and a large aisle in the center will be furnished with rugs and tables. There also will be attendants in white uniform who will direct callers. The booths will be occupied by representatives of the large engineering and contracting corporations, who will entertain their clients and guests and display photographs of their latest works in engineering and construction work.

As to progress in the exhibits to date Mr. Wells says that the space sold up to the present time is equal to the entire space sold for the 1916 convention, and that applications from manufacturers are coming in at a rate to indicate that all available space will be taken up. He has gathered the impression that the railway operating men are planning this year, to an unusual extent, to make a systematic study of the exhibits so as to apply the lessons learned at the convention to their everyday work. In addition to the exhibits of the usual types, this year special attention will be given to the needs of the accounting department. There will be exhibits of bookkeepers' supplies, calculating machines, office systems, etc.

Freight Traffic Stimulation

A NEW committee of the Transportation and Traffic Association has the task of formulating plans for the encouragement of freight traffic on electric railways. It comprises A. B. Cole, East Pittsburgh, Pa., chairman; F. W. Shappert, Chicago, Ill.; F. D. Norveil, Anderson, Ind.; E. E. Soules, Peoria, Ill.; L. E. Gould, Chicago, Ill.

Letters to the Editors

Morale of Executive Staff Is Affected by Adverse Conditions

BROOKLYN, N. Y., July 29, 1919.

TO THE EDITORS:

Reports of the frequent resignations of officials, technical men, and all classes of office employees from the service of public utility corporations, which are suffering from increased expenses without increased revenue, suggest the question as to why men who occupy positions of trust, and some of whom have built up the existing business from its inception, should leave their employers in time of need.

The fear of losing one's position after the appointment of a receiver may sometimes be a reason for the change, but it is well known that receivers generally are careful not to impair the efficiency of the organization they temporarily control, and any economies they introduce are least likely to be in the office. A recent interview with a public utility manager who had just resigned to go with another company may explain the feelings which actuate most of those who retire under such circumstances from companies they have helped to create. This in substance is the explanation he gave:

"I have been connected with this company for years. By successive promotions I became the manager of this department. I have spared no effort to make the company a success for its stockholders and an unfailing servant to the community. In times of emergency I have worked with my staff early and late, and sacrificed my holidays whenever my duty seemed to be here. If I had owned the whole business I could not have been more faithful. I have illustrated the fact that one learns to love that for which he sacrifices, and have welcomed the opportunities to make myself useful in a town where many of my friends and relatives live, and to a company which is giving to its citizens the best service possible under the circumstances. My work has been appreciated by the board of directors, and I have never been refused what I have asked for, and yet I am resigning because the situation seems so hopeless I am unhappy here.

"What makes me unhappy here is my realization of the impending fate of the company which I have worked so hard to build up. I am unwilling to stay and see the plant steadily depreciate. The buildings are neglected, the railroad is suffering for ordinary repairs, safety appliances really necessary for public safety are lacking, and the operating ratio is mounting because the company's credit is gone, and no money can be had for adequate maintenance to say nothing of extraordinary repairs, improvements and extensions. These adverse conditions are all due to the decreased purchasing power of the fixed fare. I am going to another company that can afford to pay better salaries than are paid here, but it is not so much my own prospects here as it is the prospect of the company which discourages me. I am leaving a company which is necessarily decadent if not moribund, and going to one which is continuously progressive and prosperous. Here,

everyone believes the end is inevitable. Everything has been done that can be done to get higher fares, but without any success or encouragement. Operating economy is now regarded as an unattainable ideal, and no more effort is being made to postpone the financial collapse which is impending. I feel myself getting demoralized under these circumstances. I want to travel up grade with hard work rather than run down grade with a rock pile for a stopping. I cannot do myself justice, nor properly discharge my duties, without a sense of good cheer such as I can not have here where things are systematically going wrong. An intelligent human worker needs to have an encouraging prospect before him as much as a machine needs to have oil on its bearings. That is why I am making the change."

GEORGE H. JOHNSON.

[NOTE.—The discouraged railway official, whose point of view is described by Mr. Johnson, goes only half way. It seems to us that he ought not to resign simply because things look dark for the company that has treated him so well. He ought to brace up and do something. If one expedient will not answer to get the company out of its trouble, let him try another. Has he tried to get higher fares for his property, and if so what has been the result? If an increased flat fare has not been as successful as he would like, has he considered the zone system? What has he done to get the city authorities to let him put in one-man cars? Has he tried the skip stop?

Railways will have to be continued in operation, or most of them will. They are a public necessity, and if the companies should abandon them the cities would in self-protection be obliged to keep the cars in motion. The electric railways are at present in bad shape because they have not readjusted themselves to the present scale of prices. This cannot be considered their fault, but it would be so considered if they did not do everything possible to effect a readjustment.—EDS.]

A Lesson from the Candy Business

NEW YORK CITY, Aug. 1, 1919.

TO THE EDITORS:

It is a commonplace among electric railway men to assume that only their business has been hard hit by the increase in prices; that in other lines the public uncomplainingly buys as much at the higher price as it did before. Judging from the large advertising campaigns of milk and meat producers, this easy judgment can hardly be a fact even in the case of genuine necessities. Another sign, perhaps, is the recent halving in the price of the costlier phonograph records.

But the change that may have the most interest for the electric railway man is to be noted in the confectionery business. Candy has doubled in price and since it is a luxury—not a necessity—its makers appear to have been using their wits to good purpose in order to keep up the sales. Their reasoning seems to be that if people won't pay a dollar or more per pound, they may be induced to buy smaller packages for as little as 5 cents each. This seems to be a reasonable explanation of the sudden increase in the output and advertising of small packets of chocolates, caramels, mints, lemon drops and various tablets that were formerly sold in pounds or large fractions thereof.

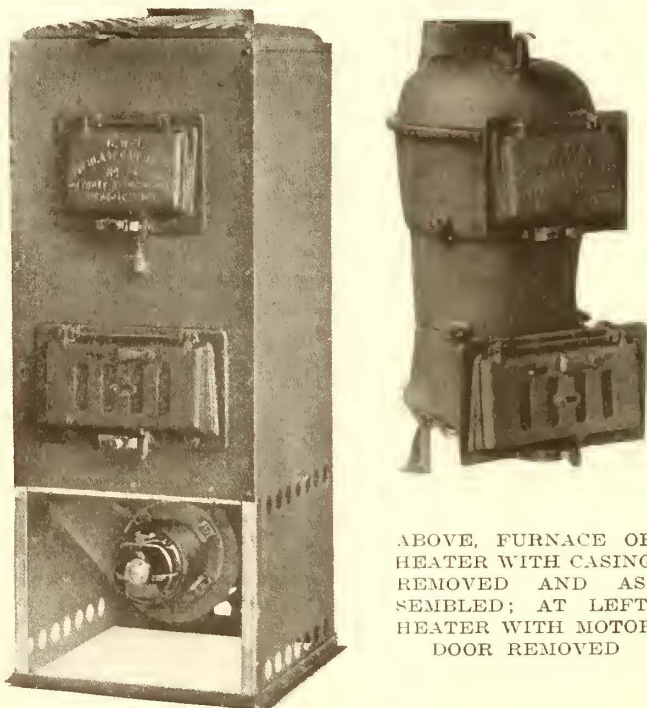
The total cost of a pound of these packet confections would scare custom away, but by giving the customer

the choice of buying them in driblets the confectioner is doing exactly the right thing to keep his business going. Of course, it would be a lot easier for him to sell by the box, but he is willing to take the trouble of subdividing his sales as it were.

Does not this plan carry a hint for the electric railway man who has thought it would be too much trouble to sell transportation on a zone or graduated fare basis? The time for sticking to a flat fare, regardless of length of ride, just because it was easier for the accounting department, has gone forever. Let us follow the candy man's lead and sell transportation to the public according to the amount of transportation that the public wants or can afford to buy. "TABS."

New Hot-Blast Forced-Ventilation Heater

A NEW line of heaters for electric railway cars has been developed, the fundamental principles applied being those of the furnace used for domestic heating with the addition of the forced ventilation apparatus. The "hot-blast" feature, described later, was introduced to provide for efficient combustion, including that of smoke and gases. Any reasonable kind of fuel can be used, hard or soft coal, slack, siftings, coke, corncobs or wood. These heaters are made in three sizes, to fit



ABOVE, FURNACE OF HEATER WITH CASING REMOVED AND ASSEMBLED; AT LEFT, HEATER WITH MOTOR DOOR REMOVED

respectively the "safety" car, the usual city car and the heavy interurban car. The medium-size heater weighs 355 lb. complete.

Each heater comprises twelve castings, the furnace consisting of four. The fire bowl is made separate so that if it burns out only one simple casting need be replaced. This replacement can be made by two men in two and one-half hours without removal of the stove from the car, and without disconnecting wires or even loosening the heater from the floor. The top grille, top plate and front of the heater casing can also be removed readily and the furnace taken out bodily. The fire-bowl castings have V-joints to prevent leakage of gas, and all bolts between these castings are on the outside to obviate burning. The grate is flat and the ashes are shaken out by moving the shaking handle

from side to side. To dump all of the ashes the grate is pulled forward but cannot be entirely withdrawn.

The hot-blast feature referred to above consists of a 2-in. tube, open to the atmosphere at the top and to the combustion chamber at the bottom, natural circulation causing a constant influx of fresh air to the fire bed. The stove is said to hold fire, when standing in the carhouse, for from eighteen to twenty-four hours without attendance. The motor and blower are placed in the bottom of the stove so that the motor will not be subjected to the stove heat. This conduces to low maintenance cost, provides a direct movement of the air and prevents waste of oil by evaporation. A Westinghouse motor is used.

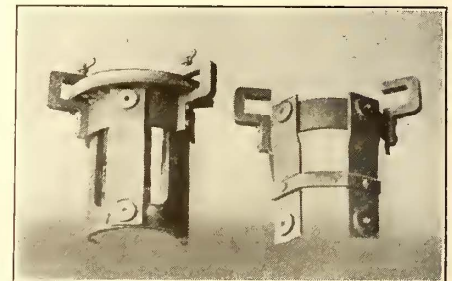
The damper on the ash-pit door is locked in place in such a way that when regulated for any condition it will remain in position. This damper is airtight when closed and the ash-pit door also is practically airtight. This construction provides for caking of the coal, a condition which is said to be highly desirable in obtaining complete combustion. Two complete casings encircle the furnace, insulated with high-pressure block.

Fresh, clean air to be heated and forced into the car body is taken from the top of the car. It is brought down through a 7-in. pipe which surrounds the 6-in. smoke pipe. The temperature of the air is thus raised about 40 deg. before reaching the stove. The air passes around the furnace through baffle plates affixed to the inner casing. These cause effective circulation of the air around the furnace and lead to its delivery to the car through the blower and the usual type of duct at a high temperature. These stoves, which are known as the Jewel "hot-blast forced-ventilation heaters," are made by the Detroit Stove Works. They are marketed by Holden & White, Inc., Chicago.

Bearing Jig for Locating Dowel Pin Holes

INSTEAD of locating dowel pin holes on axle or journal bearings by careful and painstaking measurements jigs have been made in the Des Moines City Railway Shop to accomplish this work with great accuracy and to save much time in carrying out the work. Two of these jigs for different sizes and types of bearings are shown in the accompanying illustration.

These jigs are made from strips of 2 in. x $\frac{1}{4}$ in. iron properly curved and bent to fit snugly over the bearing. The



JIGS OR TEMPLATES FOR LOCATING DOWEL PIN HOLES ON AXLE AND JOURNAL BEARINGS

clamps which hold the jig firmly against the fillet end by means of thumb screws are made of $\frac{1}{2}$ in. square material and all parts are riveted together. The dowel pin holes are carefully located and drilled through steel inserts. These prevent excessive wear, which would reduce the accuracy of the template. The jigs can be quickly adjusted and removed from the bearings and the holes can be located without especial care. This makes it possible not only to do the work rapidly but also to accomplish it without skilled labor.

News of the Electric Railways

FINANCIAL AND CORPORATE • TRAFFIC AND TRANSPORTATION
PERSONAL MENTION

Dallas Grant Faulty

Head of Dallas Railway Sees Need for Complete Municipalization of Local Lines

J. F. Strickland, president of the Dallas (Tex.) Railway which operates under a service-at-cost franchise, has announced that municipal ownership of the railway lines is preferable to allowing the systems to disintegrate to a point where they can no longer serve the people of the entire city. Mr. Strickland said:

Municipal ownership would probably be a more direct solution of all difficulties, since the maintenance of the properties could be assured through payments by the people of necessary expenses, either directly or indirectly through taxes.

Laying aside all theories on the subject of government ownership, and looking only to the practical results, we might say that municipal ownership would be better under the present trend of things. When this position is taken, the elements of increase in cost of operation and of a lack of corresponding increase in returns from the railway business bear weight.

If the railway lines are to reach a point where they are unable to keep up their service and to develop with the growth of the cities, municipal control might be adopted, since support could be assured in that event. The city then would be able to accomplish the needed results by changing the ratio of cost of operation to the return, or by assuring the proper maintenance and development of street car properties by taxation.

Or being confronted with the question whether the railway lines are to maintain their service and whether transportation facilities of the city are to develop with its growth, municipal ownership might better meet these needs in the present time.

In following up this statement, Mr. Strickland said he wanted the people of Dallas to devise and suggest some plan by which the Dallas system could be turned over to the city. He said officials of his company had no plan in mind for the transfer of the property, but they realize that something must be done within the next few months in order to enable the railway to meet its financial obligations in 1922, at which time the organization will have to be refinanced. In this connection Mr. Strickland said further:

The way things are going now, the company will not be able to take care of securities which become due in 1922, and if they are not properly cared for the company will have trouble financing itself for succeeding years. The people of Dallas actually control the lines now, as the service is supervised by a representative of the citizens. However, under the management the company is not making earnings which will enable it to make necessary extensions and to give the service that is needed. If the company disintegrates to such an extent that it cannot give adequate service, it is the people who will suffer the most.

Complete investigation of the financial condition of the Dallas Railway will be made by Mayor Wozencraft as soon as he has completed some important matters now on hand. Mayor Wozencraft said he was devoting all of his time first toward solving those

urgency measures in connection with the railway situation, and named among these the skip-stop and extensions. The Mayor plans an investigation in the East with Dallas in mind.

Mr. Meriwether, general manager of the company, in discussing the need for making improvements totaling \$1,000,000 to \$1,500,000 in the next two to five years, said:

The Dallas Railway is earning only 4 or 5 per cent and when officials go into the money market to make loans, the investors want to know what the returns on present investments are.

When they learn the return is small, they look askance at the loan, telling us that the money needed for such improvements involve a great risk and as a consequence charge us from 7 to 8 per cent, oftentimes not granting the loan because of the risk they are forced to take.

This is a question that all Dallas should give serious thought to. Dallas will not grow and expand without adequate electric railway service, and increased accommodations cannot be provided without money.

Increase in the cost of operation, material and labor is the thing that is cutting down our return. We are not permitted under our franchise to emulate the baker, butcher and grocer and increase our prices, but are compelled to have a stationary cost even though the cost to us is almost daily increasing.

Terminal Ordinance Passed

Use of Electricity on Illinois Central at Chicago Depends Upon Sanction by War Department

The ordinance providing for the lake front improvement and the electrification of the Illinois Central Railroad as described at length in the *ELECTRIC RAILWAY JOURNAL* for Jan. 11, page 108, has been passed by the City Council of Chicago, approved by the South Park Board and the Illinois Central Railroad, and signed by Mayor Thompson. The only step now remaining before actual work can be started to carry out the provisions of the ordinance is a sanction by the War Department for harbor changes, etc.

Briefly, the ordinance provides for the expenditure of about \$110,000,000 and the electrification of the Illinois Central Railroad, the construction of an immense new passenger terminal at Twelfth Street, the building of a lake front park, and the formation of a new harbor district south of Grant Park.

The passage of this ordinance represents the successful completion of agitation started as long ago as 1915. During this time frequent efforts have been made to draft an ordinance which would be acceptable to both the city and the Illinois Central Railroad. This has at last been accomplished, and as soon as permission can be obtained from the War Department work will be begun on Chicago's greatest single railroad improvement.

Wage Increase by P. R. T.

