

Electric Railway Journal



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This is a delayed number of this paper and is issued on Nov. 8.

Notice About Binding

* **T**HE Daily Report Number, dated Oct. 11 and issued two weeks ago, was No. 15 of Vol. 54 and was a supplement to this number which is No. 15-A. The paging adopted in the report number was from 1 to 132, while that of this number is consecutive with Oct. 4. The report number should be included by those who bind their copies in the volume for the latter half of 1919, and the publishers recommend that it be inserted at the end of the volume, although those who prefer to do so may include it between No. 14 and No. 15-A. Due provision will be made in the index of this volume for the convention report supplement.

We Are

Resuming Publication

OWING to printing troubles in New York, we are printing this issue in an outside city, and will continue to use outside facilities, where they can be obtained, until printing conditions in New York return to normal. Our issue of Oct. 4, made up in page form before that date but not printed, was mailed to our subscribers a few days ago. We hope soon to follow the present issue with that of Oct. 18 and Oct. 25, and soon thereafter to be back to our regular dates of publication.

This issue contains a somewhat smaller number of pages than normal, and owing to the adverse conditions under which we are getting out the paper, we may ask the indulgence of our readers for the next few issues in regard to the number of reading pages which we publish. Nevertheless, with the Report Number, published with 132 pages within a week of the close of the convention and sent to all subscribers, we believe that the aggregate number of reading pages for the present volume will not be materially if any less than that in Vol. 53 or Vol. 52.

Prevention Is Better Than Cure in Claims Work

ONE outstanding impression of the Atlantic City Convention of the Claims Association is that the men in this field are more than ever impressed with their responsibility for keeping interest in accident prevention alive and in helping to co-ordinate the efforts of all who for humanitarian and utilitarian motives want to see accidents reduced in number and severity. The convention "headed up," so to speak, in the appointment of a committee to endeavor to carry out certain suggestions of President R. E. McDougall. He made these with a view to applying the lessons which have been learned in Rochester and elsewhere in developing successful methods of accident prevention. The discussion showed that by co-operation with

the National Safety Council, of which most of the leading electric railways now are members, it is possible for any city to have a successful and continuous campaign for saving life and limb.

Closely connected with the general subject of public safety is the effect on accidents of the use of one-man cars. There has been a certain amount of propaganda on the part of those opposed to the use of these cars, intended to impress the authorities and the public with the danger which results from their use. At the same time the enthusiasts on the other side have claimed that the one-man car is safer than its older rival, the two-man car and have crystallized their belief in the term "safety-car." The facts adduced at the meeting, the results of actual experience covering a period ample for comparative purposes, show conclusively that the safety car is in fact a safe car. Advocacy of the use of these cars by claims departments is, therefore, perfectly consistent with any general scheme for accident reduction.

The work of the claim agent takes on new dignity as he becomes a leader in such an important civic movement as a public safety campaign. In this work he ranks with the leaders in industry, city government and business generally. If such work does not put "pep" into a man, it is time that he stepped aside and made room for some one equal to the opportunity.

Labor's Contribution to the Solution of the Railway Problem

LABOR was heard at Washington during the last week of the Federal Commission hearings. It had appeared, according to its own statement, to offer its assistance in the solution of the problem, because that solution was of more vital interest to labor than to any other party. Its "help" was summed up in three recommendations which it insisted the commission should indorse, if it were not to be guilty of becoming "derelict in performing its public duty." These were:

1. Unconditional surrender to collective bargaining and the closed shop.
2. An actual eight-hour day with one day off in seven.
3. A wage that will produce on the basis of (2) a minimum annual income of \$2,000.

The combination of (2) and (3) will make necessary a minimum wage of about 80 cents an hour, and this is to be the base pay for all employees, organized or unorganized, stenographers and clerks, the janitor, the scrub-women, car cleaners and all. And from this base the wages are to be adjusted upward upon the same classification as now exists between the employees.

This statement was made by labor's counsel, but he hastened to say and to reiterate frequently thereafter, that labor was not asking the commission to recommend any specific rate of wage but merely to recognize the principles of the three points of labor's constructive program. Let

us see how labor has helped toward solving the difficulties of the street railways:

According to the 1917 census figures, the gross receipts of all electric railway companies from railway operation that year was \$650,149,806. The total number of employees was 294,826, inclusive of officers, managers, superintendents, etc. The 1912 census showed the number of officers, managers and superintendents to be 5.5 per cent of the total. If this percentage still prevailed in 1917, the total number of employees exclusive of officers, managers and superintendents, may be estimated as 278,610. Assuming an increase in gross of 10 per cent since 1917, which is a very liberal allowance in the light of the actual returns, the present-day gross would be about \$715,165,000. If the 1917 number of employees were to receive the minimum income of \$2,000, with no allowance for scaling up from this sum for the more skilled employees, then wages would consume \$557,220,000 or 78 per cent of the gross receipts, leaving 22 per cent to meet the salaries of the officers, managers and superintendents and all other operating expenses, taxes, fixed charges, depreciation, return to stockholders, etc. That is labor's constructive plan for rendering assistance.

Labor presented its case most ably and thoroughly. Only one slight detail was omitted—how to carry out its recommendations; how to make \$1 of earnings pay for \$2 of expenses. An unimportant detail to be sure, from labor's point of view, yet unfortunately one which the laws of economics compel the railway managements to recognize. We feel certain that railway men have no particular antipathy to high wages if these can be earned along with other expenses, and certainly they are not desirous of having a return to the average income of \$872.50 per employee which prevailed in 1917. But they do want light on how any such program as labor presented at Washington can possibly carry a hope of consummation. Such a wage scale simply cannot be earned. It is not in the industry, no matter what fare is charged.

Improvements Possible in Fare Collection Methods

THE joint meeting of the Accountants and the Transportation & Traffic Associations during the recent Atlantic City Convention was one of the most enthusiastic of the week and was indicative of the interest taken in the subject of fare collection. Another notable feature of the meeting was that it was the first in the history of either association in which the presiding officer invited all the manufacturers of fare-collection devices to participate in the discussion. The result of this procedure amply justifies its wisdom, for the frank discussion of the difficulties involved in the solution of the fare-collection problem, and of the necessity for a certain amount of stability in ideas to permit the invention and development of the mechanical devices required, will surely prove very helpful.

Those who discussed the report brought out the lack of unanimity of opinion among the railway men and manufacturers, also, as to what should be considered the best method of collection and registration of fares, irrespective of the system of basing rates. The committee, in its report, is definitely committed to the registration of all flat fares in a mechanical registering device, located at a fixed point in the car, prior to the time the coins reach the hands of the conductor. The argument is that such a plan not only

provides the best protection to the company's treasury but that it also lightens the conductor's duty in that it enables him to remain at a fixed point in the car and requires him to look after the fares of the passengers only as they are boarding or leaving the car, as the case may be.

If railway men during the last few years had given as much thought to the rates of fare and to the proper mechanical collection and registration devices needed for lightening the conductor's work and for protecting the company as has been given to the standardization of rolling stock equipment, shop materials, track supplies, etc., there is no doubt that to-day practically all fares, whether based on the flat rate or the distance basis, could be collected and registered by mechanical registering devices. Such devices would foster two things: the adoption of a greater number of safety cars, as it would leave the operator in a position to give better and quicker service, and the creation of a better relationship between the company and the conductor, for a considerable amount of bookkeeping would be eliminated on the part of the latter.

Railway managers must consider fare collection as the all-important matter when fare rates are changed, for such fares as are established must be so collected that the company can be assured of getting all the money paid for the service rendered. To this end the transportation men are urged to join first with the accountants in their own companies and determine upon a fixed program of just what statistical information must be obtained relating to the traffic handled. At the same time every effort should be made to eliminate all work done by the conductor in the way of filling out reports that are seldom if ever used thereafter. This ought to be a relatively simple task, for nothing can be considered essential except that which is used properly and accurately to check up the conductor after the completion of his day's work. Such information as car-hours, car rules, half-trip readings of registers, transfers issued and collected, etc., are all irrelevant to a daily settlement with the conductor, and to ask him to do such things in the regular course of his work simply means an unnecessary effort.

Car-mile and car-hour statistics of regular runs, when desired, can be readily obtained from the posted schedules. The conductor should be requested to make note only of any deviations. Traffic statistics by half trips as usually kept by conductors do no one any material good, for the accounting department keeps only the sum total for the run. Half-trip traffic figures do not aid the schedule maker in building runs as he cannot tell from these figures whether the load travels the whole length of the line or only a part. Checkers are usually employed to obtain such figures as are essential to schedule making. Only thus is it possible to get the information as to how many seats should pass a given point properly to handle the traffic offered. If checkers are not employed, conductors could be asked at intervals to fill out special forms so as to determine the amount of traffic on their cars at certain fixed points en route. This information could be cumulated and plotted for the use of the schedule men.

During the ensuing year it is hoped that the accountants and transportation members will carry on together the work so admirably started during the past year by the Transportation Association alone and that a constructive report will be presented to the 1920 convention covering in detail the one best way of carrying out the principles evolved by the committee.

Benefits of a Consolidated System Not Always Appreciated

IT IS UNFORTUNATE that too many of the blessings which people enjoy are taken for granted by their recipients. They appear to think that the favorable circumstances under which they live are not an evolution of time but a condition which has existed since the beginning of human history, like sunlight and air. In consequence, if any change is made in the existing favorable status because the conditions which brought it about no longer permit its continuance, those who have benefited from this status without any exertion on their own part to maintain it, act as though they had been deprived of some right. A case in point is a consolidated electric railway property, which has to be broken up into its constituent parts because the property can no longer earn an adequate revenue when conducted as a unit.

The period of consolidation of all the railway properties in a city, begun early in the history of electric traction, has been so thorough that very few communities have more than one property. The unified property in each city thus produced has not only put in service convenient routes but it has extended in all directions and greatly reduced the average cost of city transportation. In fact, in most cities it has been so customary to think and refer to the electric railway system in any city as a "natural monopoly" that it is very difficult for the public to think of it as being made up of a number of detached properties which might have to be operated independently. Yet this was the original condition, and the through routes and the through fares which have since been instituted became possible only because the rates charged, when they were established, were adequate to pay the necessary expenses of the service.

But a time has come in most cities when it is no longer possible to give so long a ride for the same fare, and if the fare is not increased the eggs have to be unscrambled and the individual lines go back to their original owners. This, for the companies, means uneconomical operation, because the many savings which come from unified operation are not available, and for the public it means short rides, frequent changes of cars, and very much higher rates of fare for a ride of any considerable length.

Such a condition has been brought about to a considerable extent in New York and to a greater extent in Brooklyn, and it will come in other cities if no satisfactory settlement of the fare question is reached. Former operating companies which have not been active for years except to distribute as dividends rentals received from a holding company are being revived, operating staffs are being organized, and the conditions of the early eighties, so far as corporate organizations are concerned, are being renewed. The condition is somewhat akin to the experience of Rip Van Winkle after his sleep of twenty years, but reversed. The inhabitants of Brooklyn, for example, in this present year are being put back, so far as routes are concerned, to the conditions of 1889, or earlier.

Of course, during this time the arteries of travel have changed tremendously. New centers of shopping, travel distribution, etc., have been developed. The effect of the change thus described consequently is that one important section of a city is often shut off from direct communication with another important section, except through one or more changes of cars with an additional fare to be paid each time, besides the inconvenience of change. To refer

to the previous simile, the result is like an attempt to use Rip Van Winkle's old flintlock to do the work of a modern fowling piece, but those who withhold from the companies the right to charge a reasonable fare for transportation are the only ones to blame.

Another Large Company Adopts the Zone Plan

ON NOV. 2 the Connecticut Company, operating nearly one-half the track mileage in Connecticut, will put into operation a zoning plan which differs in a number of respects from those now in use. In this State the law is such that a railway company can modify its service and rates of fare without application to the Public Utilities Commission for advance permission, but the commission is obliged to review the schedules, on application from the public, and in due course to take such action as the facts seem to justify. It is impracticable, therefore, to determine just what the reaction from the public will be until after the plan has had a reasonable trial. Indications are, however, that the sentiment will show a more reasonable frame of mind than existed when the flat fare was raised from 5 to 6 cents. Of course, the public is not expected to be wildly enthusiastic over an increase in fare and a reduction in privileges, but experience in other lines has taught everyone that prices must be adjusted to fit the depreciated purchasing value of money, and in these days an air of resignation usually accompanies any announcement of a reasonable increase in the cost of some necessities.

The Connecticut Company plans to retain as its minimum or basic rate the present 6-cent fare, giving as much service as possible for this fare. In applying this principle the company has decided to give free transfers within the zone or zones covered by a given fare. The purpose of this is to give a very considerable number of patrons the privilege of riding without increased cost, although to do this some difficult problems are imposed upon the company. It seems the fair thing to do, however, in the interest of good service, and undoubtedly will go far in eliminating resentment on the part of short-haul riders in having the possible length of their rides curtailed.

The Connecticut Company's plan is based on elaborate traffic studies extending over many months and is the result of an analysis of results obtained elsewhere. Many of the details used in the Public Service zone system will be employed, with modifications considered by the officers of the Connecticut Company to be desirable. For example, fare boxes will be used instead of cash registers for the receipt of the money, zone indicators will not be used on the front platform, the transfer privilege will be added, etc.

In view of the fact that the Connecticut Company itself set the date when the new plan is to be inaugurated, that it had a free hand in laying out the schedules and zone boundaries, that it has utilized as fully as possible the New England habit of "talking things over" in order to prepare the people for the new scheme, that the motormen are already in the habit of making simple records due to the energy-economy plan which has been in use for some time, and that there are other circumstances tending to favor the success of the plan, it is the belief of those most intimately in touch with the matter that, in spite of some temporary slowing of schedules, the public will find the zone plan workable and reasonable.

London's Tubes and Buses—I

Some Particulars of Bus Service—Why Unequal Distances Are Given for the Same Fares—Marvelous Flexibility of Bus Operation to Meet Fluctuations of and Create Traffic

By WALTER JACKSON

AT THE OPENING of the war, the associated bus companies of London had a total of 2906 buses in operation. Owing to the withdrawal of buses for war service, the difficulty of repair and the impossibility of replacements and additions, the number in operation had sunk to about 1800 at the time of the armistice. Even by March, 1919, there were in operation only 1880 buses out of a park of 1970. It is obvious that the service on many routes had to be cut down, and in some cases cut out entirely. Hence the decreases in travel shown in later statistics are readily accounted for, and as these decreases were far below the enforced reductions in service the individual buses were actually crowded as never before.

The standard London bus of double-deck type seats sixteen inside and eighteen above in the open. Those buses which have cross-seats (arranged two on one side and one on the opposite side) on the lower deck, too, seat fifteen below and seventeen outside. Single-deck buses used on some outlying lines seat sixteen to twenty. The latest and largest bus, just inaugurated, seats forty-six. Standees are never carried on the upper deck. Ordinarily not more than five passengers are permitted to stand inside, but it was necessary to exceed this limit during the bus shortage. In discussing service standards, J. P. Thomas, general superintendent, said the management had no desire to see overcrowded buses, for overcrowding means poorer fare collection and injury of the bus's popularity for pick-up riding. It is self-evident that people who have but a half-mile or even less to travel will not get into long queues to stand up in a crowded vehicle.

In view of the comparatively small capacity of the bus, one would expect that disadvantage to be set off by higher schedule speed. This is not so to any appreciable extent in comparison with the much larger street cars operating over wide streets and which, necessarily, must make more stops. For the greater part of London generally the schedule speed of the buses is 8½ m. p. h., while police regulations even in the outer districts limit their speed to 12 m. p. h. Their maximum free running speed may be placed at 16 m. p. h. The average tramcar schedule speed in the London district ranges from 8.5 to 9 m. p. h. for cars carrying seventy-eight seated passengers. It would seem then that the wonderful bus development of London is due chiefly



VIEW OF THE STRAND, LONDON

to the fact that the bus has so large a territory in which street railways cannot be operated at all because of narrow thoroughfares. Even in many suburban districts the fondness for crescent-shaped streets, dead-end lanes and the like produces unusual difficulties for street railway construction.

At the beginning of the war the London General Omnibus Company was about to install a comprehensive system of "bus stop" and "fare stage" signs, of the type shown in the accompanying halftone, and it is hoped to take this matter up again at an early day. While drivers are supposed to stop almost anywhere on signal, they exercised a quality something less attractive than discretion during the war and armistice periods! In fact, the only stops that were to be relied upon were the fare stages.

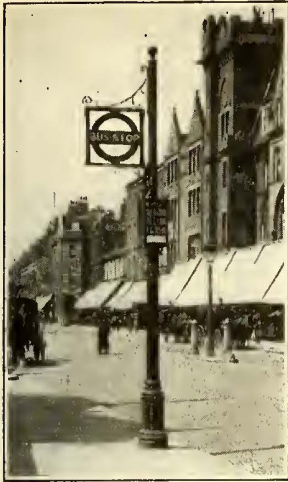
Except for a few lines, mainly in the East End, which start between 4 and 5 a. m., the traffic-carrying period of the bus is between 7 a. m. and 11 to 12 p. m. All regular routes or service are designated by a number, those with a number and letter being slight variations

such as shorter distance between terminals, a branch-off, etc. Thus services "2" and "2A" are exactly alike for the greater part of the parent service "2."

HOW FARES ARE GRADUATED

The bus system is fortunate in having no special rate tickets of any kind, whether for children, season riders or workmen. The rate is graduated according to distance but it is by no means rigid in application. The leading principle is to get the greatest possible number of riders at an over-all profit even when, in theory, some of the riders are carried at a loss. In pre-war days, for example, when the problem was to create travel rather than to keep it within bounds, it was not uncommon to charge a lower rate in the outer districts than in the congested sections where the saturation point had been attained. This appears most unorthodox if we reason on a purely mathematical basis, but it proved to be good business policy nevertheless.

To illustrate: There were a number of routes on which traffic fell off quite sharply within the last mile or so. As it would not do to reduce the base service beyond certain headways, the company decided to see what would happen if an exceptionally low rate of fare was applied to the last section. First a count was made of the people who were

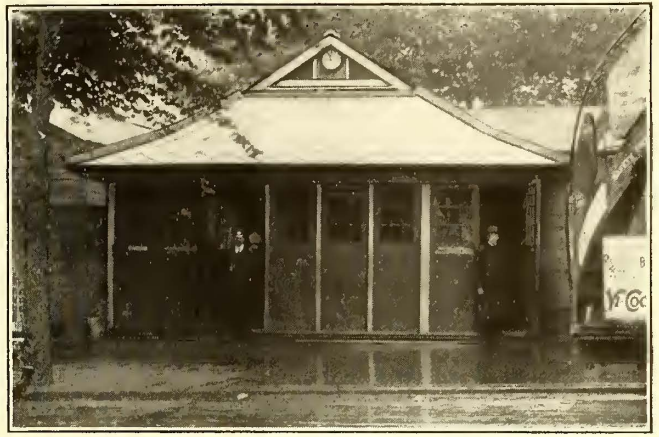


BUS "STOP" SIGN WITH COMPARTMENT FOR ROUTE NUMBER SLIDES

then riding at say a penny per mile, whereupon it was decided whether or no more revenue might come by cutting the fare to a half-penny! In many instances, the results were most gratifying, increases in traffic being so great that the revenue on the last stage was doubled. To put it another way, the company was prepared to forget the "readiness-to-serve" charge if the same equipment would secure enough extra travel to make up for it. What it was after—and obtained—was the greatest possible revenue per bus rather than the greatest possible revenue per passenger.

With the coming of war prices, the half penny, both as a base fare and as a part of intermediate fares, had to go; but the riding habit had been created and it has stuck wherever the company could continue to furnish carrying facilities.

On the whole, the fare increases have been quite moderate as indicated by the circumstance that the average fare per passenger has risen only from 1.33d. during the

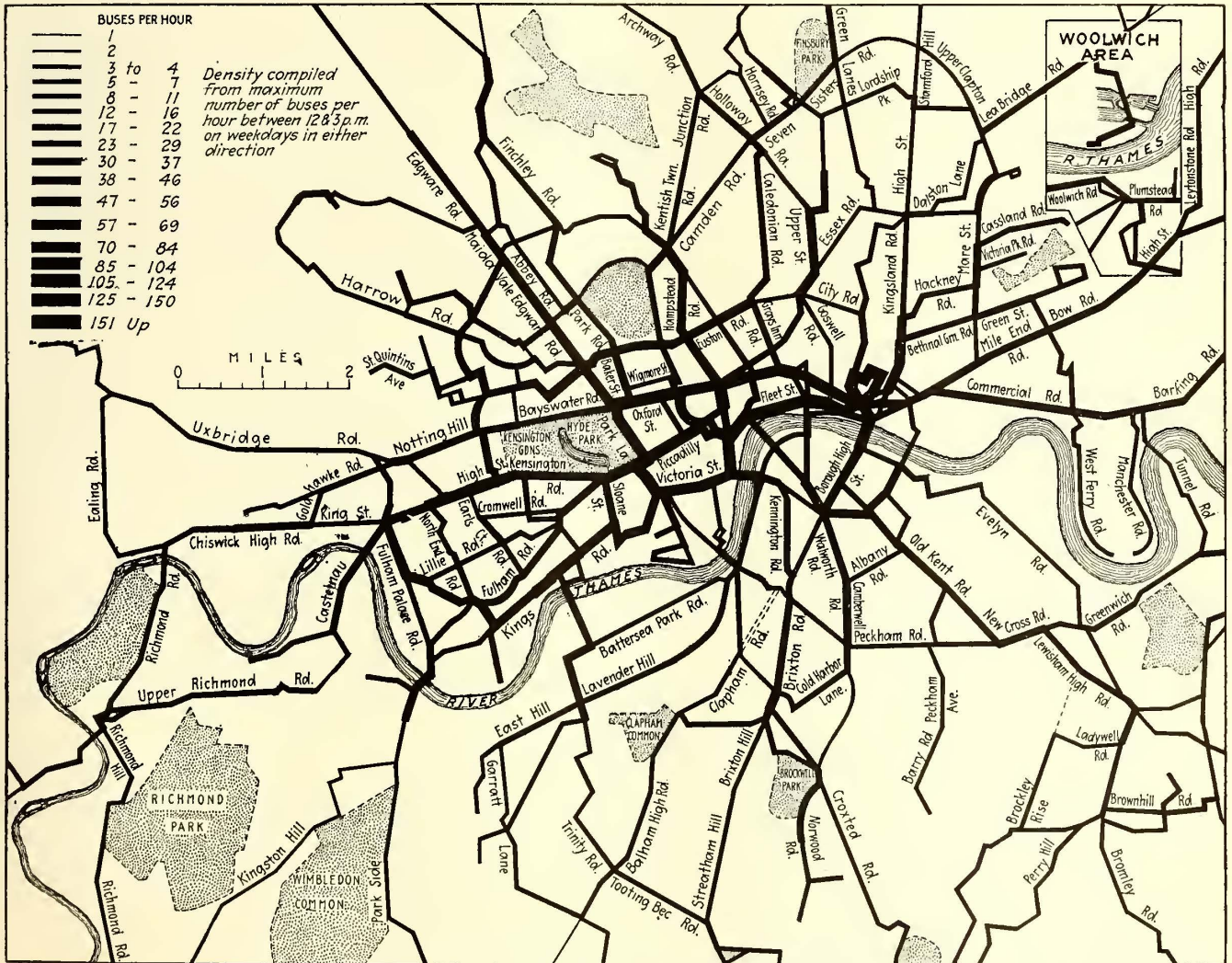


BUS WAITING ROOM, WITH CLOCK, CRYSTAL PALACE

first seven months of 1914 to 1.69d. during the first ten months of 1918. Typical examples of distances for given rates of fare follow:

TABLE I.—VARIATIONS IN STAGE LENGTHS FOR GIVEN FARES

ROUTE 25, VICTORIA AND SEVEN KINGS	
1.44 miles for 1d.	9.01 miles for 6d.
2.86 miles for 2d.	10.49 miles for 7d.
4.54 miles for 3d.	12.03 miles for 8d.
6.09 miles for 4d.	13.78 miles for 9d.
7.56 miles for 5d.	



MAP SHOWING SERVICE DENSITY IN BUSES PER HOUR

ROUTE 107A, DORKING AND CLAPHAM COMMON
(With Considerable Pleasure Traffic)

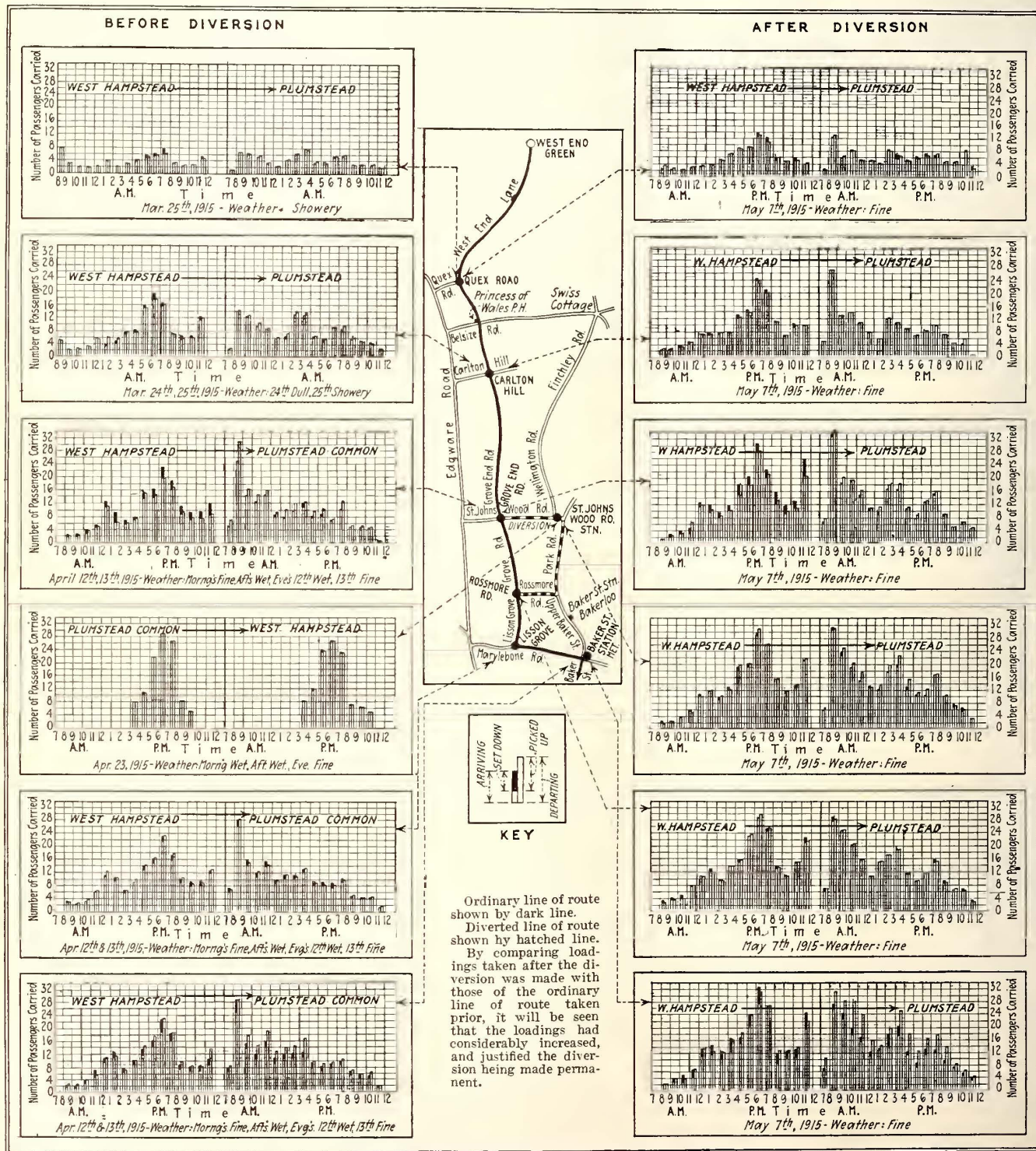
1.77 miles for 1d.	11.56 miles for 10d.
2.39 miles for 2d.	12.75 miles for 11d.
3.47 miles for 3d.	13.95 miles for 1s.
4.62 miles for 4d.	15.17 miles for 1s. 1d.
5.78 miles for 5d.	16.41 miles for 1s. 2d.
6.96 miles for 6d.	17.43 miles for 1s. 3d.
8.12 miles for 7d.	18.70 miles for 1s. 4d.
9.27 miles for 8d.	20.05 miles for 1s. 5d.
10.42 miles for 9d.	20.79 miles for 1s. 6d.

From the foregoing tables it can be determined that the penny ride on Route 25 varies in length from 1.42 to 1.75 miles and on Route 107A from 0.74 to 1.62 miles. These variations indicate that not only do the stage lengths of different routes vary but also the stage lengths on the same route, depending upon the availability of other modes of

transit, upon the location of traffic-gathering points, upon the need for building up better loads over certain sections, etc. The average penny stage on Route 25 is 1.53 miles and on Route 107A, 1.16 miles.

