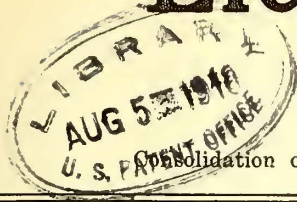


# Electric Railway Journal



Consolidation of STREET RAILWAY JOURNAL and ELECTRIC RAILWAY REVIEW

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Number 5

## Vacation Awards for Accident Prevention

THE conscientious operator is ever seeking some way of rewarding the careful motorman and conductor. Money bonuses are the first to come to mind, but these often prove less attractive to the recipient than the equivalent in time off. Perhaps the reason for this is that an extra \$2.50 or \$3.50 looks just like the kind of payment which he gets for ten hours labor and does not seem a large amount to pay for three or six months of freedom from accidents. So why all this bother to be super-alert?

About a day off there is more glamor. It is a return to freedom and to recuperation which in themselves will help him to keep the accident slate clean when he goes back to work. The vacation means more to him than the equivalent in money. The length of such a vacation should depend upon accident conditions. The critical point in the graph would be where the vacations cost more than the accident saving. Whatever basis is worked out, however, it should be an individual rather than a group award as there is no reason why an indifferent motorman should get the same treatment as the man who is extra careful.

## The One-Man Car Now a National Question

THE unadorned term "one-man car" has meant so many different things that we are happy to be able to put on record in this issue the statement on that subject by the War Board of the American Electric Railway Association. We are still happier to add that this statement was prepared in response to the request of the National War Labor Board.

In the course of the electric railway wage hearings which this board is conducting it has been natural to bring up any and every means that would permit electric railways to operate at lower costs. One-man cars were among the means mentioned, and deservedly so, for the one-man car has also proved wonderfully effective in giving more service to the public. One need read only the association's digest of one-man car service in ten cities of 21,000 to 400,000 population to realize that the right kind of one-man car service is a boon to the public as well as to the railway.

These results have been achieved, of course, only with those one-man cars in which the car operator's desires have been met by the installation of automatic equipment to replace hand labor, and in which the passenger's desires have been met by shorter headways and faster schedules. Those who object to such an innovation are as short-sighted as the workmen who destroyed the first typesetting machines. In fact, they are even

more shortsighted, for it is certain that only the use of the one-man automatic car can save hundreds of electric railways and thousands of electric railway jobs even if we pay no attention to what this car means as a conservator of the resources of the nation.

## There is a Vital Relation Between Wages and Electric Railway Incomes

WHEN once the public is convinced that additional incomes allowed to electric railways will largely go into increases in employees' wages, there will be much less reluctance to allow the companies to collect more money. People seem to have a prejudice against providing for a return upon capital, but as a rule they have more sympathy with any movement toward reasonable increases in wages. It would be futile to urge that the capital now invested in the electric railway business be allowed to earn more than a reasonable return, but the arguments of employers and employees alike to the effect that more money must be collected if higher wages are to be paid are receiving careful attention from governing bodies and from the public itself.

We have no desire at this time to argue regarding the relative rights of labor and capital to a return upon their respective investments. We believe that the workers should be well paid, wages being determined upon a basis of justice, and we believe that in the long run justice will be meted out to capital as well. What we want now to emphasize is that the necessity for paying higher wages is a much more potent argument with the public than high prices of materials and difficulty of attracting new capital. The electric railways should make the most of the situation, frankly stating, however, that the necessity for granting higher wages is but one of several reasons for increases in fares.

Somehow or other fares should be more or less automatically adjusted with cost of labor, just as modern electric power contracts involve rates contingent upon the price of fuel. If coal costs more per ton, the kilowatt-hour in many companies' power contracts advances in price automatically by an equitable amount. Such a provision is essentially made in certain modern electric railway franchises which permit fare increases when the working capital falls below a fixed amount, and provide for corresponding reductions.

Higher wages are justified and must come both on account of competition and increased cost and standards of living; by way of corollary, higher fares are necessary (that is, more income per passenger-mile) to pay not only the higher wages but also the higher cost of money and of supplies. We look forward to the day when an increase in the cost of a car ride will be viewed with the same equanimity as a boost in the price of milk or mushrooms.



## Roundabout Is the Shortest Way in Washington

THE customary rectangular layout of American cities doubtless accounts largely for the absence of the belt, circle or ring line to be found in a number of the larger European cities. Hence, it is worth stating that Washington, for which John A. Beeler has just suggested a belt line, also happens to be a city with a large number of radial avenues with the Capitol, the White House and various monument squares as the starting points. The need for the belt line is the enormous expansion of the Army and Navy departments in what, from the traffic standpoint, is an offside portion of Washington. In fact, a distressingly large area of beautiful park ground has been destroyed to make room for both temporary and permanent buildings. Now has come the job of transporting about 25,000 people with satisfaction to themselves and with minimum expense to the railway. Two ways are possible: The first, to route cars through from all over the city; the second, to distribute the riders via a belt line with transfers to other lines.

At first glance the through-routing scheme looks the more satisfactory, because the distances are less. Actually it is not so desirable because of the time lost through the inefficient use of cars in the congested area. Moreover, in this particular case, it was found that through routing would have meant the installation of a much larger amount of new special work.

In brief, the proposed belt line is not too far from the center of the city to be wasteful of mileage and time; it would tend to subtract from the central congestion rather than to add thereto and, finally, it would be free from the handicap of European belt lines in having a large number of free transfer points, since there are fully twenty in 6 miles. In fact, the shortness of the line, its inside location and the ease with which passengers can transfer to the nearest through route offer a direct solution for not the least important problem brought on by this mightiest of wars.

## How Freight Can Be Hauled at No Cost for Power Plant or Track!

ONE of the ghosts of the average operating man contemplating freight haulage is that the power house and substation equipment will not permit it. This one excuse has in too many cases stood in the way of the development of a freight service that would be of great economic value to the community served. Hence, it would be well for all railway men to analyze their power conditions before permitting this threadbare excuse to cheat them out of a lucrative revenue and the possibility of rendering an invaluable service to their communities.

Analysis will show that for freight service, whether the motive power equipment is placed under a flat car or regular electric locomotive, there must be some differentiation in the design from that for passenger propulsion. Freight trains need not move at passenger speeds, so that the use of passenger motive power equipment should be eliminated entirely, when freight service is considered. The fact that many roads operate freight motor cars on practically passenger time has shown operating officials that the power demands of this service are heavy and has led them to believe that

all freight service exacts a large amount of power. Since speed is obtained at the expense of power and high speed is not necessary, two ways are open:

1. Equip freight motor cars with low-speed locomotive motors, capable of propelling the motor car and hauling two or three trailers. This type of operation could be conducted in many cases during the day time between passenger trains, if long sidings are provided.

2. Haul standard steam railroad freight cars at night with low-speed-motor electric locomotives.

During these off-peak hours on many systems the property is lying practically idle so that any use at such times will not only increase the revenue but will improve the load factor. In other words, there would be no cost for power equipment, simply for the energy used.

## Massachusetts Shows a Good Record of Fare Increases

SINCE early 1913, when the Massachusetts Public Service Commission was established with broader powers than the predecessor board possessed, no fewer than twenty-four of the thirty-seven electric railways under the commission's supervision have been allowed increases in fares. These increases apply to about 1900 miles of line out of 2050 miles operated by the companies in the Bay State, with the exception of the Boston Elevated Railway, which, as our readers know, is now run under a public control law. Expressed in percentage of miles of track, 92½ per cent have raised their fares and 3 per cent more have received permission to do so, leaving only 4½ per cent whose fares are not yet increased. In Boston a 7-cent fare was put into effect on Thursday of this week on all the lines of the Boston Elevated Railway. These figures effectively dispose of the idea still held in some quarters that the commission has been slow to appreciate the financial needs of the roads, and a detailed study of the rates allowed shows that the old nickel fare has at last become outlawed as the measure of a proper charge for service.