Seven-Cent Advance Goes Into Effect In Accordance With Company's Co-operative Plan

The Stotesbury-Mitten management has announced a further increase in wages of the employees of the Philadelphia (Pa.) Rapid Transit Company, this being in accordance with the terms of the co-operative plan of 1918, by which the management undertakes, with the employees, that the scale of wages paid in Philadelphia shall be equal to the average in the four cities, Buffalo, Detroit, Cleveland and Chicago.

EFFECTIVE FROM AUG. 7

While certain retroactive adjustments are made by the railway company, as of July 1 and July 13, covering increases granted in Detroit and Cleveland respectively, the sum of these increases, together with that of Chicago, is represented in the maximum scale which, following the action of the co-operative committees, will be made effective as of Aug. 7, namely, elevated motormen, 61 cents an hour; surface motormen and conductors, 58 cents an hour.

ADJUSTMENTS FOR OTHER EMPLOYEES

Increases and adjustments in the wages of employees in other departments will be made in conformity with the plan. The total increase in wages paid to the employees will represent considerably more than \$2,000,000 per annum. A statement which was made by the company in announcing the change follows in part.

The introduction of improved operating methods, including removal of wasted effort, has thus far in Philadelphia served to keep pace with increased wages and other costs, as against the alternative of raising fares.

Increasing fares in other cities has almost invariably resulted in reducing the number of passengers carried by forcing many who would and should be car-riders to walk or use other means of transportation.

The remedy, it is believed, is to be found in doing everything possible to increase revenues by increasing the number of passengers carried and decreasing the costs of operation.

No relief in the way of additional carrying capacity can be expected from the city's plans for transit development, as against the requirements of the coming winter, so that the withdrawal of unnecessary and duplicate service should be encouraged and every car utilized to best serve the public need. Delays occasioned by unloading coal wagons and other vehicular interference should be eliminated, and action by Select and Common Councils looking to increased speed of the street cars and a quickening of the service is essential.

The Stotesbury-Mitten management has, ever since its incoming in 1911, considered improved service to the public to be its first duty. It now bespeaks the co-operation and help of press and public in its efforts to keep fares down and wages up, and provide the best possible service to the public.

New York Commissioner Suggests Solution

Financial and Corporate Housecleaning Followed by Service at Cost Is His Idea

In a statement issued on Aug. 3 Public Service Commissioner Lewis Nixon replied to some of the attacks made upon him because of his 2-cent transfer order and his attitude toward the railroad companies. He also outlined a plan for the reorganization of the companies which he thought would simplify operation, safeguard investors in the properties, and serve the public better than the present method.

Mr. Nixon's plan for bettering the transportation situation is to place all of the lines under one management, or possibly two, by the separation of the surface and the rapid transit lines, the termination of all present franchises and the substitution for them of franchises to live only for fixed periods, and a flexible fare to be subject to the financial needs of the companies. He also suggested that the city have upon the directorates of the companies a representative to see that the public's rights were protected. As Mr. Nixon's ideas represent enlightened opinion on public utility matters among regulators and other public officials the statement that he made is published in full as follows:

The recent decisions of the Court of Appeals have clarified the traction situation in a way which presents to city and State officials both duty and opportunity.

Their duty is to promote the interests of the traveling public by insuring adequate facilities and service, and further avoid any recurrence of the present emergencies by just and equitable readjustment of the entire traction situation.

It is to be regretted that statements made to the public have given the impression that under any existing conditions the traction systems can fall into the hands of the city government. Those responsible for such statements know that the courts will protect property rights, thus safeguarding bondholders by receivers. And even when they know from their own previous statements that the city is unable to acquire such systems, except through confiscation or abandonment, both of which they know also to be impossible, they cannot promise cheaper or better conditions for the traveling public under their ownership.

Such arguments follow a vicious circle very similar to the open charging of improper relations between public officials, who must be guided by their intelligence and judgment, and those seemingly favored.

SUGGESTS SOLUTION OF PROBLEM

The opportunity is that the relations between municipalities and railroads may be so readjusted that co-operation shall take the place of conflict, that flexible fares shall meet changing conditions, that both city and investors shall receive fair returns, and that the city may be able to establish municipal ownership or operation, or both, when it desires and is in a position to do so.

The present situation is intolerable, and must have an early solution. The transportation systems are, some bankrupt, and others approaching bankruptcy. Their ability to meet or even properly protect the necessities of passenger traffic is suspended or threatened. Those who deny this and do not try to furnish proofs, but rely upon vague insinuation, do not understand the facts as they exist, or prefer to leave the public in error. In so far as the transfer orders are concerned, they were based upon the fullest power on my part as well as a sense of justice to all concerned. Simply for purposes of controversy to question my power does no good. The courts will attend to that.

My study of the question confirms my earlier conclusions. From the viewpoint of the city, or the public and of the investor the solution of the present emergency must be along the following lines, which in the main repeat the views I have heretofore stated:

1. Each of the present transit systems to be simplified by the consolidation or merging of the constituent companies into one railroad corporation. Of course, it may be found desirable to have separate corporations for surface railroads and rapid transit railroads, respectively. Personally, I trust to see such steps taken as will insure one corporation only, with which the city and the commission can deal, but this is a detail.
2. All holding corporations, so called (not railroad corporations), to be abolished.
3. Leases of roads to be terminated.
4. Perpetual franchises to be changed to franchises limited to fixed periods within city charter limitations, or to what are known as indeterminate franchises.
5. Values of properties to be agreed upon or arrived at by such means as will leave them unquestioned.
6. The city to have the option of acquiring the properties within a fixed period at the agreed valuation, plus the cost of additions, extensions, and improvements. (It may be desirable to provide for amortization of purchase price out of earnings.)
7. A flexible fare to be established, whereby fares shall be automatically adjusted to meet the cost of service, together with a reasonable return both to city and investors upon the agreed fixed valuations and upon the cost of additions, extensions, and improvements. The variation in fare to be secured mainly by maximum and minimum limits in a surplus fund, the operation of which shall be so simple that it can be taught to and understood by the pupils of our public schools.

Traction Fares a Political Issue

Ex-Governor Eugene N. Foss of Massachusetts, whose testimony before the Federal electric railway investigating commission aroused comment because of the sensational demand for public ownership combined with a return to the 5-cent fare, has announced himself a candidate for the Democratic nomination for Governor at the forthcoming primaries. In a long statement Mr. Foss declares that the foregoing tenets will constitute his platform. He contends that no further need of investigating electric railway finances in Massachusetts exists; that public control has failed, and that no other method than municipal ownership exists for solving the problem of electric railway revenue.

Shore Line Resumes Service

The Shore Line Electric Railway, Norwich, Conn., which operates 221 miles of line, was shut down absolutely for two weeks beginning July 16 because of a strike of its trainmen. On Wednesday, July 30, however, the company began operating in New London, spreading out from there gradually, using such men as it could obtain. On Aug. 4 the company was giving full schedule in New London and out on the East Lyme road as far as Golden Spur, and had arranged to open up the main line from New London to Norwich, on an hourly schedule.

The Amalgamated Association turned down every effort at arbitration, even plans suggested by the mediation committee of the State Chamber of Commerce and by the Mayor and a committee of the Common Council of New London.

The original proposal of the company for arbitration called for a jury of twelve men. This was before the strike. Later the company agreed to an arbitration board made up in the usual manner, one selected by the company, one by the men and the third appointed by Messrs. Taft and Manly, of the War Labor Board, but stipulated that if the board was made up in this way the findings must cover a consideration of the wage question coupled with the question of the ability of the company to meet any award. The company further stipulated that if an award of an increase in wage was made it should only be effective when the arbitration board found that the company was in financial condition to meet it.

Through the intervention of the mediation committee, the company agreed to withdraw all restrictions as to the findings, provided the men would withdraw all restrictions and leave the differences up to a board of three, one selected by the men, one by the company and the third by Governor Holcomb of Connecticut. This proposal being refused, it was suggested that possibly the men might accept as the third man an appointment made by the Governor of Massachusetts.

After finding that it was impossible to agree with the representatives of the Amalgamated Association on any fair and reasonable arbitration, the company, as stated previously, began to secure such men as it could and start operations. Only a comparatively few of the old men stood by the company, and it is operating mostly with new employees who have to be broken in on each line.

Increase for New Bedford Men

The directors of the Union Street Railway, New Bedford, Mass., have acted upon the request of the men for an increase of wages, and the announcement of the new wage schedule, giving an increase of 7 cents an hour, making a maximum rate now of 55 cents an hour, was made by the company recently.

The old wage scale ran from 41 to 48 cents an hour, according to the length of service, and the new scale runs from 48 to 55 cents. The increase is to date from July 20. The directors have likewise prepared a statement directed to the public, giving forewarning of a probable increase of fare, and in the statement there is an interesting discussion as to the various ways that may be adopted to obtain the necessary additional revenues to meet the increased costs of operation. The proposal of the company on fares is referred to on page 304 of this issue.

The old and the new rates in cents per hour compare as follows:

	Old Rate	New Rate
First six months.....	41	48
Second six months.....	42	49
Second year.....	44	51
Third year.....	45	52
Fourth year.....	46	53
Fifth year.....	47	54
Sixth year and after.....	48	55

Chicago Strike Settled

Referendum, Orderly Conducted, Results in Acceptance by Men of Terms Previously Rejected at Noisy Demonstration

A four-day strike of the surface and elevated trainmen in Chicago ended at midnight on Aug. 1 with the acceptance by the men of the terms previously offered by the companies. The car riders of that city now face the practical certainty of higher rates of fare. The applications of the companies for increased rates were taken under advisement on Aug. 5 with the prospect of an immediate decision by the Public Utilities Commission. It was expected that the Chicago Surface Lines fares hereafter would be 7 cents with a 1-cent charge for transfers, and the elevated rates at least 8 and possibly 10 cents.

Developments in Chicago came fast after International President W. D. Mahon arrived in the city to take charge of affairs for the striking conductors and motormen. After several conferences with Governor Lowden, the officials of the railways and the utility commissioners, Mr. Mahon arranged for a referendum vote by all the trainmen on Aug. 1. The balloting lasted most of the day and it was early in the evening before the results were known. It was found that 12,334 out of the 15,000 union members had cast their ballots, and that while a majority of 665 of the Chicago Surface Lines union were opposed to the settlement terms, the elevated men favored their acceptance by a majority of 1,051. The end of the strike was, therefore, brought about by the narrow margin of 386 votes.

Mr. Mahon at once notified the companies that the offer was accepted, and arrangements were made to get the men back to the carhouses so service could be started at midnight. With the start of business in the morning full service was effective.

The terms that were finally accepted by the men were set forth in the *ELECTRIC RAILWAY JOURNAL* for Aug. 2, page 249. The maximum wages will be 65 cents on the surface and 67 cents for motormen on the elevated lines. The only concession made at the request of Mr. Mahon was that the util-

ity commissioners would endeavor to shorten the fourteen-hour limit of spread for swing runs and to hasten the preparation of new schedules on an eight-hour basis.

Hearings before the Public Utility Commission began on Aug 4 and would have closed in a few hours but for the dilatory tactics of the city's lawyers. Mayor Thompson had taken no active part in settling the strike and was apparently willing that Governor Lowden should get the credit or blame for urging higher fares. L. A. Busby, president of the Chicago Surface Lines, stated that the settlement with the

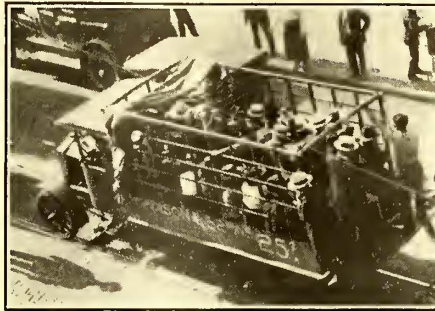
fixed under the franchise settlement ordinance for eleven months, was 4.985 per cent.

The Surface Lines' exhibits also showed that the total man-hours for trainmen during the past year was 25,775,000, and man-hours for other employees who would benefit by the settlement to the extent of 17 cents an hour were 11,112,000. It was stated that additional maintenance costs the coming year would call for \$600,000; increase in the damage reserve, \$362,000; increased taxes, \$374,000. It was estimated that \$100,000 would be lost in traffic earnings before the regular patrons would use the commutation tickets which they bought from steam roads during the strike. Other additions to expenses may be expected under the power contract and under a new agreement with the city for cleaning and sprinkling streets. President Busby stated that the average wage for trainmen in 1914 was 30.16 cents, while the new contract would make it 64.87 cents, an increase of 115 per cent in five years.

Hearing of the elevated companies' case revealed that a 10-cent fare within the city probably would be needed, and 7 cents additional for a local ride in the suburbs north and west. The statements showed an estimated loss of 40 per cent in traffic because of the higher rate. Mr. Seeley said a 10-cent local fare would mean a return of 7.12 on the valuation of \$70,924,000; a 9-cent fare, 5.67 per cent and an 8-cent fare, 4.28 per cent—none of these figures allowing for depreciation. The deficit for July under the 6-cent fare, he said, was \$61,884, and with the new increases in the payrolls the deficit would be \$1,217,757 during the next six months unless relief were given.

The new wage scales are effective from Aug. 6. It is likely that several months will be required to change the 280 time-tables used on the surface lines.

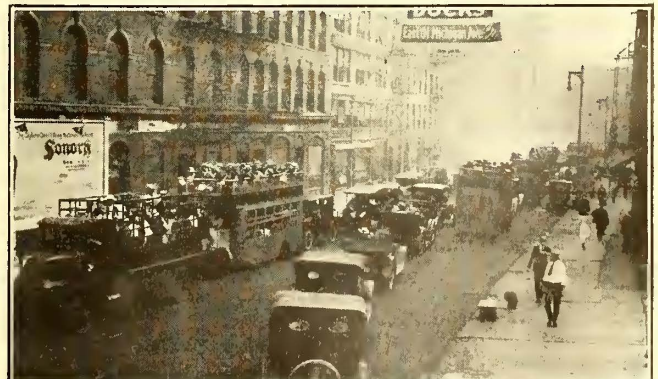
One development in the settlement of the strike was the statement of Mr. Mahon that the union laws had been violated in calling the strike without a referendum. The opposition showed so much strength that it was conceded the election laws of the union would have to be changed to restore good feeling.



DE LUXE TRANSPORTATION AT
TWENTY-FIVE CENTS PER
PERSON

union would add \$7,685,790 to this year's payroll, and other additional expenses would bring the total extra operating cost above \$9,000,000. G. T. Seeley, assistant general manager of the elevated roads, said the new terms would swell his company's payroll to the extent of \$2,435,515.

President Busby presented figures giving the results of operation on the surface lines for eleven months ended June 30, 1919. These showed gross revenue of \$33,540,882, an increase of \$1,933,667; operating expenses and taxes of \$25,899,109, an increase of \$4,554,705. Cost of conducting transportation had increased \$2,787,206 under the War Labor Board scale of wages. The average return on the purchase price of the road to the city, as



TWO VIEWS TYPICAL OF THE CONGESTION OF TRAFFIC IN CHICAGO DURING THE STRIKE

Wage Compromise Accepted

Seattle Men Vote Favorably on Offer of City Superintendent of Public Utilities

By a vote of two to one the trainmen of the Seattle (Wash.) Municipal Railway have voted to accept the wage compromise offered them by Thomas F. Murphine, superintendent of public utilities. A secret vote was taken at all city carhouses. The union's vote means that the carmen and their unions are willing to accept the wage schedule Mr. Murphine has recommended to the City Council, and that a possible strike has been averted.

The offer of Mr. Murphine was to recommend to the Council the establishment of a minimum wage of \$5 a day for new men, to be increased to \$5.50 after ninety days, and to be further increased by a bonus of at least 5 per cent to be paid at the end of one year of uninterrupted service. The working day was fixed at eight and one-half hours.

The original demand of the union was for a minimum of \$5.50, to be increased to \$6 after six months service. The opposition to Mr. Murphine's plan, which, by the way, had once been turned down, centered largely on the bonus plan. The men generally contended that the 5 per cent should be included by Mr. Murphine in his wage scale.

Mr. Murphine has recommended that the Council approve the new wage scale immediately, and that it be retroactive to Aug. 1. Mr. Murphine believes that the bonus plan will work to tremendous advantage for the municipal railway system, as it will minimize the "turn-over," and serve the majority of the experienced trainmen. Mr. Murphine says:

The experienced, careful motorman will save hundreds of dollars annually in equipment, track, overhead, rolling stock and damage claims. Our experience has shown that there is as high as 1 cent a mile difference in power cost between a skilled and unskilled motorman. * * * We realize that the wages proposed will only be sufficient provided the cost of living does not keep increasing, and we would earnestly recommend to the Council that some provision be made for a survey of the living cost, with report made semi-annually, and in case of further increase in cost of living, that the wages be proportionately increased at said time.