MORE THAN HALF OF BUS PASSENGERS RIDE LESS THAN 1½ MILES

In discussions on the graduated fare, the assertion has often been made that the large proportion of minimum fare riders was not a true indication of a highly developed riding habit but that it was due to the concentration of population within a comparatively narrow belt. Be that as it may for some communities, such an assertion will hardly be made of so spread out a city like London.



Therefore, in examining the traffic statistics of London, and particularly of the trams and buses, we conclude that the high ratio of short riders must be ascribed to the combination of frequent service and "pay-for-what-you-get" fares.

As proof take the combined traffic statistics of the associated bus operators—namely, the London General Omnibus Company and the interests of Tilling, Associated, Metropolitan Electric Tramways, Gearless, British Automobile Traction and the South Metropolitan Tramways. These figures, as presented in Table II, show that in 1918 the penny passengers were 60.3 per cent of the total traffic, and that in pre-war days the half-penny and penny riders constituted fully 68.8 per cent of the traffic. Most of these patrons ride a mile or less, say for a run through a few blocks of the business district, for a trip to some local shopping center or for a mere ½ or even ¼ mile in making connection with the tube lines. The 2 or 3 per cent maximum haul passengers are largely pleasure riders. The writer knows from personal observation that in fine weather many women like to go shopping all the way via bus despite the fact that a transfer to the tubes would save them some time. However, speaking broadly it may be said that when the ride exceeds say 1½ miles in length and 2d. in cost, the tendency is to use the faster means of transportation—a tendency that has been built up into a habit by many years of intensive advertising of the best way to use "T. O. T."—tube, omnibus, tram.

To give a more detailed idea of the classification of passengers according to rates of fare, Table III on page 712

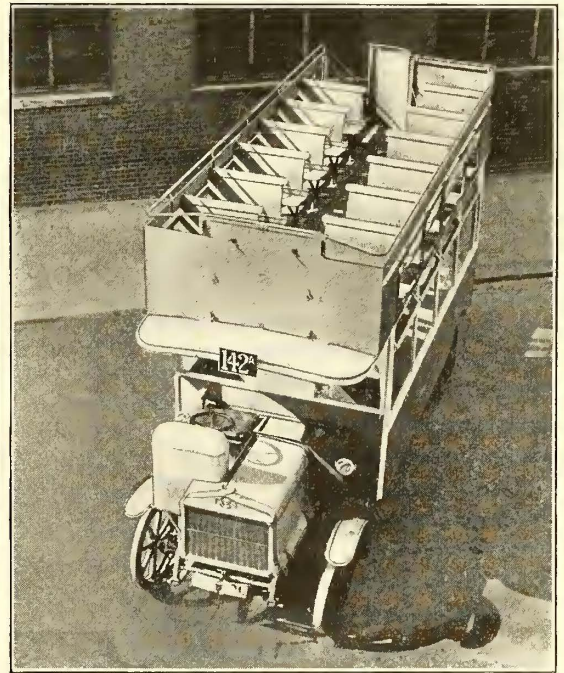
TABLE II.—LONDON GENERAL OMNIBUS COMPANY

Local and "Common Fund Through" Passengers by Fares, 1914 to July (Pre-War Period), 1915, 1916, 1917, 1918 to October					
Fare	1914 to July	1915	1916	1917	1918
½d	55,956,382	82,505,313	85,646,184	39,512,229	....
1d	249,501,269	359,627,739	368,157,646	357,537,406	392,258,011
1½d	41,576,965	62,523,043	65,034,248	41,968,732	3,647,849
2d	54,495,081	81,734,579	85,000,099	97,562,469	149,779,222
2½d	13,039,628	19,495,010	20,216,636	10,463,037	79,113
3d	15,326,147	22,943,054	24,479,758	36,376,657	58,603,762
3½d	3,995,397	6,467,976	6,912,865	3,639,441	....
4d	5,675,902	9,024,786	9,619,716	13,561,499	23,657,346
over 4d	4,625,937	7,290,603	8,092,519	12,112,924	21,275,464
Total	444,192,708	651,612,103	673,159,671	612,734,394	649,300,767

Average Fare Per Passenger									
1914 to July	1915	1916	1917	1918					
1.33	1.35	1.36	1.49	1.70					
Passengers in Percentages									
	½d	1d	1½d	2d	2½d	3d	3½d	4d	over 4d
1914 to July	12.6	56.2	9.4	12.3	2.9	3.4	.9	1.3	1.0
1915	12.7	55.2	9.6	12.5	3.0	3.5	1.0	1.3	1.2
1916	12.7	54.7	9.6	12.6	3.0	3.6	1.0	1.4	1.4
1917	6.4	58.5	6.8	15.9	1.7	5.9	.6	2.2	2.0
1918	..	60.3	.6	23.0	..	9.3	..	3.6	3.2

may be obtained within the first ¾ mile along the same highway, Finchley Road. Obviously, this section of the suburb of Hampstead is no place for walkers. Route 2 is 7¼ miles long for the complete run between Golder's Green station of the Hampstead tube and Ebury Bridge. Traffic on this route dropped from 719,980 in June, 1914, to 608,772 in June, 1918, largely because of war cuts in service.

Route 25, Victoria-Seven Kings, 13.75 miles long, runs through a densely populated section in the East End for one-



LATEST BUS, SEATING FORTY-SIX PASSENGERS, AND BIRDSEYE VIEW OF OUTSIDE SEATING ARRANGEMENT

has been prepared, covering this information for the four different kinds of bus routes described in the following paragraphs:

Route 2 is a residential and shopping line now running fourteen buses as against thirty-six in pre-war days, and its headway is now eight minutes instead of four so far as terminus to terminus is concerned. However, through the overlapping of Route 2A, the greater part of the route still gets four-minute headways. On the 1 mile between Golder's Green and Platt's Lane, Route 2 is supplemented by Routes 2A, 13 and 28, which gives a bus service on practically one minute headway. As if this was not enough, a tramcar

half its length and through a shopping district in the West End. The Victoria terminus is a great railroad station. This line has eighty buses for a three-minute service, enough dropping out during the lighter hours to give a four-minute interval. Traffic on this route to and from the Continental battlefields has remained fairly steady, nor were the schedules changed appreciably, because of its exceptional importance.

Route 40, Elephant & Castle—Upton Park serves a district of working people and has tramway competition. Long riders are very few, particularly as the maximum tramway fare is 4d. This line is 8 miles long. Cuts in

service and increases in fare have made exceptionally heavy inroads on this route, the traffic having dropped from 942,850 in June, 1914, to 347,716 in June, 1918. The headway has recently been restored from fifteen to twelve minutes.

Route 142, Kilburn Park—Watford, 14 miles long, secures excellent shortride travel at the Kilburn Park end which is a local shopping center, while the unusually large proportion, 11.7 per cent, of riders who pay more than 6d. for a journey indicates that it is also a popular service for joy rides. In winter the terminus-to-terminus headway on this route is twenty minutes; in summer, the interval is shortened as the demand for outdoor recreation riding increases.

In connection with the matter of service to the public, it may be stated that even where the intervals between

new transit routes cannot readily be laid down to harmonize with the natural expansion of a live community, the city is actually confined in a transportation straitjacket. The bonds may be loosened here or there but there is no real freedom. That freedom is obtainable only in a transportation system which can shift its facilities about, in much the same manner as a general shifts his divisions, regiments and battalions to the places where the pressure of battle is greatest.

Of course, the freedom the bus offers does not mean that it is cheaper than the street railway. Even the bus in London would be hard put to it if it had to meet the same burdens. But wherever the public is willing to pay a higher price for a higher kind of service, the street railway man should not hesitate to incorporate the bus as his legion of shock troops or strategic reserve. Certainly,

α = Service 13, Finchley Road to Goldens Green b = Service 13A, arrive Finchley Rd. x = Service 2, Finchley Road to Goldens Green c = Service 2A Finchley Rd. to Goldens Green

HOUR	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
1																								
2																								
3																								
4																								
5																								
6																								
7																								
8																								

PORTION OF RECORD MADE BY CHECKERS TO DETECT DEGREE OF CLASHING ON INTERWORKING SERVICES

buses are short for the greater part of the day, the company has put up a number of waiting rooms. These are usually of glazed and tile construction. Some of them are divided into waiting rooms for passengers and messrooms for employees. The waiting room at Crystal Palace, including clock, is illustrated on page 709.

TAKING ADVANTAGE OF BUS FLEXIBILITY IN MAKING SERVICE CHANGES

Doubtless the most fascinating traffic problem in the world is that of the London General Omnibus Company, first, because the traffic currents of London shift more than those of any other great city, and, second, because the bus carriers of that traffic can be so readily moved from one channel to another.

In operating a street railway, the adaptation of service to traffic must always be hampered by the consideration that a very heavy investment has already been made in the permanent way and the distribution system. To take up a route and put it down somewhere else is quite unthinkable. It is true that the direction of city growth is often influenced by the construction of transit routes, but we must not overlook the fact that the selection of these routes must in turn be based largely upon the existence of some natural advantage of location or terrain. If, therefore,

there is much to learn from the practice of a company which has co-ordinated so wonderfully the varying purposes of rapid transit, bus and tramway lines.

As an example of the study in density of service carried on continuously by the London General Omnibus Company the map on page 709 of service density in buses per hour will be found of interest. The general idea of this map has been applied a number of times to street railway traffic studies, but the bus company goes much further in this direction. It prepares scores, even hundreds, of neighborhood maps in connection with its studies of traffic flow; and these are carefully analyzed with the view of either adding or subtracting service. Such density studies are more complicated than similar street railway studies because of the inter-working or interweaving of the different routes. For example, a given bus route may wind in and out over a dozen highways if that particular course corresponds to the movement needs of various portions of the public. As the result of this inter-working, it may be found that the piling up of different services over one section of a street is unduly high in comparison with an adjacent section which may be of more traffic value; or the resultant jam may be such as to demand new by-passes for part of the traffic. A neighborhood map is shown on page 710 with the bus loading studies that led to the diversion of an important bus route to take in St. John's Wood Road Station.

TABLE III.—LONDON GENERAL OMNIBUS COMPANY SERVICES 2, 25, 40, 142

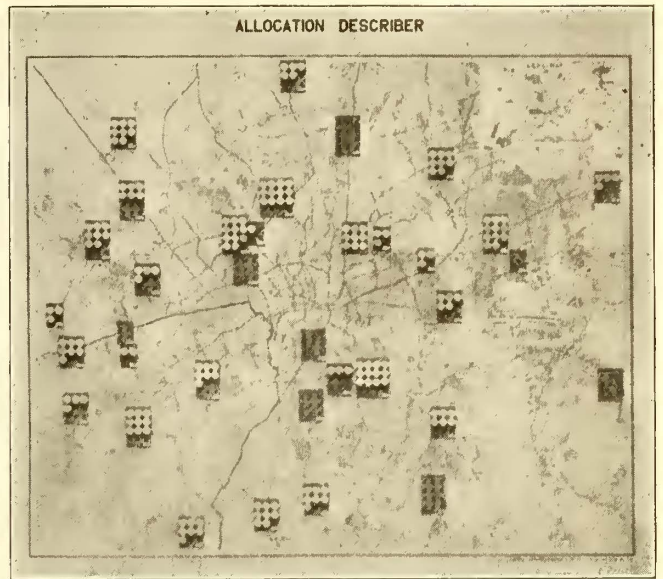
		Tickets Issued at Rates of Fares												
		Route 2.—Goldens Green & Ebury Bridge												
June	1d	1d	1½d	2d	2½d	3d	3½d	4d	5d	6d	Over	Total		
1914	75,317	352,519	41,871	137,333	11,070	67,662	1,930	32,278	...	...	...	719,980		
Per cent of total..	10.5	49.0	5.8	19.1	1.5	9.3	.3	4.5	...	...	...	100		
1918	...	311,790	...	159,462	...	70,650	...	36,429	16,100	14,341	...	608,772		
Per cent of total..	...	51.2	...	26.2	...	11.6	...	6.0	2.6	2.4	...	100		
		Route 25.—Victoria & Seven Kings												
1914	363,949	1,226,065	174,628	394,694	72,469	86,036	25,154	40,207	9,371	4,401	...	2,396,974		
Per cent of total..	15.2	51.2	7.3	16.4	3.0	3.6	1.0	1.7	.4	.2	...	100		
1918	...	1,293,495	...	589,044	...	217,951	...	89,841	29,267	18,160	7,844	2,245,602		
Per cent of total..	...	57.6	...	26.2	...	9.7	...	4.0	1.3	.8	.4	100		
		Route 40.—Elephant & Castle & Upton Park												
1914	270,833	386,271	121,888	95,106	30,127	21,201	9,837	6,925	662	...	...	942,850		
Per cent of total..	28.7	41.0	12.9	10.1	3.2	2.3	1.0	.7	.1	...	...	100		
1918	...	220,989	...	89,243	...	28,097	...	8,210	1,177	...	...	347,716		
Per cent of total..	...	63.5	...	25.7	...	8.1	...	2.4	.3	...	...	100		
		Route 142.—Kilburn Park & Watford												
1914	7,470	99,490	3,183	30,962	3,975	20,464	3,592	11,243	9,747	10,704	26,551	227,381		
Per cent of total..	3.3	43.8	1.4	13.6	1.7	9.0	1.6	4.9	4.3	4.7	11.7	100		
1918	...	106,906	...	53,406	...	29,245	...	13,488	12,428	9,387	41,746	266,606		
Per cent of total..	...	40.1	...	20.0	...	10.9	...	5.1	4.7	3.5	15.7	100		

Nor are these maps made only in accordance with the ideas of the traffic department. Every attention is given to suggestions from patrons that direct service be instituted between such and such places. Sometimes these suggestions are backed up by well-reasoned arguments; other times, they have no better excuse than thoughtless selfishness or fancy. For all that, a large number of these suggestions from the public have led to the making of special maps and studies of where people come from and go to, following which the company has revised its routings and headways accordingly.

It may be stated here that one of the most prolific sources of bus service alteration comes from analysis of the short-haul travel to and from the underground stations. In London as elsewhere the long-haul rider on the rapid transit lines may have a fairly long walk between the station and his home. If he finds a bus beckoning him to get aboard for a copper, he rides. Need it be added that this kind of travel would not exist without an attractive short-haul fare?

At this time, with the easing of the equipment situation, the company is inaugurating a series of short-route buses which will differ from the longer-route buses in that the prospective patron will know that these buses will take him in the same general direction instead of turning off to the right or left. The first route of this kind is the east-west service, 3½ miles long running from Victoria Station to Liverpool Street and the Bank of England via Victoria Street, Whitehall, Strand, Fleet Street, Cannon Street and Liverpool Street, all of which form practically a continuous thoroughfare. This straightaway routing popularizes short-haul travel still further by giving the short rider a vehicle that will not be filled by those whose destinations are off of the beaten track.

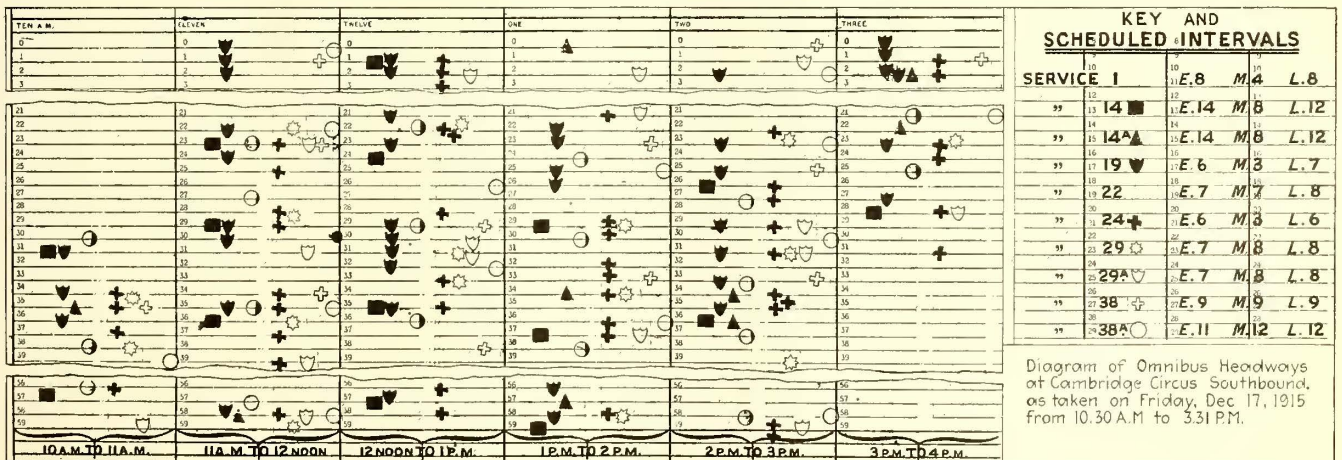
Because of the complex inter-working of the bus routes, it is vital to arrange that the headways of individual routes do not conflict on the overlapping sections. The accident account has proved that it is undesirable to try to have two buses in the same place at the same time! To avoid such conflicts as much as practicable, headway checks are made at all places where the overlapping services do not fit in with the desired smoothness. For example, as shown in the accompanying partially-reproduced form, observers stationed at a common passing point check off with a cross-mark the passing time of each bus in a given direction. In this instance, an observer at Finchley Road station set down the passing times of buses on Services 13, 13A 2 and 2A, using an ink of different color for each of the four routes. (The crosses of different colors in the chart have been replaced with letters.) On transmittal to the traffic department's headquarters, these records are transferred to a headway record sheet which is divided into hours and



ALLOCATION DESCRIPTOR FOR ALLOCATING BUSES TO THE DIFFERENT GARAGES FROM DAY TO DAY AND HOUR TO HOUR

minutes as shown on another accompanying chart. The buses of each route are indicated by individual symbols which are set down on the sheet with a rubber stamp. With this record completed, as shown, it is easy to note the irregularity in bus intervals on different routes and to observe to what extent this irregularity caused clashing in the arrival times of buses of different services.

While the graduated fare system in practice on the bus system shows automatically the classification of riders according to their possible maximum length of ride for fare paid, it does not show the on-and-off characteristics with the desired degree of accuracy. To obtain this class of traffic data, the company sends out observers to selected points along a highway served by one or more bus routes to make a count of the number of arriving, set down and departing passengers for each bus of each route. In its transcribed, completed form as already shown in the route diversion map, this "Bus Loading Diagram" presents a statement of the number of buses that stopped every hour, of the average load that these buses carried when they arrived, of the average number of patrons that they set down and of the average number that they carried off after taking on new riders. From studies like this, the company obtains an exact picture of the variations in traffic along any desired thoroughfare. Such studies must be made separately for workdays and holidays; also for different weather conditions, because a rainy day tends to divert



OMNIBUS HEADWAY DIAGRAM, DERIVED FROM CHECKS, WITH STAMPED SYMBOLS TO SHOW SYNCHRONOUS ARRIVAL OF DIFFERENT ROUTE BUSES AT ONE PLACE AND IRREGULARITY OF BUS INTERVALS

traffic to the underground lines while fine weather naturally causes fluctuations in the contrary direction.

The studies of bus loading also include, at times, a check of the time of passenger interchange. This period is considerably longer than on American street cars, as indicated by the fact that 7222 pick-ups and 16,665 set-downs showed an average of 1.77 seconds per passenger. This compares unfavorably with the record of one second or less per passenger on American prepayment cars obtained with the straight 5-cent fare. However, the absence of prepayment on the bus is more than set off by the very small platform of the bus and by the occupancy of most of the platform space by the stairway and the conductor. Only one person can board at a time and, contrary to the results with the reservoir platform of a street car, the rate of interchange increases as the crowd increases because of the slowing up due to the fact that the first entrants stop to look around for seats.

On the new forty-six-seat bus which is shortly to be placed on London streets by the London General Omnibus Company the rear platform is so arranged that passengers can alight and enter at the same time, thus considerably lessening the time occupied at stopping points.

From the foregoing account of but a portion of the traffic department's activities, it is apparent that the comparison with military practice made earlier in this chapter is amply justified. Still more striking proof of this is afforded by the system of bus allocation. It is not the time-table department but the allocation officer who decides how many buses shall be furnished to each garage and in what directions these buses shall navigate. The allocation officer assigns so and so many buses to each station in accordance with his conclusions from the traffic data, while it is the function of the time-table department to make the best possible use of the buses thus made available for given routes. As an example of the extraordinary things which can be done, it may be mentioned that sometimes say five buses run eastward from one garage and ten run westward from the garage at the opposite end of the route; that routes which have an equal number of buses in each direction one day may have a ratio of 2:3 the following day (as on holidays); that bus routes of excellent worth in winter are surpassed for a few summer months by others that are of little importance at other times, etc. The general day to day view of these fluctuations can be seen at its best only on the great map in the office of the allocation officer—a map that shows the location of every garage and of the range of action of every fleet of buses on the system. Through the courtesy of the company, an outside set-up of this "Allocation Descriptor" was made to secure the halftone on page 113 which shows the location of the garages and plug-ins corresponding to the number of buses being shifted about, all superimposed upon a map of London.

NOTE: The second article will describe time-table practices, fare, auditing, handling of employees, safety first work, etc.

Many Subscribers Express Support

THE announcement made on Oct. 4 by ELECTRIC RAILWAY JOURNAL and sent to all subscribers in circular letter form, that publication would be suspended in an effort to curb the tendency toward radicalism on the part of the striking printers, has evoked numerous letters from subscribers in all parts of the country. These letters without exception express their sympathy and support of the stand which the publishers have taken. Extracts from some of them follow:

New York City. "While I will be sorry to miss the ELECTRIC RAILWAY JOURNAL, I sincerely hope that you and the associated

publishers will hold out against the printers until the radicals are brought to their senses."

Waco, Tex. ". . . I am in hearty accord with your policy and consider that each of us can afford to make the necessary sacrifices in order to curb the revolutionary tendency that is rampant in America today."

New York City. ". . . I hope you, and the other technical journals affected by the strike, will appreciate that the entire sentiment of the public is with you."

Baltimore, Md. "Your circular letter of Oct. 4 to your subscribers hardly calls for a reply, but we wish to let you know that you have our extreme sympathy, and I am sure that the street railway fraternity will be glad to be patient with you and to wish you the greatest success in holding out against unreasonable demands."

Washington, D. C. "The JOURNAL will be greatly missed during its 'vacation,' but the reasons therefor will not be forgotten."

Omaha, Neb. "Take all the time you need to settle your troubles and settle them right. We will be patient no matter how long it takes you."

Boston, Mass. "I think you are to be encouraged in the position you have taken, and I wish to extend to you my sympathy and best wishes for the settlement of this matter in a manner which may be to the interests of the public at large."

Port Huron, Mich. "We not only commend you for your action, but you have our sympathies in your endeavor to curb radicalism."

Lewiston, Me. "We regret very much not to have the JOURNAL, particularly at this time immediately after the Atlantic City convention. However, we would rather suffer this deprivation than to have you submit to the outrageous and arbitrary demands of the printers as they have been detailed in the daily press."

Los Angeles, Cal. "More power to your elbow!"

League City, Tex. "Have worked all my life, but I say, better suspend publication for a year than grant any concessions to the Bolsheviki who threaten the very foundation of the nation."

Denver, Col. "There is no question concerning the duty of American industry under the present tendencies, and I wish to assure you that you have my heartiest support."

Portland, Ore. "Your decision is commendable, and for the benefit of all Americans, I hope you succeed in your undertaking. I am in full sympathy with you."

Framingham, Mass. "Hope you win out and get going soon, as it must be a lot worse for you than for us, as we know we will get the news later when you do get the 'controller' working again."

Detroit, Mich. "I sincerely hope and expect you to win the printers strike even, to paraphrase General Grant, 'if it takes all winter.'"

Minneapolis, Minn. ". . . would say that I am perfectly satisfied to have you continue on this bulletin basis as long as necessary. . . . I admire your stand and wish you success in carrying it through to its ultimate conclusion."

Denver, Col. "At the present time it is up to all right-thinking people to support those who take the stand that your organization has done, and to put up with inconveniences to combat this sinister influence that seems to be wading through the country."

Ottawa, Ont. "I trust that the publishers will maintain a united front and overcome the impossible conditions imposed by the men responsible for the present situation. Your subscribers will give you their hearty moral support and wish you every success in your fight for right and reason."

Indianapolis, Ind. "You will unquestionably find that practically all of your subscribers will be only too glad to suffer any temporary inconvenience that may be necessary for the sake of having the strike carried through to a satisfactory conclusion."

Wilkes-Barre, Pa. "We feel that you have assumed the proper course, and while we regret not receiving the publication, we are willing to do without it as long as in your judgment it is necessary to maintain the integrity of your position."

Similar letters have come in from almost every state in the Union, and they have been very reassuring to the publishers of this paper in the stand they have taken. This is the first time that ELECTRIC RAILWAY JOURNAL has ever been suspended on account of a strike, or in fact for any other reason since its foundation, twenty-seven years ago.

New Jersey Zone Fares in Doubt

Board of Commissioners Wants Principle Upheld but Rates Changed to Give Five-Cent Fare in Two Zones and One Cent for Each Zone Thereafter—Company Files Request for Permission to Return to Flat Fare

THE system of zone fares established on Sept. 14, 1919, by the Public Service Railway provided except in three minor instances a fare of 3 cents for the initial zone on any car and 2 cents thereafter for each zone or fraction thereof traveled. In the three exceptions the fare was 5 cents for the first zone. A full description of the system was given in the *ELECTRIC RAILWAY JOURNAL* for Sept. 27, 1919, page 637.

On Friday, Oct. 23, as the result of hearings held at the request of the city of Camden for the purpose of abrogating this zone system, the Board of Public Utility Commissioners submitted recommendations suggesting that the zone system still be maintained but the rates be changed to 5 cents for the first two zones ridden and 1 cent per zone thereafter, with an additional charge of 1 cent for a transfer to a connecting car. The railway had five days in which to file an acceptance. Commissioner Gaul, who did not favor the zone system, held out for a return to the flat rate of 7 cents with a 1-cent charge for a transfer, claiming that the delays in fare collection under any zone system would drive more passengers away than could be attracted by the most equitable system.

An abstract of the report and recommendations of the board reviewing the recent hearings, which were started soon after the zone system became effective, concluding with the minority report of Commissioner Gaul, follows:

ABSTRACT OF COMMISSION'S DECISION

The zone system, the commission stated, was inaugurated for the purpose of testing its feasibility of operation so that the results could be used in evidence in the pending fare proceedings. Soon after it was put into operation the city of Camden protested, at a hearing on Sept. 29, as to its operation in the city and its environments, claiming that much confusion attended the beginning of its operation and that it seriously affected the business interests of the city. The result was that a general boycott against the company was instituted in the hope of forcing a return to a flat 5-cent fare. This boycott still continues.

On Oct. 8 and before the board had reached any conclusion as to modifications necessary, the president of the railway company appeared before the board and stated the receipts from passenger revenue were \$12,000 per day less than under the pre-existing schedule and that \$4,500 of this loss was due to the conditions existing in Camden and vicinity. He requested permission of the commissioners to abandon the zone plan and return to the flat fare of 7 cents with a charge of 1 cent for a transfer.

Hearings on this application opened on Oct. 16 at which many representatives of the municipalities appeared and expressed their views, both as to the continuation of the zone system and the return to the pre-existing flat-fare system. Many municipalities urged the board to fix a flat fare of 5 cents.

It was evident at the hearing that there was a lack of unanimity of opinion as to the proper fare to be charged, and upon the suggestion of a representative from one of the municipalities a conference was held on Monday, Oct. 20, at President McCarter's office. This conference proved to be a deadlock, for no agreement could be reached. It was so

reported to the commissioners at the continuation of the hearing on Oct. 21, where the desires of the municipalities were further presented.

No one disputed that the zone system had not had a fair trial. A fair trial of the plan was expected to indicate to what extent the confusion and delays incident to its installation could be avoided and what changes in zone limits should be made. Reasonable co-operation between the public and company was necessary and was expected.

The opposition which was inevitable from the long-haul riders, the confusion and delays due to the temporary equipment, the utterances of candidates for political offices as well as platform declarations of political parties, produced a misunderstanding of the principle of regulating charges in accordance with distance traveled. The company reported, notwithstanding, that after a month's operation the zone system was showing an improvement not only financially but from a traffic standpoint and requested that it be continued for a while longer.

As a result of its investigations the board was convinced that there was a more general appreciation of the equity of the zone system than superficial observation would indicate, but that the charges for long hauls were too high and that these charges would be paid only where there was no other means of transportation.

The proposal to abrogate the zone plan in favor of the 7-cent flat fare was with few exceptions unfavorably received. The board was urged to restore the 5-cent fare by many, in the evident sincerity that if this was done the riding habit would be increased to such an extent that the revenues would equal those accruing under the former 7-cent fare. The commission found upon investigation, however, that such conclusions were erroneous.