As might be expected, the fares allowed under the board's decisions show a wide range. There have been straight increases to 6 and 7 cents on properties serving city as well as suburban and rural territory, and in one case a 10-cent fare has been imposed without enough opposition on the part of the public to require formal proceedings by the commission. An 8-cent fare has been approved for certain lines; reduced-rate tickets have been withdrawn in a number of instances, and the length of the fare zones shortened in others. On still other properties the replacement of the old 5-cent fare system by some form of zone system has taken effect. The maximum rate per mile now authorized on any electric road to the State appears to be 3 cents, while 2½ cents has become common in the face of the advance in steam railroad passenger rates and the still increasing costs of operation. The Massachusetts tariffs now on file at the office of the commission furnish a veritable museum of interest to the electric railway traffic officer and fare specialist.

The public has come to appreciate the need of paying higher fares, but it is doubtful whether the increases so far put into effect are capable at present of yielding a really fair return upon the investment. Case after case analyzed by the commission shows that patronage



has fallen off following any substantial fare increase. The various appeals to thrift and patriotism, combined with the amazing purchase and operation of private automobiles in Massachusetts, have done their part. On the other hand, jitney competition is better regulated to-day than formerly.

Owing to the many conflicting causes present it is obviously impossible to tell at all closely the ratio which should be expected between an increase in fares and the corresponding increase in receipts, but as conditions themselves during the war are constantly changing, this ratio even if known for any property at any particular time would not remain constant for any length of time.

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### Fight—But Don't Forget To Prepare for Peace Problems

PEACE will come some day. Just now, of course, our primary job is to help win the war, but even during these fighting days it is well for men to look ahead to the inevitable readjustment that must come with the end of hostilities. Our allies—even our enemies—have begun in an organized way to prepare for reconstruction. What must we do?

Our Washington representative, Wingrove Bathon, who has made a careful study of the question, answers it in this way: An agency should be created immediately to gather facts now, lay plans now, educate the public now and lead the nation's industries in the victories of peace when the right time comes. He suggests a Readjustment and Reconstruction Commission, appointed by executive order of the President and composed of leaders in all private industrial effort, to be assisted by an Advisory Council of government officials and legislators especially charged with the conduct of affairs vital to the industrial, commercial, transportation, labor, financial and educational worlds.

Beyond the shadow of a doubt such a co-ordinated organization would render a great service to the American people and even to the whole world, in view of the part our resources must play in the general reconstruction. The post-war problems are sure to come. Not only will there be the problems of the orderly reintroduction of returned soldiers into industry, the use of the productive capacity expanded for war needs and the development of export trade, but also the questions of how to deal with the myriad of other subjects upon which, as a result of the times, the public is already doing accelerated thinking. Returning observers tell us that even now in Europe there is a widespread radicalism and extremism hardly dreamed of here. It is not too much to say that our whole economic system will be in a state of flux in the post-war period. It would be folly not to recognize these facts and not to take every possible step to see that the nation advances along lines of the most sound development.

England has already risen to the opportunity and the duty of the hour. Through the Ministry of Reconstruction and its Advisory Council investigations are already under way in such matters as finance, shipping, labor and industrial organization, rural development, the machinery of government, health and education, housing and internal transportation. Take, for example, the two vital topics of labor and internal transportation. The study of the former is covering conciliation

and arbitration, a general labor survey, army demobilization and the like. Committees for the latter are investigating control of public utility societies, town planning and the whole inland system of transport. The ministry is in consultation with the Board of Trade concerning the future of the railways, and an inquiry has been begun into the question of storage and distribution as essential elements in transportation policy.

This country should do likewise, and the public utilities should help the movement in every way. They should, of course, be represented in the national commission, for they will have post-war problems of rates, labor supply, financing, acquisition of new facilities from the manufacturers and other important matters for readjustment. Nor should their importance be depreciated in any way, for their present vital essentiality, which the President and other government officials have been prompt to recognize, will not abate in the slightest degree during the days of reconstruction. Then, as now, maximum utility efficiency will be necessary to the nation's welfare.

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### The Agitation for Higher Fares

IN AN instructive article in the *Survey* for July 20, William L. Ransom, chief counsel for the Public Service Commission for the First District of New York, urges a higher fare for electric railways and gives expression to the following truth which he emphasizes by italics: "The public can have in transportation or public utility service only what it is willing to pay for and there is no way of getting something for nothing for the public, from the public utility, over any considerable period of time." For this reason he believes the municipalities ought not to bar necessary increases in rates merely because they can bar them, but he thinks that in return for the removal of the 5-cent fare limitation the cities might insist on some changes in franchise terms for public protection. Specifically he says: "Lines and portions of lines that are no longer necessary or desirable should be abandoned and not continued as drains upon the resources of the systems. In many instances, rail lines on the surface are obsolete and should give way to improved and more economical facilities. 'Water' should come out of stock; the power of 'extortion' possessed by the holders of 'pioneer franchises,' covering essential links of the present-day system, should be broken. \* \* \* Old franchises, granted in reckless disregard of public rights as to duration, terms and the like, may now be put on a fair, modern social basis."

On the general lines laid down by Mr. Ransom under which electric railways may secure their higher fares, he will find few who will disagree with the terms. The taxation of perpetual franchises has caused them to be considered with less esteem than formerly, and a fair modern franchise which will grant a reasonable return on the investment in the enterprise would be welcomed by most companies, but time is required to establish just and reasonable terms. During this study, there is danger that irreparable harm will be done. The present applications are emergency ones. Let the franchise situation be considered at length, as its importance demands, but do not delay temporary fare relief in the meantime.





SPEEDED-UP TRANSPORTATION HELPS TO WIN THE WAR

## Putting Car Wheels Under Shipbuilders

**Division of Passenger Transportation and Housing of Emergency Fleet Corporation on June 17 Reported Adequate Service in Eighty-five Out of One Hundred and Sixty-four Shipyards—Complete Traffic Relief Secured in Twenty Other Cases, Contracted For in Six and Agreed To in Fourteen—Up to June 1 the Corporation Had Loaned \$6,000,000 for New Railway Facilities**

**S**HIPBUILDERS must have adequate transportation to and from work. This is a national necessity, and the Division of Passenger Transportation and Housing of the Emergency Fleet Corporation is meeting it in a national way. Since this division was formally organized on April 1, it has made marvelous progress in surveying the transportation facilities and requirements in the shipbuilding districts and in aiding electric railways to make the improvements demanded by the win-the-war program.

At its very formation the Division of Passenger Transportation began to hum with activity, and it is still doing so. The results accomplished have been many, but it is impossible even now to give a definite summary. Each day sees new reports from investigators, from men checking up the progress of improvements, from men following the needs of the expanding shipbuilding industry itself. Indeed, nothing but a moving picture would do full justice to the work of the division.

Because the electric railway industry is vitally interested in what is being accomplished, however, this journal is going to give its readers a snapshot of matters as they existed during the first part of June, after more than two months of assiduous effort. This picture does not represent conditions to-day, but it is an indication of the speed and the vigor with which the division is acting, and an earnest of the greater results which are now without doubt an accomplished fact.

To understand the scope of the work along passenger

transportation lines, it is necessary to know that the sea and the lake borders of the United States have been divided into eleven great shipping districts, containing at the latest count 164 shipbuilding companies. The approximate location of the district lines is shown in the accompanying diagram.