St. Louis Wage Arbitration Starts on Aug. 5

The increased wage demands of the carmen and other employees of the United Railways, St. Louis, will be heard by the Public Service Commission of Missouri sitting as a board of arbitration on Aug. 5. Receiver Rolla Wells for the company estimates that the increased wages that are asked would cost the company an aggregate of \$3,125,000 annually.

Under a stipulation signed by Receiver Wells and his attorney for the company, and the president and secretary of the union, both sides agree to abide by the finding of the commission.

The men now get from 36 to 42 cents an hour, the average being about 40

cents. They demand a scale running from 55 to 65 cents, dependent on the length of service.

The carmen propose that they get the increase to 65 cents an hour after nine months service. Most of the employees have been in the service longer than nine months. An eight-hour day also is demanded, the work to be completed in nine consecutive hours.

Elevated Suggested for St. Louis

Recommendations for extending a number of railway lines in St. Louis and the building of an elevated line to total 64 miles at a cost of approximately \$30,000 a mile are contained in a report submitted by C. S. Butts, city engineer of the department of public utilities of St. Louis, to Director Hooke of that department.

According to Mr. Butts' plan the elevated road would start at Seventh Street in downtown St. Louis, run to the levee at Chateau Avenue to connect with the St. Louis Transit lines and the Missouri Pacific Railroad. Thence the "L" would go north to Cedar and Plum Streets and then west to Second. The grade would be about 2 per cent.

Proceeding north on Second Street the line would connect with the Merchants' Bridge at Gratiot Street. From Gratiot Street to Fourteenth Street where the Missouri Pacific yards are situated, a double track is proposed.

Aurora-Elgin Service Still Tied Up

On the night of Aug. 4 the employees of the Aurora, Elgin & Chicago Railway, Wheaton, Ill., were still out on strike. Service was discontinued at 4 a.m. on July 30. The demands of the men for an increase in wages of 41 cents an hour had been refused previously by Edward C. Faber, general manager, on the grounds that the company could not possibly meet the proposition.

The first meeting of the striking employees and the company was held on Aug. 3, but no settlement was reached. The strikers offered to return to work for a week with the understanding that they would again walk out at the end of that time if their increase demand, which has now been reduced to 21 cents an hour, was not granted. Mr. Faber refused to entertain the proposition.

The reduction of the demand of 41 cents an hour increase in wages came as a result of the settlement made in Chicago with the elevated and surface men who had been on strike, and the increase now asked of 21 cents an hour brings the wages to the maximum scale of 67 cents an hour granted to the elevated motormen in Chicago.

On Monday it seemed doubtful that any settlement of the controversy would be reached soon. In the meantime, many large manufacturing companies have been compelled to shut down their plants due to lack of power which was being purchased from the interurban.

Third Windsor Strike Settled

Service Resumed After Brief Walkout Caused by Discharge of Employee—Men Agree to Arbitration

The Sandwich, Windsor & Amherstburg Railway, Windsor, Ont., has again resumed service after the third strike of its employees. The walkout, which was of two days duration, was precipitated by the discharge of Motorman Ernest Thorn, who acted as the union's business agent. It came a few hours after James Gibbons, representative of the International Association, had convinced the men that their demands for a maximum rate of 60 cents an hour were impracticable and the second strike had been called off.

TWO STRIKES IN SHORT PERIOD

Following the second walkout of the men, when the by-law to grant the company a higher rate of fare failed to pass a special election of the voters of Windsor and Walkerville, the city Councils of the two towns asked the Ontario Railway Board to operate the line while the dispute was being settled. The chairman of the board stated that the demand for 60 cents an hour could not possibly be granted and that the board was determined to resume service even if it proved to be necessary to import outside labor.

Developments on July 15 brought forth the threat from the board to cancel certificates of striking motormen and the threat was later carried out. All motormen are required to have a certificate entitling them to operate cars, which the board can cancel at any time when the men are deemed incompetent. At the same time it was stated that the conductors would lose their seniority rights, reducing them to the status of newly-engaged employees in case they applied for re-employment on any other line in the Province of Ontario under control of the Railway Board. The board's right to cancel certificates was disputed by the men and the matter was left by the local union to be taken up later by the Amalgamated Association with the understanding that the action of the board in cancelling the certificates be referred to the Ontario Minister of Labor.

MEN ACCEPT OFFER

The men were persuaded to accept the offer of the board and cars were started on practically all lines, to continue only for a short period and then be halted by trouble precipitated by the company's action in discharging business agent Thorn. The men agreed to co-operate in giving full and efficient service after A. B. Ingram, vice-president of the Railway Board, had provided for the reinstatement of Thorn. The settlement with the men provided that they should take cognizance of the provision according to which all differences will be arbitrated by a committee, if possible, before a strike is called.

Brooklyn Men Out on Strike

Company Prepared to Give Service, but Operation Stopped Owing to Lack of Protection

On the afternoon of Aug. 7 practically all Brooklyn was walking. The employees of the Brooklyn Rapid Transit Company struck on the morning of Aug. 5, but the company went ahead with operation so far as the men who remained loyal to it would permit. At the outset of the trouble service was almost normal, with prospect good that the full schedule could be resumed again very shortly. Then came a series of attacks on the property of the company with the result that service on the surface lines was withdrawn entirely. The company says it was forced to this move by inadequate police protection and contends that the strike could have been broken at its inception had the lines been properly policed.

STATEMENT OF ISSUE INVOLVED

So much for the operating phase of the situation at the time of going to press. As for the issues involved they are very clear cut. Essentially they are a demand upon the company by outsiders for union recognition, an increase in the wages of trainmen to 75 cents an hour with proportionate increases for all other employees, an eight-hour day and the reinstatement of employees said by the strikers to have been discharged for their union activities. These demands were presented to the officers of the company on the morning of Aug. 4.

COMPANY WON'T RECOGNIZE UNION

Lindley M. Garrison, the receiver of the company, responded to the union committee that very afternoon. He referred incidentally to the matter of the wage demand and the proposed decrease in hours of labor, but his reply had to do mostly with the subject of union recognition, which it appears is the principal demand. The company is unmistakably opposed to dealing with any but committees of its own employees. Mr. Garrison's reply made his position plain on this point as follows:

Your association is fully informed of my attitude in respect of recognizing it. As you are aware, this matter was raised last March, and I then took the position, which I now maintain, that I will not deal with outside organizations, such as your association. I am always willing to deal with the employees of the system in respect of any matters affecting them, but I will not deal with outside organizations.

Your frank statement that the second article of your demand, namely the recognition of the union, is your principal demand, rids the situation of any confusion, and as that is the main issue it is not useful to take up in detail the other matters adverted to in your communication.

There could be no mistaking the purport of a statement like that. The union, such as it is, took up the gauntlet and on the morning of Aug. 5 the strike went into effect so far as the union had been able to carry out the work of organization. That no great measure of success had attended the efforts toward unionization is borne out

by the fact that out of 16,000 surface and rapid transit and shopmen the company estimated that certainly not more than 1500 had quit work. As stated previously, service on the morning the strike was declared was practically normal, but the disorder which followed quickly, coupled with inadequate police protection, made it seem best to the management to shut down some of the surface lines.

The strike was in progress as this paper goes to press.

New Wage Contract in Cincinnati

A new contract between the Cincinnati (Ohio) Traction Company and the union employees was ratified by the union, as a result of negotiations between William D. Mahon, president of the Amalgamated Association, and Walter Draper, vice-president of the traction company.

Under the new contract motormen and conductors will receive a maximum of 50 cents an hour, an increase of 2 cents; Other provisions are: Guarantee of \$85 a month, an increase of \$20, to substitutes; 37 cents an hour to greasers, trackmen, watchmen and car cleaners; incline plane men, 40 cents an hour, with ten-hour day; carhouse men of certain classes, 42½ cents to 56 cents an hour; allowance for time used in making certain reports.

The contract is retroactive to June 30. It is estimated that the new agreement will increase operating expenses of the company \$125,000 to \$130,000 annually.

Providence Men Return at 56 Cents

After nineteen days, during which practically all Rhode Island was without electric railway service, the strike on the lines of the Rhode Island Company, Providence, R. I., was declared off late on Aug. 6. It was planned to resume service on the system at 4 a.m. on Aug. 7.

By a vote of 1311 to 107, the strikers accepted the compromise agreement entered into by their officials with the receivers of the road, providing for a maximum wage of 56 cents an hour, retroactive from June 1 to the beginning of the strike on July 19. The 1917 working agreement continues in force. The new maximum is an increase of 8 cents an hour over the previous wage, but the nine-hour day is the same. The men in the original demands asked for 75 cents maximum.

At one point in the negotiations the men agreed to go back to work for 55 cents an hour, but the receivers of the company held off. The following day an award of 60 cents was made to the Boston railway men, and the Rhode Island employees at once demanded 60

cents. In consequence the deadlock over the wage matter continued.

An attempt to arbitrate the strike was without success. On July 30 Judge Doran in the Superior Court issued a decree directing the receivers to submit their case to a board of arbitration, but the men declined to accept the plan except on their own terms.

Justice Blodgett entered a decree on Aug. 6 clearing the way for operation of the lines by the receivers in case the strike was not settled by agreement. By this decree the order for arbitration was vacated and the original decree appointing the receivers and ordering them to operate the lines was reaffirmed. Backed with this decree the receivers were prepared to resume service on Aug. 7 if the men refused to yield, since strikers interfering with the cars would have been punishable for contempt of court.

The Public Utilities Commission will be petitioned by the receivers to authorize a new schedule of fares designed to bring in at once the revenue required to meet the increase in wages.

News Notes

May Use Gasoline Cars on Ohio Road.—Judge J. M. Killits, of the United States District Court, has instructed C. G. Taylor, receiver of the Sandusky, Norwalk & Mansfield Railway, to report on the advisability of using gasoline cars.

Opens Books to Public.—Rolla Wells receiver of the United Railways, St. Louis, Mo., has announced that hereafter the books of the company will be open to the public. This is a part of his plan to increase the confidence of the public in the company.

\$10,000 for Railway Investigation.—The Board of Aldermen of St. Louis, Mo., has passed a bill authorizing the appropriation of \$10,000 to investigate the affairs of the United Railways. The money will be provided for the use of the Circuit Attorney, who had announced that his annual appropriation was insufficient to conduct an inquiry into the affairs of the railway.

Freeport Men Threaten Strike.—Motormen employed by the Illinois Northern Utilities Company Freeport, Ill., have threatened to strike unless their demands for a shorter working day and more wages are granted. They ask a wage increase from 36½ cents an hour to 45 cents, an eight-hour day and time and one-half for work overtime or on holidays.

Strike on Ohio Electric Unlikely.—A conference between representatives of the Ohio Electric Railway and its platform employees has been arranged to discuss a demand from the men for an increase in wages from 45 cents to

60 cents an hour. Although conferences arranged previously have been postponed from time to time and there has been some talk of a strike, the prospects for a settlement are said to be good.

Suburban Settlement on Chicago Basis.—Cars of the Chicago & West Towns Railway continued to operate during the Chicago strike, but it was agreed that the Chicago wage scale would be accepted by the management. This, of course, would call for additional revenue, and the Public Service Commission gave prompt hearing to the company's petition on that account. It was thought the zone rates on that system would range from 7 to 15 cents.

Men in Oklahoma Organizing.—Workers in public utilities in all parts of Oklahoma, particularly city railway and interurban workers not heretofore unionized are being organized. The movement seems to be the outgrowth of the efforts at unionization at Muskogee, Tulsa and Sapulpa, which have tied up the electric railways and have resulted in considerable rioting and other disturbances.

Tulsa Strike Settled.—The cars of the Oklahoma Union Railway, Tulsa, Okla., are running on schedule after a tie-up lasting more than five weeks. Recognition of the union was the chief issue, no demand for higher wages having been made. Besides recognizing the union the company has agreed to reinstatement of the strikers, and to seniority preference. The company further agreed to drop damage suits against the members of the union.

City Won't Build Cars.—A member of the Board of Trade of Toronto, Ont., suggested recently that as the city proposed taking over the Toronto Railway the city should build a factory to manufacture cars. The sub-committee on transit advised against doing this, however, as enough new cars would not be needed continuously to warrant running the factory. The committee advised that such new cars as might be needed should be purchased from the regular car builders.

Seattle Railway Construction Delayed.—Announcement of another delay in the operation of Seattle's municipal elevated railway has been made. While it was hoped to have the cars running by July 15, it is now considered likely that at least another month will elapse before the line can be put in operation. The delay is largely due to the fact that the steel guard rails which will supplement the timbered guard rails cannot be delivered and put in place until about Sept. 1.

Wages Raised at Little Rock.—A wage increase of 11 cents an hour, a ten-hour day, and time-and-one-half for overtime have been awarded employees of the Little Rock Railway & Electric Company, Little Rock, Ark., by the board of arbitration appointed to consider their demands. The increase, which is retroactive to May 22, raises wages from 30 cents and 35 cents an hour to 41 cents and 46 cents an hour. Although the award is less

than the men had asked for they have accepted the new scale.

Ford Car Nearing Completion.—Charles E. Sorenson, general manager of the Fordson Tractor Plant, recently made a statement before the Council of Detroit in regard to the new Ford gasoline railway car. Mr. Sorenson is quoted as follows: "The plans and the castings have been completed for our first car and 200 men are now rushing it to completion. As soon as it is done, we want to arrange with Mr. Bronner for a test on the Michigan Central tracks. We want to run this car to Chicago in competition with the Wolverine."

Authorized Settlement of Claims.—Judge Dyer in the United States District Court at St. Louis, Mo., has issued an order on the recommendation of Special Master Henry Lamm authorizing Receiver Rolla Wells of the United Railways, St. Louis, "to compromise and settle" claims against the company that have ripened into judgments and in which appeals have been taken. Another order permits the company to build an extended platform, a new repair shop and an ironclad frame building at an expense of \$8,000.

Will Resume Service in Amarillo.—Electric railway service will be resumed in Amarillo, Tex., after having been suspended for several months. Negotiations have been under way since February between the City Commission and the officials of the Amarillo Street Railway and an agreement has been tentatively reached whereby service will be resumed. Increased fares will be granted. In return the railway agrees to put its track and rolling stock in first-class condition and maintain better service than it gave before.

Worcester and Springfield Wages to be Arbitrated.—An agreement to arbitrate the questions at issue between the employees and the managements of the Worcester Consolidated Street Railway and the Springfield Street Railway, both of Massachusetts, has been reached. The men demanded \$5 a day and an eight-hour day. The board of arbitration consists of H. B. Endicott of Boston, chairman; J. H. Vahey, representing the carmen; and Bentley W. Warren and C. V. Wood, representing the companies. Hearings have already begun.

Manchester Wage Arbitration Begun.—Claims of the employees of the Manchester (N. H.) Street Railway for an increase in wages were presented on July 28 to a board of arbitration composed of Charlton Ogburn, representing the War Labor Board; P. F. Sullivan, formerly president of the Bay State Street Railway, and James H. Vahey, Boston, attorney for the employees. The men contend that they are entitled to the same wages as those granted employees of the Boston Elevated Railway by the War Labor Board. The company argued that any increase would have to be borne by the public in the shape of higher fares.

New Albany Scale Accepted.—By a vote of 563 to 525 the employees of the

Albany and Troy divisions of the United Traction Company, Albany, N. Y., have voted to accept the offer of the company of 45 cents an hour, to date from July 1. The company will pay to new employees 41 cents an hour for the first six months of service, 43 cents for the second six months, and 45 cents an hour thereafter. Most of the motormen and conductors in the employ of the company will receive the 45-cent rate, which is an advance of 5 cents an hour over the old scale. The new scale also provides for 61 cents an hour for foremen in the carhouses, 51 cents an hour for first-class carpenters and electricians, and 43 cents an hour for helpers.

Memphis Wages an Issue.—Because of the absence of T. H. Tutwiler, receiver and general manager of the Memphis (Tenn.) Street Railway, presentation of the new schedule of wages asked by motormen and conductors has been deferred until Aug. 7. The contract with the union expired on Aug. 1. The men have been receiving a minimum of 36 cents an hour and a maximum of 40 cents an hour depending upon the number of years they have been in the service. They will ask that the maximum be increased to 75 cents an hour, with 10 cents an hour additional for motormen operating cars equipped with hand brakes. It is said that no significant changes in working conditions will be asked.