The commission held that the public must recognize that the company could not under existing conditions remain solvent and afford the service to which the public was entitled before the war and that it should be apparent that rentals, fixed charges, increased cost of labor and materials could not be met on a 5-cent fare except by impairment of service. The board said it would not be justified in ordering the company to return to such a fare under existing conditions as such a return would result in the company's bankruptcy, except should it be proved that the rentals and fixed charges were in excess of what would be justified by the value of the properties used. Until the valuations proceedings, which are now in progress, are completed this could not be ascertained. In the interim any rate of fare fixed by the board insufficient to meet such rentals and fixed charges and to provide a proper return on the investment would be contrary to the decisions of the courts.

The contention of the public for lower fares without regard to the effect upon the company, under which the properties are now operated, the commission stated, was without merit.

FLAT FARE INEQUITABLE

In its report of July 30, 1919, the board announced that it believed flat fares were uneconomical and inequitable and from experience since obtained it is firmly convinced that it was more desirable to work out the principle of charging,

which will more equitably relate the cost of service to the length of haul.

It would be almost fatal to the principle which the board is seeking to work out to abandon the plan at this time before it has had a fair trial, and it therefore seemed to the board desirable to continue the plan with modifications seeking to meet the objections of the riders and at the same time encourage resumption of long-haul travel, thus affording the company revenues from which it was deprived under the existing charges.

The principal objection seemed to be directed at the rates rather than at the plan itself, and the board believed that the objections to the fares which accrue to the long-haul riders under the prevailing plan have much merit, particularly where the aggregate fare exceeds the commutation rates charged on competing steam railroads. This can only result in the abandonment of the lines where other transportation facilities exist. A readjustment of the fares under the plan is possible.

Calculations were made to determine under existing conditions the results if a flat fare of 7 cents were charged and it was found that the same revenue would accrue under the following rates:

Five cents for the first two zones under the plan and 1 cent for each zone thereafter with an additional charge of 1 cent for a transfer.

This schedule the Commissioner's believed would largely meet the wishes of many, in that it permits a fair ride within the limits of most municipalities for 5 cents and also reduces the charges for the long-haul riders sufficiently in many cases to bring the rates below the commutation ticket charges on competing steam roads.

In making this report the commissioners believed the application of Camden for the abrogation of the zone system to be disposed of as it was not the intention in this report to deal with all the details which affect traffic conditions in that city.

While there has been dissatisfaction with the zone system now in effect, there has been no general boycott in other parts of the state as in Camden. It is the board's opinion that this boycott is due largely to a mistaken idea that the board can order a 5-cent fare because of the existence of ordinances enacted some years ago, which were accepted by companies that now form a part of the Public Service Railway system.

The board believes that the people of Camden upon reflection will appreciate that the Commissioners cannot direct the company to charge a certain rate, because the riding public emphatically declare they will not use the lines unless that rate is fixed, or that they will inconvenience themselves and even pay more by using other forms of transportation.

THE BOARD'S RECOMMENDATIONS

The following is a full statement of the Board's recommendations:

"The board therefore refuses the application of the company to abrogate the zone plan and to permit the company to return to a flat fare of 7 cents with a charge of 1 cent for a transfer.

"The board recommends the continuation of the zone system with a modification of the schedule of fares thereunder, providing for a charge of 5 cents for the first two zones and 1 cent a zone thereafter with 1 cent for each transfer.

"The permission of the company to collect the charges and tariffs above indicated shall be imposed and exacted by the company and be collected only in the event that prior to Oct. 28, the Public Service Railway shall file with this board its acceptance in writing of the same conditions as

were set forth in the report of this board in the matter of the application of the Public Service Railway for a further increase in rates of fare, dated July 30, 1919.

"The board will retain jurisdiction of the proceeding in which these rates are permitted to be filed as therein provided, for the purpose of modifying or abrogating the same and if the conditions change and as the results of operation warrant."

GAUL FOR SEVEN-CENT FARE

Commissioner Gaul in his minority report stated he believed the zone system impracticable. Although a believer in the justice of the zone system of fares, the present trial convinced him that unless some radical change can be made in the method of fare collection, the delay caused by fare collection under any zone system will drive more passengers away than the most equitable system will attract. Continuing he said:

"The public wants service and is willing to pay for it. Frequency and rapidity are the essentials of good service and the number of riders will increase in proportion to the increase in speed. Therefore, I believe that any system of zone fares will slow up traffic. I favor, until a valuation of the property can be made, a return to the pre-existing flat-rate system, which the Supreme Court has held to be a just and reasonable fare."

REPLY OF COMPANY IN FULL

The company's reply to this recommendation was filed with the commission on Oct. 28 and was a plea for a return to a 7-cent fare. The reply in full follows:

"Public Service Railway has carefully considered the majority report of the Board of Public Utility Commissioners, dated Oct. 23, 1919, in the matter of the application of the Public Service Railway for approval of increase in rates and has studied the effect of accepting the recommendation of the board in all its aspects in the hope that it could see its way clear to accept it.

"The company calls attention to the following state of facts, some of which are newly developed:

"1. The zone plan of imposing and collecting fares is extremely unpopular with the public and is generally considered by the public to be a failure. This is evidenced by the storm of opposition that it has met with from public officials, newspaper criticisms, disinclination on the part of the public to ride, increase in the number of jitneys operating in opposition thereto, and a demand for its discontinuance by the State Federation of Labor and both of the leading political parties in convention assembled.

"2. The said zone plan is regarded as a failure and as impracticable and unworkable by the employees of the company, as appears by a communication received by the president of the company, dated Oct. 25, 1919—a copy of which is hereto subjoined:

"Whereas, your employees, members of the Amalgamated Association of Street and Electric Railway Employees of America, through their joint conference board, representatives of the different local Nos. 819, 820, 821, 822, 823, 824, 825, 862 and 880 of the said association, on July 1, 1919, entered into an agreement with the Public Service Railway & Railroad, which in Clause 25 contained the following, namely:

"Section 25. The employees, members of the association, will, during the aforesaid period, devote their best endeavors to the performance of their respective duties in the service of the company, and will co-operate in every practical manner with the management of the company in the efficient operation of the system, including such details as may be connected with the operation of a zoning system, if the same shall be approved by the Board of Public Utility Commissions; therefore,

"We, the joint conference board take this opportunity to state that our members (the motormen and conductors, operating this system) have faithfully fulfilled the promise therein

ESTIMATE OF PUBLIC SERVICE RAILWAY OF RECEIPTS UNDER TWO PLANS

	For Year Ending Nov. 1, 1920	Under zone plan with 5 cents for first two zones and 1 cent for each additional zone with 1 cent for transfer
	With 7-cent flat fare and 1 cent for transfer	
Passenger revenue	\$24,000,000	\$21,500,000
Other operating revenues.....	570,600	570,600
Total operating revenues.....	\$24,570,600	\$22,070,600
Maintenance and operating expenses (exclusive of depreciation)	\$16,800,000	\$17,600,000
Taxes	2,163,305	1,984,055
Total operating expenses and taxes (exclusive of depreciation).....	\$18,963,305	\$19,584,055
Operating income before depreciation.....	\$ 5,607,295	\$ 2,486,545
Depreciation	800,000	800,000
Operating income	\$ 4,807,295	\$ 1,685,545
Other operating income.....	10,000	10,000
Non-operating income	182,000	182,000
Gross income	\$ 4,999,295	\$ 1,878,545
Car-miles	\$57,000,000	\$57,000,000
Carhours	6,000,000	6,600,000

It thus appears that the 7-cent flat fare, with a penny for a transfer, will produce \$2,500,000 more gross revenue than the rate recommended by the board, and approximately \$3,100,000 more net revenue than the rate recommended by the board; and it further appears that the revenue provided by the 7-cent fare, with one cent for a transfer, is not in excess of the amount required by the company to pay its operating expenses, taxes and fixed charges, and to set up the amount heretofore prescribed by the board annually for depreciation.

made, and have given this system a thorough and complete trial.

"Joint conference board fully expected that the almost unanimous public condemnation of this system would lead to its abolition at the hands of the Board of Public Utility Commissioners, and therefore eliminate the necessity of any action on our part, however,

"The Board of Public Utility Commissioners have seen fit to extend the operation of this system, with even further complicated operation, and in justice to our membership, we can no longer remain silent, but do hereby express our opposition and condemnation of this method of operation on the following good, practical and undeniable grounds:

"Motormen have for years been taught by the company that their entire attention should be given to the safe operation of their car, and consequently the safety of the passengers and the public in general.

"Under this system the minds of the motormen are distracted from the principal and vital duty, by virtue of their being compelled to issue zone checks, and change indicators and checks in accordance with zone car is in, and the continuous remembrance of the same. With the coming of winter, the issuing of zone tickets by motormen will be practically impossible.

"That this is dangerous in the extreme is proved by the unprecedented number of car collisions and other front end accidents, which have occurred during the past month.

"These have resulted in loss of life and limb, considerable damage to property, and the discharge of a number of our members.

"The collection of fares to be practical and just, should be confined to the conductor, who is responsible, and not under dual control, and subject to mistakes by the motorman.

"Under this method the collection of fares is confusing and irritating to the public, and results in a general and decided slowing up of service.

"The joint conference board has no desire or intention to enter any controversy on the fare question, but take their attitude from a practical and operating standpoint.

"We urgently request the Public Service Railway Company to abandon the present method of operation as soon as possible, so that normal service can be restored, accidents decreased and the men given a chance to work with a greater degree of safety, confidence and justice than is now possible under the present complicated and objectionable system."

As experience with the zone system has proceeded, it has become clear to the operating officials of the company that the slowing down of the system, solely by reason thereof, is a serious matter—approximately 10 per cent. This entails serious inconvenience to the public and involves the operation of a larger number of car-hours to accomplish the same result.

"4. The zone plan of operation not only involved a slowing down of the service, but of necessity a substantial increased operating expense to take care of the increase in the larger number of car-hours of operation made necessary by it. It is estimated by the operating officials of the company that this increased item of cost alone will amount to \$600,000 per year. In addition thereto, it has been demonstrated in experience that the increased checking and accounting caused by the complications of the zone system, over and above the flat fare system hitherto in effect, will cost the company \$200,000 per year. The annual expense of operating the zone system, therefore, to produce a given amount of gross revenue, would exceed the operating expenses under the flat fare system by at least \$800,000 per year.

"5. The company has made as carefully an estimate as possible of the revenue that would be derived and the operating results obtained for the year ending November 1, 1920, under the 7-cent flat fare, with the cent transfer, and under the zone plan recommended by the commission of 5 cents for the first two zones and 1 cent for each additional zone, with 1 cent for a transfer. The estimate of the results to be obtained under the 7-cent fare, with a penny for a transfer, are based solely upon experience gained under this rate while it was in force. The estimate of the rate proposed by the board is the deliberate judgment of the company's operating officials in the light of present-day experiences. Whatever deviation, if any, there might be from these figures, due to present unsettled conditions, would, in the judgment of the company, apply to both propositions.

"6. The present zone rate should no longer be continued in force, because it meets with the approval of nobody and is entailing upon the company a loss of more than one-fourth of its anticipated revenue.

"The company stands ready to substantiate under oath, through its operating officials, the statements herein contained, if it should seem wise to the board to take proofs in reference thereto.

"The company is of the opinion, for the foregoing reasons, that the whole zone system project is a practical failure, at least as applied to this property, and should be immediately abandoned and that the company should at this time return to a flat fare of 7 cents with a penny for a transfer. The company, therefore, is unable to accept the recommendation of the board and renews its application to return to the flat fare of 7 cents with a penny for a transfer, which rate has already been approved by the Court of Errors and Appeals of the State of New Jersey. The company expressly states, however, that this rate under present operating conditions, will only keep the company going, will not yield it any return upon its capital stock investment and is not the rate to which the company is entitled."

COMMISSIONERS REFUSE FLAT FARE

The Board of Public Utility Commissioners on Oct. 30 denied for the second time the application of the company for a flat 7-cent fare on all its lines. The board leaves the next move in the fare controversy to the company, suggesting as it did before that the zone fare system be continued under the rates previously suggested by the board—5 cents for the first two zones, a cent for each additional zone and a cent for a transfer.

It is stated that if the company refuses again to accept the board's recommendation, the present rate of fare—3 cents for the first zone-mile and 2 cents for each zone thereafter—will remain in effect until the board fixes a permanent rate.



R. E. McDOUGALL
President

Claims Men Discuss Accident Prevention

At the Atlantic City Convention the Claims Association Adopted a Resolution to Further the Public Safety Movement and Discuss Accident with References to the One-Man Car—S. B. Hare Was Elected President



S. B. HARE
President-Elect

SUPPLEMENTING the digest, printed in the special report issue of this paper, dated Oct. 11 and mailed from Baltimore, Md., of the proceedings of the convention of the American Electric Railway Claims Association held at Atlantic City, N. J., Oct. 6 to 9, it is now possible to print abstracts of the papers which were presented, with further notes on the discussion.

At all of the sessions R. E. McDougall, claim agent New York State Railways, Rochester, N. Y., president of the association, occupied the chair and acting-secretary J. S. Kubu, appointed to fill out the unexpired term of Miss Carrie M. Swartz, ably assisted the chairman.

Monday's Session

On Monday afternoon President McDougall fittingly opened the convention by referring to the life and work of B. B. Davis, who had been the association's secretary from its organization until his death in November, 1917. A resolution by way of tribute to the memory of Mr. Davis was passed, its substance being as follow:

Benjamin B. Davis was born in Albany, N. Y., on December 31, 1849. He removed at the age of nineteen to Baltimore, Md., where he engaged in business with his uncle. Subsequently he was connected with the Philadelphia Rapid Transit Company, leaving its employ to enter the secret service of the federal government. In 1895 he became claim adjuster for the Columbus Railway, Power and Light Company, continuing until he died on November 21, 1917.

At the time of the organization of the Claims Association in 1904 Mr. Davis was elected its secretary and treasurer, which offices he held until the time of his death. During this period his genial disposition and wholesome companionship won for him the respect and esteem of his associates. Prompt in business, thorough and efficient in the performance of his duties, his high ideals and manly principles won for him an undying attachment from his fellow men.

Mr. McDougall then read his presidential address, the substance of which was given in the report issue, page 83. Following this a paper on "A Claim Agent's Experience with One-Man Cars," by Alves Dixon, claim agent El Paso (Tex.) Electric Railway, was read by E. C. Carpenter in the author's absence. An abstract of this, together with one of a communication sent by H. G. Winsor and read by L. S. Hoffman, appears elsewhere in this issue.

In the informal discussion of the subject William Tichenor, Indianapolis, Ind., told of the experience of his company with safety cars in Terre Haute, where the cars are very popular. He said: "The people like them; and if the people like them, I am for them; anything to get the people on good terms with the company." E. F. Schneider, Cleveland, Ohio, said that in Elyria one-man cars have been in operation for two years without a single platform accident. While the experience of the company in this field has been limited, it has had good success with the cars from the accident standpoint.

Following the discussion on one-man cars, Mr. Tichenor proposed certain changes in the standard classification of

accidents and, after discussion showing that the members appreciated the importance of the subject, a motion was passed referring the matter to the joint committee of the Accountants' and Claims Associations on standard classification of accidents and accident accounts. Mr. Tichenor's motion was printed in the earlier report.

Tuesday's Session

At the session held on Tuesday afternoon L. J. Tynan, attorney Public Service Railway, Newark, N. J., read a paper on "The Advisability of Fixed Schedules for Injuries to Persons Other than Employees." In prefacing his paper, Mr. Tynan said that his conviction was that when a corporation or person has, either through negligence or willfulness, caused an injury, full compensation for that injury should be made; further, that the classification of injuries according to their mere physical characteristics and the fixing of a price thereon that shall pay for the damage can never meet the requirements of making good the injury to the person hurt. An abstract of his paper appears elsewhere.

Mr. Tynan's paper was scheduled for discussion opened by E. P. Walsh, St. Louis, Mo. Mr. Walsh was unable to be present, but he wrote stating that the position taken by Mr. Tynan is the only logical one and he agreed heartily with Mr. Tynan in his conclusions. The discussion was then opened by C. G. Rice, Pittsburgh, Pa.

Mr. Rice began by urging that something should be done to call the attention of the higher officers in the railway companies to the work of the claims men, in order that the latter might more nearly approach the position of respectability and dignity to which they are entitled but seldom reach. He also gave the results of an investigation which emphasized the seriousness of the matter of settlement for accident costs. A canvass of a large number of cities indicated that nearly 5 per cent of the total gross revenue goes for this purpose, and he pointed out that if the directors and other officials in the company would give proper attention to these sources of loss, it would be easier for the claims men to solve some of their problems. His idea was that the cost of accidents can be reduced by reducing their number, and by having passengers pay for insurance, just as they do when traveling on steam roads or when checking baggage.

Mr. Rice did not take the same position as Mr. Tynan, for he said that if workmen's compensation is fair, then why should not the same prices to the public be fair? His thought, however, was that there ought to be some kind of limitation to the liability for damage by accident to persons other than employees, as it is manifestly unfair on a 5-cent contract to have the possibility of collection of a verdict of, say, \$75,000, in cases where the liability is disputed. John J. Reynolds, Boston, Mass., supported Mr. Rice, stating that fully ten years ago, Russell A. Sears, general attorney of Boston Elevated Railway, considered this subject from the

standpoint of lessening damage cost. For himself Mr. Reynolds said that from discussion of the subject with the leading casualty managers and attorneys in Boston he knows that they consider the principle of reducing cost of accidents under a compensation scheme to be sound. If it can ever be applied, it will effectually abolish the "ambulance chaser."

In closing the discussion Mr. Tynan called attention to the fact that in the matter of damages the pedestrian and the passenger are in entirely different classes. It might be possible, he thought, for the state to allow a transportation company to limit the damages recoverable by passengers through the negligence of a motorman or conductor or other servant of the company; but even the state could not permit us to limit the amount recoverable by passengers because of the negligence of the company as a company. For example, if a car is derailed because of defective rail that is a company matter, but if a car hits another car and a passenger is thrown to the floor the accident in this case is due to the negligence of the motorman.

Wednesday's Session

Mr. McDougall opened the meeting on Wednesday afternoon by reading his paper on "Organization for Public Accident-Prevention Campaigns." This and the discussion on the paper by C. B. Procter, Memphis, Tenn., are abstracted elsewhere. The paper elicited a vigorous discussion. In response to a question as to the cost of the Rochester campaign, Mr. McDougall said that at the start the sum of \$400 was raised by contributions. When the general campaign was undertaken in 1918 a fund of several thousand dollars was raised, the National Safety Council sending Julian H. Harvey to act as secretary. The city money was spent simply for hall rent, moving pictures, publicity, etc. For the next six months' expenses, the sum of \$6,000 was raised by contributions from the Chamber of Commerce, the utilities and other business concerns. Beginning with May, 1919, the sum of \$1,000 per month has been contributed from the city "war chest," which after the termination of the war was continued as a community chest to take care of all hospital, charitable and general welfare enterprises of the city.

Another question brought out the statement that among railway employees the company co-operated in the campaign by having appropriate addresses delivered before the men, by holding meetings of the inspectors where precautions as to danger points, questions as to the reasons for accidents, etc., were considered.

Following Mr. McDougall, H. O. Allison, New Brighton, Pa., told of the wonderful results of publicity in reducing accident claims in the Beaver Valley. Special advertising regarding accident claims was fruitful and the company settles its claims with practically no lawsuits. He said that in his opinion the secrecy which surrounds accident settlements has a tendency to exaggerate the ideas that people have regarding possible collections from the companies. Mr. Allison said that it is his practice, as safety engineer of his company, to get suggestions after every accident as to how a repetition can be prevented. He had found that, supplementing the bulletin service of the National Safety Council, it is very effective to use bulletins regarding accidents that have occurred to men on the company's lines.

Mr. Rice said that any safety movement must be systematic and persistent; that "the brass band method is not worth a cent." It does not matter how people are brought to think of their own safety as long as this is done. Referring to the Rochester campaign, Mr. Rice said that a much larger one was put on in St. Louis under the direction of the Safety Council with even more far-reaching results. The work has also been inaugurated in western Pennsylvania with a section of the National Safety Council which is doing splendid work. The funds for this work will be

raised through the finance committee, the intention being first to raise \$15,000. The Pittsburgh Chamber of Commerce, the County of Allegheny, the City of Pittsburgh Council and other agencies will contribute.

Mr. McDougall then read a letter from Charles Hardy of St. Louis, telling of the result of accident-prevention work in that city. Last year at the time of the National Safety Congress in the city a safety week was "staged," with a material reduction in the fatal and other accidents. On motion it was also decided to incorporate in the minutes a copy of the paper presented by C. M. Talbot before the National Safety Congress on the subject: "The St. Louis Plan of Public Safety." The same action was taken with respect to an article quoted by Mr. Rice in his informal remarks; and to a paper written by J. J. Reynolds for the meeting of the association proposed for 1918 but not held, on the subject: "Advantages Derived from Definite Principles and Policies in Claims Work."

The meeting then adjourned to the Hippodrome, where A. J. Van Brunt, Newark, N. J., showed a moving picture film entitled "Comrades of Success," which had been prepared for the Public Service Railway.

Thursday's Session

The first item on the program Thursday afternoon was the statement by President McDougall as to the use which the membership is making of the Hooper-Holmes Index Bureau. It appears that during three years past nearly 11,000 inquiries have been sent to the bureau by members of the association, and the bureau has been able to report back on nearly 2,000. Mr. McDougall pointed out that the association is paying \$500 a year for this service and the members ought to make use of it.

E. C. Carpenter, chief claim agent Northern Ohio Traction & Light Company, Akron, Ohio, then read his paper on "Speed and Its Relation to Accidents." This, together with a written discussion prepared and read by H. K. Bennett, Boston, Mass., is abstracted elsewhere. In support of the contention made in his paper, Mr. Carpenter quoted recent experience in Akron where, after motormen had been found to be exceeding the proper maximum speed of their cars a series of arrests and fines resulted in a decrease in accidents by 40 per cent. George Carson, New York City, while agreeing with operators who contend that high speed should be used when it can be used safely, supported Mr. Carpenter in regard to the dangers of overspeeding.

At this point President Pardee of the American Association came in and complimented the Claims Association on the work that it had been doing. Mr. Bennett then presented a resolution to the effect that the incoming executive committee be requested to appoint a standing committee on accident prevention to co-operate with other national bodies interested in the same work. This was passed. In response to a question Mr. Van Brunt explained the working of a company section.

The next business was the election of officers for the ensuing year, which resulted as follows: President Samuel B. Hare, Altoona, Pa.; first vice-president John J. Reynolds, Boston, Mass.; second vice-president C. G. Rice, Pittsburgh, Pa.; third vice-president, Wallace Muir, Lexington, Ky.; secretary-treasurer John S. Kubu, Utica, N. Y.

Mr. Hare then took the chair and received a motion, which was passed, to the effect that the executive committee be instructed to redraft the plans and purposes of the organization along broader and more constructive lines, and to report the result at the next convention. Messrs. Rice, Carpenter and McDougall were appointed as a committee to take up this matter and report at the mid-winter meeting of the executive committee.

President Rice then proceeded with the appointment of committees. He stated that the executive committee will

comprise H. D. Briggs, chairman, E. L. Lindemuth, C. B. Procter and H. G. Winsor. Among the general committees was the new committee on accident prevention, composed of Messrs. McDougall, Rice, Weh, Drown and Bennett.

A Claim Agent's Experience with One-Man Cars*

BY ALVES DIXON

Claim Agent El Paso (Tex.) Electric Railway

REALIZING that there is no more important subject confronting the street railway claim agents of the country than accident prevention, and with a full appreciation of the responsibility of presenting my experience and opinions to this association, I have carefully analyzed my records and will, so far as I am able, discuss one-man car operation with absolute impartiality. I make this explanation in the beginning for the reason that I am afraid that I might let my bias in their favor influence my opinion and cause me to make statements not altogether in keeping with the facts. To avoid this, I have classified all accidents occurring on our lines during the time we have had the one-man car in operation, and will present them to you with such comment as may be necessary to the proper understanding of them.

At the outset I was confronted with the proposition that comparisons between one-man and two-man cars on a mileage or "passengers-hauled" basis are misleading, for the reason that the one-man cars are run on thickly congested lines where the probability of accident is many times greater than it is on the lines serving outlying sections in which the heavy, double-truck cars are still being used. Despite this fact the figures are decidedly in favor of the one-man cars, and collisions with automobiles are not nearly so destructive. The light weight of the one-man cars, and the ease and promptness with which they can be slowed down are large factors in their favor in congested districts.

Step accidents, in so far as they apply to cars in motion, have been practically eliminated, and the formerly frequent accident arising because passengers left the cars while the conductor was flagging at a railroad crossing is a thing of the past. A prominent union official, in a recent attack on the one-man car, drew a horrible picture of the danger of collisions at railroad crossings, with the passengers penned up "like rats in a trap." Could anything be more absurd? In an experience of more than twelve years, I have never known of a passenger on our lines killed or even seriously injured in collisions with steam trains, except in several cases where they jumped from the car. If it is safe for a man in an automobile to cross a railroad without stopping, certainly there should be no question as to safety when a motorman stops his car and looks in both directions before crossing. We believe that the undivided responsibility which exists with the one-man car will practically eliminate collisions between street cars and trains. In connection with past accidents at railroad crossings I cannot recall an instance in which there was not a dispute between the motorman and the conductor as to whether or not the latter had given the signal to proceed. During one and one-half years of operation of the one-man cars, we have had but one collision or, rather, "close call" of collision with a train. That was due to the "loss of his bearings" by a new man who ran into the side of a freight train on a dark night. Possibly if the car had been of the two-man type the conductor might have come forward and told the motorman to stop for the crossing, but this is hardly probable.

It's an old saying in our business that "accidents occur when they are least expected." This, of course, is obvious; if they were expected, necessary means to avoid them would

be taken. Accidents on "big days" are rare, generally speaking, because every man is on the alert, expects trouble and avoids it. With the one-man car, the operator has no chance to become sluggish; he is always keyed up. He cannot put the responsibility on the man on the other end of the car, and no arguments are possible. His responsibility keeps him busy; his undivided attention is necessary to the successful operation of his car. With his mind on his work the probability of accident is greatly reduced.

The data for our property are given in the accompanying table. Derailments, accidents near cars, and accidents to employees except while operating cars, have been omitted and only those attributable to actual operation are included.

ACCIDENT DATA, EL PASO ELECTRIC RAILWAY
FIRST FOUR MONTHS OF SECOND YEAR (APRIL 1 TO AUGUST 1, 1919), COMPARED
WITH FIRST YEAR (APRIL 1, 1918, TO APRIL 1, 1919), SHOWING BOTH
ONE-MAN AND TWO-MAN CAR OPERATION

Total mileage one-man cars April 1, 1918, to April 1, 1919.....	1,065,922
Total mileage one-man cars April 1, 1919, to Aug. 1, 1919.....	428,147
Total mileage two-man cars April 1, 1919, to April 1, 1919.....	1,362,992
Total mileage two-man cars April 1, 1919, to Aug. 1, 1919.....	274,020

ACCIDENTS PER 10,000 CAR-MILES

	One-Man		Two-Man	
	First Year	First Four Months, Second Year	First Year	First Four Months, Second Year
Collisions with pedestrians.....	0.13	0.07	0.09	0.34
Collisions at railroad crossings.....	0.01	...	0.01	...
Collisions between cars of company.....	0.26	0.09	0.41	0.45
Collisions with automobiles.....	1.57	1.42	1.17	1.46
Collisions with other vehicles.....	0.26	0.21	0.18	0.33
Collisions with animals.....	0.01	...	0.08	0.11
Equipment.....	0.02	0.07	0.04	0.07
Boarding cars.....	0.13	0.11	0.33	0.49
Injuries on cars.....	0.27	0.34	0.51	0.56
Alighting from cars.....	0.13	0.18	0.46	0.73
Falling from cars.....	...	...	...	...
Stealing rides.....	0.01	...	0.02	...
Doors, gates, guard rails.....	...	0.16	...	0.19
Ejectments and disturbances.....	0.08	0.09	0.08	0.21
Miscellaneous.....	0.20	0.21	0.35	0.36
Totals.....	3.03	2.95	3.95	5.30

The outstanding feature of this comparison is that while the two-man car shows a considerable increase in total accidents per 10,000 car-miles, the one-man car shows a slight decrease. During the first four months of the second year of one-man-car operation there was a decrease in one-man-car collisions with automobiles and an increase in the two-man car automobile collisions. The constant increase in the number of automobiles from month to month and the heavy automobile pleasure riding during the summer months necessarily increased the accident hazard for this four-month period compared with an entire year, and the two-man car having already been developed to its capacity was unable to show any improvement. The one-man cars, notwithstanding the increased probability of accident, continued to gain in efficiency.

During both periods covered the one-man car shows a smaller number of collisions with automobiles per 10,000 car-miles, and this although it operates a much greater proportion of its mileage through the congested business districts than does the two-man type, with consequently greater collision hazard. During both periods practically all collisions with animals were with the two-man cars, indicating that they make more mileage in the outlying districts where the "animal" hazard is far greater and where the "automobile" hazard is consequently less. Even in the item of "ejectments and disturbances" the one-man car makes the better showing, probably because the operator is too busy to engage in argument with his passengers.