As a means of facilitating the work of the Division of Passenger Transportation in eliminating railway deficiencies and in following up adjustments, Director A. Merritt Taylor has organized a force to work in the field. Inasmuch as it does not seem necessary, however, to provide separate field men for each shipbuilding division, Mr. Taylor has grouped some of these districts in such a way that the field-work divisions number seven. They are constituted as follows:

(a) Eastern District: This includes all shipyards in Connecticut, Rhode Island, Massachusetts, New Hampshire and Maine—headquarters, Boston.

(b) New York District: This includes Newark Bay, Staten Island, Hudson River and Long Island—headquarters, New York.

(c) Philadelphia District: This includes the Delaware River shipyards at Bristol, Gloucester and Camden, Philadelphia, Chester and Wilmington—headquarters, Philadelphia.

(d) Chesapeake Bay: This includes shipyards from Baltimore to Newport News—headquarters, Baltimore.

(e) Southern District: This includes shipyards from North Carolina to Texas—headquarters, Jacksonville, Fla.



(f) Pacific District: This includes all shipyards on the Pacific Coast—headquarters, Seattle.

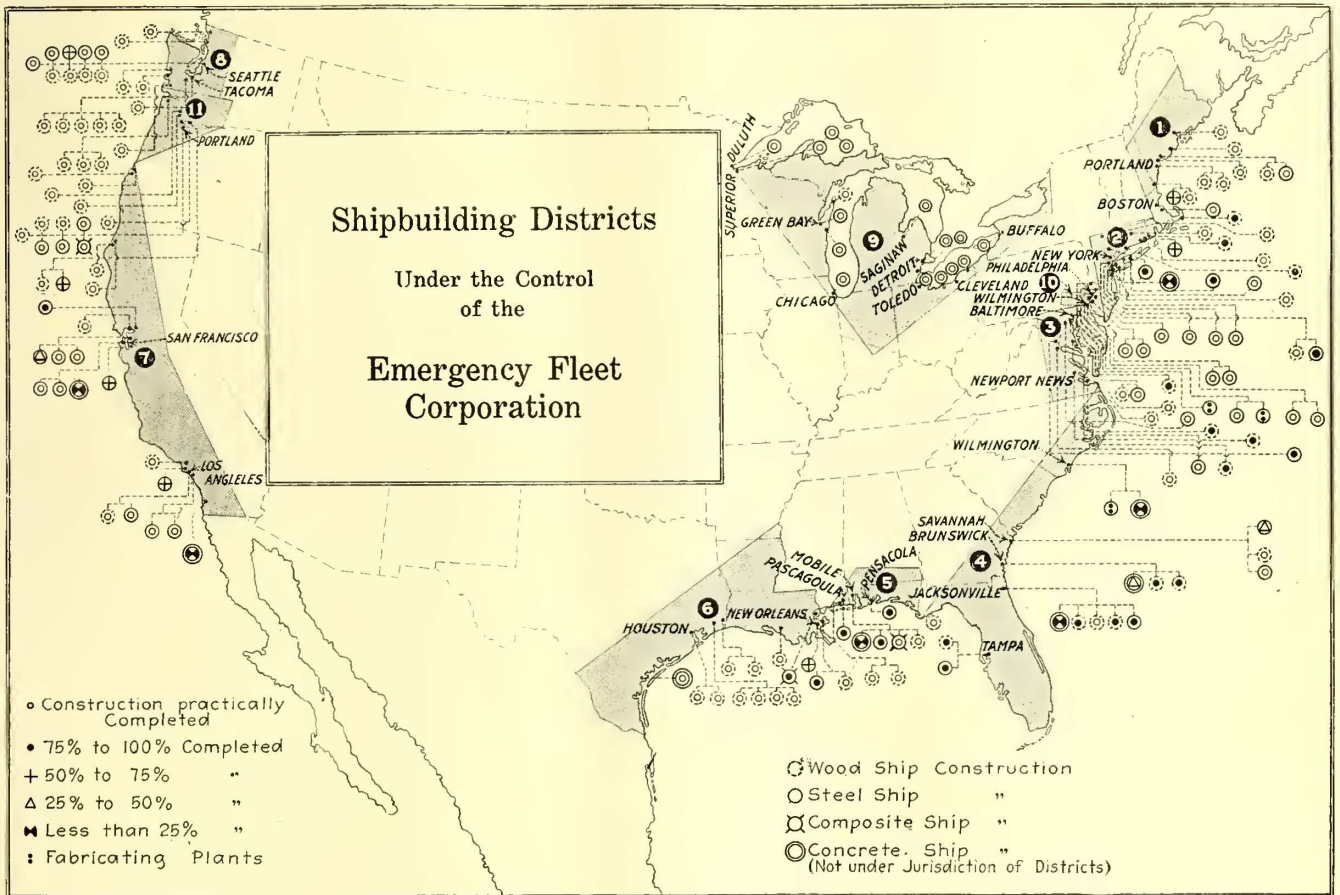
(g) Central District: This includes all shipyards on the Great Lakes—headquarters, Philadelphia.

Each field division is in charge of a district engineer located at the district headquarters. His duties are to keep in close touch with the transportation service rendered to the shipyards in his district, to watch the progress of all railway construction work and to see that additions and betterments agreed to by the railways are actually placed into effect. He also keeps in close touch with the district auditor in checking up contracts and payments authorized thereunder for additional facilities as covered by contracts. The district engineer is expected to give special attention to forecasting the

senger Transportation began at its institution to secure from shipyards and railways, together with an outline of the procedure followed in local examinations. In accordance with this procedure the organization has been carrying on its surveys throughout the country, and the general transportation situation in the nation's shipyards as of June 17 was found to be as shown in the diagram and in Table I on page 188.

**MORE THAN HALF OF SHIPYARDS ARE O. K.**

These exhibits tell their own story of the improving transportation conditions in the shipbuilding districts. Nevertheless, it seems worth while to emphasize here the facts that on June 17 eighty-five out of the 164 shipyards had reported no transportation difficulties at



character and the extent of additional facilities required to provide adequate transportation service for at least six months in advance.

Owing to the growing nature of the work, no fixed organization chart can well be drawn for the whole division. The approximate responsibilities and inter-relationships of the general organization, however, are as shown in the diagram on page 191.

The division is divided into two main sections. One section is devoted entirely to transportation matters and reports through its own officers directly to Mr. Taylor. The other section, which is not shown in detail in the diagram, is concerned only with housing. It is under the supervision of an assistant director, also reporting directly to Mr. Taylor. The two sections share a clerical force and an accounting and statistical department.

The ELECTRIC RAILWAY JOURNAL of May 4 contained a digest of the information which the Division of Pas-

all, and that for the seventy-six which had reported inadequacies complete relief had been secured in twenty cases, had been contracted for in six and had been agreed to in fourteen. In each of the last two cases, too, immediate partial relief had been secured in practically all instances through either the better use of existing facilities or the installation of temporary facilities. The remaining thirty-six shipyards were still under investigation. The foregoing results in the way of relief were obtained partly with and partly without financial aid from the Emergency Fleet Corporation.