New Appointee to Massachusetts Commission.—Levi Greenwood, Gardner, Mass., president of the State Senate, was nominated by Governor Coolidge as a member of the special commission to study the street railway situation in the State and report at a special meeting of the Legislature next November. Mr. Greenwood will take the place of Oliver Prescott, New Bedford, who was nominated by the Governor but who found it impossible to give his time to the work. The executive council has confirmed all the nominations for the special commission. These include Mr. Greenwood, Robert F. Herrick, Milton; Charles G. Washburn, Worcester; George W. Anderson, Boston, and James L. Doherty, Springfield.

Spartanburg Strike Settled.—Employees of the South Carolina Light, Power & Railways Company who went on strike on July 3, tying up railway service in Spartanburg, S. C., returned to work on July 19 after an agreement had been reached between the strikers and officials of the company. The men had stood out for a nine-hour day. This the company agreed to put in effect as soon as possible. Under the agreement which has been signed the wages of motormen and conductors are placed at 37 cents an hour for the first six months, 38 cents an hour for the second six months period, 39 cents an hour for the second year, with an advance of 1 cent an hour for each additional year up to a maximum wage of 42 cents an hour for those who have been in the company's employ for five years or more. The wage scale of carhouse and shopmen has been raised 20 per cent.

Financial and Corporate

Wants Taxes Remitted

Pittsburgh Railways Seeks Aid of Court Toward Relief from Municipal Burdens

The receivers of the Pittsburgh (Pa.) Railways have asked the United States Court to relieve them of the obligation to pay municipal taxes. The request is made in an answer filed to a petition of the city of McKeesport seeking to have the receivers ordered to pay \$10,000 due as a license task under an old franchise.

From now on the receivers intend to take the position that remission of such tax claims should be considered only equitable on the part of municipalities making them, it was stated at their office on the day the answer was filed. The desire of the receivers is to impress upon public officials that it is absolutely impossible for them to pay political subdivisions what they claim and also pay for proper service to the public out of present revenues.

The company has paid no taxes, license claims, bridge tolls or bills for street cleaning or other similar work since the first of the year, and the receivers hope to establish that relief from such expenses is only a just contribution on the part of municipalities toward the cost of maintaining an essential service that cannot be made to pay for itself through the fare box. The answer of the receivers declares:

A community expecting transportation service must recognize that such service can continue only as long as the revenue derived from the fares is sufficient to pay the costs of service, including all repairs and maintenance charges, a fair return on the capital actually employed in furnishing the service, and for all taxes and municipal charges.

The receivers' contention in this matter may be presented by means of an argument that such a municipal tax as McKeesport is attempting to levy is not reasonable. The answer, while admitting that the receivers may lawfully be required to pay any reasonable tax, sets forth that there is no evidence that the claim made is "reasonable."

The railway traverses fifty or more municipalities, many of which levy a license tax or some other form of tax which has constituted a considerable drain upon the company's revenues.

Abandonment Threatened

The Knoxville Railway & Light Company, Knoxville, Tenn., has given formal notice that it declines to lay a double-track car line on Morelia Avenue, and also declines to agree to pay for the paving between the car rails on that avenue and on Pershing and Chickamauga Avenues. It proposes to take up that part of the Oakwood and

Lincoln Park line "in order that these improvements may proceed."

These matters are discussed in a letter written by C. H. Harvey, president of the company, to Commissioner John W. Flenniken, in reply to a letter from Commissioner Flenniken requesting that the paving work be done by the company. Mr. Harvey asserts that the rights-of-way grants contained no provision in regard to paving. He then states that his company is in no financial position to do the work, even though it be required to do so, and that it certainly can not do it "as a gratuity." In conclusion he said:

It seems unnecessary to say to your honorable commission that this company would not lightly propose to abandon a part of what has always been considered one of its best lines of railway, and it does so at this time only because of the practical impossibility of doing what is asked of it in the premises, and because of the serious exigencies from a financial standpoint which are confronting and pressing in upon it.

Dismantlement Stopped

The authorities of Randolph and Stoughton, Mass., have stopped the dismantling of the Bristol & Norfolk Street Railway by Edward Cohen, who purchased the road for junk. The selectmen of the two towns have ordered Mr. Cohen to furnish a bond in the sum of \$25,000 to insure the town against accidents. Mr. Cohen is to leave the highways of the town in as good condition after the rails are taken up as they are at the present time.

The movement started by residents of both towns to purchase the road by subscription is meeting with some success.

Shore Line Affairs Reviewed

Edward M. Day, counsel for the Shore Line Electric Railway, Norwich, Conn., has filed with the Public Utilities Commission a petition asking approval of the company's plan to sell its franchises, privileges and rights to generate and distribute electricity, to the Eastern Connecticut Power Company, with headquarters in Norwich. The Eastern Connecticut Power Company was organized by the late Morton F. Plant, who was also principal owner of the Shore Line Electric Railway.

R. W. Perkins, president of the Shore Line Company, on July 23 issued the following statement concerning the company's finances: The gross earnings for six months in all departments, \$820,832.35; gross operating expenses, \$847,359.26; deficit exclusive of taxes \$26,526.91. The taxes amount to \$35,406.41, making the total loss \$61,933.32.

Rentals amounting to \$112,063.43 for six months have not been earned, nor has the interest on bonds amounting

to \$80,000 been met. The statement says further that if the company on Jan. 1 had turned the property over to the employees, the latter would have had to assess themselves \$173,996 to make good the losses up to June 30.

\$535,336 Loss in June

Boston Elevated Railway Ran Behind Half Million for Last Month of Six-Month's Period

The Boston (Mass.) Elevated Railway sustained a net loss from June operations of \$535,336. This does not include any back pay for which the road is liable under recent wage increases. The net loss for May was \$324,002 and that for April, \$316,392. It should be stated, however, that one of the reasons for the larger deficit for June was the excess of track and car repair work, above a fair monthly average, which was necessarily performed. In other words, the bulk of this work is done in the warm summer months, whereas from an accounting standpoint the expense can properly be pro-rated over the full year.

The detailed financial statement of operations for June, as made public by the company, follows:

<i>Receipts.</i>	
From fares	\$2,261,498
From operation of special cars, mail pouch service, express and service cars.....	11,653
From advertising in cars, on transfers, privileges at stations, etc.....	23,781
From other railway companies for their use of tracks and facilities	3,962
From rent of buildings and other property	6,259
From sale of power and other revenue	7,314
Total receipts from direct operation of the road.....	2,314,468
Interest on deposits, income from securities, etc.....	7,417
Total	\$2,321,886

<i>Cost of Service.</i>	
Maintaining track, line equipment and buildings	\$519,782
Maintaining cars, shop equipment, etc.	213,621
Power (including 20,775 tons of coal at \$5.299) \$110,106.....	280,883
Depreciation	167,000
Transportation expenses (including wages of car employees, car house expenses, etc.).....	807,901
Salaries of administrative officers	7,583
Law expenses, injuries and damages and insurance.....	94,619
Other general expenses.....	82,568

Total operating expenses (of which \$1,282,490 wages).....	\$2,173,961
Taxes, proportion	82,453
Rent for leased roads (exclusive of subways)	216,016
Proportion of rent of subways and tunnels to be paid to the city of Boston, exclusive of Cambridge subway, owned by the B. E. Ry.	126,373
Interest on Boston Elevated bonds and notes.....	136,978
Miscellaneous items.....	4,443
Proportion of dividends under acts of 1918	116,997

Total cost of service.....	\$2,857,223
Net loss	\$535,336
Revenue passengers	28,386,561
Receipts per revenue passenger	8.176 cents
Cost of service per revenue passenger	10.065 cents
(of which labor cost 4.518 cents)	

Slight Improvement in April Revenues

Increase in Cost of All Items of Expense Still Reflected in Association Compilation

Returns compiled by the information bureau of the American Electric Railway Association for the month of April, 1919, indicate a slight improvement in electric railway operating conditions over the same month of the previous year. In all, the association compilation consists as usual of eight tables, one of which is reproduced on this page and the other seven on page 299. Table I shows a comparison of the statistics for forty-two companies, and Table II the same figures on a per car-mile basis.

OPERATING REVENUES UP 19.53 PER CENT

Referring to Table II it will be seen that operating revenues increased 19.53 per cent. This increase, however, was offset by a still larger increase in operating expenses. The result is a net revenue from operation of 9.85 cents per car-mile in 1919, as compared with 9.70 cents in 1918, an increase of more than 1½ per cent. These net figures, of course, do not take account of taxes and other deductions from net.

Taxes in 1919 amounted to 2.45 cents per car-mile, and fixed charges to 7.09 cents per car-mile, which when deducted from the net revenue of 9.85 cents leaves a return of 0.31 cent, as compared with 0.89 cent in 1918. However, taking the non-operating income and net return from auxiliary operations into account, the net income is 3.05 cents per car-mile as compared with 2.76 cents for 1918, an increase of more than 10 per cent.

The ratio of railway operating expenses to railway operating revenues shows an increase of 7.42 per cent, the operating ratio for 1919 being 71.92 as against 66.95 for 1918.

GREAT SLUMP IN SOUTH

As in the past, the returns from both city and interurban companies have been classified according to the following geographic grouping: Eastern District—east of the Mississippi River and north of the Ohio River; Southern District—south of the Ohio River and east of the Mississippi River; Western District—west of the Mississippi River.

Further analyzing Table II according to this grouping it will be seen that the

Southern District experienced the greatest slump, its net revenue dropping 9.33 per cent. Despite this fact, this district makes the best showing of all, its net income being 5.14 cents per car-mile as compared with 2.92 cents for the East and 2.31 cents for the West.

The operating ratio for the South increased from 59.68 per cent in April, 1918, to 68.35 per cent in April, 1919, while for the West the operating ratio increased from 62.81 to 68.84, and for the East from 72.59 to 75.22.

Table III gives the operating expenses divided up among the several departments while in Table IV the expenses per car-mile of these departments are shown. Sixty-four companies are represented and analysis of their expenses contributes to a better understanding of the returns in Tables I and II.

The increased cost of materials is strongly reflected in the way and structures account. The cost in 1919 was 3.59 cents per car-mile as compared with 2.29 cents for 1918, an increase of 56.76 per cent. The cost of maintenance of equipment increased 32.43 per cent, from 2.55 cents per car-mile in 1918 to 3.37 cents in 1919. These accounts, of course, include wages, but they reflect the high cost of materials also.

WAGE DECISIONS A FACTOR

The effects of the War Labor Board decisions is strongly reflected in the conducting transportation account, which shows an increase of 30.33 per cent, from 9.10 cents per car-mile in 1918 to 11.86 cents in 1919.

Referring further to Table IV, the West shows the largest increases in the cost of labor and materials, although the increases in these items are pretty general throughout the country. In the way and structures account, the percentage increase for this district was 72.56 per cent as compared with 53.90 for the East and 37.63 per cent for the South. The South shows the largest increase in the cost of equipment, the percentage increase being 46.77 as compared with 45.64 per cent for the West, and 22.38 per cent for the East.

The Eastern District shows an increase of 35.33 per cent in the conducting transportation account as compared with 28.18 per cent for the South and 25.14 for the West.

The income statement of 121 electric railways for the month of April, 1919, is shown in Table V. Table VI shows the same statement on a per car-mile basis.

Table VII is a detailed statement of the operating expenses for April, 1919, of 140 companies, and in Table VIII the same statement is shown on a per car-mile basis.

The most interesting of these is Table VIII, in which the operating expenses per car-mile are divided among the main operating departments, way and structures, equipment, power, conducting, transportation, etc.

Power and Traction Deal Pending

While admitting that negotiations of sale are pending, James A. McHenry, the heaviest stockholder in the Edison Electric Illuminating & Power Company, Cumberland, Md., and the Cumberland Electric Railway, denies the report that the properties have been sold to a New York syndicate, as indicated in the issue of the ELECTRIC RAILWAY JOURNAL for Aug. 2, page 256.

Mr. McHenry has declared that should the deal go through the light and power company and the railway would go together. The Edison company's plant at Cumberland furnishes power not only to the city but for electric railway service and to operate the mines in Georges Creek, Allegheny County.

The proposition is that a company of capitalists, known as the West Virginia Power Company, may acquire these two properties of the Western Maryland Railway to Elkins, W. Va. The plan calls for connecting up all the towns by electric railway, forming a system between Cumberland and Elkins and Grafton. If this project should go through, the new company will take over, own and operate all the light and power plants along the Western Maryland Railway between Cumberland and Grafton, inclusive, and ultimately connect up all intervening towns with these two cities by electric railway, thus forming a loop extending practically from Grafton to Cumberland.

TABLE I—INCOME STATEMENT OF FORTY-TWO ELECTRIC RAILWAYS FOR APRIL, 1919, COMPARED WITH APRIL, 1918

	United States		East		South		West	
	1919	1918	1919	1918	1919	1918	1919	1918
Operating revenue	\$7,338,225	\$6,104,285	\$3,630,990	\$2,905,025	\$1,173,254	\$1,007,223	\$2,533,981	\$2,192,037
Operating expenses	5,277,805	4,086,718	2,731,393	2,108,873	801,926	601,126	1,744,486	1,376,719
Net operating revenue	2,060,420	2,017,567	899,597	796,151	371,328	406,097	789,493	815,218
Net revenue: Auxiliary operations	454,750	380,599	209,724	155,038	186,347	168,167	58,679	57,394
Taxes	512,168	402,230	266,785	188,374	98,952	94,812	146,431	119,044
Operating income	2,003,002	1,995,836	842,536	762,815	458,723	479,452	701,741	753,566
Non-operating income	118,135	11,039	90,805	527	190	231	27,140	10,281
Gross income	2,121,137	2,006,875	933,342	763,438	458,913	479,683	728,881	763,847
Deductions from gross income	1,482,921	1,433,086	671,367	633,429	277,415	272,041	534,139	527,616
Net income	638,216	573,789	261,975	130,020	181,497	207,642	194,742	236,231
Operating ratio (per cent)	71.92	66.95	75.22	72.59	68.35	59.68	68.84	62.81
Car-miles operated	20,924,733	20,805,676	8,951,370	8,893,248	3,533,390	3,503,584	8,439,973	8,408,844

TABLE II—INCOME STATEMENT IN CENTS PER CAR-MILE FOR FORTY-THREE COMPANIES SHOWN IN TABLE I, FOR APRIL, 1919, COMPARED WITH APRIL, 1918

	United States			East			South			West		
	1919	1918	Per Cent Increase	1919	1918	Per Cent Increase	1919	1918	Per Cent Increase	1919	1918	Per Cent Increase
Operating revenue.....	35.07	29.34	19.53	40.56	32.67	24.15	33.20	28.74	15.52	30.02	26.07	15.15
Operating expenses.....	25.22	19.64	28.41	30.51	23.71	28.68	22.70	17.16	32.28	20.66	16.37	26.26
Net operating revenue.....	9.85	9.70	1.54	10.05	8.96	12.15	10.50	11.58	9.33	9.36	9.70	3.51
Net revenue from auxiliary operations.....	2.17	1.82	1.54	2.34	1.74	34.48	5.27	4.80	9.79	0.70	0.69	1.44
Taxes.....	2.45	1.93	26.95	2.98	2.12	40.56	2.80	2.70	3.70	1.75	1.43	22.37
Operating income.....	9.57	9.59	0.21	9.41	8.48	10.97	12.97	13.68	5.20	8.31	8.97	7.36
Non-operating income.....	0.57	0.05	1,040	1.01	.....	.....	.....	.....	.....	0.33	0.12	1.75
Gross income.....	10.14	9.64	5.20	10.42	8.48	22.87	12.97	13.68	5.20	8.64	9.09	4.96
Deductions from gross income.....	7.09	6.88	3.05	7.50	7.02	6.83	7.83	7.76	0.90	6.33	6.27	0.95
Net income.....	3.05	2.76	10.51	2.92	1.46	100.00	5.14	5.92	13.17	2.31	2.82	18.09
Operating ratio.....	71.92	66.95	7.42	75.22	72.59	3.62	68.35	59.68	14.53	68.84	62.81	9.60
Car-miles operated.....	20,924,733	20,805,676	0.57	8,951,370	8,893,248	0.65	3,533,390	3,503,584	0.85	8,439,973	8,408,844	0.37

NOTE—Figures in *italic* denote decrease.