In my opinion the one-man car is not an absolute panacea for the accident evil. It has wonderful possibilities which even yet have not been thoroughly developed, but its operation requires serious study. Like a musical instrument, it cannot do its best work until it is thoroughly understood and its capabilities mastered.

* Abstract of paper read at meeting of American Electric Railway Claims Association, Atlantic City, N. J., Oct. 6, 1919.

Written Discussion on Mr. Dixon's Paper

BY H. G. WINSOR

Claim Agent, Tacoma Railway & Power Company
Tacoma, Wash.

THE statistics presented by Mr. Dixon show that he has studied the subject very carefully with a full realization of the importance which such a radical change in the operation of equipment has in connection with accident costs. While I do not agree with him in some of his views, it may be that our experience has been so limited and that there are so many phases to be considered, that full and frequent discussion and data covering a period of years will be necessary before we can judge as to the advantages and disadvantages of the one-man car from a claims-cost standpoint.

The success of the one-man car seems to be demonstrated and its utility in providing satisfactory service for short-haul business is generally accepted by the public as an improvement over former conditions. Consequently we can safely anticipate a general adoption of this type of equipment, whatever the results may be so far as the accident hazard is concerned, for we must consider that our total claims expense is such a small percentage of the total costs involved that it can be considered only as subordinate.

It is our business, then, not to approve or condemn the equipment but to search out the defects which increase accident costs, and to endeavor to correct such as we find without impairing the economy of operation.

Mr. Dixon gives his opinion that comparisons between one-man and two-man cars on a mileage or passengers-hauled basis are misleading and not comprehensive. I cannot agree with this view because the unit of hazard in accident costs is the individual passenger regardless of whether he is carried on a one-man or a two-man car. A car carrying a capacity load of 100 paying passengers safely to their destinations is certainly entitled to more credit than one carrying one-half that number.

Our company has been operating one-man cars for practically the same period as that covered by Mr. Dixon's statistics and with approximately the same general results. However, we do not feel safe in assuming that comparative figures under the conditions of the past two years are reliable enough to warrant a conclusion as to the real merits of the new type of car, for the following reasons: First, a large percentage of our most reliable and experienced men were selected to operate one-man cars, leaving the men of less experience for assignment to the older type of equipment on which their duties are not so exacting or complicated. Second, a comparison between results obtained in 1918, when a large number of our best men were in the army, and 1919, during which we have been rapidly returning to normal conditions, would likely be misleading.

If each member company operating a considerable number of one-man cars would submit to the association during the next two years statistics similar to those given in Mr. Dixon's paper, with the possible addition of costs per 1000 passengers carried, we could make some valuable deductions and profit materially by the information received. Such a course would undoubtedly disclose the danger points and enable our companies to take whatever action is deemed necessary.

Undoubtedly we all agree with Mr. Dixon when he states that the undivided responsibility in one-man car operation is beneficial, provided that the mental and physical capabilities of the operator are in all cases equal to service requirements. It is obvious that an efficient operation of any vehicle under present traffic conditions should demand the service of an intelligent person, that care should be exercised in the selection of operators and that strict obedience to traffic rules should be insisted on.

In the operation of the one-man car we have found a rather serious condition in an increase of boarding and alighting accidents which apparently failed to develop until after our safety cars have been in service for some time. While the door mechanism is supposed to prohibit the opening until after a car comes to a full stop as well as the starting of the car before doors are closed, the history of the "auto-motoneer" has been repeated, and it now seems to be a pleasure for operators to defeat the purpose for which Mr. Birney gave us the electrically-controlled door. Consequently, one of the most expensive types of accident has increased rather than diminished. I have been advised that some companies, to guard against this trouble, have required operators to finish collecting fares in all cases before starting cars. This, however, congests traffic on busy streets where cars run on headway of say one minute or less, although it may possibly help to some extent so far as boarding accidents are concerned.

A particularly dangerous condition in one-man car operation is in "wye-ing" at points where traffic is to any extent congested. The danger incident to this condition can be avoided only through the exercise of the greatest caution by the operator.

A point which in the final analysis may have considerable effect on accident costs is the difficulty experienced by operators in serious injury cases where immediate attention must be given the injured party; of course this duty must be performed first with the result that few if any witnesses are secured.

As Mr. Dixon states: "the one-man car has wonderful possibilities"; speaking generally, its success is assured. We must study its advantages and profit by them; discover its disadvantages and if possible correct them. Co-operation in working out these problems will bring the desired results quickly and effectively.

A Fixed Schedule for Injured Persons Other Than Employees *

BY L. J. TYNAN

Public Service Railway, Newark, N. J.

IN MOST STATES there are compensations for injuries under fixed schedules in workmen's compensation acts, and doubtless the thought has arisen that the principle, so far as concerns a schedule, might be applied to our relations to the general public. But the circumstances and conditions that surround our relations with our employees are so different from those that surround our relations with the public that one case is no guide or precedent for the other. In my opinion a fixed-schedule plan applied to the general public would be impracticable and unfair, and would conflict with the federal Constitution.

The schedules contained in workmen's compensation laws are based, in most states, upon implied contractual relations existing between the employer and the employee. If the law provided simply that the employer should pay certain moneys to an injured servant, regardless of whether or not the employer was to blame for the injury, I am confident that such a taking of the employer's property would be unjustified under the constitutions of most of the states. In New York, after one workmen's compensation act was declared void, the people adopted a constitutional amendment providing in effect that the constitutional protection afforded to private property should not control the relation of master and servant in accident cases. The New York Legislature was therefore enabled to enact a workmen's compensation law without resorting to the expedient of an implied contract between the parties to bring the law within the constitution.

* Abstract of paper read at meeting of American Electric Railway Claims Association, Atlantic City, N. J., Oct. 7, 1919.

In workmen's compensation, in the absence of a constitutional amendment permitting such statutes, and in the absence of an implied contract such as has been resorted to in New Jersey, there are two points of conflict with those provisions of our federal and state constitutions which aim at the protection of private property. First, the employer is compelled to pay, whether he is to blame or not. Second, the schedule of compensation compels the employer to pay a fixed sum for an injury, regardless of whether or not the injury is worth that amount; and the same schedule compels the workman to accept that fixed amount, even when the damage is worth more. I have no quarrel with workmen's compensation laws; they have done, and are doing great good, and they denote substantial social progress. I merely point out the elements underlying the fixed schedules of compensation in those laws to demonstrate that they in no way form a precedent for fixed schedules in dealing with the public. We cannot make a contract, expressed or implied, with each member of the public that we will pay for an injury whether we caused it or not, even though we limited the agreement to injuries received on our respective properties.

There is a federal employer's liability act relating to inter-state commerce, which contains no schedule. The injured man must prove negligence, but the statute provides that the common-law defenses, such as for example as the fellow-servant defense, cannot be raised. The injured man is given an open road if he can prove negligence on the part of the employer, and the question of the amount of damages is left to the jury. There would doubtless be constitutional difficulties in the way of the fixing of a definite schedule by Congress. There would be no justification in, and no reason for, a fixed schedule under the federal law unless the law also adopted the plan of compelling payment for injury whether blame existed or not.

One of the possibilities which industry has to face is that workmen's compensation laws may some day do away with the schedule, and give the injured employee such compensation as a jury shall fix. This should be a great burden on industry. We are able to get along under the present workmen's compensation laws because, while we probably pay twice as often as we would if our payments were limited to cases in which we were to blame, each time we pay only about half what the damages amount to, and thus we secure an average that does not greatly exceed the old system.

In cases of injuries suffered by the general public we shall necessarily continue to pay only when we are to blame, and when the injured person has not been guilty of contributory negligence. It follows as a matter of course that when the injured person does recover damages from us, he is entitled to recover full compensation for the injury he has suffered. Compensation for damages has so many intricacies that an attempt to make a fixed schedule is out of the question. The tip of a finger might be of vast importance to a musician, but might be of relatively little worth to the iceman. These are matters for a jury.†

Working, as we all are, under a federal constitution which forbids deprivation of property without due process of law, any legislature which attempted to fix the amount of money which would be allowed to an individual for a given injury would be enacting an unconstitutional statute. It is true that in a number of states damages recoverable for death are limited by statute. The reason that such a limitation can be made in death cases, whereas it could not be made in other cases, is that at common law no damages could be recovered for the death of a human being. As a result damages for wrongful death are allowed only by virtue of statutes, and it follows that the legislature enacting a statute allowing actions for damages for death, can make such conditions in those statutes as it pleases, for damages for wrongful death

are not among the things which, under our federal constitution, can be classified as property. However, none of these states, so far as I know, fixes an amount to be paid for a death; they fix merely the maximum, leaving the amount to the jury.

Another fact to be borne in mind is that juries often compromise verdicts, and this has a bearing on the question of fixed schedules. Of course, a jury strictly speaking has two functions; to determine whether the defendant is to blame and, if he is to blame without any contributory negligence or other such defense to relieve from the consequences of that blame, to take up the subject of damages. In actual practice jurors blend their two duties; comparative negligence enters into their consideration. Considering what juries are and what evidence, as it is heard in the courts from day to day, is we must consider compromise verdicts as an actuality.

A fixed schedule would have a peculiar bearing on the subject of settlements. If the injured person was in a position where he would get, as a fixed and statutory fact, \$5,000 or nothing, so that the only question open to debate with him was whether or not we were negligent, and whether or not his negligence contributed to the result, we should have a hard time to convince him that he should give us a release for \$1,000 instead of \$5,000. Furthermore, new legal questions might arise, for no settlement would carry with it full payment for an injury. A compromise would be on the question of liability alone. If we should pay anything, we should pay all; and we would have to be careful that the payment and release did not raise an inference of liability that might result in the release subsequently being attacked for not having sufficient consideration to support it.

Workmen's compensation cases, owing to their fixed schedules and the fact that compromises are not allowed, present an unusually difficult problem to the legal department. In accident cases involving the public, the opinion of the legal department often is inconclusive. A settlement up to say 50 per cent of actual damage may be advised, with the further advice that if the case cannot be settled for that then it should be allowed to go to trial. In workmen's compensation cases that sort of position cannot be taken as the amount is fixed. There is nothing to settle. Under the New Jersey statute no release by the claimant for less than the amount due him is of any avail as a defense. We pay in full, or we do not pay at all. If a fixed schedule was arrived at for the purpose of dealing with the public, settlements for less than the schedule, as compromises of questions of liability, would presumably be countenanced instead of being forbidden as they are by workmen's compensation statutes.

In conclusion, I am convinced that fixed schedules for settling damage cases with the public would result in injustice, and would be contrary to the provisions of the federal constitution.

Speed and Its Relation to Accidents *

By E. C. CARPENTER

Chief Claim Agent Northern Ohio Traction & Light Company, Akron, Ohio

IN CONSIDERING the matter of schedule speeds, from the accident-hazard standpoint, it is convenient to divide cities into four classes, namely: Those with 500,000 or more population, having surface and elevated lines and subways; those with populations between 250,000 and 500,000, having surface lines and subways; those between 50,000 and 250,000 population, having surface lines with congested districts, and those having less than 50,000 population, having surface lines with the usual conditions of operation in a small city. Interurban operation, with single and multiple-unit cars, must be studied with relation to

† At this point Mr. Tynan gave a number of citations to show the basis of compensation for injuries.—EDS.

* Abstract of paper read at meeting of American Electric Railway Claims Association, Atlantic City, N. J., Oct. 8, 1919.

conditions on city streets, on country highways and on private right-of-way.

In determining speed schedules certain elements must be kept in mind, as follows: (1) Speed limits set by city ordinances; (2) the demands of the public; (3) competition; (4) length of line; (5) number, type and headway of cars on regular schedules and during rush hours; (6) average number of stops; (7) physical condition of cars, track and grade; (8) width of streets; (9) congestion caused by other vehicles and pedestrians; (10) extra hazardous points in business, school and residential districts, and (11) the human element, including employees, passengers and public.

It is a well-recognized fact that the traveling public measures the distance between given points by the time necessary to travel between them. The result is that many are inclined to take chances on speeds that are not always consistent with safety. Every city has congested districts and danger zones, in which the hazards from the operation of surface lines, particularly, require attention in fixing speed schedules.

The human element must not be overlooked in considering this question. Whenever the running time is shortened and speed increased to a point where it keeps the trainmen wrought up to a high nervous tension, the tendency will be for them to run their schedules regardless of consequences. They are apt to take undue chances by starting cars before passengers are safely on or off, by running too close to cars ahead, by depending too much upon the gong or whistle to clear the track of vehicles instead of having the cars under control. Before any high-speed schedule is fixed for city transit lines, all data applying to local conditions should be secured and thoroughly digested.

Our conclusion is that accidents will increase or decrease largely in proportion as the scheduled speed is changed from normal, particularly on city lines. The careful operating official will give due consideration to these and other matters bearing directly and indirectly upon his schedules before "putting on too much speed."

Written Discussion on Mr. Carpenter's Paper

BY H. K. BENNETT

General Claim Agent, Eastern Massachusetts Street Railway, Boston, Mass.

SPEED is the predominant factor which enters into almost every line of action which mankind pursues. To outstrip the other fellow, to think ahead and act accordingly, is what makes the development of speed in business an ever-changing game. As a race we are never satisfied with our achievements, but are constantly reaching out to advance a step further, to accumulate just a bit more, to arrive just ahead in order that our present ambitions may be gratified.

In our particular line of business we must recognize the fact that people desire to be transported to their destinations as quickly as possible and they leave the question to those who operate the railways, satisfied if they arrive on schedule time, disgruntled if they are late. Yet, when an accident occurs the passengers forget their desire to arrive at their destination quickly, and sometimes say that the motorman was running too fast. Now "running fast" and "running dangerously fast" are widely distinct. There are times and places where speed can be used without danger of detrimental results, such as on open stretches not crossed by intersecting streets or roadways or on inter-urban lines on private right-of-way. There is danger, in my mind, in a schedule which calls for speed, because in the desire to keep up to the mark motormen sometimes use speed in the wrong places, causing accidents which would have been avoided had a little more judgment been used.

The street railway of today is confronted with jitney competition and undoubtedly it is the speed with which these vehicles cover the ground that appeals to those who are content to sacrifice safety for speed. In my judgment we should not be competitors as to speed, but rather as to safety. We cannot sacrifice safety for speed, for if we do we lose sight of the fundamental principle which is the foundation of our organization—"safety first." We cannot afford to lend ourselves to any new departure that puts safety in the background.

As we must have speed on our electric railways, there are factors which enter which must be taken into consideration. In the very able paper presented by Mr. Carpenter, the elements which must be given recognition in making up speed schedules are carefully considered. While I heartily indorse his ideas I wish to reiterate that the tracks must be in the best possible condition, that the cars must be of such a type as to stand the increased strain placed upon them and that the mechanical operating devices of the cars must be in such a condition as successfully to care for the unusual load which they must carry.

Recognizing speed as one of the elements with which we must contend, it is hoped that those who have to do with making up schedules will not lose sight of the underlying principle of safety. With the ever-changing personnel of train crews, and the varied temperaments of men and their varying ability to do the right thing at the right time, the problem of safeguarding both the public and the company's interest is a serious one.

Organization for Public Accident-Prevention Campaigns *

BY R. E. McDOUGALL

Claim Agent New York State Railways, Rochester, N. Y.

THIS paper is not intended as a brief in favor of any particular plan for an organized public accident-prevention campaign, but is merely the story of a campaign along such lines that has been carried on in Rochester for the past two years. In 1912 there was appointed by the Chamber of Commerce a safety committee of ten members comprising executives and representatives of manufacturing and public utility companies, to plan for reducing accidents, particularly in the industrial plants. This committee did good work, but after it joined hands with the National Safety Council in 1914, organized the "Rochester Safety Council" and undertook an intensive campaign in the industrial plants and schools, much interest was displayed by employees and employers and a good deal of enthusiasm was aroused.

Early in 1918 a public accident-prevention campaign was decided on and an organization was provided. At present this comprises a president, a vice-president, a secretary and an executive committee of twenty-six members. This committee is selected from among the city officials, schools (both public and parochial), utilities, manufacturing, professional, insurance and mercantile establishments of the city. The only paid employees of the committee are the secretary, a stenographer and the publicity agent.

Meetings of the executive committee are held every month at the call of the president. These are usually luncheon meetings, at which matters pertaining to the work of the council are discussed or some special report of one or more of the sub-committees is presented.

In addition to the executive committee there are sub-committees on program, finance, membership, publicity, statistics, education, industrial safety and public safety. The last-named has twenty-one members and the others

* Abstract of paper read at meeting of American Electric Railway Claims Association, Atlantic City, N. J., Oct. 8, 1919.

ELECTRIC RAILWAY ACCIDENTS IN ROCHESTER, N. Y.

	Entire Year		First Seven Months	
	1917	1918	1918	1919
Collisions with vehicles.....	2,249	1,639	948	811
Collisions with pedestrians.....	210	155	97	62
Collisions with cars.....	530	294	192	68
Derailments.....	583	334	182	174
Employees injured.....	291	316	189	125
Alighting from car.....	698	521	302	305
Boarding car.....	719	502	265	301
Falling from car.....	13	9	7	4
Injured on car.....	435	394	240	276
Controller trouble.....	265	153	98	46
Electric shock.....	11	6	1	4
Miscellaneous accidents.....	404	379	174	266
Incidents and other.....	1,634	2,283	455	741
Total.....	8,042	6,985	3,150	3,183

from three to five each. Meetings of the sub-committees are held monthly or more frequently if necessary.

The personnel of the public safety committee includes representatives from the following city departments and organizations: Bureau of public safety, police department, judicial department, automobile club, public schools, parochial schools, Boy Scouts, State labor bureau, street railway, department of public works, amusement houses, coroner's office, fire department, etc.

The public safety committee has at present nine subdivisions as follows: Sub-committees on parking, on traffic law and regulations, on publicity for pedestrians and motor vehicle drivers, on playgrounds, on police, on schools, on Boy Scouts and on street cars, and a vigilance committee.

The members of the last-named sub-committee, appointed recently, report to the chief of police the names of drivers of vehicles who deliberately violate ordinances, such as those relating to cutting corners, passing street cars which are taking on and letting off passengers, speeding, etc. They send to the "chief" the license number of the automobile or the name of the owner of vehicle, together with the date and place of the incident and a short memorandum regarding it. This information is treated as confidential by the "chief," but he sends for the offender and warns him. If reported the second time the offender is arrested and taken before the police judge.

The secretary of the council attends to the details of the work of the various committees and sub-committees, acts as secretary of all committees, keeps a record of work finished and stimulates the committees to keep up their work. He also follows up safety suggestions that have been submitted, personally investigates conditions reported to him to be dangerous and does what he can individually to have unsatisfactory conditions improved. He arranges for safety rallies, and often addresses them. The publicity agent's duties are to prepare newspaper articles and get them into print, to look after advertising, etc. The membership of the Rochester Safety Council is now 110 firms and corporations employing from 48,000 to 50,000 persons.

A record of the accidental deaths for the years 1917 and 1918, taken from the coroners' records, shows that in the year 1918 he investigated 140 death cases due to accident as against 166 in 1917, a reduction of 16 per cent. The records for the first six months of 1919 compared with the same period of 1918 show fifty-three accidental deaths in 1919 and sixty-five in 1918, a reduction of 18.5 per cent for six months.

The work done by the police department, particularly among the school children, deserves special mention. The "chief" had a large number of slides prepared showing dangerous practices that result in accidents in the streets and homes. A police captain and several of the officers visited the schools during the first six months of the campaign, showed the slides and talked to the children regarding safety and accident prevention. The number of accidents to children was reduced in 1918 and we attribute it to the work done by the police and the teachers. The police also gave special attention to dangerous corners and to conditions generally about the city that might cause accident,

and they have done everything possible to see that the traffic laws and ordinances have been observed.

The best kind of co-operation has also been received from the police court, the newspapers, "movie" theaters, the automobile association, school authorities and teachers, and the Boy Scout organization.

The results of the Rochester campaign are reflected in the electric railway data given in the accompanying table. While it is not claimed that the improvement indicated is due entirely to the accident-prevention work, it is true that the results show what can be done by organized effort. On the electric railway property we have reduced our mileage and we have been able to secure a better class of employees than we had in 1917.

It is not necessary that the Rochester plan be adopted elsewhere to insure good results in safety campaigns, but it is necessary that each community awake to the cost in life, limb and suffering in its midst every year and learn how to prevent it. For years past railway claims men have carried on accident-prevention campaigns, but with indifferent success. This may be attributed to the fact that prevention was a side issue with them. In order to get results, public accident prevention has got to be divorced from railway operation. In our work we had the assistance of the National Safety Council, and the plan of campaign was submitted, and many of the details worked out, by Messrs. Cameron and Price of that organization. The organization appears now to be a permanent basis.

Written Discussion on Mr. McDougall's Paper

BY C. B. PROCTOR

Claim Agent Memphis (Tenn.) Street Railway

MR. McDOUGALL'S paper furnishes an excellent plan for the organization of a successful public accident-prevention campaign, but few of us are so fortunate as to be located in cities where the conditions are as favorable as are those in Rochester for a really extensive campaign. The average city has a chamber of commerce. That body always has a safety committee; but how often does this committee ever accomplish anything? It generally meets a few times when first appointed, does a lot of talking and passes some resolutions; then goes to sleep for the remainder of the term. In the average city there is no systematic concentrated effort made to reduce accidents. The industries, the public service corporations and the police department work along independent lines.

I shall take up briefly what the street railway can do toward changing this state of affairs; what assistance it can render towards creating public sentiment favorable to an accident-prevention campaign.

First the street railway must reduce its own accident to a minimum and bring its own organization to a high state of efficiency. We must remedy our own deficiencies before we can ask help from the public. Safety organizations among the company's employees will be of wonderful assistance in doing this. Through membership in the National Safety Council, valuable assistance can be had. The railway can, through its safety committee, effectively reach reckless chauffeurs and drivers, calling their attention to specific cases of negligence. The schools and the Boy Scouts will be found always ready to co-operate with the company's safety committee, if they are given a workable plan by which the idea of safety and self-preservation can be taught.

Street railways should, therefore, concentrate upon developing their own safety organizations, persist in maintaining them, do everything possible to sustain the interest of employees in accident prevention. While all this is being done and as a reduction in number and severity of accidents results, then in order to arouse public interest in

similar work the railway should publish from time to time information as to what it is accomplishing and advertise why all should enlist in a movement to prevent accidents and the destruction of property resulting from carelessness.

In the average city practically everyone is mildly in favor of accident prevention, but it is difficult to find a man or organization sufficiently enthusiastic on the subject to devote to it the necessary time, thought, and money to produce

results. The street railway should be more interested than others in accident prevention, and is better fitted to start a movement for a publicity campaign than any individual or other organization. By systematic effort on its part, with the assistance of the National Safety Council, a campaign similar to the one outlined by Mr. McDougall can be conducted in practically every city in this country. The benefits to be derived are so obvious that they need no discussion.

City Representatives Organize

Association Is Formed at Atlantic City to Comprise City Representatives of Electric Railways—Robert P. Woods of Kansas City Elected President—New President Discusses Individual Situations and Offers Suggestions for Improvement



THE latest electric railway association formed was organized at Atlantic City during convention week, Oct. 6-10, with the name of American Association of City Representatives of Electric Railways. A number of these representatives were in attendance at the convention of the American Electric Railway Association, and after an informal gathering at the Traymore Hotel it was decided that it would be helpful to have an organization. The new association will be entirely independent of the American Electric Railway Association, as it doubtless should be. Its purpose is to provide a better working arrangement among those who are carrying on the work of city supervision either over privately-owned street railways under the service-at-cost plan or municipally-owned roads. This seems to be developing into a new profession and its problems take a slight slant from that of electric railway executives.

The following officers were selected:

President: Robert P. Woods, city member, Board of Control, Kansas City, Mo.

First vice-president: Thomas Murphine, superintendent of public utilities, Seattle, Wash.

Second vice-president: M. M. O'Shaughnessy, director of Municipal Railway, San Francisco, Cal.

Secretary: W. C. Culkins, director of street railroads, Cincinnati, Ohio.

The two other members of the executive committee will be named later. As there will be no dues, no treasurer will be necessary.

A copy of the constitution and by-laws follows:

CONSTITUTION

1. *Name.*—The name of the organization shall be The American Association of City Representatives of Electric Railways.

2. *Objects.*—The purposes of the association are twofold: First, the promotion of co-operation, and the interchange of information and experience among the members. Second, the improvement of electric railway transportation service and facilities, and of the relations of the public to its transportation systems and to its city representatives.

3. *Members.*—The membership of this association shall consist of those individuals who are officially designated to represent the public in cities having direct representation in the control, management or operation of their electric railway. Applications for membership shall be addressed to the secretary. All applications shall be referred to the executive com-

mittee, a two-thirds vote of the members of the executive committee being necessary to election.

4. *Amendments.*—This constitution may be amended by a two-thirds vote of the members present at a regular meeting, provided that the proposed amendment shall have been approved by two-thirds of the executive committee, and provided that a copy shall have been sent to each of the members at least thirty days prior to the date of the meeting at which the proposed amendment is to be acted upon.

BY-LAWS

1. *Officers and Executive Committee.*—The officers shall consist of a president, first vice-president, second vice-president, secretary and two others, who shall constitute the executive committee.

(a) The executive committee shall have the entire charge and management of the affairs of the association. The officers of the executive committee shall be elected by ballot at each annual meeting of the association, and shall hold office until their successors shall be elected; they shall hold meetings at the call of the president, and, upon his absence, at the call of the vice-presidents in their order. In case of resignation, or death of any of the officers or members of the executive committee, the vacancy may be filled for the remainder of the term by the executive committee.

(b) The officers and executive committee members shall be elected at the annual meeting of the association by votes of members present at the session. Members not present may forward their votes by letter to the secretary, and such votes shall be cast by the secretary. A majority of votes cast shall be necessary to an election.

(c) At a suitable time before the annual meeting, the president shall appoint a committee of five to act as a nominating committee to nominate the officers and executive committee for the following year. When such nominations have been made, the secretary shall mail to each member, not less than two weeks before the annual meeting, a copy of such nominations. Additional nominations may be made by members, but all must be made for an entire ticket and presented to the secretary in writing, signed by not less than six members, not less than three days before the annual meeting. The secretary shall, at the annual meeting, present such additional tickets in nominations.

2. *President.*—The president shall preside at all meetings, if present, or in his absence one of the vice-presidents in order, if present, shall preside at all meetings of the association, and of the executive committee.

3. *Secretary.*—The duties of the secretary shall be those usual to such an office in similar organizations.

4. *Executive Committee.*—The executive committee shall hold a regular meeting before each regular annual meeting of the association and shall hold such special meetings as may be necessary. Such special meetings may be called by the president, or any three members of the executive committee. A

vote of the executive committee may be taken by mail when deemed necessary by the president.

5. *Meetings.*—Regular annual meetings of the association shall convene at the time and place to be approved by the executive committee.

A paper read by Mr. Woods at the meetings follows:

City Representation in Electric Railways

BY ROBERT P. WOODS

Newly-Elected President American Association of Representatives
of Electric Railways

IN THE resettlement franchises granted to the electric railways in a number of cities of late years, the tendency has been to give to the city or state more or less direct control in the management and operation of the system and an opportunity as well to purchase the property.

The kind, character and extent of this control varies considerably in the different grants. Some have stressed rehabilitation and extensions, others the character of the service and ultimate city ownership of the property. Several have accented service at cost, and in these is shown wide latitude in the inclusion of the elements of that cost.

Direct city representation in electric railways of a substantial character began in February, 1907, with the Chicago Surface Lines. Since then and in order of their adoption are the grants in the cities of Cleveland, February, 1909; Kansas City, Mo., July, 1914; Des Moines, January, 1916; Dallas, September, 1917; Montreal, January, 1918; Boston (Elevated), July, 1918; Youngstown, Ohio, January, 1919; and Boston (Bay State), February, 1919. In addition, the city of San Francisco began its operation of municipal lines on December 28, 1912, and the city of Seattle took over the ownership and operation of the local street railway system on March 31, 1919.

There are other cities now going through the process of revamping their street railway franchises, and they naturally are considering the pertinent factors embraced in the settlements made in the cities mentioned. None of the resettlement grants was entirely satisfactory to both parties when made, but each was the best obtainable under the circumstances. As time elapsed the conditions of the country have undergone such radical economic changes that there is scarcely an existing resettlement railway franchise today but what there are strong and reasonable demands for modifications of vital elements in it. For several years attempts have been made to change the Chicago grant, and a new one was agreed upon between the traction company and the Common Council, but when put to a referendum on Nov. 5, 1918, it was defeated.

In Cleveland modifications have been under discussion, with the city desiring greater control over the property and the company wanting additional returns. As a sort of round-up of the matter, both parties, a few months ago, agreed to an extension of the existing franchise for fifteen years. The company, however, is still seeking its additional returns.