**\$6,014,270 ALREADY APPROPRIATED TO AID RAILWAYS**

What the Division of Passenger Transportation is doing to help electric railways put themselves in a position to handle shipbuilding traffic in spite of their restricted resources is more clearly shown by the financial record for the period up to June 1. As shown in Table



TABLE I—HOW THE WORK OF THE DIVISION OF PASSENGER TRANSPORTATION IS PROGRESSING

	June 1	June 6	June 13
Shipyards reporting clear of transportation difficulties.....	83	83	85
Shipyards not reporting.....	8	3	3
Shipyards reporting inadequacies in transportation.....	73	76	76
Complete relief secured.....	13	19	20
Complete relief agreed to and contracted for	12	8	6
Immediate partial relief at these yards secured through better use of existing facilities or installation of temporary facilities.....	4	5	4
Complete relief agreed to and contracts being prepared.....	11	14	14
Immediate partial relief at these yards secured through better use of existing facilities or installation of temporary facilities.....	7	12	12
Under investigation by engineers in the field	10	9	12
Under investigation through district officers, through district supervisors or by correspondence.....	27	26	24

TABLE II—APPROPRIATIONS UNDER CONTRACT WITH EMERGENCY FLEET CORPORATION TO JUNE 1, 1918

Location	Railway Concerned	Work	Cost
Hog Island, Pa.	Philadelphia Rapid Transit Company	Track extensions and purchase of 160 cars	\$3,105,000
Port Newark, N. J.	Philadelphia Railways	Track extension and purchase of eighteen cars	821,739
Camden, N. J.	Public Service Railway	Construction of track and purchase of power house, substation equipment and thirty-three cars	1,240,780
Gloucester, N. J.	Public Service Railway	Track extensions and purchase of ten cars	300,000
Newport News, Va.	Newport News & Hampton Railway, Gas & Electric Company	Track extensions and purchase of ten cars	\$5,457,519
Add 10 per cent for contingencies and margin			546,751
Total appropriations under contract			\$6,014,270

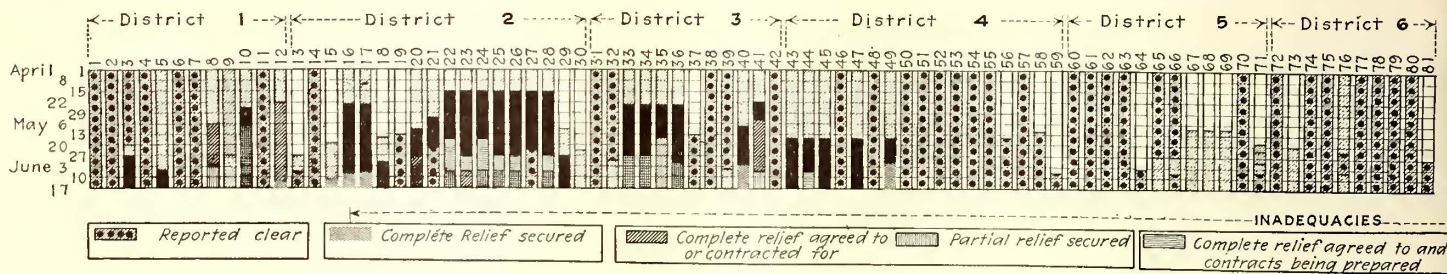
II, the division's appropriations to that date on behalf of the Emergency Fleet Corporation for new railway facilities, authorized under five contracts already signed, totaled \$6,014,270. Since then a contract for \$829,638 has been made in the case of the United Railways & Electric Company, Baltimore, Md.

Up to June the division had reached agreements or recommended additional appropriations in the case of ten other shipyards, the proposed facilities ranging from simple track extensions to track, power and car items. Moreover, the organization had under ad-

ministrations will not grow less in the near future. Table III, showing the past records of employment in representative shipyards and the estimated totals of employees at the end of the next six months, hardly indicates a declining tendency.

PRACTICAL RESULTS ACCOMPLISHED

References have been made in other issues of this journal to the physical improvements which individual electric railways have been enabled to make through the assistance of the Emergency Fleet Corporation, but



WEEKLY PROGRESS BEING MADE BY THE DIVISION OF PASSENGER TRANSPORTATION IN

visement the furnishing of additional cars for six industrial plants handling shipbuilding material and machinery, and it was considering expenditures for track, cars or power equipment in connection with sixteen shipyards. Still another item of expenditure is the amount which the Emergency Fleet Corporation may pay to shipyard workers who operate electric railway cars, in order to bring the railway wage scale up to the shipyard scale, as is already being done in the Staten Island (N. Y.) yards.

In view of the number of shipyards still under investigation and the probable further expansion of already examined shipyards so as to require added passenger transportation, it is evident that the \$6,014,270 of appropriations thus far made may be considerably increased during the coming year. Certainly the transportation work of the electric railways in the shipyard

it is deemed advisable now to present a general outline of what has been accomplished throughout the country up to June 1. Take first the cases in which actual contracts had been made up to that time:

Hog Island.

Electric railway transportation to and from Hog Island, Pa., is supplied by the Philadelphia Rapid Transit Company via its Chester Short Line to a delivery loop at Ninety-fourth Street, Elmwood, about 1½ miles from the shipyard, the passengers being transferred at that point to a shuttle steam train. Additional electric railway facilities are supplied by the Philadelphia Railways, which operates a line from southeastern Philadelphia over the Penrose Ferry Bridge, the route passing Hog Island at a distance of about ½ mile.

Contracts have been executed covering the construction of a double-track branch from the Chester Short Line into the Hog Island shipyard and the purchase of 100 new cars to be operated by the Philadelphia Rapid Transit Company. In the case of the Philadelphia Railways, contracts have been executed covering rehabilitation in South Philadelphia, the construction of a double-track branch from the south end of the Penrose Ferry Bridge into the Hog Island shipyard, the purchase of thirty additional second-hand cars and the rehabilitation of certain existing cars. Thirty additional cars have

TABLE III—ESTIMATED INCREASES IN NUMBER OF SHIPYARD WORKERS

	Number of employees		
	Maximum in 1916	May 1918	Estimated in six months
Camden, N. J.	4,179	10,145	20,000
Newport News, Va.	6,955	9,175	17,300
Chester, Pa.	1,059	4,279	5,480
Quincy, Mass.	3,204	14,439	15,000
Sparrows Point, Md.	2,786	7,544	10,000
Baltimore, Md.	1,713	7,172	10,000
Seattle, Wash.	159	3,450	4,200
Staten Island, N. Y.	952	3,001	5,400
Shooters' Island, N. Y.	434	5,345	5,645
Jacksonville, Fla.	642	2,218	4,718



been ordered but these cars as yet have not been assigned to any particular company.

*Port Newark.*

Port Newark, N. J., is served by the Public Service Railway. Deficiencies in transportation there have consisted of the absence of direct street-car connection with the shipyard, resulting in dependence upon auto buses. Permanent additional transportation facilities are now under construction in the form of a 2-mile double-track extension of the Newark service by way of Doremus Avenue and Avenue R to the shipyard.

*Camden and Gloucester, N. J.*

The Public Service Railway also supplies service at Camden and Gloucester. Inadequacies were found to exist principally because of the shortage of cars and of men to operate them. The car shortage was due to the facts that eighteen cars had been lost by fire and that both shipyards started and stopped work at the same time.

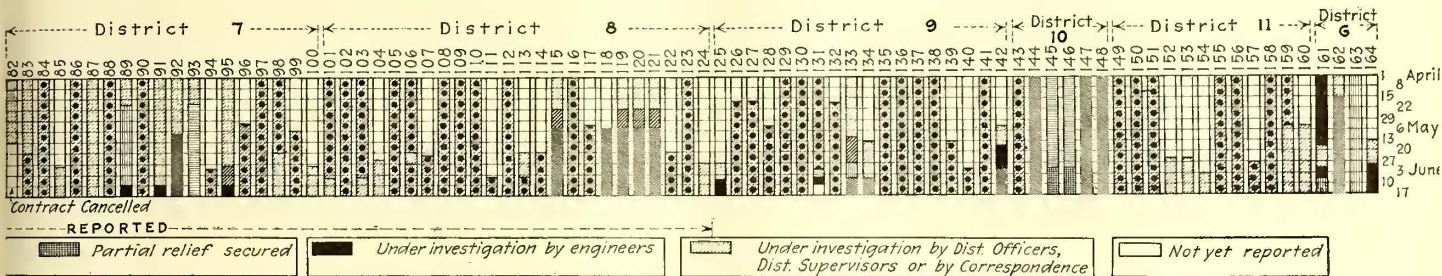
Immediate relief was obtained by staggering the times of starting and stopping by a difference of one hour. This expedient increased the number of rush-hour cars available for each plant from an average of ten to twenty-one cars, without any resort to new equipment. In addition, present and future requirements

on page 190 a summary of two formal agreements entered into by the Division of Passenger Transportation and Housing after this department was organized. The two Hog Island contracts and the Port Newark agreement were made before that time by another government agency. In order to give the latest information regarding contract terms, there is concluded a contract just entered into with the United Railways & Electric Company, Baltimore, Md. This is drawn along the lines of the later contracts mentioned above.