TABLE III—OPERATING EXPENSES OF SIXTY-FOUR ELECTRIC RAILWAYS FOR APRIL, 1919, COMPARED WITH APRIL, 1918

	United States		East		South		West	
	1919	1918	1919*	1918	1919	1918	1919	1918
Operating expenses.....	\$6,430,938	\$4,916,258	\$3,269,378	\$2,473,254	\$1,035,944	\$765,198	\$2,125,616	\$1,677,806
Way and structures.....	860,688	547,444	492,852	318,734	118,365	84,739	249,471	143,971
Equipment.....	808,468	607,719	431,756	351,461	126,128	84,851	250,584	171,407
Power.....	971,099	787,421	543,330	459,334	89,850	45,874	337,919	282,213
Conducting transportation.....	2,846,776	2,175,485	1,303,195	959,940	563,853	435,158	979,728	780,387
Traffic.....	32,146	34,452	11,878	16,012	2,635	2,570	17,633	15,870
General and miscellaneous.....	877,404	768,826	445,998	367,812	135,113	112,006	296,293	289,008
Transportation for investment—Cr.....	6,012	5,089	.....	39	.....	.....	6,012	5,050
Car-miles operated.....	23,992,103	23,877,521	10,540,726	10,491,224	4,625,860	4,585,201	8,825,517	8,801,096

*Includes \$40,369 depreciation not divided among sub-accounts.

TABLE IV—OPERATING EXPENSES IN CENTS PER CAR-MILE OF THE SIXTY-FOUR ELECTRIC RAILWAYS SHOWN IN TABLE III, FOR APRIL, 1919, COMPARED WITH APRIL, 1918

	United States			East			South			West		
	1919	1918	Per Cent Increase	1919	1918	Per Cent Increase	1919	1918	Per Cent Increase	1919	1918	Per Cent Increase
Operating expenses.....	*26.80	20.58	30.22	†31.02	23.56	31.66	22.39	16.64	34.55	24.08	19.06	26.34
Way and structures.....	3.59	2.29	56.76	4.68	3.04	53.90	2.56	1.86	37.63	2.83	1.64	72.56
Equipment.....	3.37	2.55	32.43	4.10	3.35	22.38	2.73	1.86	46.77	2.84	1.95	45.64
Power.....	4.05	3.30	22.72	5.15	4.37	17.85	1.94	1.00	94.00	3.82	3.20	19.37
Conducting transportation.....	11.86	9.10	30.33	12.37	9.14	35.33	12.19	9.51	28.18	11.10	8.87	25.14
Traffic.....	0.13	0.14	7.15	0.11	0.15	26.67	0.05	0.05	.....	0.19	0.18	5.55
General and miscellaneous.....	3.65	3.22	13.36	4.23	3.51	20.51	2.92	2.44	19.67	3.36	3.28	2.44
Transp. for investment—Cr.....	0.02	0.02	.....	.....	.....	.....	.....	.....	.....	0.06	0.06	.....
Car-miles operated.....	23,992,103	23,877,521	0.48	10,540,726	10,491,224	0.47	4,625,860	4,585,201	0.189	8,825,517	8,801,096	0.28

*Includes 0.17 cents per car mile for depreciation not divided among sub-accounts.
 †Includes 0.38 cents per car mile for depreciation not divided among sub-accounts.

TABLE V—INCOME STATEMENT OF 121 COMPANIES FOR APRIL, 1919

	United States	East	South	West
Operating revenue.....	\$20,244,332	\$15,691,482	\$1,613,476	\$3,981,938
Operating expenses.....	15,014,413	11,803,750	1,139,376	2,788,604
Net operating revenue.....	5,229,919	3,887,732	474,100	1,193,334
Net revenue: Auxiliary operations.....	932,962	394,689	314,812	223,461
Taxes.....	1,212,292	893,023	142,424	241,921
Operating income.....	4,950,589	3,389,398	646,488	1,174,874
Non-operating income.....	366,588	244,893	7,043	128,624
Gross income.....	5,317,177	3,634,291	653,531	1,303,498
Deductions from gross income.....	4,319,404	3,274,691	401,852	892,578
Net income.....	997,773	359,600	251,679	410,920
Operating ratio.....	74.21	75.22	70.62	70.03
Car-miles operated.....	57,484,943	40,998,490	4,802,600	11,683,853

TABLE VI—INCOME STATEMENT IN CENTS PER MILE OF THE 121 COMPANIES SHOWN IN TABLE V

	United States	East	South	West
	Operating revenue.....	35.22	38.27	33.60	34.08
Operating expenses.....	26.14	28.79	23.72	23.86
Net operating revenue.....	9.08	9.48	9.88	10.22
Net revenue: Auxiliary operations.....	1.62	0.95	6.56	1.86
Taxes.....	2.09	2.18	2.97	2.03
Operating income.....	8.61	8.25	13.47	10.05
Non-operating income.....	0.64	0.60	0.15	1.10
Gross income.....	9.25	8.85	13.62	11.15
Deductions from gross income.....	7.52	7.98	8.37	7.64
Net income.....	1.73	0.87	5.25	3.51
Operating ratio.....	74.21	75.21	70.62	70.03
Car-miles operated.....	57,484,943	40,998,490	4,802,600	11,683,853

TABLE VII—DETAILED STATEMENT OF THE OPERATING EXPENSES OF 140 COMPANIES FOR APRIL, 1919

	United States	East	South	West
Operating expenses.....	*\$16,798,828	*\$12,509,305	\$1,373,384	\$2,916,139
Way and structures.....	2,275,358	1,749,564	166,068	359,726
Equipment.....	2,098,114	1,575,038	167,201	355,875
Power.....	2,547,648	1,967,515	133,418	446,715
Conducting transportation.....	7,392,660	5,335,744	716,028	1,340,888
Traffic.....	65,879	38,771	4,872	22,236
General and miscellaneous.....	2,164,435	1,581,928	185,797	396,710
Transportation for investment—Cr.....	7,456	1,444	.....	6,012
Car-miles operated.....	61,513,871	43,407,105	5,895,070	12,211,696

* Includes \$262,190 depreciation not divided among sub-accounts.

TABLE VIII—DETAILED STATEMENT IN CENTS PER CAR-MILE OF THE OPERATING EXPENSES OF THE 140 COMPANIES SHOWN IN TABLE VII, FOR APRIL, 1919

	United States	East	South	West
	Operating expenses.....	*27.31	†28.82	23.30	23.88
Way and structures.....	3.70	4.03	2.82	2.95
Equipment.....	3.41	3.63	2.84	2.90
Power.....	4.14	4.53	2.26	3.68
Conducting transportation.....	12.02	12.29	12.15	10.98
Traffic.....	0.11	0.09	0.08	0.18
General and miscellaneous.....	3.52	3.64	3.15	3.24
Transportation for investment—Cr.....	0.01	.....	.....	0.05
Car-miles operated.....	61,513,871	43,407,105	5,895,070	12,211,696

* Includes 0.42 cents per car mile for depreciation not divided among sub-accounts. † Includes 0.61 cents per car mile for depreciation not divided among sub-accounts.

Financial News Notes

Note Interest Remains Unpaid.—It is stated now that neither the principal nor the interest due on June 1, 1919, on the \$4,000,000 of 7 per cent one-year gold notes of the New Orleans Railway & Light Company, New Orleans, La., was paid.

Chattanooga Receivership Extended.—Judge E. T. Sanford has ordered that the receivership of the Chattanooga Railway & Light Company, Chattanooga, Tenn., be extended to apply to the power and light departments of the company as well as to the electric railway branch.

Interest on Chicago Debentures Unpaid.—It is reported that the coupons due on July 1, on the \$7,000,000 of 1914 debentures of the Chicago (Ill.) Elevated Railways, collateral trust were not paid. Moreover, according to a statement made by Samuel Insull, chairman of the board of the company, before the Federal Electric Railways Commission, \$14,000,000 of five-year notes due on July 1 could not be refinanced, and the trust was unable to meet the interest payment due on the same date.

Cleveland Arbitrators Disagree Over Empire.—W. E. Davis, city light commissioner, will represent the city on the board of arbitration which is to decide whether stockholders of the Cleveland (Ohio) Railway shall receive an increase of 1 per cent in dividends, while J. R. Nutt, president of the Citizens' Saving & Trust Company, will represent the railway. They have failed to agree upon a third member and the choice will probably be left to Federal Judge Westenhaver. The company

asked for an increase from 6 per cent to 7 per cent in the dividends.

Interurban Approves Bond Issue.—The directors of the Syracuse & Suburban Railroad, Syracuse, N. Y., have authorized the issuance of \$750,000 of first and refunding 5 per cent bonds. The Public Service Commission has also approved the issue. Of the total amount \$400,000 will be held in trust to retire the first mortgage bonds due in 1926 and \$150,000 to retire the general mortgage bonds falling due in 1953. The remaining \$200,000 will be issued and sold for cash, one-half to be taken by the bondholders and the other half by the stockholders. The proceeds will wipe out the floating debt and leave \$55,000 for improvements and \$18,000 for working capital. The Syracuse Trust Company has been designated as trustee of the mortgage.

Evansville Receivership Accounting.—William A. Carson, receiver for the Evansville (Ind.) Railways, has filed his final report in the Vandenberg County Superior Court, showing that during the receivership he received \$103,025. An itemized statement of expenses was filed at the same time. The holders of some of the bonds who did not come in on the reorganization of the company are to receive 24.34 per cent of the face value of their securities. This will be paid out of the net balance of \$2,692. With the ratification by the court of the report, the receivership will be brought to an end. The Evansville Railways underwent reorganization shortly after the appointment of Mr. Carson as receiver. The various lines owned by that company have now passed to the control of the new company, known as the Evansville & Ohio Valley Railway.

Foreclosure Suit Against B. R. T.—The Equitable Trust Company, New York, N. Y., as successor of the Colonial Trust Company, and the Trust Company of America has brought a mortgage foreclosure suit in the Federal District Court against the Brooklyn

Rapid Transit Company, for which Lindley M. Garrison is receiver. The litigation is the result of default on April 1, last, in payment of the semi-annual instalment of interest on first mortgage bonds, aggregating \$7,000,000 and known as the 5 per cent fifty-year gold mortgage bonds. As the default has continued the Equitable Trust Company, under the terms of the mortgage, says the principal and interest are now due and asks for the foreclosure and sale of the property pledged as security. The hearing before the Public Service Commission on the application of the company to issue \$15,000,000 of receiver's certificates was closed on July 31. The issue was authorized by Federal Judge Mayer to meet the cost of completing the rapid transit system, but it must have the commission's approval.

Ready to Enter Foreclosure Decree.—Justice Morrill at Auburn, Me., on July 31 filed his decree on the bill in equity of the Old Colony Trust Company, Boston, Mass., against the Lewiston, Augusta & Waterville Street Railway, Lewiston, Me., in which the petitioner, trustee under the mortgages securing the first and refunding bonds of the railroad, asked for permission to foreclose mortgages and sell property and franchises. The decree states that the amount of the first and refunding bonds secured by the mortgages to the Old Colony Trust Company is \$2,937,000, on which there is overdue interest to the amount of \$151,133. It orders the railroad to pay this latter sum with interest before Aug. 11. In the event of default in this payment, Wallace H. White, Lewiston, special master, is ordered to sell the property. Bids are to be called for the whole property, also for the property exclusive of the Turner branch, for the Turner branch including its franchise, and for the physical property of the Turner branch alone. If the bid for the whole property is greater than the combined bids for the different items mentioned, then it is to be sold as a whole, otherwise each piece is to be sold separately.

Electric Railway Monthly Earnings

BATON ROUGE (LA.) ELECTRIC COMPANY

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '19	\$28,558	*\$18,042	\$10,516	\$3,447	\$7,069
1m., May, '18	20,455	*11,221	9,234	3,359	5,875
12m., May, '19	307,889	*179,573	128,316	42,203	86,113
12m., May, '18	240,609	*125,228	115,381	38,899	76,482

CAPE BRETON ELECTRIC COMPANY, SYDNEY, N. S.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '19	\$46,350	*\$38,450	\$7,900	\$5,693	\$2,207
1m., May, '18	38,916	*27,740	11,176	5,255	5,921
12m., May, '19	550,059	*419,485	130,574	64,113	66,461
12m., May, '18	483,028	*335,899	147,129	63,074	84,055

COLUMBUS (GA.) ELECTRIC COMPANY

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '19	\$101,645	*\$52,341	\$49,304	\$30,129	\$19,175
1m., May, '18	101,017	*38,403	62,614	28,407	34,207
12m., May, '19	1,190,199	*628,320	561,879	353,847	208,032
12m., May, '18	1,166,369	*459,522	706,847	322,277	384,570

EASTERN TEXAS ELECTRIC COMPANY, BEAUMONT, TEX.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '19	\$110,107	*\$67,869	\$42,238	\$13,084	\$29,154
1m., May, '18	94,395	*53,320	41,075	11,865	29,210
12m., May, '19	1,235,895	*748,274	487,621	154,827	332,794
12m., May, '18	996,074	*554,905	441,169	134,226	306,943

EL PASO (TEX.) ELECTRIC COMPANY

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '19	\$126,205	*\$91,353	\$34,852	\$7,508	\$27,344
1m., May, '18	\$105,575	*73,101	32,474	6,446	26,028
12m., May, '19	1,350,625	*962,285	388,340	83,881	304,459
12m., May, '18	1,277,199	*830,315	446,884	72,554	374,330

GALVESTON-HOUSTON ELECTRIC COMPANY, GALVESTON, TEX.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '19	\$248,596	*\$181,613	\$66,983	\$35,638	\$31,345
1m., May, '18	209,765	*142,898	66,867	29,618	37,249
12m., May, '19	2,898,992	*2,083,365	815,627	372,425	443,202
12m., May, '18	2,319,050	*1,517,439	801,611	341,274	460,337

HOUGHTON COUNTY TRACTION COMPANY, HOUGHTON, MICH.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '19	\$22,188	*\$17,403	\$4,785	\$3,994	\$791
1m., May, '18	25,122	*17,118	8,004	4,110	3,894
12m., May, '19	307,347	*213,362	93,985	49,030	44,955
12m., May, '18	339,555	*218,696	120,859	49,774	71,085

JACKSONVILLE (FLA.) TRACTION COMPANY

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '19	\$85,484	*\$75,357	\$10,127	\$14,346	†\$4,219
1m., May, '18	83,210	*55,601	27,609	14,972	12,637
12m., May, '19	1,005,377	*848,863	156,514	177,402	†20,888
12m., May, '18	776,083	*529,673	246,410	169,744	76,666

NORTHERN TEXAS ELECTRIC COMPANY, FORT WORTH, TEX.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '19	\$264,546	*\$170,727	\$93,819	\$25,042	†\$78,360
1m., May, '18	247,016	*156,341	90,675	25,213	†75,046
12m., May, '19	2,904,145	*1,925,637	978,508	300,677	†792,831
12m., May, '18	2,999,061	*1,694,123	1,304,938	308,908	†1,072,697

TWIN CITY RAPID TRANSIT COMPANY, MINNEAPOLIS, MINN.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., June, '19	\$924,854	\$623,330	\$311,524	\$158,595	\$152,929
1m., June, '18	808,431	542,769	265,662	153,612	110,050
6m., June, '19	5,342,680	3,827,038	1,515,642	950,228	565,414
6m., June, '18	4,847,573	3,515,491	1,332,082	938,080	384,002

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

Traffic and Transportation

Norfolk Ordinance Ready

Fare Measure Looking Toward Relief for Virginia Railway & Power Company Comes Up on Aug. 19

The City Council of Norfolk, Va., will on Aug. 19 hold a public hearing on the matter of a proposed ordinance looking to granting relief to the Virginia Railway & Power Company in the way of a 6-cent fare with a charge of 2 cents for transfers. The Council has read the ordinance the first time, and has begun its advertising, announcing that the public will be heard on the above date.

OUTCOME OF CONFERENCES

The ordinance is the result of a number of conferences between the "citizens' committee," initiated by the Chamber of Commerce of Norfolk, and participated in by members of the City Council, A. B. Carney, attorney for the commonwealth, and others representing the county of Norfolk. The conferences were brought about as a result of opposition on the part of certain industrial interests to a zone system the traction company proposed for its lines outside the cities of Norfolk and Portsmouth, in Norfolk County.