The terms of the Kansas City grant have, temporarily at least, been modified by the State Public Service Commission, whose authority has been confirmed by the State Supreme Court. The change consists of permitting the company to charge an 8-cent rate of fare instead of the 5-cent rate specified in the franchise. Owing to the poor financial condition of the company and its necessary companion, insufficient service, the Chamber of Commerce appointed a committee of 100 which is making an exhaustive investigation of the matter, and it may recommend modifications of the franchise.

Everything is not lovely in Des Moines, for the company is asking the court to revoke the franchise. Nor can the Boston grants be considered harmoniously self-sustaining,

when the Common Council is on record for a decided change.

The Dallas situation is also complicated in that the franchise specified a fixed fare, and it has not produced sufficient revenue to meet expenses.

It might appear from what has been stated that all of these franchises are mistakes, but such is not the case. Each has bad specks on it, but there really is a lot of good in the worst of them, and just a little bad in the best of them. The addition of more good elements and the elimination of the objectionable ones would help the situation. The panacea for present troubles will not be meteoric but rather will come gradually, because the remedy lies in the co-operation of the different interests involved. Knowledge and its application are the tools with which to secure it.

WHAT SHOULD BE DONE

Notwithstanding the fact that conditions ought to be bettered, so that the company may receive the expense of operation and proper returns, yet the public demands proper service now and at no increase in rates, and when rates are raised they decrease their patronage. Do they decrease their patronage when prices are raised on commodities other than street railway transportation? No, decidedly not. Other business is growing by leaps and bounds, regardless of increased cost, even that of steam railroad transportation. Why should this situation exist? The true answer would be a difficult one, but I venture a guess that it exists because a fault on the part of street railways has existed that has not been explained away. It is not primarily the making of the present operators. It may have been true or false of their predecessors, it runs far back, but note this: It is the duty of the individuals of today who have to do with the running of street railways, temporarily at least to set aside the truism that they be justly compensated, and zealously and honestly analyze the question "why the public opposes them"; then proceed by co-operation tooth and nail, to correct the fault, and the proper financial returns will be secured.

The interferences with car service in various cities during the war and during the last year especially have shown clearly the vital relation of city transportation service to the very stability of business and public life, and those cities wherein the public has direct representation in the personnel of the street railway system should have a better understanding of its present condition because of that relationship. This representation is usually delegated to an individual, or as in larger companies to a board of trustees. As never before these agents of the public are becoming a more important medium in obtaining good transportation for the people.

The number of cities wherein control of the management of the local street railway service is directed in whole or in part by the city or state is increasing.

The duties and responsibilities of those acting for municipalities are also increasing, and it would appear that greater success would attend their work if there were co-operation and exchange of ideas among them.

There are about a dozen street railway properties in this country that are operating under franchises wherein the public has a direct representation, and by forming an association these representatives would not only derive mutual benefits of inestimable value but would be able through such an association to obtain better service for the communities they represent.

The real purposes of such an association would be the promotion of co-operation and the interchange of information and experience among its members, and to the improvement of electric railway transportation service and facilities, and of the relations of the public to its transportation systems and to its city representatives.

Concurrent efforts and labors of practically all street car companies during the industrial turmoil and peculiar conditions following the war, in their various conferences with themselves, public committees and boards, shows wisdom and has given them greater strength.

As the companies have found that in union there is strength, so the representatives will find that in co-operation there is knowledge, which would not otherwise be obtainable.

I believe that every street railway franchise of today will be changed in some substantial part, within a comparatively short time, and those persons representing the public should be possessed of pertinent information, concerning the worthy and unworthy provisions in their own and other franchises, for use when needed. This can best be obtained from those in intimate contact, with direct responsibilities, in the actual operation of a franchise over a period of time.

Letters to the Editors

More Passengers Better Than Too-High Fares

LONDON COUNTY COUNCIL TRAMWAYS

LONDON, ENGLAND, Sept. 27, 1919.

To the Editors:

Mr. Madgen's article in your issue of August 30 expounds a sound theory backed up by lucid argument. It appears, however, only to deal with one method of placing British, or for that matter American, tramways on an adequate commercial footing. Fortunately there is another side to the story.

In analyzing the expenses of British tramways Mr. Madgen divides them into two parts, standing charges and running costs, and arrives at the cost per passenger under each item, but there is such a wide variation between the results on the various tramways that an average is really of little value in attempting to assess a minimum rate of fare. In the case of municipal tramways the proportion of standing charges to the whole is much greater than that of company-owned tramways, owing to the fact that the former have to pay off their capital as well as to pay interest on the outstanding debt. Although that is a point which does not affect the principle of charging the passenger such minimum fare as will cover the cost of readiness to serve, it has a considerable bearing on the amount of such minimum.

The crux of the matter is the number of passengers carried. On Mr. Madgen's figures a passenger must pay at the rate of 1.32d. per mile for 1 mile in order to cover expenses, but the result of that in most towns would so reduce the number of passengers that the cost would rise again and call for a new basis. The proper way to improve revenue is to reduce the cost of carrying each passenger by carrying more of them, and the greatest possibility in large towns is to increase the number of short-distance passengers. Further increases in fare will not attract more passengers, but good service and low fares will do so and may yet prove the salvation of the electric tramway.

Mr. Madgen states that very low fares for short distances discourage families from moving outward. It is difficult to accept this statement, although it may be readily agreed that very high fares for long distances discourage families from moving outward. After all, if the family lives a long distance from the business center, there are only one or two breadwinners who travel the whole distance every day. The rest will probably make short journeys for shopping or pleasure, and the rate of fare will decide whether the journeys are made on foot or by car. Therefore, high

initial fares are not necessarily calculated to bring about a desirable state of affairs.

So far as can be gathered, practically all tramway authorities in Great Britain and America have been busy during the past few years in either raising fares or attempting to do so. The result is far from being universally successful. The restrictions on material for permanent way and rolling stock are disappearing, and labor, if dear, is plentiful, so that there is little excuse for not improving services and making the experiment of offering attractive fares as a means of reducing the cost per passenger.

With regard to a decimal coinage, the adoption of a 5-mill coin would be a distinct advantage to tramway proprietors, but an equivalent increase in the length of a penny stage should be given, the gain being derived from those who are willing to pay for less than is offered to them.

THEODORE E. THOMAS.

Buses Carry Large Proportion of London Traffic

OUTER TEMPLE, 222, STRAND

LONDON, W.C., ENGLAND, Sept. 26, 1919.

To the Editors:

In the ELECTRIC RAILWAY JOURNAL of July 5, in an article on "The Zone Fare in Practice" by Walter Jackson, reference is made to a paper read by J. B. Hamilton in 1912 on "Urban Passenger Transport." In that paper Mr. Hamilton did not do justice to the facts, as I conclusively showed in the discussion of his paper. Mr. Jackson unwittingly does Mr. Hamilton a displeasure in quoting him in the paragraph referring to "Mr. Worby Beaumont's alternative" inasmuch as that paragraph shows how completely wrong Mr. Hamilton was in 1912 concerning motor omnibuses.

Seven years have passed since he gave publicity to those remarks, and these years have not only proved that I was right in my estimates of the place that was being taken by the motor omnibuses in urban passenger transport, but that the whole tramway world recognizes this now, for there is not a town of any size in Great Britain that is not now extensively using motor omnibuses, while some are ordering them on a larger scale than ever. My work for some years from 1906 as responsible advisor to the Commissioners of Police of the Metropolis is recognized by all those concerned in motor omnibus design and working, as having led to the production of the most satisfactory urban service fleet in the world. A proof of this is found in the statistics of the numbers of passengers carried.

These show that in 1914, just before the war, when 2705 London General omnibuses each carried 283,062 passengers and the fleet carried at the rate of 765,682,640 passengers per year.

In the same period the London County Council Tramways carried only between 325,000 and 350,000 passengers per seventy-eight-seat car, compared with the thirty-four-seat omnibus. For the year 1918 the returns are 682,000,000 passengers by motor omnibus, and for the whole of the tramways of the several authorities and companies and the London County Council put together 992,000,000. Of the 353 miles of tramways of the Metropolitan area, the London County Council operates 150 miles with 1662 electric cars and 158 trailers, and many of the tramears weigh 15 tons as against the motor bus 3 tons 12 cwt.

The number of motor omnibuses in use before the war was 2906, while in May last it was only 1165 and about 100 lorries, fitted for the emergency of the great population influx, with seats and cover.

The actual bus-mileage run last year was 73,152,709 miles.

These are among the facts, to which I might appeal to show that whatever may have been the assumed requirements for Leeds in 1912, the correct anticipation of suburban passenger transport was that of

W. WORBY BEAUMONT,
M. Inst. C. E.

[NOTE: In connection with the foregoing comparison of passengers carried on thirty-four-seat buses and seventy-eight-seat cars, London tramway operators have made the point that they are at present practically shut out from the choicest traffic areas of London. This fact is also noted in the articles by Mr. Jackson on the London County Council and West Ham Tramways, published in recent issues of this paper.—Eds.]

Association News

Subjects for Investigation by Transportation & Traffic Association Committees

THE executive committee of the Transportation & Traffic Association held its first meeting at Atlantic City on Friday, Oct. 10, 1919, and received the report of the committee on subjects. The subjects selected and assigned to the committees for investigation and report to the 1920 convention are:

Committee on a code of traffic principles—To prepare a detailed draft of a code of traffic principles.

Joint committee with the Accountants' Association on collection and registration of fares—To give special attention to the collection of zone fares, transfers and base fare, on both one- and two-man cars.

Committee on joint use of tracks and terminals—To draft a basic contract covering this class of service.

Committee on freight and express haulage—(a) To prepare a brief summary of express traffic on typical lines to illustrate the importance and growth of the business. This brief to be published in *Aera*. (b) To make an analysis of facilities required to give adequate service. (c) To make an analysis of the cost of handling express matter to serve as a basis for rates; this last to be worked out jointly with the Accountants' Association.

Committee on schedules—(a) To make an analysis of schedules to show the relation of dead time to live time and the effect of an eight-hour day. (b) To show effect of increasing schedule speeds on platform expense, on investment and on traffic. (c) To outline a proper supervisory organization with comparative data from the larger systems. (d) To outline methods of making traffic checks which can serve as a basis for schedule making.

Committee on merchandising transportation—To outline various methods of making service more attractive together with plans that can be used to increase the off-peak riding.

Engineers Make Committee Assignments

THE following tentative list of committee assignments for the Engineering Association has been reported by the committee on subjects, but it may be modified somewhat by the executive committee.

Committee on buildings and structures—Facilities for prepayment and post-payment fare collection at terminals. Investigate use of lag screws instead of bolts in timber-deck structures.

Committee on bureau of standards safety code—Continue work of committee.

Committee on equipment—Revision of standards for brakeshoes and brakeshoe heads. Continue study of standardization of motor parts. Report on helical gears. Investigate feasibility of adopting standard cars. Co-operate with committee on way matters on sections for curved rail heads.

Committee on power generation—Recommended forms of contracts for the purchase of power, (a) normal, (b) emergency. Powdered coal, oil, gas and special fuels for use in electric railway power plants. Appoint member on national committee on standardization of method for determining the cost of power when this subject becomes active.

Committee on power distribution—Continue revision of specifications of overhead line material. Revise specifications for crossings of power lines with railroads, as part of a joint committee with other engineering associations. Specifications for catenary line construction. Revision of specification for standard stranding of cables. Specifications for standard thread for pins and insulators.

Committee on way matters—Complete standard specifications for track spirals. Standard sections for curved rail heads (in co-operation with committee on equipment). Study of progress made in rail joints. Revise specifications for plain, bolted special work.

Toledo Section Pushes On

A REPORT from Secretary J. P. Merkle of the Toledo Section states that the membership is now 1428 made up as follows: Railway, 876; electric light, 472; district heating, 31; gas, 22; associates, 27. The work is well organized for the fall, but Chairman Melvin Sommerville has big plans ahead. Among the activities are a bowling league with ten teams meeting weekly, a basket ball league with four teams which hold weekly meetings, a glee club meeting weekly, monthly dances, welfare work of a far-reaching character with special attention to individual needy cases, educational work, an orchestra which functions on every possible occasion. Monthly or bi-monthly entertainments are given of a rather elaborate character and plans are under way to hold such entertainments at Sylvania as well as Toledo for the benefit of the Toledo & Western men. The four sub-sections meet monthly in successive weeks. The railway sub-section will be headed this year by F. M. Sommerville.

Center-Entrance, Single-Truck Surface Passenger Car

THE Municipal Railway of San Francisco has invited bids for a sample single-truck, center-entrance car of a type which it is proposed to use on the lines of this company. The car is to be 29 ft. in length and 8 ft. 6 in. wide. Entrances are provided on both sides and access is gained by three steps. The floor level of the car is uniform throughout.

The city will select the truck, electrical equipment and air brakes and make arrangements for their purchase. Two 50-hp. motors are specified for use with 26-in. wheels. The car will have a seating capacity of thirty-two passengers. Provision is to be made at each end of the car so that the motorman may leave it through a small door, below which strap steps will be mounted.

The building of but one car is contemplated at this time, to permit of trying out the design in actual service before additional cars are purchased. Changes may be made during the course of construction or after the car has been tried out, following which not less than nineteen additional cars will be ordered.

Recent Happenings in Great Britain

Labor Apparently Checked—New Ministry of Transport Established—Omnibuses Chief Topic Before Municipal Railway Men

(From Our Regular Correspondent)

In the closing days of September all other matters in Great Britain were thrown into the shade by a general railway strike which threatened to paralyze the country. It was soon apparent, however, that the government arrangements for food supplies and distribution were so good that there was no danger of famine, but industries of all sorts were slowed down and threatened to come to a standstill. This is the first general railway strike to take place in Britain. The nearest approach to it was the strike in 1911 which though widespread was far from universal and it was of very short duration.

REVIEW OF DISPUTE

The question in dispute may be indicated briefly. Negotiations have been going on for some months between the government and the executives of the National Union of Railwaymen and the Society of Locomotive Engineers and Firemen as to fixing standard rates of wages. The drivers', firemen's and cleaners' cases were settled some time ago, the skilled men getting better proportionate terms than the cleaners. Then the National Union of Railwaymen wanted the same proportionate terms for all their members as those given to the drivers and firemen.

The government, distinguishing between skilled and unskilled men, resisted and offered conditions which the men said would mean a reduction of pay to some of the lower grades. The government pointed out that in the very worst case, men who before the war got only 18s. a week would be guaranteed to have £2, while if any reduction on the additional war bonuses of 9s. took place it would not occur till after six months and only then (by agreement or arbitration) if the cost of living showed material reduction.

The National Union of Railwaymen executive abruptly broke off the negotiations and without balloting their members called a strike on Sept. 26. The drivers' and firemen's union struck "in sympathy" and the whole London city system was stopped.

GOVERNMENT TAKES FIRM STAND

The government declared that was war on the community and announced it would fight it to the bitter end. The great road motor transport organization which had been prepared to meet emergencies was at once mobilized, and in a day or two it was clear that the plot to starve the nation and the government into submission had failed. Limited railway services, manned partly by volunteers and partly by men abandoning the strike, began and improved every day. Electric railways like others were stopped, but tramways and omnibuses were not affected. The strain on the two latter services was enormous and in London many people had to walk long distances to and from business.

The Transport Workers' Federation and other trade unions, recognizing that the railwaymen's attempt to paralyze the country had failed, instead of coming out on strike in sympathy, formed a body of about a dozen representatives to act as mediators. Conferences went on and after two or three failures a settlement was reached on Oct. 5, under which the strikers returned to work on the following day.

Negotiations as to standard rates of pay are to be resumed and are to be completed before Dec. 31. Meanwhile wages are to be stabilized at present levels until Sept. 30 next year, instead of until March 31 next as the government originally proposed.

This is the only concession of any consequence. No adult railwayman is to receive less than 51s a week so long as the cost of living is not less than 110 per cent above pre-war level. This is 2s. a week more than originally offered. Both sides profess to be satisfied, but it is freely said that the men could have got the same terms without striking. The trade unions and the "direct action" men have got a nasty jar, and the country has suffered enormous loss. The general national strike notion has had a heavy set-back.

STRIKE APPARENTLY TIMED

Whether by accident or design the railway strike was timed to begin just when the new Ministry of Transport was about to commence its work. It is some little time since the act constituting the Ministry was passed, but it was not till Sept. 24 that Orders in Council were issued under which the powers of the Board of Trade in regard to railways, tramways, etc., were transferred to the Ministry of Transport. On the following day the Railway Executive Committee (consisting of railway company managers who for the Board of Trade controlled the railways during the war and since) tendered their resignation. Sir Eric Geddes, Minister of Transport, in reply asked the committee to continue its services for a short time longer. He also said that it was inevitable that there should be some change in the position of the committee. He looked forward, however, to the creation of an organization which would enable the committee to give to the new Ministry much of the invaluable assistance which it had rendered to the Board of Trade during the past five years.

The arbitration over the claim by British tramway workers for an advance in wages of 12s. a week, referred to previously in these notes, was concluded so far as the hearings were concerned on Oct. 4. It was arranged that parties should be heard at London, Bristol, Manchester and Glasgow. The municipalities owning tramways and the tramway companies argued that it was not possible to give the increase unless fares were greatly raised or unless a levy to meet the deficiency were made on the rates. In some cases it was contended that it was not possible to raise fares further, and in others it was pointed out that the tramways were already on the rates and that the latter stood excessively high.

The arbitrators' award was issued on Oct. 8, and it gave an additional war bonus of 4s. per week to employees of eighteen years of age and over, and 2s. per week to those under eighteen. The condition produced is serious. The secretary of the Municipal Tramways Association estimates that the additional cost to municipal undertakings alone will be about £700,000 a year.

The annual conference of the Municipal Tramways Association, which was held in Dundee from Sept. 17 to 19, attained to something of the proportions which it had

before the war, and was highly successful. As was perhaps to be expected under present circumstances, engineering subjects were rather in the background, attention being chiefly devoted to matters of finance, labor, operation, and so forth.

In his presidential address T. B. Goodyer, general manager of Croydon Corporation Tramways, made a general survey of the present situation and the tramway industry. In the course of his remarks he hopefully anticipated that tramway necessities would be even better looked after by the Ministry of Transport than they had been by the Board of Trade. He also welcomed the formation of the Joint Industrial Council for the tramway industry.

Mr. Kelly, convener of Glasgow Corporation Tramways Committee, in a paper called "Where Do We Stand," made a number of suggestions on a variety of topics. A most interesting and practical paper, and one which should be of value to American electric railwaymen as well as to their colleagues here, was that presented by A. R. Fearnley, general manager of Sheffield Corporation Tramways, on "Motor Omnibus Services." The municipality of Sheffield has for several years worked motor omnibuses as auxiliaries and extensions of the tramway system, and the fruits of the experience were given by Mr. Fearnley.

There are no statutory maxima for omnibus fares in this country, and Sheffield Corporation has claimed absolute freedom to charge such fares on omnibuses as it thinks fit. It was with that important fact in view that Mr. Fearnley arrived at the following conclusions: The motor omnibus is (1) an excellent vehicle for acting as a feeder and in connecting up tramway routes and services; (2) an unusable vehicle for satisfactorily dealing with heavy town traffic; (3) quite inadequate for dealing with peak loads; (4) financially impossible for workmen's traffic at reduced fares; and (5) in regard to average speed maintained throughout the day has no advantage over the electric railway. He concluded that the motor omnibus is not going to supersede the electric railway, but that it can serve a most useful purpose, (1) for connecting up tramway routes for cross-town traffic; (2) for relieving congested tramway routes by diverting part of the traffic along other routes; (3) for connecting up villages and rural districts with tramways and railways, and thereby providing such districts with regular and direct transport facilities.

OPINIONS OF MANAGERS

The following among other opinions were in the course of the discussion expressed by managers of important tramway undertakings. J. B. Hamilton, Leeds, said his belief was as strong as ever that electric traction remained unrivalled. Alfred Baker, Birmingham, speaking from experience, said that the omnibuses were improving in reliability, but he saw no reason to despair of tramways yet. J. M. McElroy, Manchester, said that it would be a physical impossibility for omnibuses to cope with the great tide of morning and evening peak-load tramway traffic in the city of London.

At the annual business meeting of the Association, Sir John Curtis, chairman of Cardiff Corporation Tramways Committee, was elected president, and W. Holford, general manager of Salford Corporation Tramways, was elected vice-president for the ensuing year.

News of the Electric Railways

FINANCIAL AND CORPORATE . TRAFFIC AND TRANSPORTATION
PERSONAL MENTION

Denver Settlement Defeated

Failure of Traction Issues at Special Election Apparently Complicates Matters Again

On the face of the unofficial returns at the election in Denver, Col., on Oct. 22, both the service-at-cost plan and the so-called elastic 6-cent fare measures in the interest of the Denver Tramway appear to have been lost. The vote on the service-at-cost proposal was close. That count stood 10,505 for the plan and 10,740 against it. In other words, a bare majority, of an insignificant minority of the whole vote, voted down the main proposition for a settlement. Close to 100,000 persons were entitled to vote. It is generally estimated that out of seventy-odd thousand that should have voted, barely 11,000 voters said on their ballots that they did not want the service-at-cost plan. On the elastic 6-cent fare proposal the count was 4,577 for the plan and 10,884 against it.

SITUATION COMPLICATED

In consequence of this outcome the situation in Denver has again become very threatening. It will be remembered that last summer the Council passed a temporary ordinance restraining the 6-cent fare for ninety days. This time expires on Oct. 29. It had been hoped that the fare question would be settled by the special election. Accepting the election returns on their face, there would seem to be no way out except to go back to 5 cents.

The tramway has all along announced that if the fare drops, it must cut the wages of its employees. The employees have announced that if their wages are cut they will strike immediately. A wage cut would reduce the men to 34 cents an hour from the present scale of 48 cents.

The company, through F. W. Hild, general manager, said that the tramway would not make any statement until after the official count had been finished. The Mayor also said that he could not discuss the matter until the defeat of both proposals had been declared officially. Unless some solution can be speedily arrived at a strike would seem to be inevitable.

CASE REVIEWED

The election just decided is merely a phase of the upheaval which followed the decision last July by the Supreme Court of Colorado reaffirming that court's former decision holding that in home rule cities the Public Utilities Commission was without jurisdiction. The 6-cent fare ordinance in Denver was accordingly repealed and the tramway announced reductions in service and a return to the 1917 wage scale. The city retaliated by authorizing jitneys to operate and the trainmen went on strike. Charges followed by the city in which collusion was alleged between the company and the men. The situation was reviewed at length in the *ELECTRIC RAILWAY JOURNAL* for July 12, page 95, and July 19, page 131.

On Oct. 23 City Auditor F. D. Stackhouse came forward with a plan for the settlement of the fare problem. This plan provides for the enactment of an ordinance by the City Council, providing for a con-

tinuation of the temporary 6-cent fare ordinance, which was enacted last July as a compromise measure to end the strike of the trainmen. He also suggests the appointment of a committee of seven which, through auditors, shall watch the earnings of the tramway and distribute excess earnings obtained by a 6-cent over a 5-cent fare between the company and its men.

The ordinance as agreed upon by the city authorities and the tramway fixing and adjusting fares as submitted to the electors at the special election provided:

1. That from the date the ordinance becomes effective, the company shall be entitled to receive 6 cents for a single passage on any of the company's lines within the city and county of Denver, provided that children under six years of age when accompanied by a paying passenger shall be carried free of charge, and children over six years of age and under twelve years of age, at half fare.

2. The company shall at all times transfer its passengers from one to another of its lines for a continuous passage without any charges, provided the company shall not be required to transfer passengers to adjacent lines.

3. Whenever the wage schedule shall be increased or decreased by the company, the fares to be charged may be increased or decreased to take care of such increase or decrease in wages.

4. A board of control of three members, one appointed by the Mayor, another by the City Council, and a third by the board of directors, shall be appointed for a term of four years. The appointments to be made within ten days after this ordinance becomes effective.

Whenever this company shall increase or decrease the present schedule of wages it shall advise the Board of Control, who shall investigate and act thereon within ten days and authorize or order an increase or decrease in fares to be charged by the company to correspond to the increase or decrease in wages.

The records and accounts of the company, concerning its wages and fare receipts, shall be open to inspection at all times by the Board of Control, and the company shall furnish the board with any and all information which the company has relating to wages or increase or decrease in fares. If increase or decreases in fares are authorized or ordered by the Board of Control, they shall be at such rates as will produce an amount not more than said wage increase and not less than the wage decrease; and successive increases or decreases in fare in the discretion of the board may be authorized or ordered by the board as the facts and conditions warrant; provided always, that the board shall not authorize any increase in fares in excess of that necessary to take care of increases in wages in Denver based upon the average of the hourly schedule paid to railway men in St. Louis, Omaha, Kansas City, Minneapolis and St. Paul.

Fare increases authorized or decreases ordered by the Board of Control shall be put into effect not later than ten days after the date of such authority or order.

Louisville Strike Over

The strike of the employees of the Louisville (Ky.) Railway remains only as a matter of local history. Despite political, city and other interference, business interests stuck with the company, criticizing the Mayor for his attitude toward the company and generally adopting resolutions condemning the closed shop. The company prevented the closed shop idea from becoming effective, and although it had lots of trouble, and many cars were damaged, it is now giving full service on all lines, with more than 1,200 new men in its employ.

All strike breakers are gone and police protection is no longer necessary. The present force is considered very efficient. Various unions have recently lifted the ban against union men riding on cars. Pickets have been withdrawn by the union. The strike was declared on Aug. 18. The ban against union men riding on the cars was lifted during the week of Oct. 20.

Franchise Plan at Detroit

Service-at-Cost for Detroit United Urged by Street Railway Commissioners—Extensions Outlined

On Oct. 22 the Board of Street Railway Commissioners of Detroit, Mich., submitted a report on the present condition of transportation facilities in that city to the Mayor and Common Council. Barclay Parsons & Klapp acted as consulting engineers for the commissioners.

SERVICE-AT-COST RECOMMENDED

Briefly, the report recommends that the city enter into a service-at-cost franchise with the Detroit United Railway, and that future construction be on the basis that the city build the proposed downtown subway and all future rapid transit lines, while the company will build the surface lines and supply all equipment.

The report includes a recommendation that during the next two years the company buy 300 motor cars and 260 trailers and build the necessary power houses and substations for the operation of these cars and 92.88 miles of track.

The subway proposed would relieve the traffic congestion on Woodward Avenue. There would be a short section on Fort Street. The proposed surface extensions would be crosstown lines. They were grouped as three classes; namely, (a) necessary for immediate construction, 71.43 miles; (b) next in importance, 21.45 miles; (c) recommended for construction as traffic develops, 64.66 miles.

PAST REPORTS REVIEWED

The report reviews the plans considered in the past to settle the franchise situation, including various votes on municipal ownership. It points out that the three-fifths vote necessary in Detroit to carry through any detailed plan is a handicap to the settlement of the railway problem and to other municipal problems as well, and if this provision has to remain an appropriation should be made for publicity to insure an accurate presentation of the facts to the voters.

In conclusion the report recommends a service-at-cost plan for the Detroit United Railway on a basis somewhat similar to that in Cleveland. It says that if this receives the approval of the city the commissioners will enter into negotiations with the company to work out the details of such a plan.

RECOMMENDATIONS ON EXPENDITURE

A summary of the recommendations as to expenditures, the city to build the subways mentioned and the company to do the rest of the construction and purchase the equipment, follows:

Subways on Woodward Avenue and Fort Street	\$8,500,000
Surface line extensions	6,926,650
300 motor cars at \$10,000	3,000,000
260 trail cars at \$5,000	1,300,000
Carhouses, substations, connections, and electrical feeders	1,200,000
Total	\$20,926,650

Conference on New York Affairs

Railway Representatives and Public Service Commissioner Confer— Plan Presented for Discussion—Mayor Refuses to Attend

Public Service Commissioner Lewis Nixon, of the First District, has issued a general invitation to the Mayor, Comptroller and other city authorities, and to the traction interests, to meet with the commission in a general conference to map out, if possible a method by which the transportation systems in New York City can be saved from complete disintegration. Commissioner Nixon pointed out in his letter that the people of the city were face to face with vast losses, and in addition with a lowering of the standard of service, the physical deterioration of the property and equipment, and demoralization of organization. For temporary concessions extended to the companies, he pointed great and lasting benefits could be secured to the city.

What the situation needed, according to Commissioner Nixon, was constructive and business-like handling, such as that which might have been forthcoming several months ago, and would have avoided the present crisis and saved to the traveling public the system of free transfers then prevailing.

Mayor Hylan and other city officials declined to attend the fare conference. The Mayor gave out a letter to the press attacking the commissioner for "worrying about increased fares for the traction corporations instead of paying attention to the overcrowding of passengers on the transit lines." This thrust brought forth a hot rejoinder from Mr. Nixon, who declared that he was "personally capable of regulating the city's traffic and of using the maximum of safe service in rush hours." Mr. Nixon said: "As to the propriety of my taking the initiative, I am the judge, not you."

The railway officials on Oct. 3 accepted the invitation to the fare conference. Forty officials attended. Mr. Nixon introduced the subject by reading a long statement containing comments on the situation and suggestions for concessions which he thought might meet the demands of the city administration and lead to modification of franchises and contracts which would bring about higher fares.