While some variations will be found to exist in the contracts summarized, the general terms are similar. The fundamental point is the furnishing of capital by the Emergency Fleet Corporation, with the railways paying interest thereon at 5 per cent. Operation of the new property is to be in the hands of the railways for at least the period of the war, and then the railways are to purchase the property at appraised values determined by boards of arbitrators, payment in most cases to be made in five annual installments.

OTHER IMPROVEMENTS ARE BEING PLANNED

As stated above, the Division of Passenger Transportation and Housing had, at the date of this review, reached understandings with local electric railways as to the transportation needs in ten other shipbuilding centers. While these understandings are subject to amend-



CLEARING UP RAILWAY DIFFICULTIES IN THE SHIPYARDS OF THE EMERGENCY FLEET CORPORATION

are being provided for by the purchase of thirty-three new cars and the installation of the necessary powerhouse, substation and line equipment, together with terminal loops at the shipyards.

Moreover, the site selected for the housing development at Camden and Gloucester requires the construction of a 1-mile single-track extension. The estimated cost of this proposed extension is \$210,000.

*Newport News, Va.*

Employees who do not live within walking distance of the shipyard at Newport News use the lines of the Newport News & Hampton Railway, Gas & Electric Company, which operates sixty-five cars in all. The lines extend 3/4 mile north, 3 miles south and 11 miles east of the yard. The rush-hour conditions were found to be unsatisfactory, but under the contract made ten additional cars are to be purchased by the company.

The Emergency Fleet Corporation has authorized the construction of 500 houses at Hilton. A contract for the extension of the Huntington Avenue line to the proposed housing site, about 3 miles away, has been made.

HOW THE CONTRACTS RUN

For the benefit of operators who may be interested in the details of contracts between electric railways and the Emergency Fleet Corporation, there is inserted

ment before enactment into formal contracts, their general scope may be indicated as follows:

*Essington and Chester, Pa.*

Electric railway transportation for the shipyards at Chester and the Westinghouse Electric & Manufacturing Company at Essington is provided by the Southern Pennsylvania Traction Company and the Philadelphia Rapid Transit Company. Inadequacies exist principally by reason of the limited capacity of the single-track lines concerned, and the shortage of cars and car operators.

The construction of a second track paralleling the present single track of the Southern Pennsylvania Traction Company between Darby and Chester, and the purchase of twenty-two new cars, together with the necessary substation and line equipment, have been recommended. Thus adequate service will be provided between Chester and Darby and the territory adjacent thereto, from which the shipbuilding companies in Chester draw a considerable part of their labor.

The rehabilitation of the Wanamaker Avenue Line and the construction of a loop in Chester by the Philadelphia Rapid Transit Company has also been recommended to provide good local transportation for the Westinghouse plant and to provide accommodations for special cars to be operated for the shipyards at Chester.



## Abstracts of Recent Contracts Made by Division of Passenger Transportation

### CAMDEN AND GLOUCESTER

#### Public Service Corporation of New Jersey

**Work To Be Done:** Construction of two loops, together with power house, repair shop, substation apparatus and appurtenances, car shortage tracks and overhead electrical equipment. Thirty-three new cars are to be purchased.

**Cost:** Estimated cost is \$1,240,780, to be paid by the Emergency Fleet Corporation, whatever it may be.

**Operation:** Operation shall be under the control of the railway, but such priority shall be given to the transportation of shipyard employees as may be necessary to make service rendered them adequate to the demand.

**Period of Operation:** Duration of war and thereafter until notice of termination of operation is served by either party and until both parties have consented, in writing, to the appraisal figure hereafter provided for.

**Interest:** From commencement of operation to termination of operation, the railway shall pay interest at the rate of 5 per cent per annum on the actual cost.

**Final Accounting:** At termination of operation, the railway shall purchase all property (except the two loops, the estimated cost of which is \$60,295) at an appraisal figure to be determined by a board of three—one selected by each party, and these two to select a third. The Emergency Fleet Corporation shall have the option to retain any car or all cars.

**Basis of Appraisal:** "Reasonable worth and value to the railway for its own use or for the use of Public Service Electric Company as its lessee, or for sale after the termination of operation under this agreement."

**Payment:** Payment of the appraisal figure shall be made in five equal annual installments, the first installment to be due one year after termination of operation. Interest on balances due shall be 5 per cent per annum.

**Security:** Bond, guaranteeing performance of contract, to be executed by the Public Service Corporation, holding company for the railway, and title to all property to be retained by the Emergency Fleet Corporation until full purchase price is paid. If any part of principal sum or interest is in default for two months, the entire balance shall become due and payable.

### NEWPORT NEWS

#### Newport News & Hampton Railway, Gas & Electric Company

**Work To Be Done:** A single-track extension of existing line into proposed village of "Hilton," with all necessary tracks, overhead construction and feeders, and purchase of ten new cars.

**Cost:** To be paid by Emergency Fleet Corporation, whatever it may be; estimated at \$300,000.

**Operation:** Operation of such extension is for the service and benefit of the shipyard and its employees; and preference shall be given to employees of the shipyard in so far as the railway has a lawful right to discriminate.

**Period of Operation:** Duration of war and thereafter until either party gives three months' notice of a desire to terminate the contract, and thereafter until the decision of arbitrators.

**Interest:** From commencement of operation to termination of operation, the railway shall pay 5 per cent interest per annum, payable semi-annually, on actual cost.

**Final Accounting:** At termination of operation the railway shall purchase all property, including the ten cars, at an appraisal figure to be determined by a board of three—one to be selected by each party, and these two to select a third. The Emergency Fleet Corporation may elect to retain six of the ten cars.

**Basis of Appraisal:** "Upon the then existing physical value provided, however, that in no event shall the appraised figure for the construction work and four of the ten cars be less than \$175,000."

**Payment:** Payment of the appraisal figure shall be made in five equal annual installments, interest on balances due being payable semi-annually at the rate of 5 per cent per annum. The first installment shall be paid one year after the termination of operation.

**Security:** The Emergency Fleet Corporation shall retain title to the property, including the ten cars, until the principal sum together with the interest thereon is fully paid. If any part of the principal sum or the interest be in default for two months, the entire balance shall become due and payable.

### BALTIMORE

#### United Railways & Electric Company

**Work To Be Done:** Purchase of fifty electric cars fully equipped for train operation and the construction of storage facilities and terminal loops.

**Cost:** To be paid by the Emergency Fleet Corporation, the contract amounting to \$829,638.

**Operation:** Operation is under lease, whereby the railway pays rent equal to 5 per cent on the purchase price of the cars. All maintenance and repairs are borne by the United Railways & Electric Company. The cars shall be devoted to the best interest of the Emergency Fleet Corporation as determined by it.

**Period of Operation:** Duration of the war and thereafter until both parties have consented in writing to the terms of purchase as provided for.

**Interest:** From commencement of operation until the termination of the lease, interest in the form of rent shall be paid at the rate of 5 per cent per annum on the actual cost.