The citizens' committee approached the recently organized public relations department of the traction company with a request for conferences "in an effort to provide needed relief for the company and at the same time avoid the necessity of increasing the number of zones outside the city in the county of Norfolk."

After three weeks of conferences the citizens' committee submitted a proposed ordinance which, while it does not meet the views of the officials of the company in many points, will give certain relief, in the matter of increased wages to platform men, the company agreeing to advance their wage from 41 cents to 45 cents an hour "when a 6-cent fare shall have been allowed."

The City Council was represented on the citizens' committee by a number of members, its chairman being President Albert L. Roper of the Council, who is also Mayor of the city of Norfolk. Those members of the Council who were and are members of the citizens' committee are of the opinion that there will be no delay in putting the new ordinance into effect.

WILL WITHDRAW SUITS

The proposed ordinance, in addition to providing for the increased fare and charge for transfers, carries with it an agreement on the part of the company to withdraw its suits against the

city for taxes paid the city for the last two years, for which it holds itself not to be liable under a recent decision of the Supreme Court of the State of Virginia, when the ordinance shall have been in effect for a period of twelve months.

At the closing conference between the citizens' committee and the company officials a number of the members of the committee commented at length upon the spirit of fairness which marked the deliberations on both sides of the table. Mayor Roper was the leading spokesman in this regard, and T. S. Wheelwright, president of the company, followed with an appreciation of the changing sentiment toward the company.

Competition from One-Man Interurban Autos

In the recent case of the Louisville & Interurban Railway before the State Railroad Commission of Kentucky over increased rates, which the commission held were not warranted, the railway showed conclusively that the automobile had greatly cut into earnings. The pleasure cars and bus lines have reduced passenger travel, while trucks are hauling livestock, grain and general merchandise of all kinds. Quantities of milk and cream formerly hauled into Louisville by interurban are now placed on platforms along the road and picked up by the truck lines under contract.

Two types of auto in particular have been giving considerable trouble. One is the passenger car equipped with a large body, with side seats. A car of this kind is run out the Taylorsville road on the schedule staggered with that of the electric railway. The auto does an excellent business at the expense of the railroad. The driver is, of course, both motorman and conductor.

The other type of car that has come forward as a competitor is the transfer line truck. One of these vehicles is now run parallel to the Shelbyville line, and on out to Grafenburg, Ky., which will be on the interurban line as soon as a link between Shelbyville and Frankfort is completed. This truck is equipped with a body that is interchangeable for handling various kinds of freight, from package merchandise to livestock. Pork and beef are so high in price that the driving of livestock to market has been stopped and all is now taken to town by interurban, truck or motor to save the fat. Similar trucks are to be found in operation on practically every road, whether or not an interurban line is operated over that particular road.

Transfer Order Enforced

New Yorkers Paying Two Cents at More Than 1000 Points Where Transfers Were Free

The 2-cent transfer charge authorized on July 18 by Lewis Nixon, Public Service Commissioner for the First District of New York, went into effect on Aug. 1 at more than 1000 transfer points on the lines of the New York Railways and the Brooklyn Rapid Transit Company. Commissioner Nixon had granted a rehearing of the transfer case on July 29, but refused to stay the order.

COURT FIGHT EXPECTED

Despite threats of trouble on the part of large numbers of the companies' patrons, the charge for transfers has caused little difficulty. Opponents of the railways plan to carry the matter to the courts. Persons wishing to contest the order are advised to pay the charge demanded by conductors and then to file a complaint. A test case will be brought under the railroad laws of 1890 which it is contended provide that any railway charging more than the legal rate of fare shall be liable for fifty times the amount of excess fare collected.

Commissioner Nixon in opening the rehearing on Aug. 4 declined to hear evidence relative to his authority in issuing the order, and stated that the only matter to be determined was the responsibility for naming the points at which the charge should be made. Corporation Counsel Burr of New York, who is contesting the order, contends that the order was defective in that it failed to name definitely the points at which transfers should be charged for. The transfer points which remain free are only those at which franchises or special agreements with the city forbid the extra charge. Only fourteen of the 113 points in Manhattan at which transfers formerly were issued free remain, while in Brooklyn out of 1008 free transfer points only thirty are exempted, with the exception of forty-eight "feeder" points at which transfers continue to be given free of charge.

MUST FILE REPORTS

Each company is obliged to keep a detailed account of its income under the new arrangement for the report to the Public Service Commission. The Brooklyn Rapid Transit Company must file monthly reports, while the New York Railways must convince the city that the valuation of its property submitted at hearings is true, or the city may, in six months, petition the commission for a rehearing.

In Manhattan the New York Railways will benefit by this order until July 7, 1920. In Brooklyn it holds good until July 30, 1920, and in each instance Commissioner Nixon has reserved the right to extend the time if operating results prove a continuation advisable.

Ten-Cent Fare on Middlesex & Boston

Seven and Eight Cents Have Been the Charges Since July, 1918
—Increase of \$132,000 Anticipated

A tentative allowance of 10-cent fares on the Middlesex & Boston Street Railway was declared in a finding of the Public Service Commission of Massachusetts on July 31. Previous fares, established on July 1, 1918, were 7 cents on the main traffic lines and 8 cents on the remainder of the system except on the Westborough-Hopkinton line, where, by agreement with the towns affected, the fare was increased in November, 1918, to 10 cents.

Under the schedule recently filed the company proposes to increase the fare to 10 cents on all parts of its system except on the lines in Waltham, on the Commonwealth Avenue, Newton line, and on the other Newton lines formerly owned by the Newton and the Wellesley & Boston street railways, where the present fares are retained. The tariff as filed also provides for an additional charge of 3 cents for transfers. At the hearing, however, the company agreed to furnish free transfer privileges to patrons paying a 10-cent fare. The charge for passengers using a transfer would thus be uniformly 10 cents on the entire system.

Prior to July 1, 1914, the fares were 5 cents on the principal city lines and 6 cents, with a 5-cent ticket rate, on the remainder of the system. During the last year under that schedule the passenger revenue of the company amounted to \$951,808. During the year just ended, the passenger revenue, after three successive fare increases, was only \$938,533, which was insufficient by about \$65,000 to meet operating expenses and fixed charges. During the year ended June 30, 1919, covering the period of the last fare increase, traffic fell off nearly 20 per cent and revenue decreased more than 10 per cent.

Upon this showing the company's need of more revenue was exceeded by all in interest, but the commission and the remonstrants doubt the efficiency of a further increase in fare unit. The commission believes that a zone system of fares offers more hope, and will take up the design of such a system with the company, meanwhile allowing the 10-cent fare unit to go into effect for a trial period of three months, subject to the modification given below. As the company has been unable to meet the payment of current operating expenses or to meet excise taxes now owing to the municipalities, and as negotiations are now pending with its employees for a further wage increase, its needs of additional revenue, in the commission's view, is "immediate and urgent." The last hearing was on July 24, 1919. The company estimates that the new schedule will yield \$132,000 in increased revenue. While the board is not optimistic in regard to the revenue effects of a 10-cent fare on this system, it does not feel justified in over-riding the judgment of the

company or in making a positive finding that no increase in revenue would result from the proposed fares.

The commission has advised the company that the revenue received within the two fare zones on the main line between Newton Lower Falls and Framingham, as compared with the average revenue from the proposed 7-cent lines, does not justify a spread of

Ten Cents Being Charged in Pittsburgh

Question of Fares Will Be Gone Into Exhaustively at Hearing to Commence on Aug. 20

Fares on Pittsburgh, (Pa.) Railways were raised on Aug. 1 to 10 cents, if paid in cash, and 7½ cents if tickets are bought by the passenger.

In the few days the new fare has been in force the company has not been able to get figures upon which to base final conclusions as to its effect, but certain results are easily discernible to any observer.

FEW RESIDENTS PAY TEN CENTS

For one thing, it has been pretty well established already that, as far as Pittsburghers are concerned, there is nothing but a 7½-cent fare. Residents all buy tickets, leaving such cash business as is transacted to transients. This arrangement, of course, is satisfactory from the viewpoint of the public with which the Pittsburgh Railways has to deal, for the local public sees the outsider contributing much more heavily than the native to the maintenance of the city's transportation service. In consequence little is heard of protest against the 10-cent cash fare feature of the new tariff. Conductors on many lines, particularly those serving suburban districts, report that trips are frequent upon which they never see cash, except that tendered for the little brass disks issued four for 30 cents. Considerable cash business is transacted, of course, on cars traversing downtown lines between railroad stations.

Probably the most notable feature of the situation immediately following the raise was an increase in traffic on the many railroad lines serving suburban districts. Pittsburgh, as is well known, strings out in three directions, along its three rivers, in long arms where population is dense. The high hills between the valleys, in general, are not thickly populated.

RAILWAYS HEAVILY PATRONIZED

These valleys afford entrance to the city to the steam railroad trunk lines and each of them is traversed by two or more. Commutation service is supplied by practically all of these railroads, and this, by the nature of things, is much faster than the service the Pittsburgh Railways can offer.

3 cents in the fares charged, and that tickets at the rate of six for 50 cents without transfer privileges should be made available on the two zones mentioned. Readjustments in the fare situation on the Lexington & Boston division and the South Natick line appear also to be desirable; but on the basis of the total length of ride available and the revenue results from existing zones, the fare proposed for these lines does not appear discriminatory, and any adjustment of fares, the board states, should be accompanied by a revision of fare zones. •

Heretofore, train fare has exceeded electric railway fare so slightly from most points, or has been so little less that the rider usually preferred the convenience of the electric railway to the walk to the railroad station. That half-cent raise in car fare, however, has seemed to tilt the scale in favor of the railroads in many instances, however—that, and the inevitable irritation of the public over any increase in fares.

For another thing, the increase was instituted on the first of the month, from which day the cheap monthly commutation tickets are dated. Thus the regular electric railway patron could change over to the railroad without loss, as he could not have done had the new tariff gone into effect, say, on the tenth of the month. In the latter case a third of his monthly ticket would have been useless to him and possibly he would have become accustomed to the 7½-cent fare by the first of September and would not have thought of patronizing the steam lines.

PATRONAGE FALLS OFF

At any rate, it was easily observed on the morning of Aug. 1 that the patronage of the Pittsburgh Railways had fallen off. Seats were available in cars that had always been packed during the rush hours. This condition, however, became less noticeable on the second and third days.

For several hundreds of thousands of Pittsburghers the new tariff involves a 50 per cent increase in the cost of transportation, for it must be remembered that although 7 cents has been charged in the outer rim of the city for a number of months, the rate has been 5 cents for a ride beginning and ending within a territory of a radius of approximately 2 miles from the center of the downtown district.

This is the most densely populated section of the city, of course, and the section in which live those to whom a sudden 50 per cent increase in the cost of any necessity pretty nearly puts it out of the necessity class. These people also live closest to the downtown district. There can be no doubt that thousands of them have decided to walk to

work. Rush hour crowds on the bridges leading across the rivers into the city show that plainly.

The question of whether or not rebate slips should be issued upon payment of the new fares threatened for a day to start a controversy with the city administration. It has been the practice heretofore in Pittsburgh for the railway to issue such receipts for fares paid in excess of the last one legally approved, which is the old 5-cent rate. This has resulted from the fact that in Pennsylvania a public service company can, without awaiting approval of the commission, increase its tariff upon thirty days' notice to the commission. If the commission disapproves, the company can continue to collect the new rate, upon appeal to the courts from the commission's finding. So to protect passengers, receipts have been issued calling for refund of the excess in event of overthrow of the excess.

The Pittsburgh Railways has issued receipts for hundreds of thousands of dollars of these "excess fares" since its first increase to 5½ cents from the old 5-cent fare at the beginning of 1918. None of the subsequent increases have been passed upon finally. In the present instance the rebate slips are issued only to purchasers of tickets at the office of the company.

The whole question of fares in Pittsburgh will be gone into exhaustively at a hearing before the commission in Pittsburgh on Aug. 20, of the city's protest against the new fare. At this hearing, for the first time, the commission will have before it a physical valuation of the properties of the company. This task has been in the hands of five engineers for more than a year.

It is hoped that a fare policy for the Pittsburgh Railways may be worked out following this hearing that will form a permanent basis for future dealings. Consideration of all of the increases in fare above the original 5-cent charge has been postponed by the Public Service Commission pending the report of the valuation commission, the company in the meantime collecting the new fares and issuing excess receipts.

Kansas City, Kan., Disputes Not Yet Settled

Because of the illness of Frank Hagerman, one of the arbitrators appointed by Judge John C. Pollock of the Kansas Federal Court to adjust the fare dispute between the city of Kansas City, Kan., and the Kansas City Railways, no action to settle the controversy will be taken before September. The board of arbitration is to report on the questions of fares, of franchises and all public contracts, the use of the city viaduct and removal of the "L" structure. Pending the report fares will remain at 6 cents under the temporary restraining order issued by Judge Pollock, which also provides that the inter-city viaduct shall be used by the company until the arbitrators settle the question of rental.

Eight Cents in Kansas City

This Will Be the Cash Rate, With Two Tickets for Fifteen Cents—Effective One Year

The Public Service Commission of Missouri has ordered that the Kansas City Railways be permitted to increase fares to 8 cents, or two fare tickets for 15 cents, seven tickets for 50 cents, fifty tickets for \$3.50. The half fare rates, heretofore 2½ cents, are increased to 4 cents, with four tickets for 15 cents, fourteen tickets for 50 cents, or 100 tickets for \$3.50. The higher fares are put in for a year, effective on Aug. 20. The commission retained jurisdiction.

The commission's action was technically the action on the deferred subject of 6-cent fares. The company had been authorized to charge 6 cents for the year to July 10, 1919, the commission retaining jurisdiction. When the year was up the company made a plea for still higher fares and for relief from certain expenses that made it impossible to keep pace with debts. The commission's findings at this time makes no mention of relief from burdensome franchise requirements, as to paving, taxes, etc., but it is understood that the State and the city, to a larger degree than ever before, are trying to work out the problem.

City officials have announced, however, that they will oppose the 8-cent fare, but no statement is made of the steps to be taken.

Following is the finding of the commission, written by the chairman, W. G. Busby, concurred in by Commissioners Blair, Simpson and Flad, dissented to by Commissioner Bean:

1. That the company be permitted to increase its rate for adult passengers from 6 cents to 8 cents cash fare, or two tickets for 15 cents, seven tickets for 50 cents, or fifty tickets for \$3.50, and to increase its rates for half-fare passengers from 2½ cents to 4 cents, cash fare, four tickets for 15 cents, fourteen tickets for 50 cents, or 100 tickets for \$3.50.

2. The increased rates are put in for a temporary period of one year only from Aug. 20, 1919, with reservation of jurisdiction in the commission to hereafter change or reduce the rates at any time in accordance with changed conditions.

3. The commission finds that the company failed to earn operating expenses on the Missouri property during the eleven months ended May 31, 1919, by \$208,140; that it failed to earn operating expenses and fixed charges on the Mississippi property during the same eleven months by \$1,711,166; that it failed to earn operating expenses on the entire system during the year ended June 30, 1919, by \$362,753, and failed to earn operating expenses and fixed charges on the entire system during the same years by \$2,255,368; and that since July 1, 1919, the company has granted further wage increases amounting to \$575,000 per annum.

4. The commission, estimates that the new rates allowed will yield the company 4.8 per cent per annum for depreciation and return on \$20,742,420, the "bare bones" value of the Missouri intrastate property.

This estimated return of 4.8 per cent for depreciation and return on \$20,742,420 is dependent on the company increasing the number of passengers 21 per cent over the number carried for the year ended June 30, 1919, and is exclusive of the cost of operating additional cars. It is also estimated that the cost of carrying Missouri intrastate passengers, based on normal traffic of May and June, 1918, is 7.8 per cent per passenger.

The company is ordered to restore what is known as the "July schedule" of service within ninety days from Aug. 20, 1919, which means that it must have 100 more cars in operation within ninety days than

it had in operation on July 1, 1919. If necessary the commission will place one of its representatives in the employment office of the company to aid in restoring the service.

6. That the company was unable to pay the interest due on its bonds on July 1, 1919, in the sum of \$600,000, and immediate relief is necessary to save the company from bankruptcy.