It was decided to hold a second conference on Oct. 15. Mr. Nixon's plan is as follows:

The consolidation of all systems into one corporation with unified control. This suggestion has been made before, and a way to accomplish it has been studied by at least one of the receivers.

A uniform fare except in isolated sections, such as Staten Island.

Abolition of holding companies, such as the Brooklyn Rapid Transit and the Interborough Consolidated.

Perpetual franchises to be replaced by terminable or indeterminate franchises.

The institution by the city of an inquiry to determine the value of each of the railroad properties.

The termination of all leases such as those held by the New York Railways and of all underlying contracts.

The city to have the option of acquiring the railroad properties within a fixed time at agreed valuations. It is suggested that the purchase price be paid out of earnings.

The establishment of a flexible fare, automatically adjusted to meet the cost of service, which must cover interest on money invested.

A reserve fund to meet variation in costs and the sale of tickets at less than 5 cents to those buying in quantity. The occasional passenger would thus pay more than the regular one.

The city to be represented on all boards.

Mr. Nixon explained that the suggestions were tentative and were offered as a basis for discussion. He said that when the various contracts were made the 5-cent fare was fixed because that was then the best known plan for controlling rates, and

that, while comprehensive plans for control of the railroads had since been worked out, the rate restriction stands. Therefore, he argued, if the city surrendered this right the companies must yield something of equal value—for example, their perpetual street rights.

Then Mr. Nixon proposed two committees, one on unification and the other on differentials and guaranteed payments. He suggested that these committees consist of Transit Commissioner John H. Delaney, the Comptroller, a representative of each of the companies, and a representative of the city's franchise committee. If the Board of Estimate declines to name a representative Mr. Nixon suggested that the public should be represented by a man selected by the Chamber of Commerce, the Board of Trade and Transportation, and the Merchants' Association.

After Mr. Nixon had read his statement suggesting that all of the lines be placed under one management and making other suggestions as a solution of the problem, he said:

I have no power. The power will vest in the Transit Construction Commissioner who sits here. If there is ever a redraft of these contracts application must be made to him.

Commissioner Nixon held a second conference with the traction officials on Oct. 15, at which plans for the financial relief of the companies were discussed. Mr. Nixon plans to take each company's needs under consideration in turn. At present he is considering the situation as it affects the New York Railways. He held a conference with the officials of the company on Oct. 20.

Federal Judge Mayer on Oct. 6 ordered Francis G. Caffey, United States District Attorney, to prepare papers accusing Charles L. Craig, Comptroller of New York City, of contempt of court. The action followed the reading of a letter from Comptroller Craig by Public Service Commissioner Nixon at the meeting of traction officials in Mr. Nixon's office.

Buses were operated over the Manhattan Bridge beginning Oct. 4, replacing the Brooklyn & North River Railroad cars. Up to Oct. 4, Grover Whalen, commissioner of plants and structures, had not applied to Mr. Nixon for a certificate of convenience and necessity permitting bus operation. Operation of the cars ceased at midnight Oct. 4. The bus line runs from the Flatbush Avenue extension at Fulton Street, Brooklyn, across the Manhattan Bridge, through Canal Street to Vestry Street, to Greenwich Street, to the Desbrosses Street Ferry. The route is covered in about twenty minutes, or ten minutes less than it took the traction cars.

Washington Wages Adjusted

Employees of the Washington Railway & Electric Company, Washington, D. C., agreed on Oct. 23 to accept the increase of 3 cents an hour which the management of the company offered them in answer to a recent demand of the employees for a substantial increase in their wage scale and recognition of the union by the company. The 3-cent increase raises the present scale of 43, 46 and 48 cents an hour to 46, 49 and 51 cents an hour for the three classes of men operating cars.

The agreement reached between the employers and the men operating cars was that an increase of 3 cents an hour should

be accepted, said increase to be retroactive to Oct. 1, and the company to make payments up to date on that basis not later than Nov. 5.

The employees who are members of the Amalgamated Association accept the increase in the wage scale as an evidence of recognition of their union by the employing company.

Ten-Day Strike

Oakland Men Break Agreement—Service Resumed Pending Negotiations or Arbitration of Dispute

A strike of 1500 carmen of the San Francisco-Oakland Terminal Railways, Oakland, Cal., which had completely tied up service for ten days, ended on October 11, when the men voted to return to work pending settlement of the points at issue. Normal service was resumed on October 12.

The State Railroad Commission and federal conciliators brought the company and the men together by representing to them the public's rights to service. The agreement provided for immediate return of the men at their old ratings, a conference between the company and union officials to discuss all demands, and the submission to arbitration of all points which cannot be readily settled between both sides.

The men went out on October 1, although the company had agreed to submit to a board for settlement all the demands made by the men in their communication addressed to the company on August 30.

The demands of the men were most extraordinary. They requested a wage increase alone ranging from 56 to 94 per cent. Other demands were for an eight-hour day and radical changes in other working conditions. The new wages would mean \$6 for an eight-hour day on the so-called traction division and \$7 a day for an eight-hour day on the so-called railway division. The company promptly pointed out that these demands would increase its payrolls \$1,613,000 a year, thus practically doubling them. In effect the demands, if granted, would require the public to pay 8 cents for a city ride, 20 cents for a ride across the bay and \$5 for a commutation ticket. The company advanced as susceptible of proof the statement that it was actually \$78,888 worse off on August 31 than it was on the same date in 1918 for the corresponding period, notwithstanding the car riders paid an additional cent in fare.

On October 6 the representatives of the union assured a committee acting in the interest of a settlement that if the committee could secure written assurance from the directors of the railway that all men would be restored to their former positions and rating and that contract relations would be restored as before the strike, with all claims submitted to arbitration immediately, they would recommend to their associates that the proposition be accepted and that the men return to work at once.

The company's reply was a flat refusal of these conditions. It declared that it had not been justified in its belief that the men would at least observe the oath they had taken to accept arbitration before going on strike. The company did, however, suggest that the men be advised to return to work in reliance upon "that sense of fairness which the company has always shown them and with the assurance that any request for a conference with them or their representatives will in the future, as in the past, be immediately granted."

Bay State Program Outlined

Statement of the Company's Policy and What It Is Hoped to Accomplish Under Its Contract for 100 One-Man Cars

After nearly four months of experience under the public control act, during which the Bay State Street Railway, Boston, Mass., has been thoroughly reorganized and made much more efficient, there appears to be a widespread and constantly growing feeling among the people throughout the system that the public trustees are indeed public servants.

Since Fall River, Lowell and Taunton furnished the most concrete proof of this feeling by refusing to permit unfair competition by jitneys, the public trustees felt that these cities were entitled to first consideration in fare reduction experiments and the following plans are now in operation:

Fall River—Three dollar monthly ticket, fifty rides, good for one person, with transfer privilege to any part of city zone. Rate of single fare, 6 cents. Effective Sept. 15.

Lowell—One dollar monthly ticket, sixteen rides, good for one person in central city zone with transfer privilege between Boston & Maine Railroad Station and center of city. Rate of single fare, 6½ cents. Effective Sept. 25.

Taunton—One dollar ticket, fourteen rides, good for more than one person and not limited to use within one month, with transfer privilege except on certain lines. Rate of single fare, 7 1-7 cents. Effective Sept. 20.

JITNEY COMPETITION OPPOSED

In no city have the public trustees pleaded for the elimination of the jitneys out of sympathy for the trolley cars. Their argument has always been that street railways and the jitneys cannot both live in the same community because of the numerous unfair burdens imposed by law upon street railways, from which jitneys are allowed to escape.

They have repeatedly pointed out that in case of accident street car riders are protected against financial loss resulting from injuries while jitney patrons are not;

That street railways pay heavy taxes to the state and city which jitneys do not;

That street railways are safe, sanitary and are operated on regular schedules while jitneys are not;

That street railways spend thousands of dollars plowing snow from the streets and opening pathways for traffic in the winter, while jitneys do not;

That street railways are under state regulation and held to strict account for conditions of operation, while jitneys are, in most instances, under the loosest kind of local control and run how, where and when they please, regardless of public comfort and convenience.

The public trustees say they are confident that under the home-rule plan, which provides that each one of the twelve operating districts shall have its fare determined by its own receipts and expenses, the hostile feelings of the past will be removed and close, friendly relations will be established between them and the public.

That they are confronted by the task of removing causes of public grievances of long standing in years gone by, the public trustees say they are well aware. The only request they make of the public is to keep in touch with their work.

Already they have reduced the overhead expenses of the Bay State System thousands of dollars by the consolidation of several offices. At the suggestion of many city and town officials they have awarded a contract for 100 one-man safety cars which they hope to have in operation within a month, and they have also voted

to buy 100 more one-man cars which will be ready by March 1.

By abrogating their lease of the offices at 245 State Street and removing to 1 Beacon Street they will save \$11,000 a year rental.

By reducing the office force in Boston they will save \$100,000 annually, and by discontinuing non-paying lines they have reduced the burden on paying communities thousands of dollars annually.

They are staunch advocates of local operation of cars with practically unlimited powers to district managers. They are going to make many experiments in fares and intend to give each district the lowest possible rate consistent with satisfactory service.

No Injunction for Minneapolis Mayor

The injunction sought by Mayor J. E. Meyers, of Minneapolis, Minn., to prevent submission of the cost-of-service franchise for the Twin City Rapid Transit Company to the citizens of that city at a special election on Dec. 9, was denied in a decision filed by District Judge J. W. Molyneux on Oct. 9. Assuming that the case will be taken to the higher courts, Judge Molyneux does not go into detail on the question of the issues involved. His opinion holds:

That the Mayor has not the veto power, as claimed;

That the ordinance does not purport to grant a perpetual franchise, as claimed, but does grant a franchise for the term of twenty-five years, commencing on Jan. 1, 1920, with the privilege to the city to purchase as prescribed by the enabling act both during the term of twenty-five years and after the expiration thereof;

That the Council was acting within its power in granting a franchise to the company holding the existing franchise, making the new franchise, if ratified, commence on Jan. 1, 1920, and canceling the old franchise at the time the new franchise goes into effect;

That the ordinance complies with the enabling act in reference to submitting the adoption of the proposed franchise to the vote of the people, and the ordinance does provide for such submission to the vote of the people according to the terms of the enabling act;

That the power to regulate is not contracted away;

That the price which the city would pay in case of condemnation is not fixed in the proposed franchise; that the proposed franchise only purports to fix the price in case the property is purchased by the city under the contractual ordinance.

Mr. Hedley Announces Policy

Frank Hedley, elected president of the Interborough Rapid Transit Company, New York, N. Y., to succeed the late Theodore P. Shonts, issued a statement on Oct. 21 in which he declared his intention to do everything in his power "to the end that the people of New York City shall have the safest, the most convenient, and the most efficient rapid transit in the world."

Mr. Hedley said:

In becoming president and general manager of the Interborough Rapid Transit Company, my policy will be very simple. It will be:

1. To do everything I know how to do to the end that the people of New York City shall have the safest, the most convenient, and the most efficient rapid transit in the world. We carry practically a million and a half people to their business every morning and then carry them home at night. To do this safely and without delay constitutes, as I see it, a public trust of the highest order.

2. To imbue the personnel of this company with a feeling of enthusiasm in their work and with a sense of their responsibility to the public for a loyal and efficient performance of their duties.

Satisfactory service to the public can only be attained through loyal and efficient effort on the part

of all employees of the company, and the employees themselves can be greatly aided through public co-operation with them.

Helpful criticism of our service will always be welcomed whether from employees or from the public, and I want to express the hope that I will receive the co-operation of everybody concerned in seeing to it that for the people of New York City it continues to be possible to maintain and operate the safest and best possible rapid transit service.

Mr. Hedley announced that he had decided on a policy of full publicity, and that he would hold conferences with newspaper men on Wednesday of each week. In the first of the conferences held under this new policy, he said:

We have no secrets in so far as the true condition of the road is concerned. The road is owned by the city and by private interest in almost equal parts, and I see no reason why the city and its representatives should not be entitled to as much information as are the private interests.

Improved Service Proposed for Philadelphia

The Philadelphia (Pa.) Rapid Transit Company has submitted to the Philadelphia City Council drafts of four ordinances containing measures projected for the improvement of the company's service, and the draft of a fifth incorporating a form of lease for the Frankford elevated railroad, now under construction.

In the lease submitted, the company assumes that the Frankford elevated can be completed by July 1, 1920, and proposes to begin operation of the line July 4 of that year. The most important of the other four ordinances deals with the proposition recently advanced by Thomas E. Mitten, president of the Philadelphia Rapid Transit Company, at a hearing before the State Public Service Commission, that in return for an abolition of 3-cent exchange transfers, the city remit the annual payment of \$785,000 now made to it by the rapid transit company under the terms of the agreement of 1907.

Another of the ordinances would impose regulations on traffic upon streets occupied by car tracks. Its principal provision is that all streets over which a single line of street cars is operated in the district embraced by the Delaware and Schuylkill rivers and Oregon and Erie avenues shall be one-way thoroughfares for all vehicular traffic.

The fourth ordinance is to authorize the relocation of the car tracks encircling the City Hall from the middle of the streets to a position adjacent to the curb line surrounding the building, while the fifth seeks authority for the construction of turning loops at the Pelham car barn to enable the company to operate green cars on the Germantown and Chestnut Hill route.

A general explanation of these measures and their purposes was given in a communication addressed by Mr. Mitten to the members of the Select and Common Councils. This communication, a copy of which was delivered to every councilman, said in part:

Philadelphia street cars carried 550,000,000 people in 1912, at which time the inadequacy of the transit facilities was recognized, and in 1913 a plan for a system of subway and elevated lines was developed. None of the new lines then planned is available to assist in carrying the traffic of 1919, which bids fair to exceed 850,000,000 passengers.

The approaching Christmas holiday season will bring the heaviest transportation requirement the city has ever known, and unless the greatest possible use is made of existing facilities a most uncomfortable condition of overcrowded cars will be upon us.

We now ask your help and co-operation in making effective certain changes and improvements as herein set forth.

Mr. Mitten then proceeded to outline his solution of the traffic problem. The Councils have taken the matter under consideration.

Strike on Indiana Road Ended

A strike of employees of the Chicago, South Bend & Northern Indiana Traction Co., South Bend, Ind., caused by the discharge of two men, has been ended as a result of a conference between a citizens' committee, Mayor Foster, officers of the company and ten of the strikers. The men have agreed to resume work under the old conditions and the company has consented to re-employ all except the two discharged men. The latter withdrew from the union to relieve their fellows of the embarrassment of standing out in their behalf.

News Notes

Easton Lines Tied Up.—The lines of the Northampton Traction Company, Easton, Pa., and its associated companies were tied up on October 14 as the result of a strike of motormen and conductors to enforce demands for increased wages.

Service Resumed on Berkshire Road.—Service was resumed on the lines of the Berkshire Street Railway, Pittsfield, Mass., on October 1 after an interruption which had lasted seven weeks. An agreement with the men led to the reopening of the road.

Service Resumed at Muscatine.—A vote of the City Council of Muscatine, Ia., granting of a 7-cent fare to the Clinton, Davenport & Muscatine Railroad, controlled by the Tri-City Railway & Light Company, Davenport, Ia., has been followed by the resumption of service in Muscatine after an interruption lasting seventy-nine days. The trainmen signed an agreement for a maximum wage scale of 52 cents an hour, as compared with the maximum scale of 60 cents for the Rock Island, Ill., trainmen of the Tri-City Railway following their recent strike. The Muscatine men had been idle since Aug. 1, when the Rock Island trainmen struck.

Higher Pay for Kansas City Men.—The Kansas City (Mo.) Railways on October 15 put into effect a new scale of wages involving an increase of 5 cents an hour except for three-year men, whose increase is 6 cents. The ultimate wages are 50 cents an hour, becoming effective at the end of the second year. The minimum wage for extra trainmen has been \$93 a month; it is now \$105 a month, based on a thirty-day month. One-man car operators receive 5 cents above the scale, and mail car operators 4 cents above the scale. Students have been getting \$1.50 a day; they now get \$2. All employees received increases on July 1.

Olean Strike Settled.—The Western New York & Pennsylvania Traction Company, Olean, N. Y., came to an agreement with its striking trainmen effective on Oct. 18 after service had been suspended for sixty-seven days. The new contract carries about the same privileges and conditions as prevailed previous to the organization of the men. It permits collective bargaining through a committee representing the employees and made up of employees of the company only. By Oct. 23 most of the old men had returned to their former positions. Those that still remained out at that time had until Oct. 25 to report for duty, after which time they could return only as new employees.

Financial and Corporate

Doing Better With Ten Cents

Statement of Public Trustees of Boston Elevated Railway For the Quarter Ended Sept. 30

In presenting their report for the quarter ended Sept. 30, the trustees of the Boston (Mass.) Elevated Railway state that receipts under the 10-cent fare which went into effect on July 10 increased steadily until in the closing days of September they were sufficient to meet all expenses. This improvement has been sustained during the past three weeks and warrants the belief that the railway is now self-supporting.

The financial exhibit of the company shows that during the quarter the actual deficit from operation was \$928,694. The deficit in July was \$599,198; that in August \$227,029; and in September the actual operating loss was \$12,942. The statement for that month, however, includes also an item of \$89,524, which represents an adjustment on account of track work and taxes.

The item of \$450,000 appearing at the end of the exhibit represents a deficit that really belongs to the preceding year. It grew out of the retroactive character of the arbitration award made in July, which increased wages of employees for the months of May and June.

It is to be noted that the 10-cent fare did not go into effect until July 10; that an unusually large amount of track work for the entire year necessarily has to be performed in this season; that the four days of strike entailed a very heavy loss of revenue; and that with the installation of the higher fare there was an immediate loss in patronage, which has since been gradually returning.

TRUSTEES CONFIDENT

The trustees are confident that during the next three months, in which expenditures for track work are ordinarily small, a large part of the deficit incurred during the last quarter will be eliminated, and that unless some extraordinary and unforeseen event should occur, the year closing June 30 would show no outstanding deficit to be assessed upon tax-payers. Any change in the wording of the statute in relation to the procedure in the matter of deficits which may be necessary to secure this can be seasonably made.

The public control act calls for an automatic increase in fare at the end of every quarter during which there has been a loss from operation even though the fare in force at the end of the quarter is meeting expenses, and there is no reason to believe that under a continuance of that fare a deficit will again occur.

When in July the trustees inaugurated the 10-cent fare, and, as required by the statute, established grades above and below that fare, they were confident that although receipts would fail at first to meet expenses, they would prove sufficient to meet them before or soon after the end of the quarter. The next grade above the 10-cent fare therefore was established through a charge of 1 cent for transfers at certain points where the use of transfers would be light, this change being deemed a sufficient compliance with the law.

Now that operation has reached a sound

business basis in which expenses, including suitable provision for obsolescence, depreciation and maintenance, are being met by revenue, the problem left for consideration is that of fare. The trustees ask: "Ought there not to be made possible as soon as may be a reduction in the flat 10-cent fare?"

In concluding their statement, which is dated Oct. 23, the trustees say:

There are disadvantages which distinguish the service here that are not remediable. But there are other disadvantages which are remediable. Capital imperatively needed is not available. Its lack and the other burdens like that of subway rentals, which in the opinion of the trustees constitute a discrimination against the car rider, ought not to be left outstanding so as to prevent in the near future a material reduction from the 10-cent fare. This situation is now under study by the Street Railway Commission, which is soon to make its report to the Legislature.

Cleveland Dividend Arbitration

The hearing of the Cleveland (Ohio) Railway's request for an increase in dividends from 6 per cent to 7 per cent has proceeded in a casual way before a board of arbitration for some time. A number of witnesses were examined in an effort to ascertain whether an increase is necessary.

Milo R. Maltbie, New York, stated that if it became necessary for the company to raise a large sum of money for improvements and extensions, the rate of dividend should be advanced. He thought, however, that it was unwise to make extensive improvements at this time. For this reason he was of the opinion that the present rate should be continued. He was a witness for the city. It is possible that the arbitrators will render a decision before long.

Chicago Reproduction Figures Presented

On Oct. 6 the Chicago (Ill.) Surface Lines submitted before the Public Service Commission of Illinois several volumes of figures showing the reproduction value of the properties, exclusive of land, as being \$193,370,612 as of Jan. 31, 1919. These figures do not make any allowance for depreciation, the companies contending that the amount of money in the renewal fund are sufficient to keep the properties at 100 per cent of operating efficiency.

The valuation was made jointly by A. L. Drumm & Company and Stone & Webster. Among the larger items included in the schedules are \$60,527,984 for tracks; \$45,802,852 for rolling stock; \$17,635,003 for paving; \$15,519,430 for electrical distribution system; and \$14,795,085 for buildings. Later the attorneys for the Chicago Surface Lines announced that there was no intention to claim the right to a return on more than the ordinance values, approximately \$158,000,000.

Besides the representatives of the firms which made the valuation, other witnesses, including M. E. Cooley and George Weston, testified in support of the companies' claims. At one of the hearings President L. A. Busby urged that the renewal fund requirement be restored to 8 per cent of the present gross earnings rather than 8 per cent or the earnings on a 5-cent fare basis as directed by the commission. The city objected and this point was not decided.

San Francisco Readjustment Plan Modified

New Company Will Have \$47,973,000 of Securities as Compared with \$82,411,600 Now Out

The two committees representing the holders of the 4 per cent bonds of the United Railroads, San Francisco, Cal., have agreed to further changes in the plan for the readjustment of the finances of the company. The present company has securities to the amount of \$82,411,600 outstanding while the successor company, the Market Street Railway, will have \$47,973,000 of securities outstanding.

The original plan for readjusting the finances was dated Sept. 22, 1916, and was amended on April 26, 1917. It is explained now that the former amended plan, which was approved by the owners of \$22,514,000 out of a total of \$23,500,000 of bonds, has become impossible of being carried out owing to the great loss of earnings and the increase of expense of operation of the railroads which occurred in the fall of 1917, and many other conditions and circumstances beyond control.

The holders of the \$23,500,000 of United Railroads 4's will receive \$3,525,000 of Market Street Railway bonds, \$11,750,000 of prior preferred stock, \$1,175,000 of preferred stock, \$2,350,000 of second preferred stock and \$4,700,000 of common stock. Thus for each \$1,000 bond the holder will receive \$150 in Market Street bonds, \$500 in prior preferred stock, \$50 in preferred stock, \$100 in second preferred stock and \$200 in common.

Following the United Railroads 4's there are \$46,613,600 of junior securities. These consist of \$1,925,000 of 7 per cent notes, \$740,000 of 6 per cent notes, \$1,000,000 of 5 per cent notes, \$5,000,000 of preferred stock, \$20,000,000 of second preferred stock and \$17,948,600 of common stock, largely owned by the California Railway & Power Company. For these securities there will be exchanged a total of \$12,175,000 of securities, consisting of \$3,825,000 of preferred stock, \$2,350,000 of second preferred stock and \$6,000,000 of common stock.

The capitalization of the present United Railroads and of the Market Street Railway as successor company after reorganization will be as follows:

	Present United Railroads	Market St. Rwy. After Reorganization
Underlying bonds	\$5,200,000	
Market Street Railway bonds (exclusively of \$5,200,000 pledged)	7,098,000	\$10,623,000
New Notes (secured by \$5,200,000 Market Street Railway bonds and Sutter Street, Sutro Railroad and San Mateo properties)		5,200,000
United Railroads 4 per cent bonds	23,500,000	
7 per cent, 6 per cent and 5 per cent notes	3,665,000	
First preferred stock (and accrued dividends)	5,000,000	
Prior preference stock		11,750,000
Preferred stock		5,000,000
Second preferred stock (and present accrued dividends)	20,000,000	4,700,000
Common stock	17,948,600	10,700,000
Total	\$82,411,600	\$47,973,000

Under the new proposed plan the fixed charges of the Market Street Railway will be as follows:

Interest on Market Street Railway bonds now issued, \$7,098,000 at 5 per cent.	\$354,900
Interest on Market Street Railway bonds to be issued, \$3,525,000 at 5 per cent.	176,250
Sinking fund requirements of Market Street Railway bonds	160,000
Interest on new \$5,200,000 notes at 6 per cent.	312,000
Sinking fund requirements of new notes.	160,000
	\$1,163,150

The carrying out of the plan requires the consent of the present holders of the un-

derlying bonds to the exchange of their securities for new securities and cash. E. H. Rollins & Sons are now soliciting these bondholders and report that the owners of more than 65 per cent of all the underlying bonds have agreed to the exchange and that they are confident the entire exchange will shortly be arranged.

The \$5,250,000 of 6 per cent notes together with \$520,000 in cash will be exchanged for or used to acquire the following matured underlying bonds to a like aggregate amount, namely, \$1,800,000 of the Market Street Cable Railway, \$2,000,000 of the Omnibus Cable Company, \$400,000 of Ferries & Cliff House Railway and \$1,000,000 of Sutter Street Railway. All these bonds have matured. In two of the instances suits for foreclosure have been begun. The committee believes that it would be ruinous to the interests of the bondholders of the United Railroads if the proceedings for the foreclosure of all the mortgages should be conducted upon a hostile basis.

Notes Sold at Home

\$3,600,000 of Milwaukee Notes Sold at a Large Saving Principally by Means of Advertising

Several references have been made in this paper to the sale locally by the Milwaukee Electric Railway & Light Company of its recent issue of \$3,600,000 five-year, 7 per cent notes. The completion of the sale permits a statement now of the way the plan was carried out and the results secured.

Sales through newspaper advertising by the company were supplemented by a small field sales force working during the early part of the campaign; by circulars mailed to investors already interested in the company and by an initial sale of \$400,000 of the notes, negotiated by the management, to one of the Milwaukee banks. These supplementary sales methods, themselves all greatly facilitated by the home newspaper advertising campaign, are credited with selling approximately \$750,000 of the issue, leaving a balance of \$2,850,000 whose sale is attributable only to newspaper advertising.

The actual selling costs by this method were: Newspaper advertising, \$51,525; office expenses, sales commissions, etc., \$22,246; with a total of \$73,771.

The company had two purposes in selling the securities in the way it did. First, and most important, the company desired to enlist the co-operative interest of home investors in the business. Secondly, the company desired, if possible, to sell the issue at less than the usual cost of marketing such issues through underwriting syndicates.

The first purpose was achieved to this extent: The notes were sold to 5,458 buyers, of whom 3,690 are resident of Milwaukee, 1,608 residents of other Wisconsin cities and towns—most of them in the Greater Milwaukee district served by the company, and 160 residents of other states. Of the 5,458 buyers, 1,394 are women.

The second purpose was also achieved. At the time the issue was put on the market—December, 1918—the best price that a banking syndicate would probably have felt justified in offering for them would have been 95, or at most 96 per cent of par, leaving the syndicate a margin of 4 or 5 per cent for selling expenses and profit. The actual cost of selling direct,

through home newspaper advertising, was \$73,771. This represents a saving to the company of \$70,228, as compared with a syndicate offer of 96, or of \$106,228 as compared with a syndicate offer of 95.

The issue was advertised in fifty-six Wisconsin cities, including Milwaukee. It was sold in 232 cities and towns of Wisconsin, and in eighty-one cities of other states. Preliminary advertising of the issue began Dec. 12, 1918. The notes were placed on sale Dec. 18. The issue was sold in nine months of elapsed time, covering 230 business days, at an average daily rate of \$9,696.

Receiver Defaults Interest Payment

Andrew E. Kalbach, receiver of the Second Avenue Railroad, New York, N. Y., has reported to the Supreme Court that about \$94,000 interest due on \$3,140,000 of receiver's certificates is in default because of insufficient funds. Justice McAvoy stated that "the default of receiver's certificates in interest is the last indication of the inability of the road to earn enough to support a modest capitalization and the present wage scale and material costs." Further the court said: "The report shows a deplorable state of affairs. Stock worthless, bonds, principal and interest defaulted, judgments of tort creditors unpaid, taxes of city and state accumulating, without prospect of liquidation. The receiver must operate the road so long as any means exists or whatever of value is left to its franchise may be lost through the non-user." Justice McAvoy said that the receiver's certificates would lose their priority as a lien if tort judgments were paid out of the funds in the receivers' hands when the interest due on the certificates had been defaulted. He decided, therefore, that the receiver had no funds with which to pay the tort claim.

Chattanooga Lines Running Behind

The receivers of the railway lines of the Chattanooga Railway & Light Company, Chattanooga, Tenn., report \$10,400 net earned in September, but call the attention of the court to the fact that expenditures as reported to the court do not cover items for taxes or interest on any indebtedness and do not take into consideration any amount for the services of the receivers or their counsel. No amount is set aside for depreciation of the property, according to the report. The sum expended covers only the cost of operating the property, they state.

Attention of the court is called to an item of \$16,818, for maintenance of ways and structures, and an item of \$9,781, for maintenance of equipment. The sums set out in connection with these two items aggregate \$26,599, which amounts to 34 per cent of the gross receipts for operating the railway department of the defendant company.

The receivers also mention the increased expenses of upkeep of the property. They state that they thought it wise to do necessary repair work and make expenditures as set out before bad weather sets in.