**Final Accounting:** At the termination of the lease the Emergency Fleet Corporation shall have the election to sell all or any of the fifty cars to the company at a price not more than 100 per cent or less than 75 per cent of the actual cost to the corporation, the exact amount being determined by arbitrators, if so decided—one to be appointed by the company, one by the Emergency Fleet Corporation and the third by the two arbitrators thus chosen.

**Basis of Appraisal:** The appraisers shall determine (a) 75 per cent of the actual cost of the cars to the Emergency Fleet Corporation; (b) the value of each of the cars to the company; (c) the value of each of the cars for sale. The highest figure shall constitute the appraised value, which may not exceed 100 per cent.

**Payment:** Payment shall be made in five equal installments, of which the first shall become due one year after the termination of the war. Interest on all balances due shall be figured at 5 per cent.

**Security:** The Emergency Fleet Corporation shall retain title to all cars until the principal sum together with interest thereon is fully paid. If any part of the principal sum, or interest, be in default for one month, the entire balance shall become due and payable.

Various changes in routing of the Philadelphia Rapid Transit Company cars to provide quicker and cheaper transportation to the plants have been agreed upon.

#### Kearny, N. J.

Transportation at Kearny has been inadequate owing to the lack of cars and men on the part of the Public Service Railway, and to the inconvenient location of the station on the Jersey Central Railroad. Recommendations for relief include the rendering of additional tripper service by the Public Service Railway (ten cars), the changing of the location of the Jersey Central station and the bringing of the service of the Pennsylvania Railroad and the Hudson & Manhattan Railroad, transportation agencies heretofore not used, to the shipyards.

#### Quincy, Mass.

At Quincy the transportation facilities furnished by the Bay State Street Railway have been inadequate, resulting in dangerous overcrowding of cars. The difficulties have been lack of sufficient power to handle the morning and evening rush-hour traffic, inadequate track facilities over the Neponset bridge and insufficient cars. Some improvement has been accomplished through a flattening out of the morning and evening rush-hour periods by having some shipyard workers report for

work at 7 a.m. and some at 8 a.m., and having them quit work at 5 p.m. and 6 p.m. This plan gives better railway service, but it is unsatisfactory both to the men and to the shipyard management.

The plan now agreed upon to relieve the situation is to construct a transmission line for the purpose of increasing the power supply, by overhead construction or by conduit if the former is not allowed; to rehabilitate thirty-seven cars to permit train operation, and to widen the Neponset bridge to permit double-track operation.

#### Sparrows Point, Md.

The shipyard at Sparrows Point is served by the United Railways & Electric Company, but the present line is  $\frac{3}{4}$  mile from the shipyard gate and there is a shortage of cars. Moreover, housing facilities are to be provided at St. Helena, and this requires an improvement in transportation facilities.

To meet the need the construction of a spur from the present line to the shipyard gate is under investigation. The Pennsylvania Railroad passenger tracks into the shipyard are to be shifted to the west, and the electric lines placed to the east of the main entrance. It is proposed to include sufficient storage tracks for an additional train on the Pennsylvania line and for storage of electric cars between rush hours.



Additional cars are on order and are being delivered to the electric railway.

*Baltimore, Md.*

The shipbuilding company at Baltimore has three yards. The upper yard, a small one located near Frost and Jackson Streets, has adequate transportation facilities. The lower and east yards are located at the end of Fort Avenue, the yard gates being opposite each other. Approximately 5000 employees are carried over the Carey Street line and the Hartford Avenue line of the United Railways & Electric Company to and from the shipyard gates, which form the eastern terminus of the line. Passengers are carried away in one direction only, and the cars are badly overcrowded. No loop is provided and the cars have to change ends.

Already the working hours of the two plants have been staggered so as to permit the use of tripper cars twice during each rush hour. Moreover, according to latest advices, the Baltimore case has just been covered by the drawing of a contract involving the expenditure of \$829,638 by the Emergency Fleet Corporation. Fifty cars fully equipped for train operation are to be purchased, and storage facilities and terminal loops constructed.

*Curtis Bay, Md.*

The Curtis Bay shipyard is served by one line of the United Railways & Electric Company, but the men have to walk a long distance from the end of the car line. The line was badly overcrowded during the last winter, and there was a shortage of power. The railway, however, is going to extend its line a distance of 1500 ft., which will bring it within 1/2 mile of the shipyard gate. The sidewalk from the end of the extension to the gate will be constructed, and additional car service will be provided.

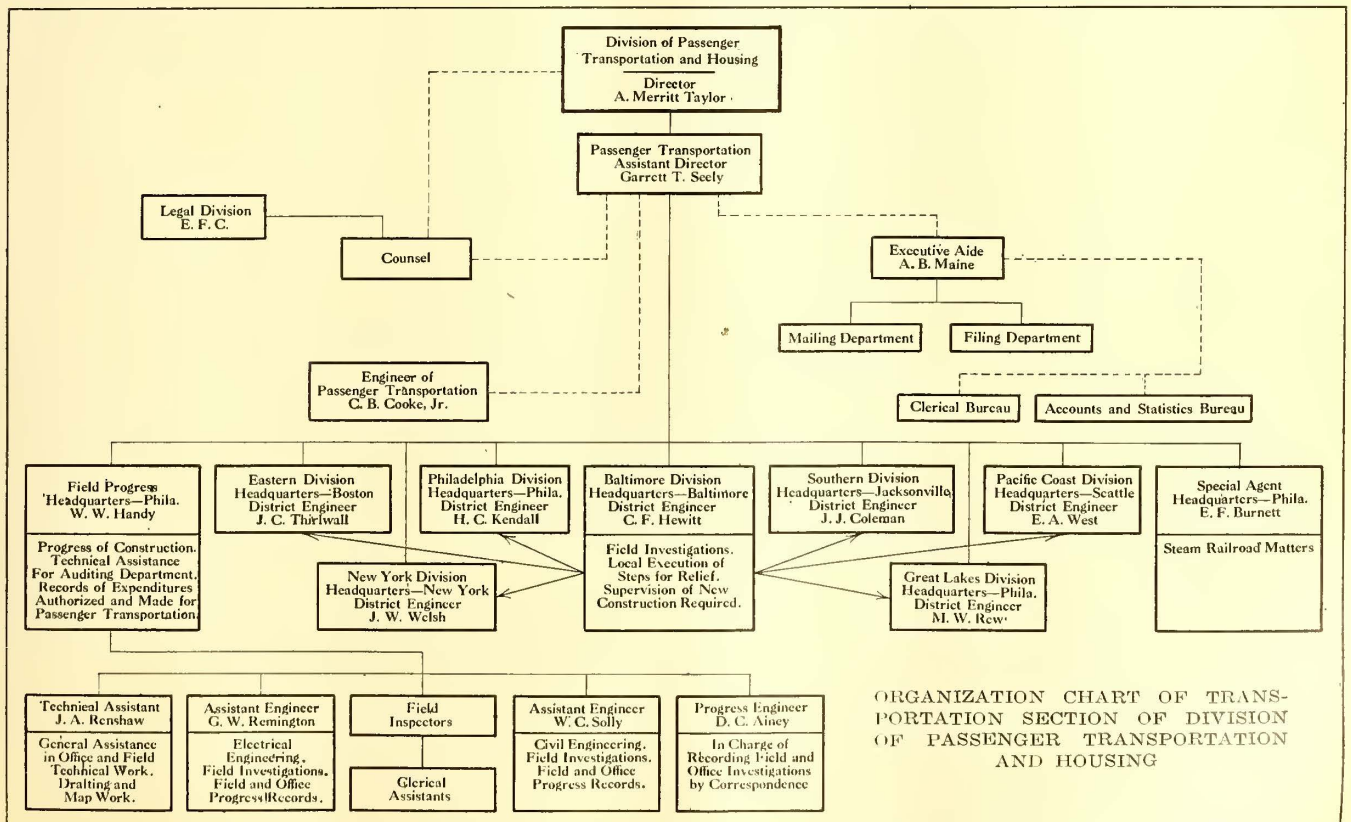
*Seattle, Wash.*

The shipyards in Seattle are served by the Puget Sound Traction, Light & Power Company, which lacks adequate track facilities to handle such service. A proposed extension of the electric lines has been under advisement. The Northern Pacific Railway, however, is operating steam service to the shipyards, and it is stated that the transportation facilities are now adequate.