Binghamton Fights Proposed Fare Advance

The city of Binghamton has begun proceedings to restrain the Public Service Commission for the Second District of New York from granting the application of the Binghamton Railway Company for an increase of fare, on the grounds that a contract exists between the city and the company in its franchise fixing the fare at 5 cents. The Interborough Rapid Transit Company, New York, joined with the Binghamton Railway in opposing the city's application for a writ of prohibition made before Justice Nichols at Albany, the case being looked upon as a test one to determine the right of the Public Service Commission to order an increase in fares where a contract exists fixing the rate at 5 cents.

The company seeks to raise the fare to 6 cents. The commission on June 28 refused to dismiss the application of Receiver William J. Phelps on the ground of lack of jurisdiction.

Trenton Company Asks More

The Trenton & Mercer County Traction Corporation, Trenton, N. J., has filed a petition with the Board of Public Utilities Commissioners asking for increased rates consisting of 1 cent for transfers on the local and suburban lines and four new 6-cent fare zones on the suburban service. The present rate of fare is 6 cents with free transfer in the city and 6 cents in each of the suburban zones. If the increase is granted riders in the city will have to pay 7 cents and suburban riders will have to pay 6 cents additional for the new zones proposed. The company, in its application, declares that with the present fares it had a deficit of \$167,812 for 1918. New sources of revenue are required owing to increased wages and expenditures for improvements.

The proposed change in fare zones would add one zone each to the Hopewell, Princeton, Hamilton Square and Yardville lines. The present rate of fare to Hopewell and Princeton is 18 cents and the increase would make it 24 cents. The utility commission will set a date for a public hearing on the proposed increase. The company's petition, among other things, says:

That the question of an increase in wages to certain of its employees is about to be arbitrated; that if any increase of wages should be awarded pending the determination of this application your petitioner asks for such further increases as may be necessary to produce additional revenue equal in amount to any increase in expenses caused by the decision of the board of arbitration now considering the rate of wages to be paid by your petitioner during the period of its next working agreement with its employees.

Transportation News Notes

Seven Cents in Butte.—The Railroad and Public Service Commission of Montana on July 23 issued an order granting the Butte Electric Railway an increase in fares from 6 to 7 cents. The commission in January, 1919, denied the company's petition for a higher fare.

Seven Cents in McAlester.—The Corporation Commission of Oklahoma has approved the application of the Pittsburgh County Railway, McAlester, Okla., for an increase in local fares within the city limits of McAlester from 5 cents to 7 cents. The increase becomes effective immediately and applies only within the city limits.

Increasing the Short Hauls in Kansas City.—The Kansas City (Mo.) Railways is rerouting its cars to give special attention to the short hauls. Under the new plan service will be concentrated in congested districts. The changes are in the interest of better service to the patrons and to overcome so far as possible the severe competition of the jitneys.

Jitneys Regulated in Biddeford, Me.—Jitney operators of Biddeford, Me., are required to pay license fees of \$20 and \$30 depending on the size of their vehicles, under the terms of an ordinance passed recently by the City Council. Bonds or insurance policies of from \$3,000 to \$6,000 are to be deposited with the city clerk before licenses are issued.

Naval Base Employees Protest Fare Advance.—Employees of the Norfolk naval base recently protested through Admiral Fechteler against the proposal of the Virginia Railway & Power Company to increase fares to the base. In reply the company contended that the service was adequate and that the increase was necessary on account of higher operating costs.

Four-Cent Fare Hearing Closed.—The Public Service Commission for the First District of New York has concluded hearings in reference to the application of the Van Brunt Street & Erie Basin Railroad, Brooklyn, for permission to increase fares from 3 cents to 4 cents. The distance traversed by the line is slightly more than a mile. The company's franchise permits a maximum charge of 4 cents.

One-Man Cars Discussed in Richmond.—The City Council of Richmond, Va., has been investigating the operation of one-man cars with a view to their use by the Virginia Railway & Power Company. The city attorney has been instructed to advise the committee on streets as to the legal rights of the company in installing such cars. It

was agreed that the safety features of the car should be looked into.

Transfer Charge Allowed.—The City Council of East Liverpool, Ohio, has consented to an increase in fare on the lines of the Steubenville, East Liverpool & Beaver Valley Traction Company, consisting of a 1-cent transfer charge. After consideration of an appeal from the company for financial relief, the Council directed the city solicitor to draw up an ordinance allowing the new charge, which will be passed immediately.

Baltimore Fare Hearing Postponed.—The hearing of the application of the United Railways & Electric Company, Baltimore, Md., for an increase from the present 6-cent to a 7-cent car fare, was postponed from Aug. 4 to Aug. 7. There was a vacancy on the Public Service Commission, due to the resignation of Chairman Albert Towers. Governor Harrington stated that he would appoint a successor to Mr. Towers at once so that a full board might hear the company's case.

Will Seek Rehearing in Rate Cases.—The East St. Louis & Suburban Railway, East St. Louis, Ill., will seek a rehearing of its application to the Public Utilities Commission of Illinois for an increased fare between East St. Louis and Belleville and within the city limits of Belleville. The commission allowed a slight increase in the rate per mile on the interurban line, but it refused to permit the company to establish two additional fare zones, which was the chief object sought.

Increased Fare and Wages Held Up.—Petitions asking for a referendum vote on the ordinance granting the Ashtabula (Ohio) Rapid Transit Company an increase from 5 cents to 6 cents in fare have been filed with the City Clerk. This automatically suspends the operation of the ordinance until the vote is taken. It also suspends the contract giving the men an increase in wages, as this was contingent upon an increase in the rate of fare. The vote will probably be taken at the regular election in November.

Wants Transfer Charge in Rochester.—Application has been made by the New York State Railways, Rochester Lines, to the Public Service Commission for the Second District for permission to charge 2 cents for transfers in the city of Rochester. In its petition the company says that in 1918 69,695,318 passengers paid fares on Rochester city lines and 23,529,602 passengers were carried on transfers. It says that the free transfer has become a burden upon the company, which, coupled with a 5-cent fare to which the company is limited, threatens destruction of its property.

No Fare Increase in Newcastle.—An increase in fare from 6 cents to 7 cents, as proposed by the Mahoning & Shenango Railway & Light Company on the lines of the New Castle (Pa.) Electric Street Railway and the New Castle Mahoning Street Railway, which it

leases; has been refused by the Public Service Commission of Pennsylvania. The 6-cent fare was granted by the commission on April 28, and under the present agreement will remain in effect until May 1, 1920, when a 5-cent fare will be restored unless the company can show that the revenue derived from the increases is necessary for operation.

One-Man Cars Barred.—One-man cars have been barred in Beaumont, Tex., on account of their encouraging race feeling, and the City Council has denied the application of the Beaumont Traction Company for authority to purchase six additional cars of this type for use on the Beaumont lines. The Council took the position that the cars being so constructed that negroes are compelled to pass through that section of the car set apart for white persons in entering and leaving them, race hatred is engendered which leads to frequent clashes between whites and blacks. Use of the cars was opposed by the company's white patrons.

Agitation for Safety Devices.—A conference between the City Commission and officials of the Birmingham Railway, Light & Power Company, Birmingham, Ala., will be held in a short time on the question of providing local cars with safety devices. At a meeting of the City Commission on July 29, a committee from the Trades Council charged that most of the recent accidents in Birmingham were due to lack of proper safety appliances on the cars. A resolution was adopted by the Commission calling for a conference with officials of the company to take up the question of safety appliances. A committee of the commission was appointed to investigate the matter and report to the commission prior to the conference.

New Bedford Would Retain the Nickel.—The retention of the traditional nickel as the basic fare, the elimination of the transfer privilege and the establishment of a zone system, whereby two fares will be collected on some of the longer lines, is the plan announced by the directors of the Union Street Railway, New Bedford, Mass. In their opinion, it is the method best adapted to produce the added revenue the corporation needs in order to meet the greater demand upon the treasury occasioned by the substantial increase in wages granted recently to all the employees of the company. In order to sound public sentiment as to the course they had better follow in the effort to increase the corporation's income, the directors had canvassers about the streets for several days to ask men and women what method they favored. The persons interviewed were selected at random wherever crowds congregated, and of more than 1000 who were approached, over 700 expressed their preference for the plan which will be adopted. The question of a fare increase has been brought to a head by the recent advance in wages to the company's men, as noted on page 292 of this issue.

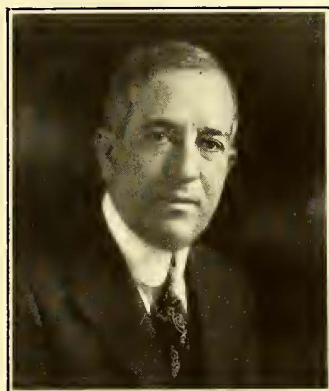
Personal Mention

Mr. Dempsey Goes Into Oil

Vice-President of B. R. T. In Charge of Operation Becomes Connected With One of the Most Successful of the Independent Oil Companies

John J. Dempsey, vice-president in charge of operation of the Brooklyn (N. Y.) Rapid Transit Company, tendered his resignation on Aug. 5 to take effect on Sept. 1. Mr. Dempsey resigns to become connected with the Seamans Oil Company, with headquarters in New York, said to be one of the largest and most prosperous of the independent oil companies, with wells and acreage in Kansas, Oklahoma, Texas and Louisiana.

Mr. Dempsey has had a remarkable career in railway work and is undoubtedly one of the ablest operators in the



J. J. DEMPSEY

field. He was elected vice-president of the Brooklyn Rapid Transit organization in December, 1917, to succeed S. W. Huff, after having started with the company in 1894 as a telegraph operator with the Brooklyn Union Elevated Railroad. This was not the beginning, however, of Mr. Dempsey's railroad career, for he had entered the service of the Lehigh Valley Railroad as a boy. After remaining with the Brooklyn Union Elevated Railroad from 1894 to 1897, Mr. Dempsey resigned to return to the Lehigh Valley as a telegraph operator. From this position he was promoted to yardmaster. In 1902 he resigned from the Lehigh Valley and returned to the employ of the Brooklyn Rapid Transit Company as assistant dispatcher.

Quick acknowledgement followed of his ability, and his rise after this with the Brooklyn Rapid Transit Company was very rapid. He was successively advanced from assistant dispatcher to dispatcher, trainmaster, chief dispatcher, assistant superintendent and

finally superintendent of transportation of the New York Consolidated Railroad (Brooklyn Rapid Transit System). Then followed his election as vice-president of the operating subsidiaries of the Brooklyn Rapid Transit Company, including the Brooklyn Heights Railroad, Brooklyn, Queens County & Suburban Railway and others.

Despite the fact that Mr. Dempsey was largely responsible for the entire operation of all of the surface and elevated lines in the Brooklyn Rapid Transit System, which is the second or third largest perhaps in the world, he found time to engage in association activities and served on a number of committees of the American Electric Railway Association and was president of the New York Electric Railway Association in 1915-16. He is also at present a member of the executive committee of the American Electric Railway Transportation & Traffic Association.

The withdrawal of "Jack" Dempsey, as he is familiarly known to a wide circle of acquaintances, from the transportation field, particularly at this time, when the need is felt for men who, like him, have a keen appreciation, born of personal knowledge, of the hopes, aspirations and trials of the men who keep the transportation wheels turning, is a distinct loss to the company with which he has been so long associated and to the industry of which he has been a part.

Edward Dana has been appointed acting general manager of the Boston (Mass.) Elevated Railway succeeding C. D. Emmons, who resigned recently to become president of the United Railways & Electric Company, Baltimore, Md.

Timothy J. Donahue, formerly superintendent of the Salem division of the Bay State Street Railway, now the Eastern Massachusetts Street Railway, has been assigned to the inspection department of the system with headquarters at Boston. Mr. Donahue has been with the system since 1905.

Charles DeMoss Emmons assumed his duties as president of the United Railways & Electric Company, Baltimore, Md., on Aug. 1, on which date also Thomas A. Cross, former president, became chairman of the board of directors. The election of Mr. Emmons to the presidency and of Mr. Cross to his new position took place at a meeting of the board on July 23, after a very careful survey of the railway situation for the purpose of strengthening the organization. Mr. Emmons was formerly general manager of the Boston (Mass.) Elevated Railway.

Ralph Broadwater, Sr., Sistrerville, W. Va., recently submitted his resigna-

tion as superintendent and general manager of the Tyler Traction Company. At Mr. Broadwater's request the resignation was accepted, he stating that he wished to devote more of his time to private business matters and to closing up matters of the Union Traction Company, of which he was president and general manager until the sale of its properties a short time ago. Mr. Broadwater expects to take a rest, after which he will devote his full time to a bank in Pennsboro of which he is president.

Albert R. Olds has resigned as engineer of maintenance of way of the Havana Electric Railway, Light & Power Company, Havana, Cuba, effective on Aug. 15. Mr. Olds entered the employ of the Havana company in June, 1908. In January, 1909, he was placed in charge of the track and roadway department, with jurisdiction over the construction and maintenance of tracks, buildings and structures. In July, 1911, the civil engineering department was added to Mr. Olds' department and he was given the title of engineer of maintenance of way. Mr. Olds is going to Los Angeles, Cal., to enter the employ of Smith-Booth-Usher. His successor at Havana has not been chosen.

Obituary

F. W. Bullock, assistant purchasing agent of the Safety Car Heating & Lighting Company, New York, N. Y., died on July 16 at the age of thirty-eight years. Mr. Bullock was taken ill while on his vacation and his death came suddenly. He had been with the company for more than twenty years.

William O. Stout, formerly connected with the Minneapolis (Minn.) Street Railway, died on July 22 at Rupert, Idaho, at the age of sixty-one years. Mr. Stout, after practicing law and serving as probate judge, entered the employ of the Minneapolis Street Railway as claim agent, a position which he held for more than twenty-five years. Mr. Stout left the company in 1913 to go to Idaho.

James Gunn, superintendent of the Toronto (Ont.) Railway, died at his home in that city on July 25, after an illness of four months. The late Mr. Gunn was an historic figure in street railway development in Canada, having been connected with the Toronto Railway for more than fifty years. He was born in Banniskirk, Scotland, and settled in Canada in 1867. In those days the Toronto Railway was a small horsecar line and Mr. Gunn in addition to acting as secretary on many occasions took his turn as a conductor. When the present company acquired the franchise and converted the line into an electric railway system in 1892 Mr. Gunn became superintendent, which position he held until his death.

Manufactures and the Markets

DISCUSSIONS OF MARKET AND TRADE CONDITIONS FOR THE MANUFACTURER,

SALESMAN AND PURCHASING AGENT

ROLLING STOCK PURCHASES

BUSINESS ANNOUNCEMENTS

Cotton and Silk Products Show Advances

Bell Cord and Insulating Tapes Marked Up—Silk Insulating Materials Higher

Cotton products have again reacted to an advance in the cotton market, short lived though it was, and to general labor conditions, and prices in some instances have been marked up. A week ago manufacturers of cotton bell rope and register cord advanced their prices from 6 to 10 per cent. Although there has been no noticeable increase in buying by railways, general purchasing has increased. This of course has its effect in slowing down deliveries on cord.

All cotton insulation manufacturers did not advance prices this week. Cotton webbing has been reported up about 10 per cent and sleeving about 14 per cent as of Aug. 1. Varnished cambric has not appeared on the upward list at this time, but it is expected that it will respond in due course. Returns show friction tape higher by 2 cents a pound. There is no present indication that flexible non-metallic conduit is to rise.

ORDERS ARE INCREASING

Some cotton mills are 2 months behind on shipments. This is particularly true of the braiding mills. Other mills can make shipments in one month. Orders for cotton insulating materials are coming through in large volume, and the orders themselves are large. The export market has opened up in an especially attractive manner.

Silk for insulating purposes has become harder and harder to obtain, and supplies have been badly curtailed. The demand for silk for garments is increasing rapidly and the price has gone up in consequence. This has resulted in further advances by manufacturers of silk insulation, wherein silk covered wire increased about 10 per cent the first of August and varnished silk insulation the same amount.

Tool Steel Gear Sales Firm

A Buying Movement Is Developing—No Price Increases Likely—Production Satisfactory

Brisk sales of tool-steel gears and pinions indicate that a decided buying movement is developing in regard to these products. Sales have increased during June and July over earlier months and it is expected that August and September will show further increases in this respect.

The majority of orders are for main-

tenance although a goodly number of large companies are placing orders for new stock. Some, however, put in a large supply in the fall of 1918 prior to the signing of the armistice, and have sufficient stock to fill present demands and are in good shape except on certain sizes.

Labor conditions are satisfactory and the production is slightly above normal, hence an increase in prices is unlikely at this time. Deliveries are good.