The receivers have taken possession of the Riggdale and Seventh Street sub-stations and equipment, they state, and are making an appraisal of the property with a view to arriving at a fair and reasonable rent to be charged for the property's use and occupancy by the Chattanooga Railway & Light Company. They request permission to make a separate report on this matter.

Pittsburgh Increase Helpful

Company Doing Better Under Recent Increase, But Figures Indicate Need for Nine-cent Fare

The 7½-cent fare has increased the revenues of the Pittsburgh (Pa.) Railways at a rate that will amount to \$2,400,000 a year, J. A. Mead, auditor for the receivers, testified at the hearing during the week ended Sept. 27 of the city's protest against the new fare before the Public Service Commission, sitting in Pittsburgh.

Included in Mr. Mead's testimony was a table of the effects on receipts of four different fares charged by the Pittsburgh Railways since Jan. 1, 1917. They afford an interesting view of the change in the attitude of the public toward the nickel.

Under the old 5-cent fare, in 1917, daily receipts were \$36,132. When a 5½-cent fare was instituted on Jan. 22 of that year, receipts fell to \$35,662 daily, a decrease of \$470. On June 20, 1918, the fare was raised to 5 cents and 7 cents, according to the area in which paid. This increase brought daily receipts up to \$41,442, a gain of \$5,780. The present 7½-cent rate went into effect on Aug. 1 and in the fourteen days from that time until the two-week strike, average daily receipts were \$47,960, another gain of \$6,518.

Thus since 1917, it will be seen, the daily revenues of this company have increased \$11,828. No increase in fare was made between 1914 and 1919, so that during a five-year period in which average costs in the Pittsburgh district soared 80 per cent, the electric railway managed to swell its revenues only a little more than 30 per cent.

To increase its income this much, it was necessary to raise fares more than 50 per cent, for although the present ticket rate is 7½ cents the cash fare is 10 cents.

PRESENT FARES INADEQUATE

The 7½-cent fare has increased revenues more than was generally expected, but it has proved inadequate, according to Mr. Mead's figures. The company will face a deficit of \$947,000 at the end of 1920, at the present rate. His estimates provide for payment of \$3,500,000 in fixed charges, many of which have been defaulted in the past year.

It is upon this fixed charge item that company and city authorities split. City engineers on the physical valuation board which recently completed its work place the value of the company's property at \$48,000,000. Representatives of the company on the board place the valuation at \$70,000,000.

The city maintained at the hearing that the present fare is sufficient to return 7 per cent on the \$48,000,000 its engineers hold that the properties are worth, and allow more for depreciation and maintenance than the company has done before.

Witnesses for the company, however, contend that the need for a 9-cent fare is indicated by their figures. Both sides agree that the War Labor Board award of a 6-cent increase in wages means an addition of four-tenths of a cent to the fare.

Separate Operation in Brooklyn

The lines of the Brooklyn (N. Y.) City Railroad have been separated from the other lines of the Brooklyn Rapid Transit Company under an order made on Sept. 29 by Federal Judge Julius M. Mayer.

Under the ruling of the court twenty-six surface lines have been returned to their owners, the Brooklyn City Railroad, which leased the lines to the Brooklyn Heights

Railroad, the surface operating company of the Brooklyn Rapid Transit System.

Judge Mayer made his ruling after Carl M. Owen, attorney for Lindley M. Garrison, the receiver of the company, had told the court that the Brooklyn Rapid Transit System could not raise the \$300,000 rental for the lease of the lines from the Brooklyn City Railroad and that the Brooklyn Rapid Transit Company was in a quandary how to proceed.

Philadelphia Net Declines

The income account statement of the Philadelphia (Pa.) Rapid Transit Company as released to the press on Oct. 20 is as follows:

	1919	1918
September		
Operating revenue	\$3,030,930	\$2,679,001
Operation and taxes	2,055,298	1,686,461
OPERATING INCOME	\$975,632	\$992,539
Non-operating income ..	42,005	49,886
GROSS INCOME	\$1,017,638	\$1,042,425
Fixed charges	812,279	804,804
NET INCOME	\$205,358	\$237,621
Nine Months Ended		
Sept. 30	1919	1918
Operating revenue	\$25,995,430	\$23,123,556
Operating and taxes	17,888,629	15,089,049
OPERATING INCOME	\$8,106,801	\$8,034,507
Non-operating income ..	396,095	470,277
GROSS INCOME	\$8,502,896	\$8,504,785
Fixed charges	7,295,944	7,211,062
NET INCOME	\$1,206,952	\$1,293,722

Results in Chicago in September

A recent report submitted to the Public Service Commission of Illinois showed for the Chicago Surface Lines the following earnings and expenses for the month of September over a period of years:

	Gross Receipts	Operating Expense	Net
1919....	\$4,190,527	\$3,053,265	\$1,119,672
1918....	2,941,251	2,286,222	620,442
1917....	2,916,967	1,902,834	961,531
1916....	2,885,825	1,800,628	1,035,902

Revenue passengers for September, 1919, increased 2½ per cent over September, 1918.

The Chicago Elevated Railways also submitted a report showing that revenues under an 8-cent fare have increased on a basis of \$2,800,000 a year, while the recent wage schedule is expected to cost \$2,500,000 annually. Six months of operation on a 6-cent fare gave the elevated lines \$600,000 more revenue, but during the same period expenses were increased about \$1,150,000.

Since Aug. 8 the 7-cent fares have been in force on the Chicago Surface Lines and 8-cent fares on the Chicago Elevated Railways.

Foreclosure Sale and Abandonment

A force of laborers was put to work on Oct. 25 taking up the rails of the Pascagoula Street Railway & Power Company, thus terminating railway service between Pascagoula and Moss Point. The property of the Pascagoula Street Railway & Power Company was sold under foreclosure in September to E. J. Ford, and he recently sold the same to A. Patterson and associates. The water, light and ice plants will be remodeled and operated, but the railway will be abolished, the rolling stock, etc., being sold.

Financial News Notes

Shore Line Abandons Branch.—The Shore Line Electric Railway, Norwich, Conn., has discontinued service between New Haven and Saybrook.

New York City Company Quits.—The Brooklyn & North River Railroad, operating between the borough of Brooklyn and the borough of Manhattan over the Manhattan Bridge, New York, ceased operations at midnight on Oct. 4. The city is running buses over the routes of the abandoned lines.

Foreclosure Suit Commenced.—The Guaranty Trust Company, New York, N. Y., has brought foreclosure suit as trustee under a mortgage made to secure an issue of bonds of the Broadway & Seventh Avenue Railroad, part of the New York (N. Y.) Railways system. Job E. Hedges, receiver for the New York Railways, is named as defendant.

Wants Money for Interest Payment.—Transit Construction Commissioner Delaney, of New York City, asks an \$8,000,000 appropriation to pay the interest on the city's \$180,000,000 investment in rapid transit lines. A total of \$250,000,000 will be invested by 1921. The first estimate of \$163,000,000 made in 1913 is increased by \$87,000,000 because of higher costs. The contribution of the Interborough Rapid Transit Company to the cost of the dual subway system will be \$86,680,000 by the close of 1920, and the Brooklyn Rapid Transit Company's share will be \$113,850,000.

Would Abandon Goshen Service.—A hearing on the petition of the Chicago, South Bend & Northern Indiana Railway, South Bend, Ind., to discontinue its Goshen City service was set for Oct. 22 by a member of the Indiana Public Service Commission. City service has been in effect in Goshen about twenty years. The company declares that the expenses exceed receipts. Authority is sought to tear up the tracks and remove the equipment of the Lincoln Avenue-Eighth Street line. The City Council a year ago refused to permit the company to discontinue its Goshen service and threatened then that if the city service were abandoned the operation of inter-urban cars within the city would not be permitted. The company then appealed to the Public Service Commission.

Foreclosure Suit Against Interurban.—The Guaranty Trust Company, New York, N. Y., trustee, has brought foreclosure proceedings against the Kansas City-Western Railway in the Federal Court at Topeka, Kan., following the default in September of interest on first mortgage bonds. A plan of reorganization of the Kansas City-Western Railway is said to have been approved by practically all of the bondholders. Under this plan the bonded indebtedness will be reduced and a substantial sum provided for improvements. Officers of the company take the position that under present conditions, hope for profits is out of the question, and that the best interests of the bondholders demand that as quickly as possible the company be placed on a basis where it will be giving the kind of service that will bring in profits.

Traffic and Transportation

Seven Cents in Washington

Commission Grants Increase to All Three Companies—Four Tickets to Cost Twenty-Five Cents

The Public Utilities Commission of the District of Columbia on Oct. 18 issued an order authorizing the Washington Railway & Electric Company, the Capital Traction Company, and the Washington-Virginia Railway to raise cash fares on their lines from 5 cents to 7 cents. The order provides for the sale of four tickets for 25 cents, making the ticket rate 6¼ cents. The order further provides for the issuance of free transfers between the lines of the same company. A 2-cent charge will be made for inter-company transfers, as under the present arrangement. The higher fare became effective on Nov. 1.

The ruling came as the culmination of repeated attempts to solve the electric railway difficulties in the national capital. The Washington Railway & Electric Company asked the commission for a 7-cent fare, declaring that it could not pay dividends on its investments unless this increase was granted. The Capital Traction Company and the Washington-Virginia Railway, however, asked for no increase, and the additional fare will enable these two companies to increase their earnings even beyond those of last year.

The commission based its conclusion as to the amount of the increase to be granted on its contention that the company is entitled to earn a 6 per cent return on its investment. At the hearings recently the company introduced expert testimony tending to show that under present conditions at least 8 per cent return should be allowed. The commission refused to accept this view.

The commission admits in its order that it believes the service could be improved by rerouting of cars on some lines. It states that this question will be taken up separately in the near future.

The commission states that it has not yet completed the valuation of the railway properties. It points out that the valuation cases, covering the properties of the companies, so far as the submission of evidence and argument is concerned, were completed in April, 1919. The commission is not yet prepared to issue formally its findings in the manner contemplated by all. Basing its findings upon the data already in its hands, however, it puts a tentative value on the property of the Washington companies for electric railway purposes of approximately \$14,175,000. The net capital expenditures since July 1, 1914, up to and including April 30, 1919, as shown by the books of the three companies, amount to \$744,427.36.

The commission finds that the introduction of the zoning system as proposed by William F. Ham, president of the Washington Railway & Electric Company, would be inadvisable at this time. It states that it has given careful consideration to the general question of the zone system, as well as to the particular one submitted in the present case. While appreciating the general benefit to be derived from such a system, the commission concludes that from a purely civic or com-

munity standpoint, there is great objection to upsetting the practice established by Congress and in force for many years, and under which the numerous suburban sections of the district have been developed.

The local union of the Amalgamated Association of Street & Electric Railway Employees, composed of the carmen of the Washington Railway & Electric Company, is expected to insist on the wage increase of 3 cents an hour recently promised by Mr. Ham.

Baltimore Charges Seven Cents

Maryland Commission Grants Rate Increase—Four Tickets Are Now Sold for Twenty-Six Cents

The United Railways & Electric Company, Baltimore, Md., began charging 7-cent cash fare on Oct. 1 under authority granted by the State Public Service Commission. The company was ordered to sell tokens at the rate of four for 26 cents, thus making the ticket rate 6½ cents per adult fare. There was no change in the fare for children, this remains at 4 cents. There also was no change in the rate for commutation tickets. The commission's order was referred to briefly in the issue of the ELECTRIC RAILWAY JOURNAL for Oct. 4.

The installation of the increased fare caused little trouble, as the company had made careful preparations for the change. Every effort was made to provide the riders with the opportunity to take advantage of the 6½-cent fare. Conductors were supplied with quantities of the metal tokens and nearly 150 selling agencies have been established throughout the city and suburbs, in stores, banks, and other business places, where they are handled by the proprietors without compensation for the convenience of the public. On the first day of the higher rate a large proportion of fares was paid with the metal token, showing that the public was thoroughly alive to the advantage to be gained through buying in quantities rather than paying the 7-cent straight fare.

On account of a limited supply of tokens some restriction had to be placed upon the number sold to each purchaser, both by conductors and at the sales agencies. Conductors were instructed to sell only four tokens to each purchaser.

The Public Service Commission refused to extend the city zone on the car lines to the present city limits. After making a careful study of the proposition it decided that such an extension of one fare to the new city limits would mean a loss in revenue of approximately \$1,176,000 a year, which would be within \$200,000 of the amount which it was estimated would be yielded by the new fare, and would require the addition of another half cent, or a straight 7-cent fare.

The commission's order pointed out that, if there had been no increase in the rate from 5 cents to 6 cents, the company would have sustained a deficit of \$2,108,269 for the year, or \$808,142 short of being able to pay the interest on its bonds and notes, which, it was stated, showed the reasonableness of the increase and the utter unreasonableness of the demand for a return to the 5-cent fare.

Detroit United Enjoined

Barred from Charging Two-Cent Rate on Its Interurban Lines—Appeals to Supreme Court

The Detroit (Mich.) United Railway and its subsidiaries were restrained from charging increased rates of fare on their interurban lines by a temporary injunction issued by Judge Howard Weist of the Ingham County Circuit Court on Oct. 6. The action was taken upon petition of A. J. Grosbeck, Attorney General of Michigan, who held that the Detroit United lines were excluded from the provisions of the law recently passed by the State Legislature authorizing increases for lines whose gross earnings do not exceed \$8,000 per mile.

LEGISLATIVE INTENT

The act allows such roads, that is, those earning less than \$8,000 per mile, to charge rates of 2½ cents per mile on their interurban lines. The legislators apparently intended to bar the Detroit United from collecting the higher fares by inserting the proviso regarding revenue. The act, which is poorly drawn, contains many ambiguous clauses. The company claimed that its earnings were less than the stipulated amount and that it was consequently entitled to charge rates in accordance with the terms of the new law.

It, therefore, put a schedule of rates into effect on Aug. 14 by which interurban fares were raised to 2 cents a mile. The increase was referred to at length in the issue of the ELECTRIC RAILWAY JOURNAL for Aug. 16, page 360.

Judge Weist in his opinion upheld the validity of the act, but denied that it applied to the Detroit United Railway. He ruled that the company's earnings exceeded \$8,000 per mile.

He also held that the State Legislature's power to abrogate franchises was not lost by delegating power to local municipal authorities to fix rates in franchise rights granted to street or interurban railways, but that this power may be exercised at any time by the Legislature.

The company filed a petition for permission to charge the increased fares pending a Supreme Court decision, the petition also stating the company's intention to appeal from the Ingham Circuit Court ruling. It offered to furnish a bond for the return of the excess fares collected during the time which must elapse before a final decision in the rate litigation could be reached, the refunds to be made in case the injunction was sustained by a Supreme Court action. This petition was denied by Judge Weist. Attorneys for the Detroit United stated that the return to the former rates would reduce the company's revenue \$1,000 a day.

APPEAL MADE TO HIGHER COURT

The Michigan Supreme Court refused to dissolve the injunction pending argument of the main case as to whether or not the company should be entitled to the higher fares. Appeal to the higher court was made after Judge Weist had decreed that the temporary injunction should be made permanent.

In conjunction with the company's appeal to dissolve the permanent injunction, company attorneys again made a plea for permission to continue charging the increased fares and to issue rebate slips to passengers, to be redeemed in case the present injunction were sustained by the higher court. This plea also was denied. It was agreed that the appeal from Judge Weist's decision should be heard as expeditiously as possible.

Brooklyn Surface Lines Segregated

Brooklyn Rapid Transit System Returns Brooklyn City Railroad to Owners—Fares Up, Transfers Abolished

Judge Julius M. Mayer in the United States District Court on Oct. 17 signed an order directing the Brooklyn (N. Y.) Rapid Transit Company to return to their owners the lines of the Brooklyn City Railroad. Judge Mayer acted because Lindley M. Garrison, receiver for the Brooklyn Rapid Transit Company, was unable to meet rental payments which were due. The financial aspects of the case are discussed elsewhere in this issue of the ELECTRIC RAILWAY JOURNAL.

The return of the leased lines means the virtual break-up of the surface lines of the B. R. T. system. Twenty-six lines were leased by the B. R. T. from the Brooklyn City Railroad. These routes, which traverse the most populous sections of Brooklyn, made up approximately 75 per cent of the B. R. T. surface system. Under the lease they were operated as a unit, along with the lines of other B. R. T. subsidiaries. The uniform fare on all of the lines was 5 cents, with free or 2-cent transfers.

MANY TRANSFERS ABOLISHED

The most significant effect of the break-up is the abolition of many transfer points and the installation of higher fares. A number of the lines were built in sections under separate franchises, each franchise providing for a 5-cent fare. The Brooklyn City Railroad is free to collect a nickel fare for a ride in each of these zones. In several instances the company is legally entitled to collect an aggregate charge of 20 cents or more for a ride on a single line. As a matter of fact, 10 cents is the maximum charge now made in any case.

Independent operation of the lines began on Oct. 19. H. Hobart Porter, general manager of the Brooklyn City Railroad, had previously announced comprehensive changes in routing. The principal changes in the rate of fare and in the routing of cars are as follows:

A 10-cent fare replaces a 5-cent fare on nine lines. Twenty changes in routes are made by the Brooklyn City Railroad and eleven by the Brooklyn Rapid Transit Company.

Service on three lines of the Brooklyn City Railroad is discontinued.

Transfer points numbering 450 between the lines of the B. R. T. and the Brooklyn City Railroad are abolished entirely.

Transfers between the lines of the Brooklyn City Railroad are abolished entirely except at fifteen points where they are made obligatory by franchise provisions.

The last change means that passengers transferring from one line of the Brooklyn City Railroad to another must pay a second 5-cent fare instead of a 2-cent transfer charge. The number of points thus affected is approximately 150. Thus the total number of transfer points abolished as a result of Judge Mayer's order is in the neighborhood of 600.

The beginning of independent operation resulted in considerable confusion. Many riders were unfamiliar with the changes in routing. Others objected to paying 10 cents instead of a nickel and walked to zone limits. Still others insisted that they be given transfers. In such cases conductors issued transfers for 2 cents each, but when these were presented on cars of the other company they were not honored. Officials of the company expressed themselves as well satisfied with the initial results of independent operation.

Public Service Commissioner Lewis Nixon of the First District issued a state-

ment on Oct. 20 in which he charged Mayor Hylan with responsibility for the B. R. T. break-up, because he refused to consent to an increase in fare of a few cents to tide the company over its present difficulties. William M. Calder, United States Senator from New York, also issued a statement arraigning the Mayor for bringing about the disintegration of the Brooklyn surface lines.

Mayor Hylan was equally outspoken in his criticism of the arrangement whereby fares were raised, as he contended, in violation of law. He directed Grover Whalen, commissioner of plant and structures, to take steps looking to the establishment of municipal bus lines to run in competition with the two-fare routes.

Under Commissioner Whalen's direction four such bus lines began operation on Oct. 27. On the first day of business the buses carried large numbers of persons, especially during the rush hours. The fare is 5 cents.

Officials of the Brooklyn City Railroad intimated that an injunction would be sought to bar the bus competition. Inspectors for the company checked up the number of passengers carried by the buses.

No Rehearing on St. Louis Fares

Commission Denies City's Motion—Governor Gardner Opposes Move to Restrict Power of Commission

The Public Service Commission of Missouri has denied the motion of the city of St. Louis for a rehearing of its recent order permitting the United Railways of St. Louis to charge an 8-cent cash fare and a 7-cent token fare. The case will be taken to the Circuit Court in St. Louis, according to Associate City Counselor Hamilton, and thence, if necessary, to the Missouri Supreme Court and the United States Supreme Court. A petition has already been filed in the Circuit Court asking for a writ of certiorari.

Opponents of the increased fare have received another setback in the shape of Governor Gardner's refusal to call a special session of the Legislature to consider a bill restricting the Public Service Commission's authority to cities with less than 50,000 population and giving each city the right to regulate local public service corporations. Governor Gardner announced that he had given no thought to the subject of the special session and would not consider calling one.

One of the effects of the increased fares on the county lines has been to stimulate greatly passenger traffic on suburban trains running into St. Louis from Maplewood, Meramac and other towns. The fare on the steam roads is from 2 cents to 9 cents lower than on the electric lines and several coaches have had to be added to each train in order to take care of the enlarged business. Electric railway officials admit a noticeable falling off in traffic on the county lines, but feel that as soon as tokens come into general use, the number of passengers will return to normal, since the electric lines give frequent service and the steam roads are not able to run more than one train an hour except at the rush hours.

The necessity of paying car fares with a nickel and two pennies has caused a considerable slow-up in schedules. On the longer runs cars are coming in from five to ten minutes late. This will be eliminated when the new supply of tokens is obtained.

Fare Decision Stands

New York State Court of Appeals Denies Motion for Readjustment in Quinby Case

The New York State Court of Appeals on Oct. 21 denied a motion for a reargument of the Quinby fare case, in which it decided, in April, 1918, that the Public Service Commissions lack power to raise a rate of fare fixed by franchise agreement. The court's refusal to reopen the case was in effect a reaffirmation of its previous decision. This decision was analyzed at length in the issue of the ELECTRIC RAILWAY JOURNAL for April 13, 1918, pages 696-7.

The New York State Railways, Rochester, the company directly affected by the court's decision in 1918, filed a motion for a rehearing some time ago. The attempt to have the case reopened was backed by the public service commissioners of both the first and second districts. Commissioner Nixon of the first district filed with the court a brief in which he expressed the view that the commission is empowered to regulate fares as delegated by the Legislature in section 141 of the State Railroad law, despite provisions which may be inserted in franchise grants by municipal or other local authorities. James L. Quackenbush, attorney for the Interborough Rapid Transit Company, New York, and the New York Railways, also filed briefs asking the court to reopen the case.

In refusing to entertain the motions the court said:

This case was decided eighteen months ago by holding that the Public Service Commission has not been given power, on the application of the railroad to regulate and increase rates of fare on the street railroads when such rates were fixed as conditions to the consent of the local authorities to the operation of the roads.

The court's action is seen as an important factor in determining the status of fare cases not only in Rochester but also in New York and other cities where franchise provisions impose a maximum rate. Representatives of the Public Service Commissions and of the traction companies, as well as city officials, have expressed themselves as satisfied with the outcome of the case. In commenting on the situation Terrence Farley, counsel for the Public Service Commission for the First district, contended that the court's stand refuted the claim of the New York municipal authorities that the commission must keep its hands off all contracts between railroad and municipalities. He said in part:

The Public Service Commission does not look upon the opinion of the Court of Appeals as a defeat. We intend to fight and we believe we ultimately will establish that the commission and not the city is the proper authority to regulate fares.

Judge Ledyard P. Hale, counsel for the second district public service commission, after studying the decision, said that in his opinion the decision only affects rates of fare in Rochester. He said the decision in the International Railway case several months ago, in which the court held that the legislature had power to permit fare increases, was directly in conflict with the decision in Rochester fare case.

More Court Intervention

Justice Finch Enjoins Commissioner Nixon in Queens Fare Case—North Shore Increase up for Review

Supreme Court Justice Finch on Oct. 4, issued an injunction restraining Commissioner Nixon and the receivers for the New York & Queens Traction Corporation from taking any action in the matter of an increased rate of fare. Justice Finch had previously issued a writ of prohibition in the case.

The decision also virtually restrains the receivers of that corporation, William R. Begg and Arthur C. Hume, from increasing fares, for it affirms the assertion of the corporation counsel to the effect that the contract of the city with the South Shore Traction Company, the Manhattan & Queens Traction Corporations predecessor in interest, contained a provision that 5-cent fares only should be charged, and set forth that, in case of any violation of this provision "the contract may be forfeited at the option of the city."

The corporation counsel acted after learning that the receivers had filed an application with the Public Service Commissioner for a rehearing on the matter of the corporation's application for the right to increase its fares. He secured an alternative writ, requiring the commissioner and receivers to set forth why an injunction should not be granted, or to submit to the operation of a permanent injunction forthwith. This writ carried with it a temporary restraining order which held matters in *status quo* pending the hearing before Justice Finch and his determination. The court said:

The city gave certain rights and privileges to the South Shore Traction Company. In return, among other things, it required that the fare for one passenger upon said railroad was not to exceed 5 cents, and it was set forth as a franchise provision that in case of any violation of this requirement the contract might be forfeited at the option of the city.

Justice Finch then reviewed the statements of the receivers with regard to the need of an 8-cent fare beyond a certain point in Queens, and made mention of the contention of the Public Service Commission that no injunction was necessary. With regard to this assertion Justice Finch sets forth:

The commissioner fails, however, to deny the all-important allegation that he does claim jurisdiction to increase the fare. This is important in view of the conceded fact that he assumed jurisdiction and granted an increase of fare in the case of the application of the New York & North Shore Traction Company.

Commissioner Nixon set forth that he intended to recommend to the Board of Estimate & Apportionment, if it should appear that action was necessary, that it grant such relief as in its judgment the railroad corporation seemed entitled to. As to that point Justice Finch held that an injunction could not issue.

TO REVIEW NORTH SHORE CASE

A writ of certiorari, obtained by Corporation Counsel Burr from Justice Gavan of the Supreme Court, calling for a review of the order of Commissioner Nixon permitting the New York & North Shore Traction Company to establish the zone fare system, was served on Oct. 27 on Mr. Nixon. The writ directs him to file an answer within twenty days.

Mr. Burr said the matter would be presented directly to the Appellate Division and that a decision would be obtained as speedily as possible. His application to the court stated that Mr. Nixon had no authority to grant the order; that in doing so he violated the rules of law to the prejudice of the people, and that he acted with-

out sufficient proof and on insufficient facts.

The order authorizing the company to establish four zones, in which from 6 cents to 11 cents could be charged for a continuous ride, was signed by Mr. Nixon on Aug. 28 and the extra charge has been in force ever since. No comment was made by the commission on the fact that the franchises of the company limited the fare to 5 cents.

Commission Overruled

Illinois Judge Reverses Order Which Granted a Seven-Cent Fare on the Chicago Surface Lines

Judge J. E. Smith, of the Sangamon County Court at Springfield, Ill., on Oct. 2 handed down an order reversing the ruling of the State Public Utilities Commission permitting the Chicago Surface Lines to charge 7-cent fares. The court's action was based on the ground that the commission had refused to allow the city's attorneys time to submit evidence as to valuation of the railway property.

The company on Aug. 8 last raised fares from 5 cents to 7 cents under authority granted by the commission after a short hearing. At the same time fares on the Chicago Elevated Lines were raised to 8 cents. The latter company is not affected by Judge Smith's ruling.

President L. A. Busby, of the Surface Lines, at once announced that he would take an appeal to the State Supreme Court. The city authorities opposed the motion for an appeal, declaring that they would insist that the rate of fare be fixed at 5 cents until a proper showing was made before the commission. Arguments on the question of valuation were begun before the commission in Chicago on Oct. 3. Judge Smith on Aug. 3 allowed the appeal to the higher court.

The Public Utilities Commission has refused to act on the court's order, and the fare will consequently remain at 7 cents pending the appeal to the Supreme Court. This will require at least two months. The city of Chicago has demanded that the company refund the amount collected from passengers in excess of 5 cents.

The Surface Lines management contends that an important victory has been won in the ruling of Judge Smith that the contract with the city, calling for a 5-cent fare, is not binding as against the authority of the State Commission to allow reasonable rates. The opinion says in part:

The court recognizes that valuations, income and expenses are proper and necessary to be considered in determining the just and reasonable rates to be charged, and it seems that before this evidence was produced the order changing rates was premature. A 5-cent fare has been in force. It is a matter of common knowledge that many have contended that there should be a 3-cent fare. The condition is not met by finding there is an increase in wages or expenses. What is there that demands a 5-cent or a 7-cent fare? A valuation upon which dividends are to be paid is essential before the necessity of an increase in fares can be determined.

The court thereupon entered an order that the ruling of the commission be reversed and the cause remanded with directions to the commission to admit evidence as to valuations of the properties, the amount of expenditures, and to enter proper findings and order thereon.

Mr. Busby declared that the evidence before the commission showed that the increase in wages and other expenses amounted to more than the entire sum received during the preceding year by the companies for interest and fixed charges. This meant, he said, that, on the basis of a 5-cent fare, the companies could not pay operating charges and could not continue to meet the present wage scale.

Transportation News Notes

Eight Cents in Manchester.—Eight-Cent cash fares went into effect on the lines of the Manchester (N. H.) Street Railway on Sept. 22. Tickets are now sold in books of ten for 75 cents. Books of forty tickets cost \$3.

Ten-Cent Fare Again Suspended.—The Public Service Commission of Massachusetts has again suspended the proposed 10-cent fare of the Middlesex & Boston Street Railway, Newtonville, Mass. The commission is considering the introduction of the zone system on the company's lines.

Ten-Cent Fares for West Virginia Line.—The Public Service Commission of West Virginia has authorized the West Virginia Traction & Electric Company, Wheeling, to charge a 10-cent fare between Wheeling and Elm Grove. Books of twenty-five tickets will be sold for \$2, making the ticket rate 8 cents.