*Oakland, Cal.*

About 85 per cent of the 6000 employees of the Oakland shipyard reside in territory served by the surface lines of the San Francisco-Oakland Terminal Railways. These men have to walk 2400 ft. from the shipyard gate to the Eighth Street line, from which they transfer to all parts of Oakland. More than 400 employees (mostly skilled workmen) walk about 2000 ft. from the shipyard gate to the Aldine Station of the Southern Pacific interurban electric line, connecting with the Southern Pacific ferry operating between the Oakland Mole and San Francisco. This service is adequate. Minor facilities are also afforded over the Twelfth Street line of the San Francisco-Oakland Terminal Railways and the Eighth Street line of this company to Alameda.

An extension of the line between Eighth Street and the shipyard, a distance of 2000 ft., has been agreed upon. A prepayment inclosure to be constructed at the end of the extension near the gate, to be used also for storage of cars during the non-rush hours. Additional service has been provided by the Southern Pacific electric interurban line from the Aldine Street station. The Webster Street drawbridge, crossing the Oakland Estuary, has been ordered closed during the rush hours. This affects service to employees living



ORGANIZATION CHART OF TRANSPORTATION SECTION OF DIVISION OF PASSENGER TRANSPORTATION AND HOUSING



in Alameda and using the surface lines of the San Francisco-Oakland Terminal Railways.

Staten Island, N. Y.

Electric railway transportation at the shipyards on Staten Island is dependent upon the Richmond Light & Railroad Company. The service has been inadequate owing to the distance of Staten Island from large sources of labor supply, requiring long trips by ferry or steamer, as well as to deficiencies in the local electric railway service.

Recommendations for immediate relief include the operation of twelve additional tripper cars, of summer type now available, for the local service. For permanent relief, twelve additional cars will be purchased. This service will be made more effective by means of terminal loading tracks at the shipyards, thereby permitting the use of a greater number of trippers without interfering with the regular service. Further relief is being arranged for by additional ferry service and the operation of special steamers from adjacent districts.

### Fare Increases in Massachusetts

#### Twenty-four Companies Operating 92½ per Cent of Mileage Raised Their Fares

THE Public Service Commission of Massachusetts was established in 1913. Since that time, of the thirty-seven street railway companies operating in Massachusetts (exclusive of the Boston Elevated railway system, over whose rates the commission has no jurisdiction) having a total length of line of about 2050 miles, twenty-four companies representing 1900 miles of line have been allowed increases in rates of fare.

The following summary shows, as of Aug. 1, 1918, the companies granted increased rates, the length of line represented, the date of the commission's findings with the time taken for consideration in each case, together with a brief statement of the character of the increases which were granted:

Company	Length of Line (Miles)	Date	Commission's Decision
Bay State	762	Aug. 31, 1916	6-cent fare on country lines.
Bay State		Mar. 5, 1917	Reduced rate tickets in Fall River withdrawn.
Bay State		July 3, 1917	6-cent fare on city lines.
Bay State		June 11, 1918	6-cent cash fare within restricted inner zones on certain city lines with 2-cent additional cash fare to outer zone; by tickets to and from center, 5 cents and 7½ cents, respectively, with further reduced rate for off-peak travel. Zone system on interurban lines, with varying cash rates of 2 cents, 2½ cents and 3 cents per mile. Reduced-rate tickets withdrawn or modified.
Blue Hill	16	July 31, 1915	6-cent fare on part of line; additional zone established.
Blue Hill		June 15, 1918	7-cent fare on part of line.
Boston & Worcester	49	Sept. 22, 1917	Zone system 2 cents per mile.
Boston & Worcester		July 16, 1918	Increased to 2½ cents per mile.
Bristol & Norfolk	6	Aug. 31, 1916	6-cent fare.
Concord, Maynard & Hudson	18	May 25, 1917	Zone system 2 cents per mile.
Concord, Maynard & Hudson		Aug. 1, 1918	Increased to 3 cents per mile.
Connecticut Valley	45	April 16, 1918	Workmen's tickets withdrawn.
Connecticut Valley		July 6, 1918	Round-trip tickets withdrawn.
Holyoke	58	Dec. 31, 1917	5-cent cash fare in restricted inner and outer zone. 6½-cent ticket rate between points located in both zones. 7-cent fare on branch line.
Massachusetts North-eastern	120	Oct. 14, 1916	6-cent fare.
Massachusetts North-eastern		June 29, 1918	5-cent unit; re-established with restricted additional zones.
Middlesex & Boston	106	Oct. 28, 1914	6-cent fare.

Increases in fares were pending on Aug. 1, 1918, upon the following street railways:

Name	Length of Line (Miles)	Hearing Closed	Tariff Effective	Character of Increase
Brockton & Plymouth	22	*	Aug. 15, 1918	7-cent fare.
East Taunton	11	July 16, 1918		6-cent fare.
Interstate Consolidated	27	July 9, 1918		Additional zones established.
Milford & Uxbridge	**	July 23, 1918		7-cent fare on certain zones.
New Bedford & Onset	**	July 10, 1918		7-cent fare.
Northern Massachusetts	**	*	Aug. 19, 1918	6-cent fare, additional zones at 3-cents per mile.
Total	60			

\* Pending under tariff filing.  
\*\* Previous increase allowed by commission.

### "As Necessary as Rails"

UNDER this caption, in a recent issue of *Tram-O-Grams*, J. C. Davidson, publicity manager Denver (Col.) Tramway, emphasized the great importance of publicity to electric railways. In his opinion, the money necessary for carrying on this great work is an expense that is looked upon by the leaders of this industry as an economical means of curtailing vast expenditures. In other words, it prevents misunderstandings which might lead to a long drawn-out series of small outlays in the end totaling sums of tremendous proportions.

Electric railways in nearly all large cities, says Mr. Davidson, are waking up to the full realization of the usefulness of wide publicity on matters relating to their work. To his mind, *Tram-O-Grams* and the newspaper campaigns used in Denver are fairly good illustrations of what may be accomplished by presenting the facts in a truthful and straightforward manner to the people, throwing light on subjects that heretofore have been a closed book, drawing criticism about matters little understood and answering them satisfactorily.

The Denver company feels that its patrons have come to realize that the company has no desire to profit at the expense of good-will.

Company	Length of Line (Miles)	Date	Commission's Decision
Middlesex & Boston		Aug. 10, 1917	Certain lines increased to 7 and 8 cents.
Middlesex & Boston		June 29, 1918	6-cent lines increased to 7 cents; 1 cent for transfer on certain lines. Reduced-rate tickets withdrawn.
Milford & Uxbridge	53	Aug. 9, 1917	6-cent fare.
Milford, Attleboro & Woonsocket	28	July 15, 1918	7-cent fare.
New Bedford & Onset	37	Sept. 8, 1915	6-cent fare.
New Bedford & Onset		Aug. 24, 1917	Reduced-rate tickets withdrawn.
Norfolk & Bristol	20	Aug. 19, 1915	6-cent fare.
Norfolk & Bristol		June 29, 1918	7-cent fare.
Northampton	24	June 29, 1918	Additional zones.
Northern Massachusetts	45	April 30, 1918	Zone system 2 cents per mile.
Norton, Taunton & Attleboro	19	Aug. 30, 1917	6-cent fare.
Norwood, Canton & Sharon	6	May 2, 1917	7-cent fare.
Providence & Fall River (Swansea & Seekonk)	10	Mar. 13, 1914	6-cent fare.
Springfield	141	Mar. 30, 1918	5-cent cash fare in restricted inner and in outer zone. 6½-cent ticket rate between points located in both zones not more than 5 miles distant; 8½-cent ticket rate beyond 5 miles.
Taunton & Pawtucket	17	Jan. 11, 1918	7-cent fare.
Union	42	Aug. 20, 1917	*Monthly commutation tickets withdrawn.
Ware & Brookfield	11	Mar. 29, 1917	7-cent fare.
Worcester Consolidated	250	July 1, 1918	
Worcester Consolidated		Aug. 1, 1918	6-cent fare.
Worcester & Warren	19	Mar. 30, 1917	7-cent fare.
Worcester & Warren	19	Dec. 13, 1917	10-cent fare.
Total	1,902	miles	

\* Allowed under tariff filing without formal proceedings.