High-Tension Insulator Market More Active

Orders for \$1,500,000 Reported About to Be Placed—Prices Are Just Changing

The market for high-tension insulators has shown increasing activity, and great promise is held out for the near future. This is shown by the report that there are orders for about \$1,500,000 worth of high-tension insulators in the placing at this time. The domestic market is opening up in good shape and the foreign market holds out extremely good hope. Projected European transmission lines form the basis for much of the foreign promise.

Prices on high-tension porcelain insulators are to advance 10 per cent on Aug. 11. It is some time since this product has increased and the advance was not unexpected.

LONGER DELIVERIES PREDICTED

Shipments of certain types of high-tension insulators may be made from stock, while shipments of other types are given at this time as thirty days. Manufacturers predict longer deliveries on account of increasing orders going through the factories and advise early ordering of any anticipated needs.

Although labor conditions are threatening, manufacturers report that they shall be able to make good on present deliveries, unless some unforeseen trouble arises. Operators who are forehanded are placing their orders now for two reasons, first, in order to secure deliveries in a reasonable amount of time, and second, to place their orders before conditions should become such that a further increase in price might become effective. The latter hinges on the cost of labor, which in the case of the ordinary high-tension insulators amounts to 50 per cent. As there is no likelihood of a decrease in insulator material, it is plain to be seen that the labor in this case is the controlling factor in regard to the price. Some little difficulty has been encountered in malleable fittings, but not sufficient to cause appreciable delay in present deliveries.

Copper Lower, But Some Products Advance

Rail Bonds at 7½ Per Cent—Overhead Line Brass Shows Increase of About 10 Per Cent

Although there has been no advance in copper in the past two weeks, prices have advanced or are about to advance on several items of electric railway material utilizing copper or brass. Copper may be purchased now at 22 cents a pound.

Rail bonds reached a higher level when the discount was changed to 7½ per cent on August 4. It was only two weeks ago that the discount dropped from 15 to 10 per cent. Orders for rail bonds are being received continually, but the volume is not so great as it should be at this time. Many of the railways have sent out inquiries on prices, but have not placed orders on account of financial difficulties. As soon as some of the relief which has been granted to various companies, in the manner of fare increases or in charges for transfers, is granted to other companies the volume of business will be greatly increased.

OVERHEAD BRASS INCREASES

Reports have been received that overhead line brass is to increase in the neighborhood of 10 per cent on August 11. This advance has been anticipated ever since the rise in copper sent up prices on manufactured copper and brass products. In so far as these ears and other bronze goods are concerned prices on this line were reduced, following the market price of copper, during the early part of the year. But the continual advance in the copper market, plus increased cost of labor, will probably put the cost of this class of material back to where it was during the war, or possibly even higher, according to the statement of a prominent line material manufacturer.

It is also noted that malleable iron in small castings has been advanced on an average of 15 per cent during the last two weeks owing to the high wages which the foundries have had to grant the moulders. The general increase in labor of the character used in the manufacture of line material will average about 30 per cent. Shellac, which is used in the manufacture of line material, has advanced from 14 cents per pound just before the war to \$1.10 at the present time.

The wire bases increased some this week. Six manufacturers of rubber covered wire are on a 28 cent base while 7 are on 30 cent base. The majority last week were on 28 cents.

Good Sales Expected in Car Fittings

Maintenance Orders on Curtain Fixtures Just Fair—Scattered Orders for Car Hardware

Car hardware, curtain fixtures and seats and seating material show but little activity although it is known that much equipment of this kind will be purchased in the near future. Maintenance orders as a rule are only fair. Many companies are operating cars with old or sun-faded curtains whose edges are badly worn, and these probably will be renewed this fall when the cars are overhauled. In places where hardware is missing is has not been replaced, and a considerable amount of this business is looked for when the companies begin making repairs.

Car seatings are in demand for spares although the volume of new business is not large. There has been no change in prices with the exception of genuine leather which has increased from 8 to 10 per cent. It is used in the smoking compartments of the inter-urbans. This is the first increase noted for several months in these lines.

The general feeling is that many roads will bring up their equipment to the condition that it was in previous to the war. All organizations are in better shape to take care of necessary repairs as most of the skilled employees have been released from the service. These men are available for the overhauling and repairs that have not been made in their absence, due to lack of finances or skilled labor.

Rolling Stock

Brooklyn (N. Y.) Rapid Transit Company has placed an order with the Pressed Steel Car Company for 100 subway cars.

Elmira Water, Light & Railroad Company, Elmira, N. Y., has placed an order with the Osgood-Bradley Car Company for seven safety cars.

Berkshire Street Railway, Pittsfield, Mass., has been authorized by the Public Service Commission to expend \$74,000 for seventeen safety cars.

Marshall (Tex.) Traction Company has just received two new double truck cars for use on its lines in Dallas. The cars had been ordered for several months, but had been delayed en route.

Safety Car Devices Company, St. Louis, Mo., has received an order from the J. G. Brill Company, covering 200 sets of its complete air and safety control equipment including brakes, Westinghouse compressors and governors for the cars recently ordered by the Brooklyn Rapid Transit System.

Municipal Railway of San Francisco, Cal., through City Engineer O'Shaughnessy, has announced its preliminary plans for the construction of a new model street car for its Union Street branch. The Board of Public Works, it is reported, asked the supervisors to

call for bids for the building of a sample car, designed particularly to meet the heavy grade conditions on that line. It is to be a center entrance and exit car, built at an estimated cost of \$11,000 for the first car, on a cost-plus basis.

Recent Incorporations

Northeast Oklahoma Traction Company, Miami Okla.—Incorporated with a capital stock of \$1,000,000 to construct and operate an interurban line from Miami to Commerce, Tar River, Picher and Hockerville, all in Ottawa County, Oklahoma. (Apr. 6, '18).

Track and Roadway

Pacific Electric Railway, Los Angeles, Cal.—Work has been completed by the Pacific Electric Railway on the electrification of the old Southern Pacific link between Colton Avenue and Market Street, Riverside. This line will be used by the interurban cars coming into the city from Redlands, San Bernardino and Colton.

Peoria (Ill.) Railway.—Work on the rehabilitation program as tendered the Peoria Railway by the city of Peoria, precedent to the 6-cent car fare agreement, will be begun by the middle of this month with the improvement of the Monroe Street line. An order for 250 tons of steel has just been placed by the company and the greater part of this will be used in relaying the Monroe Street line. Plans and specifications for rebuilding the cemetery bridge, leading to Glendale cemetery, are now in the hands of the company officials and that work is expected to be begun in the near future. The work of rehabilitation will cost about \$100,000 and, according to the new contract, is to be completed by Dec. 1.

New Orleans Railway & Light Company, New Orleans, La.—The construction of a new line by the New Orleans Railway & Light Company, to be known as the Industrial Canal Line, has been approved by Judge Foster of the United States District Court and work will be completed about Oct. 1.

United Railways, St. Louis, Mo.—Receiver Wells of the United Railways has adopted the plans prepared by the company's engineers before the receivership for the reconstruction of twenty-one miles of track at a cost of \$750,000.

Plainfield, N. J.—Residents of Plainfield, South Plainfield and Metuchen have taken steps to organize the New Jersey Trackless Trolley Company to build and operate a trackless trolley line between the three municipalities. Charles H. Frost and Tepper Brothers, Plainfield, have started the movement. It is estimated that it will cost about \$125,000 to build and equip the line.

Interborough Rapid Transit Company, New York, N. Y.—Transit Construction Commissioner John H. Delaney has awarded to A. W. King for

\$810,279 a contract for the building of eleven stations on the Pelham Bay Park Branch of the Lexington Avenue subway. The bid of Mr. King was the lowest received. Contracts have already been let for general construction and track work and the former is in progress. Commissioner Delaney has also approved the award of P. N. Brown & Company of a contract for the construction of the new Atlantic Avenue station on the Brighton Beach connection of the Fourth Avenue subway in Brooklyn. The price was \$85,781.

Philadelphia, Pa.—Sealed proposals will be received until Aug. 19 by George T. Atkinson, assistant director of the Department of City Transit, Philadelphia, Pa., for the construction of the tracks of the Frankford Elevated Railway on the elevated structure on Front Street, Kensington Avenue and Frankford Avenue between Callowhill Street and Harrison Street, 5 miles. The contract will include the furnishing and laying of about 11 miles of single track, of which 38,900 ft. will be laid in stone ballast and 20,800 ft. will be laid with short ties bedded in concrete. Plans and specifications may be obtained upon deposit of \$10, which will be refunded upon the return of plans.

Sherbrooke Railway & Power Company, Sherbrooke, Que.—Plans are being made by the Sherbrooke Railway & Power Company for the construction of an extension of its lines.

Dallas (Tex.) Railway.—Work on a new interurban line for Dallas will be begun within the next few months, according to formal notice to this effect given to the City Commission by J. F. Strickland, president of the Dallas Railway. The traction company is obligated under its franchise to build two interurban lines at least 30 miles in length each. Work on the first must start by Oct. 1, 1919, and on the second by Oct. 1, 1920.

Corpus Christi (Tex.) Railway & Light Company.—It is reported that improvements will be made to the property of the Corpus Christi Railway & Light Company, recently placed in the hands of a receiver, as soon as the sanction of the court for the same is obtained.

Waco-Temple Interurban Association, Waco, Tex.—H. W. Meisner and H. L. Dailey, both of Temple, have been selected as directors of the Waco-Temple Interurban Association, promoted by O. A. Ryfle of Waco, with the announced purpose of building and operating an interurban line between Temple and Waco. Contract for surveys has been awarded by the Association to the J. G. White Engineering Company of New York and work has already begun on these surveys which will determine the route to be followed by the line. [July 5, 1919.]

Wichita Falls, Tex.—The immediate construction of an electric interurban line from Wichita Falls to Burkburnett, 10 miles north, is proposed by a company now being organized among the

oil men of these two towns. Burk-burnett interests have pledged \$50,000 of the proposed \$200,000 capital stock to be sold, and Wichita Falls men have agreed to underwrite the remaining \$150,000. Leading business men of the two towns are interested in the movement.

Wisconsin Traction, Light, Heat & Power Company, Appleton, Wis.—It is reported that the Wisconsin Traction, Light, Heat & Power Company will extend its lines to nearby towns. Work on the construction of an extension to Hortonville has been begun.

Power Houses, Shops and Buildings

Tuscaloosa Railway & Utilities Company, Tuscaloosa, Ala.—A cold storage plant and creamery will be constructed by the Tuscaloosa Railway & Utilities Company.

British Columbia Electric Railway, Ltd., Vancouver, B. C.—Plans have been prepared by the British Columbia Electric Railway for the construction of a transformer station at Barnet.

Shore Line Electric Railway, Norwich, Conn.—The Shore Line Electric Railway has petitioned the Public Utilities Commission of Connecticut for its approval of the method of construction of a 33,000-volt transmission line from Hallville to the Noank substation.

Union Traction Company of Indiana, Anderson, Ind.—The directors of the Union Traction Company of Indiana are negotiating for the purchase of the power plant at Detamore and the water rights of the Cartwright stone quarry.

Winnipeg River Power Company, Winnipeg, Man.—Work has been begun by the Winnipeg River Power Company on the construction of a large hydro-electric power plant at Dubonnet Falls on the Winnipeg River, 75 miles from Winnipeg. The company, which is closely allied with the Winnipeg Electric Railway, contemplates not only supplying power to the latter company but to develop an extensive power business in towns throughout Manitoba. The cost of the plant and transmission system is estimated at about \$6,000,000.

Missouri & Kansas Interurban Railway, Kansas City, Mo.—Preparations are being made by the Missouri & Kansas Interurban Railway to extend its electric lighting, power and heating service in the towns and farming districts along its railway lines. Substations will be located at Adams and at Milburn Place. The company obtains all of its energy from the Kansas City Light & Power Company.

Chatham, Wallaceburg & Lake Erie Railway, Chatham, Ont.—It is reported that the Chatham, Wallaceburg & Lake Erie Railway will be operated under hydro power in about a month. Two 250-kw. rotaries will be installed in Chatham, one at Wallaceburg and one at Cedar Springs.

Trade Notes

Naugle Pole & Tie Company, Chicago, announces the opening of a branch office, in charge of E. L. Morier, at Room 800, 41 Park Row, New York.

Hess-Bright Manufacturing Company, Front and Erie Streets, Philadelphia, has taken bids for a two-story addition, 43 ft. by 105 ft., for its ball-bearing factory.

The American Precision Works, 135 Cedar Street, New York City, plans to remove its works to some city near New York, probably Newark, where it will increase its manufacturing schedule.

Inquiry No. 30,032.—A street railway company in Spain wishes to receive catalogs of materials such as rails, overhead construction and electrical conductors. Correspondence should be in Spanish.

Westinghouse Air Brake Home Building Company, an interest of the Westinghouse Air Brake Company, Wilmerding, Pa., has bought eight and one-half acres of ground in Swissvale, Pa., near its plant, on which to erect homes for employees of the Westinghouse interests.

Trump Manufacturing Company, of Springfield, Ohio, manufacturer of water-power machinery, announces that R. A. Burford, of Atlanta, Ga., has been appointed general representative of the company for the sale of hydraulic turbines in Georgia and North Carolina. Mr. Burford's office is in the Forsyth Building, Atlanta.

Dr. Edgar Kidwell, M. E., formerly Pacific Coast manager of the Babcock & Wilcox Company, New York, has been elected general manager of the Kidwell Boiler & Engineering Company, organized at Milwaukee, Wis., with a capital stock of \$1,000,000, to manufacture high-pressure water-tube boilers of his own design.

F. N. Cooley has been promoted from assistant sales manager to sales manager of the Seattle office of the Western Electric Company. Mr. Cooley first became associated with the company in 1912 as lamp salesman at San Francisco. Two years later he became supply specialist at Seattle, a little later becoming assistant manager there.

Green Engineering Company, East Chicago, Ind., announces the appointment of the firm of Bull & Livensparger as its sales representatives in Chicago and northern Illinois territory, with headquarters at 14 East Jackson Boulevard. Mr. Bull has been connected with the company as an engineer for the past seven years, and Mr. Livensparger has been a member of its sales force for the past nine years. For these reasons the members of the firm bring a wealth of experience to their new work.

Edison Lamp Works of the General Electric Company on June 8 delivered to the Republic Electric Company,

Cleveland, Ohio, one of the new Mazda C-4 tipless lamps, via aerial mail service. The regular mail plane left Belmont Park, New York, at 5 a.m., arriving in Cleveland about noon, and the lamp was delivered to Louis Griesser, president of the Republic Electric Company, in good condition, through the regular post office channels. The transportation department of the Edison Lamp Works announces that it is now ready, in cases of emergency, to make delivery of lamps by aeroplane, in all sections of the country covered by government aerial mail. It is expected that Heller Field, at Newark, the largest government landing field for aerial mail service in the East, will be ready for use shortly, and this will make for even quicker service. Packages shipped by aerial mail are limited to 30 in. in length and girth.

British Electrical Importers' Association.—It is reported in the London *Electrician* that the Electrical Importers and Traders' Association has recently been formed and several leading firms have already applied for membership. The object of the association is to combine importers and traders in opposition to the action of British manufacturers for the total prohibition of imports of certain classes of electrical and allied goods. The association will oppose such unreasonable restrictions of trade and will try to secure reasonable facilities for importing and distributing such goods as are required by the public and are not manufactured in England either in sufficient quantities or suitable quality. The association is in full sympathy with legitimate means of fostering home industries and encouraging the handling of British goods, but considers that established importing interests should be fairly treated and is not willing to see the trade given over to a group of manufacturers to the detriment of consumers. The address of the association is 97 Cannon Street, London, E. C. 4. Frank W. Challis is secretary.

New Advertising Literature

Lungmotor Company, 711 Boylston Street, Boston, Mass.: Booklet on the Lungmotor and the Need of It.

Electric Undercurrent Company, Lambertson, W. Va.: Catalog descriptive of a sectional surface contact system.

Blaw-Knox Company, Pittsburg, Pa.: Bulletin No. 200, descriptive of Blaw cableways, of the automatic single-rope type.

Combustion Engineering Corporation, New York, N. Y.: Illustrated booklet showing details of construction of the Grieve grate for hand-fired boilers.

Clark Tractor Company, Chicago, Ill.: Illustrated pamphlet showing construction and application of the "tractor," a gasoline-propelled truck of small size for hauling trailers in industrial establishments and elsewhere.