Seven-Cent Fares in Wilmington.—The Wilmington & Philadelphia Traction Company, Wilmington, Del., has been authorized by the city Board of Public Utility Commissioners to charge 7-cent fares on its Wilmington local lines. The company in its application asked for 8-cent fares. The higher fares have already gone into effect, four tickets being sold for 25 cents. The fare was formerly 6 cents. The company must submit to the board within three months a statement of the exact physical valuation of the property, under penalty of revocation of the board's order granting the increase.

Interchange of Transfers Stopped.—Commissioner Nixon has granted the application of the New York City Interborough Railway, a part of the Third Avenue surface system, and the Interborough Rapid Transit Company, for permission to discontinue the joint traffic arrangement which has existed between the two companies upon the basis of an 8-cent fare. Under this arrangement inter-company transfers were given at seven points in upper Manhattan and the Bronx. The companies stated in their application that an 8-cent fare divided equally between the two was insufficient and that each passenger so carried was carried at a loss.

Jitneys Barred in Dallas, Tex.—The case of the State of Texas against the City Commissioners of Dallas, wherein the constitutionality of the ordinance enacted by the city of Dallas regulating the jitneys out of existence was attacked, has been dismissed in the District Court of Travis County. The state had obtained a temporary injunction restraining the city of Dallas from enforcing the jitney ordinance which prohibited the jitneys from operating on or upon certain downtown business streets in the city of Dallas. When the State Supreme Court decided what was regarded as a companion case adversely to the jitney men, it was decided to dismiss the case in the Travis County District Court. This dismissal ends all Dallas jitney litigation.

Personal Mention

Mr. Hedley Made President

Operator of Proved Ability Has Been Made Chief of New York Rapid Transit System

Frank Hedley, vice-president and general manager of the Interborough Rapid Transit Company, New York, N. Y., has been elected president to succeed the late Theodore P. Shonts. He will continue to perform the duties of general manager.

Mr. Hedley is very well known in the electric railway and steam railroad circles in the East. He is a former president of the New York Electric Railway Association and of the New York Railroad Club, and has been a regular attendant at the conventions of the American Electric Railway Association since he foresook the steam railroad operating field.

The history of the Hedley family is probably without parallel in railroad development. It includes men of four generations, all of whom have made important contributions to the railroad art. William Hedley, the pioneer and great, great uncle



FRANK HEDLEY

of the new president of the Interborough Rapid Transit Company, built "Puffing Billy," the first successful railroad locomotive in the world to run on smooth rails. Barnabas Hedley, a nephew to William Hedley, was the first superintendent of the New Castle & North Shields Railroad. His son, James, the father of Frank Hedley, also took an active part in the development of steam railroading in England. James Hedley was superintendent of the York & North Midland Railway, opened several new railroad lines in England and frequently acted as locomotive driver for Queen Victoria and other members of the royal family.

Frank Hedley, the subject of this sketch, was born at Maidstone, Kent, England, in 1864. He received a common school education and learned the trade of machinist at Maidstone. He came to this country in 1882 and the first two years was a machinist in the Jersey City shops of the Erie Railroad, following which he was employed in the same capacity in the New York Central & Hudson River Railroad shops for a few months. He next became a machinist with the Manhattan Elevated Railway, New York, and in 1885 was made

assistant general foreman in the locomotive department of the company.

In 1889 he was appointed master mechanic of the Kings County Elevated Railroad, Brooklyn, resigning in 1893 to become general superintendent of motive power and rolling stock for the South Side Elevated Railroad, Chicago. A few months later he was appointed general superintendent of the Lake Street Elevated Railroad, which was the first elevated railway to adopt electricity as motive power.

Less than two years after going to Chicago he was appointed consulting engineer by the late Charles T. Yerkes in addition to the duties of the other offices, and retained this position throughout the construction of the Northwestern Elevated and the Chicago Union Loop. He organized the operating forces of these three elevated systems and had charge of the operation of the lines as general superintendent.

In January, 1903, Mr. Hedley was appointed general superintendent of the Interborough Rapid Transit Company and the following year became general manager. On July 1, 1908, he was elected vice-president and general manager of the company, being responsible for the operation of all the elevated and subway lines in the boroughs of Manhattan and the Bronx and the subway extension to Brooklyn.

When the surface lines of the old Metropolitan Street Railway, New York, passed through receivership and foreclosure to the New York Railways and to financial interests identified with the Interborough Rapid Transit Company, Mr. Hedley was elected vice-president and general manager of the company in addition to his duties with the Interborough Company.

Stephen Crute, who for the last two years has been general manager of the Danbury & Bethel Street Railway, Danbury, Conn., has resigned to take an executive position with the National Acceptance Corporation, Boston, Mass.

R. A. Leussler, who has been assistant general manager of the Omaha & Council Bluffs Street Railway, Omaha, Neb., since 1906, has been appointed general manager of the company, following the resignation of W. A. Smith, as noted elsewhere in this issue of the *ELECTRIC RAILWAY JOURNAL*.

John H. Pardee, president of the American Electric Railway Association, has started on a trip to Manila, P. I., for the purpose of visiting the Manila Electric Railway & Light Company and other interests of the J. G. White Management Corporation. He will be absent from the home office in New York for at least three months.

W. A. Smith, first vice-president and general manager of the Omaha & Council Bluffs Street Railway, Omaha, Neb., has resigned from the general managership, retaining the vice-presidency. He will be in charge of the affairs of the company until a successor shall have been elected to succeed the late Frank T. Hamilton. Mr. Smith has been general manager of local traction company since the days of horse cars.

Charles E. Elmquist has resigned as solicitor of the National Association of Railway & Utilities Commissioners. He will return to St. Paul, Minn., where he will resume the practice of law as a member of the firm of Clapp & Macartney.

Mr. Sullivan at Tacoma

Leaves Mahoning & Shenango System to Become General Manager There for Stone & Webster Properties

Richard T. Sullivan, general manager of the Mahoning & Shenango Railway & Light Company, Youngstown, Ohio, has resigned to accept a position with Stone & Webster as general manager of their properties at Tacoma, Wash. Mr. Sullivan succeeds Louis H. Bean, resigned. The system of which Mr. Sullivan will be in charge comprises the Puget Sound Electric Railway, the Tacoma Railway & Power Company, the Pacific Traction Company, and the Tacoma district of the Puget Sound Traction, Light & Power Company.

Mr. Sullivan became connected with the Mahoning & Shenango Railway & Light Company in 1916, and was appointed general manager the following year. He was born in Newton, Mass., where he attended public school. He later attended the Massachusetts Institute of Technology and Harvard University, receiving the degree of electrical engineer from the latter in-



R. T. SULLIVAN

stitution in 1906. He subsequently became connected with the Stone & Webster Management Association.

In 1908 he was appointed general superintendent of the city and interurban railways of the Houston (Tex.) Electric Company, retaining that position for eight years. During that time he was engaged in several investigations for Stone & Webster which involved extended trips to the principal cities of the North and East as well as to the Pacific Coast. He resigned from his position at Houston to join the Mahoning & Shenango system as manager of railways.

Leroy O. Gordon, has resigned as general manager of the Jackson Light & Traction Company, Jackson, Miss. Mr. Gordon will join the engineering department of the American Public Utilities Company, Grand Rapids, Mich. He was appointed general manager of the Jackson Light & Traction Company in 1916. Mr. Gordon entered the employ of the General Electric Company in 1902, remaining with the company for ten years. He resigned in 1912 to take the position of general manager of the Valparaiso (Ind.) Lighting Company.

Herbert D. Flagg, formerly a captain of Coast Artillery, has been appointed chief engineer for the Public Service Commission of the State of Washington, succeeding D. F. McCurrach, resigned.

Frederick T. Royce has relinquished his position as general manager of the Brooklyn (N. Y.) Rapid Transit Company. Mr. Royce will act hereafter in an advisory capacity to Receiver Lindley M. Garrison on questions of finance and administration.

William S. Menden, assistant general manager of the Brooklyn (N. Y.) Rapid Transit Company, has been appointed general manager of the company by Lindley M. Garrison, receiver. Mr. Menden was formerly assistant to Timothy S. Williams, president of the company.

Edward Dana, who became acting general manager of the Boston (Mass.) Elevated Railway following the resignation of C. D. Emmons, now president of the United Railways & Electric Company, Baltimore, Md., has been appointed general manager of the company at Boston. Mr. Dana was the subject of a biographical sketch in the issue of the *ELECTRIC RAILWAY JOURNAL* for Aug. 16, 1919, page 364.

Charles H. Jones, who succeeds E. J. Blair as electrical engineer of the Elevated Railways of Chicago, has spent practically all of his time, since completing his course at the Armour Institute of Technology in 1909, with his present employer. He started in as a storage-battery maintainer, and worked up to substation operator, line foreman, general foreman of electrical construction, assistant electrical engineer and finally to acting electrical engineer during Mr. Blair's term in the army. On returning to the Elevated Railways, Mr. Blair was appointed organization engineer and Mr. Jones became electrical engineer of the company.

M. G. Stratton, general manager of the Shore Line Electric Railway, Norwich, Conn., has resigned. Mr. Stratton joined the company two years ago after being connected with the firm of Sanderson & Porter, New York engineers, since 1913. Before his association with Sanderson & Porter he was general manager of the Northumberland County Gas & Electric Company, Sudbury, Pa., for two years. He was graduated from Cornell University with the degree of Electrical Engineer in 1891. For the next two years he was connected with the New York Edison Company and for the following four years he acted as superintendent of the Lawrence (Mass.) Gas Company. He has been connected at one time or another in various capacities with several other public utility companies in the East.

Colonel T. H. Dillon, formerly of the Engineers Corps, U. S. Army, has been appointed professor of electrical engineering of the Massachusetts Institute of Technology, where he will make a specialty of instruction in the problems of electric railways, including the electrification of steam railroads, and in the problems of power transmission. Colonel Dillon is a graduate of West Point in 1904 and has served in the Engineers Corps in Cuba, the Philippines, in Panama, and in this country. In 1918 he went to France as colonel of the 37th Engineers, a notable electrical and mechanical engineering regiment, and in France was deputy chief engineer of the First Army of the A. E. F. during the St. Mihiel, Aisne-Marne, and Argonne-Meuse campaigns.

Mr. Seely, General Manager

Goes to Youngstown to Direct Mahoning & Shenango System, Succeeding Richard T. Sullivan

Garrett T. Seely, assistant general manager of the Metropolitan West Side Elevated Railway and the Northwestern Elevated Railroad, Chicago, Ill., has been appointed vice-president and general manager of the Mahoning & Shenango Railway & Light Company, Youngstown, Ohio. Mr. Seely succeeds Richard T. Sullivan as general manager of the Mahoning & Shenango system.

Mr. Seely was born in 1876 at Oswego, Ohio. Following his graduation from the University of Illinois in 1899 he was employed for a time by the Atchison, Topeka & Santa Fe Railroad. In 1900 and 1901 he was engaged in engineering work on track elevation in Chicago. For the next seven years he served as engineer of maintenance of the South Side Elevated Railroad, Chicago.



G. T. SEELY

He remained with the company for several years, becoming assistant general manager and later vice-president and general manager. He resigned in 1911 to become assistant general manager of the consolidated system of Chicago elevated railways. He is a vice-president of the Transportation & Traffic Association of the American Electric Railway Association and a member of the Western Society of Engineers.

Colonel Blair Returns to Chicago

E. J. Blair who served during the war first as captain and finally as lieutenant-colonel in the Engineer Corps, has returned to the Chicago (Ill.) Elevated Railways and has the title of "Organization Engineer." In his present position, his task is to develop and carry out a systematic analysis of the company's operations in all departments, and to go into every detail of the expenditure of money. It is expected that he will apply the experience gained in army life to elevated railway affairs, with a view to bringing about economies and increasing efficiency. The department of which Mr. Blair is the head is a new one.

Before going into the United States Army Mr. Blair was electrical engineer for the Elevated Railways and up to that time had been with the company since his graduation from Cornell University in 1905. Before the consolidation of the several elevated companies in 1911 he was employed in various capacities by the Metropolitan

West Side Elevated Railway, for the last two years of its separate existence, being its electrical engineer. Before the war he was very active in the work of the American Electric Railway Engineering Association. He served on technical committees of the association, and also was particularly helpful to the local company section in Chicago. He early saw in the company section an opportunity to interest the employees in each other and in the company problems, and of making them a part of the industry as a whole.

Obituary

George W. Elkins, Philadelphia capitalist, died at the Philadelphia Country Club on Oct. 23 after an attack of apoplexy. Mr. Elkins, who was sixty-one years of age, had been in poor health for some time. Among the corporations in which he was financially interested were the Philadelphia Rapid Transit Company, the Union Traction Company, Philadelphia, and the Metropolitan Street Railway, New York City.

James N. Wallace, banker, died suddenly of heart disease on Oct. 10 at his home in Nyack, N. Y. Mr. Wallace, who was president of the Central Union Trust Company, New York City, was identified with a number of electric railway companies, being a member of the board of directors of the New York Municipal Railroad Corporation, the Brooklyn Rapid Transit Company and the Brooklyn Heights Railroad.

Eugene Chamberlain, at one time superintendent of equipment of the Brooklyn (N. Y.) Rapid Transit Company, died at his home in Mount Vernon, N. Y., on Oct. 2. Mr. Chamberlain, who was seventy years of age, retired recently from the position of manager of the equipment repair pool of the New York Central Lines. Most of his life was devoted to steam railroad work, except for a period prior to 1904 during which Mr. Chamberlain was connected with the electric Railway system in Brooklyn.

William T. Goundie, who at one time was vice-president and general manager of the Kings County Elevated Railroad, Brooklyn, N. Y., died on Oct. 28 at the age of seventy-two years. Mr. Goundie was born at Bethlehem, Pa. He studied railroading, and in 1884 became superintendent of the Manhattan Elevated Railway, New York. He was made vice-president and general manager of the Kings County Elevated Railroad in 1888, and operated the first elevated train that ran through Brooklyn. When the road was absorbed by the Brooklyn Rapid Transit Company he retired.

John A. Lahrmer, superintendent of the Columbus, Delaware & Marion Electric Company, died at his home in Columbus, Ohio, on Oct. 9. He was born in Jackson County, Ohio, forty-seven years ago. At the age of twenty he secured a position as conductor on the city line at Columbus, and a few years later was employed as an inspector on the Ohio Electric Railway. From this position he went to the Columbus, Delaware & Marion Railway, the predecessor of the Columbus, Marion & Delaware Electric Company, as superintendent. Mr. Lahrmer had been ill for about two years.

Manufactures and the Markets

DISCUSSIONS OF MARKET AND TRADE CONDITIONS FOR THE MANUFACTURER
SALESMAN AND PURCHASING AGENT
ROLLING STOCK PURCHASES BUSINESS ANNOUNCEMENTS

Door and Step Control Market Active

Good Sales Result from Remodeling of Cars in Many Localities—Manufacturing Conditions Satisfactory

A large percentage of the work now being done in company repair shops is in the remodeling of cars to have safety car features. While in many places the amount of work is in actually installing door and step control, still considerable is being done in preparing cars for installation and in planning and estimating on cars to be equipped.

The business is being conducted on an extensive scale and a number of large orders for equipment have been received from several central Atlantic cities where large numbers of cars are being remodeled. In the South and Southwest a great deal of this work is being carried on and the aggregate of cars being changed over is considerable.

Deliveries on door engines and step control equipment are being made promptly. Great faith is being shown in the one-man safety car by the continued approval of these equipments by railway managers.

Prices are being held down as conservatively as they possibly can be. Although there have been advances in the past, they were less in proportion than the advances in the price of raw materials. This was made possible only through economies instituted in the manufacturing plants. One large manufacturer who has been making prompt deliveries on large quantities advises that no increase in price has been made in the past six months and that for the present at least no increase in price is contemplated.

Good Heater Orders Placed Recently

Manufacturers' Space Taken up For Some Time to Come on Present Orders

Business in the heater line is good and manufacturers are having their hands full to get out orders now going through their shops. It is known that business has been better during the past two months than at any time during the present year. This is on account of a number of large orders which have been placed recently and which will be sufficient to keep the manufacturers' space filled for some months to come. The volume of business in repair part stocks has also increased but is still below normal. Deliveries are fair, however, with three to four weeks' time being required on orders of considerable size. On large orders for complete heating units and on thermostats, one company advises that it is keeping up with car builders' requirements.

Some good business has been looked forward to in safety car heater equipments and a number of safety car orders are now being placed. One of the most important sales made recently is for 3,000 truss-plank heaters for the 300 safety cars which are to be built by the J. G. Brill Company.

These cars are for stock purposes and will be standard throughout. One-half of the cars will be equipped with eight heaters per car while the remainder will have twelve heaters per car.

Another order of considerable size is one which has just been placed by the Eastern Massachusetts Street Railway, for 2,400 heaters and 200 thermostats to be used on the 200 safety cars recently ordered by that company. Another order for heaters is to equip the thirty one-man cars recently placed by the Virginia Railway & Power Company. In addition to these sales the New York Municipal Railway will very shortly place orders for heaters for the 200 subway cars now under construction. The requirements are for thirty heaters per car or a total of 6,000 heaters.

Labor conditions, although not entirely satisfactory, are considered fair. Manufacturers generally find it difficult to get good help, but this is true at the present time in nearly every industry. One company which has had a strike in its plant for several weeks has settled its difficulties amicably.

It is believed that with good orders on the books and with prospects of considerable amount of business being placed within the next few months, the heater business is considered to be in a very satisfactory condition. On requirements now going through manufacturers' plants, one company has advised that it is ahead of the schedule on heaters for the 200 safety cars being built by the J. G. Brill Company for the Brooklyn Rapid Transit System.

New Engineering Firm

Harry Barker and Robert C. Wheeler have opened an office as consulting engineers at 170 Broadway, New York City. Special attention will be given to public utility engineering, including valuations, rates, operation and management; to hydraulics; to power development and utilization; water supply and purification; sewerage and sewage disposal; municipal problems, including city transportation and civic improvements; development of new processes, and reports for investors. Mr. Barker for several years was an editor of *Engineering News* and *Engineering News-Record*. He is also the author of the treatise "Public Utility Rates," published in 1917 by the McGraw-Hill Book Company. During the war he was assistant engineer depot officer at the New York port of embarkation, and an engineer of camp maintenance and utility operation in the cantonment and construction divisions. Recently he has been associated with the Engineers' Valuation Board for the Pittsburgh Railways. Mr. Wheeler has for ten years specialized as an engineer in the design, construction and operation of water supply and purification plants, sewers and sewage disposal works. His earlier work was in railroad construction. During the war he served as Assistant Port Utilities Officer at Newport News, Va., and in June, 1919, was appointed chief of the water supply section of the construction division of the army.

Malleable Iron Users Face Difficulties

Line Material Manufacturers Greatly Hampered by Uncertain Delivery Situation—Labor Shortage Serious and Growing Worse

The malleable situation is serious. The industry is facing a labor shortage in the foundries with a result that deliveries are being held up. Line material manufacturers have long since split up their requirements among a number of different foundries but conditions in one place are not much better than in another and hence there is a considerable amount of work continually being held up, due practically entirely to the unprecedented labor shortage which confronts the manufacturers.

The best estimate received on malleables for orders of precedence which are now going through the shops is two months, although a considerable amount of business is being quoted on longer deliveries.

Malleables for trolley fittings and line material are coming through in from six to eight weeks, according to one manufacturer, but there is no telling what the conditions will be a month from now. Although deliveries are now generally said to be two to three months, it must not be forgotten that there have been times when deliveries were far worse than that at the present time. For instance, in the early part of 1917 and even later, deliveries were quoted at from five to eight months. One large malleable manufacturer advises that its plant capacity is booked ahead for months and that it will be unable for a long time to take care of some of its present orders.

Much is heard of malleable capacity idle. In connection with the insistent demand, the American Malleable Casting Association reports that this condition has been anticipated and that ample facilities have been provided for both the present and future expansion of the industry. At the present time, however, the shortage of unskilled labor will not permit this great capacity being used.

The result is that fully 200,000 tons of malleable capacity is today idle but would be immediately available if the necessary labor could be secured. Improvement in this direction is not looked forward to with any great hope until the activities of other industries are curtailed or until there is a flow of immigration sufficient to build up a supply of labor available for foundry work. This means, therefore, a large percentage of capacity idle continuously in every plant regardless of heavy unfilled orders that may be on hand.

One cause for delay in production schedules is the unprecedented demand of the automobile trade for malleables. The volume of this business is so great that it is everywhere crowding out other lines, and shop space in foundries which was formerly devoted to railway or allied lines, are now turning out castings for the automobile industries. Under the circumstances, therefore, the deliveries which are quoted above do not seem unreasonable.

Rolling Stock

Havana (Cuba) Central Railroad is building fifty cars in its shops.

Danbury & Bethel Street Railway, Danbury, Conn., has ordered two safety cars.

Harrisburg (Pa.) Railway has recently ordered five safety cars from the J. G. Brill Company.

J. G. Brill Company, Philadelphia, Pa., expects to start shortly on 300 safety cars which it will build for stock purposes.

Austin (Tex.) Street Railway has placed an order with the National Safety Car & Equipment Company for three safety cars.

Nashua (N. H.) Street Railway will shortly receive four of the eight one-man cars recently purchased from the Wason Manufacturing Company.

Bombay (India) Electric Tramway Company is reported to have purchased 150 railway trucks from the J. G. Brill Company, Philadelphia, Pa.

Rio Janeiro (Brazil) Tramsways is building fifty cars in its shops and has placed orders for equipment and accessories with the J. G. Brill Company.

Montgomery Light & Traction Company, Montgomery, Ala., through its receiver, Ray Rushton, has been authorized by the court to expend \$55,000 for the purchase of ten new cars.

Eastern Massachusetts Street Railway, Boston, Mass., noted in the Aug. 2 issue of the *ELECTRIC RAILWAY JOURNAL* as having placed an order for 100 safety cars with the J. G. Brill Company, has ordered an additional 100 cars from the same company. The details of the 200 cars now on order is as follows:

Number of cars.....	200
Date of order.....	100—Aug. 21, 1919; 100—Sept. 23, 1919
Dates of delivery.....	100 cars Nov. 10-Dec. 20, 1919; 100 cars Dec. 20-Jan. 20, 1920
Builder.....	J. G. Brill Co.
Type.....	Birney Safety
Capacity.....	32
Weight.....	Approx. 16,500 lb.
Length over all.....	28 ft. 1/2 in.
Truck wheelbase.....	8 ft. 0 in.
Width over all.....	8 ft. 0 in.
Height.....	12 ft. 0 in.
Body.....	Steel
Interior trim.....	Cherry
Headlining.....	Agasote
Roof.....	Arch
Air brakes.....	West, DH10
Axles.....	Refinished—Old
Car signal system.....	Consolidated
Trolley bases.....	100 Cars G. E.; 100 Cars West.
Trolley wheels or shoes.....	Wheels
Trucks.....	Rebuilt trucks to be used
Ventilators.....	Brill exhaust
Conduits and junction boxes.....	100 cars G. E.; 100 Cars West.
Control.....	K-10
Couplers.....	Drawbars
Fixtures.....	Curtain Supply
Curtain material.....	Pantasote
Designation signs.....	Hunter
Door operating mechanism.....	Safety Car Devices Co.
Fare boxes.....	Johnson
Fenders.....	H. B. Lifeguard
Gears and pinions.....	100 cars G. E.; 100 cars Nuttall
Hand brakes.....	Brill
Heater equipment.....	Consolidated
Headlights.....	Crouse-Hinds incandescent
Journal boxes.....	Peckham Standard
Lightning arresters.....	100 cars G. E.; 100 cars West.
Motors.....	100 cars—2 West. 508; 100 cars—2 G. E. 264
Motors.....	Outside hung
Varnish.....	Old Dutch system
Registers.....	International
Sanders.....	Ohio Brass Co.—pneumatic
Sash fixtures.....	Edwards
Seats.....	16 Brill cross
Seating material.....	Rattan finish
Slack adjuster.....	None
Step treads.....	Ferrallon
Trolley retrievers.....	Wilson retrievers
Wheels.....	26 in. steel

Trade Notes

Ward Leonard Electric Company, Mount Vernon, N. Y., is building a two-story addition to its factory.

American Transformer Company, Newark, N. J., has prepared plans for alterations and improvements in its plant, estimated to cost \$5,700.

United Electric Construction Company, Ltd., New York, contracting electrical engineers, has opened a Cleveland office in the Hippodrome Annex.

Page & Hill Company, Minneapolis, Minn., has recently purchased at 15-ton Browning locomotive crane to facilitate the more rapid handling of poles.

J. H. Parker & Son, Inc., porcelain manufacturers, have opened a New York office at 50 Church Street, with J. W. Tompkins as manager. The Trenton office has been discontinued.

E. B. Badger & Sons Company, Boston, manufacturer of spray washers, cooling towers, etc., has opened an office in Chicago with Harry E. Wheeler as manager.

American Insulation Company, Roberts and Stokley Streets, Philadelphia, will represent the Philip Carey Company, in the Philadelphia district in all Carey lines.

Diesel Engine Company, St. Louis, Mo., announces that it has opened an Eastern sales office at No. 60 Broadway, New York, in charge of George D. Pogue, Eastern sales agent, and Stanley Wright assistant.

Schutte & Koerting Company, New York, N. Y., announces that H. W. Philbrook, formerly with the General Electric Company of Schenectady, N. Y., has been appointed district manager of its New York office, 50 Church Street.

Curtain Supply Company, Chicago, Ill., announces that T. W. Holt, its new assistant general manager, has been elected a director and secretary of the company in place of William S. Estell, resigned. Mr. Holt formerly was with the Pressed Steel Car Company, having charge of its munitions work during the war.

Roller-Smith Company, New York, N. Y., announces the appointment of the Alfred Collyer Company, 83 Craig Street West, Montreal, Canada, as its agent for the Dominion of Canada and Newfoundland. It will handle products of instruments and circuit breakers. The latter company has a branch office at 183 George Street, Toronto.

James S. Hearons has become affiliated with the Gustin-Bacon Manufacturing Company, Kansas City, Mo., as railroad representative. Since his return from France in July, where he held a commission as captain in the 49th Railway Engineers, Mr. Hearons has been with the Garlock Packing Company, St. Louis, with which he was connected prior to his entering the service.

Dugald C. Jackson and Edward L. Moreland, consulting engineers, announce that after their absence in France in the Engineers Corps, U. S. A., they have now resumed their practice at 387 Washington Street, Boston, Mass., which was formerly conducted in association with William B. Jackson, now retired, under the firm name of D. C. & Wm. B. Jackson. Arthur L. Nelson has become associated with the firm for the purpose of giving particular attention to the design and the supervision of construction of power plants and transmission systems.

Templeton, Kenly & Company, Ltd., Chicago, Ill., announces that H. W. Ross, formerly a major in the Motor Transport Corps and member of the General Purchasing Board in charge of engineering and purchasing in France, has been elected vice-president of the company and will take charge of the general sales management of Simplex jacks. Before returning to this country, Major Ross closed out the government's immense accumulation of motor cars and equipment as officer in charge of sales of this type of equipment with the United States Liquidation Committee.

Columbia Machine Works & Malleable Iron Company, Brooklyn, N. Y., announces the appointment of J. L. Whittaker as its New England representative with headquarters in Boston. Mr. Whittaker will look after this territory in place of the late W. R. Kerschner, formerly vice-president of the company. Ernest Keller, formerly with the Westinghouse Electric & Manufacturing Company, will handle Pennsylvania, District of Columbia, Maryland, Virginia, West Virginia and a part of New York State. S. A. Redding will represent the company in Brazil.

Ernest Keller has resigned from Westinghouse Electric & Manufacturing Company to become sales representative for the Columbia Machine Works & Malleable Iron Company. Mr. Keller has been connected with the former company for the past ten years and received his early training in the electric railway field in the shops of the Brooklyn Rapid Transit Company. He entered the employ of this latter company in May, 1897, as stock clerk, and was advanced rapidly through the mechanical department as wireman's helper, road inspector, wireman, controller man, assistant foreman, and finally foreman of the eastern division inspection shop, which maintains the elevated equipment for that division.

New Advertising Literature

Electric Service Supplies Company, Philadelphia, Pa.: Booklet on floodlighting projectors.

Wilson Welder & Metals Company, New York, N. Y.: Booklet about the repairs made by its electric welders.

Engineer Company, New York, N. Y.: Bulletin on the construction and application of Turner baffle walls for boilers.

Lux Manufacturing Company, 123 East Kinney Street, Newark, N. J.: Booklet containing prices, engineering data and general information about Lux lamps.

Curtain Supply Company, Chicago, Ill.: Illustrated circular on the ring curtain fixture, showing the principles involved and the types which are manufactured.

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.: Publication No. 1572-A about its protective relays and their use on alternating-current systems.

American Steam Conveyor Corporation, Chicago and New York: Mailing folder entitled "A Pertinent Ash Pile Question," explaining the advantages of its steam ash conveyor.

Condit Electrical Manufacturing Company, South Boston, Mass.: Bulletin No. 413-2 descriptive of type E-3 oil switches and circuit breakers. This publication supersedes Bulletin No. 413.