# A. E. R. A. War Board Submits Brief on One-Man Cars

**National War Labor Board Informed of Improvements in Service, Stimulation of Travel and Decrease in Energy and Labor Due to Modern One-Man Cars**

**I**N ACCORDANCE with the request of the National War Labor Board a brief on the development of modern one-man cars was presented to that body on July 26 by the War Board of the American Electric Railway Association. The data for the brief were compiled for the War Board by J. F. Layng, railway department General Electric Company, and Walter Jackson, business manager *ELECTRIC RAILWAY JOURNAL*. The situation on the one-man car is set forth as follows:

## THE USE OF ONE-MAN CARS WITH AUTOMATIC EQUIPMENT

Beginning with the year 1914, the increasing incursions of the private automobile and the coming of unregulated jitney competition led railway engineers and operators to design a car which could be safely and economically operated with one man at the shorter intervals necessary to regain and even to create street railway travel. The need for such a car has since been accentuated by enormous increases in all operating costs and by the scarcity of platform labor, owing to the large number of men who have gone into war or war industries. Thus the average operating ratio has risen from 58 per cent in 1912 to 72 per cent in February, 1918.

At the present writing some 700 of the modern one-man cars hereinafter described have been built, and it is estimated that at least 30,000 could be applied advantageously. Inasmuch as the term "one-man" car has been loosely construed, it is well to define the types that pass under that name.

The term "one-man" car is applied to any car on which one man acts as conductor and motorman. There may be the widest difference, however, in the kind of service and in the character of the equipment.

The oldest application of one-man cars is for stub-end or shuttle service in suburbs where travel is light. In such cases, the car differs only from the usual two-man car in the locking of the rear platform to prevent unauthorized ingress and egress. Such operation is of little importance in saving man-power since the mileage of shuttle cars is less than 1 per cent of the total. It is a service which is given merely to permit access to other lines.

A somewhat wider application of the one-man car is its use on complete routes with light traffic calling for headways of say fifteen to thirty minutes between cars. For such service it is desirable to have a more attractive car than for shuttle service and also to use labor-saving equipment, such as air brakes. Several hundred cars are now operated as one-man cars under such limitations.

But by far the widest application of the one-man car is in cities where downtown congestion does not demand

the largest possible passenger capacity per unit or where such congestion could be overcome by rerouting part of the traffic. Such application has already been proved feasible in cities up to 400,000 population and with car intervals of thirty-five to forty seconds through the use of the safety or automatic type of one-man car. It has been proved that because of the thoroughgoing substitution of automatic equipment for manual labor, this car can readily be handled by one man.

New safety one-man cars seat twenty-nine to thirty-five passengers each, or about three-fourths the usual capacity of two-man cars. In practice, however, it is customary to operate 25 to 50 per cent more units than of the larger cars so that the frequency of service and the number of seats offered are substantially increased with say two-thirds the number of men. These cars weigh less than 400 lb. per seat, whereas the displaced cars weigh 700 to 1200 lb. per seat. This reduction in weight means a proportionate reduction in coal. Most of these cars economize coal still further through the use of anti-friction bearings.

The term "safety" may also be applied to cars rebuilt for one-man operation by being equipped with the same group of automatic appliances. These cars are just as valuable for the saving of platform personnel but they are not so economical in fuel, naturally, as the newer, lighter cars.

The safety equipment is a combination of air brakes, air-operated doors, air sanders and the deadman's handle of the electric controller. These equipments so inter-act automatically that:

1. The doors will not open until the car has come to a full stop.
2. The car will not start until the doors are closed.
3. The power will go off, the brakes will apply instantaneously, and the tracks will be sanded the moment the operator of a moving car fails to bear down on the controller handle of the deadman type.

The saving in manual labor may be appreciated from one item alone, that of air operation of doors. A car which makes eight stops per mile, requires one opening and one closing movement each time. At a schedule speed of 9 m.p.h., this means  $9 \times 8 \times 2$  or 144 door operations in one hour or 1440 door operations in ten hours. The air brake gives a like saving in manual labor, and, as all operations on a one-man car are concentrated at the front platform, the labor of reaching up to pull bell signal and fare register cords is also eliminated.

The best proof that safety cars need only one man is presented by the fact that nearly always these cars are making better, faster schedules than the two-man cars which they replaced. If the one-man car was appreciably slower, the railways would abandon its use because the loss in mileage, the slowing up of the service and



the increased liability of congestion would wipe out any saving due to smaller personnel. The superiority of the safety car for certain classes of service, as based upon actual operation, was first set forth in the *ELECTRIC RAILWAY JOURNAL* for Sept. 22, 1917, in a series of articles which have been accepted as authoritative not only by the operating companies but also by the public service commissions of many states. This superiority of the "safety" car is confirmed for a still wider range of service by the following memoranda made by the same transportation analyst who prepared the earlier survey. These later figures, covering ten cities ranging in population from 21,000 to 400,000, should prove conclusively that one-man safety cars are amply able to meet a wide range of operating conditions, and that if they were applied wherever possible there would be a saving of hundreds of thousands of tons of coal annually and a saving in men of vigorous physique equivalent to at least one division of the United States Army!

*Columbus, Ga.—Population 21,000*

One-man service was begun on April 15, 1918, on a 6-mile belt line which serves rich and poor, white and colored. This change has proved so satisfactory that the company cannot get more cars fast enough to satisfy the riders on other lines. The cars make the round trip in thirty-six minutes instead of forty; they take 1 kw.-hr. per car-mile instead of 2.3 kw.-hr. per car-mile, or in terms of coal they use 3 lb. of coal per mile instead of 6.9 lb. of coal per mile. Actually, less power is now used to run cars every twelve minutes than when cars were run every twenty minutes. The greatly improved service is given with nine men instead of twelve.

*Tampa, Fla.—Population 37,000*

One-man car service was begun Jan. 10, 1918, on the Michigan-Hyde Park crosstown line, 12.22 miles round-trip length. It is the most representative line in Tampa, since it carries Latin cigarmakers, negroes, white, etc. The people were accustomed to open cars which they could board at any point, often while the car was in motion. In one day they were asked to change to front-entrance, prepayment closed cars which cannot be left or boarded under normal conditions while the car is in motion. The change was a success. The old schedule speed of 8.6 m.p.h. was raised to 9.2 m.p.h., an increase of 7 per cent; fifteen and ten-minute intervals were replaced by ten and seven-and-one-half-minute intervals with a consequent increase in riding of 15 to 20 per cent. The coal requirements per car are less than half of the old 15-ton cars. The desire of the public to co-operate is also evident from the fact that 75 per cent of the passengers tender exact fare. Twenty men are now giving 30 per cent more service to the public than was formerly given with thirty men.

*Beaumont, Tex.—Population 50,000*

Two-man service on light cars without the safety devices was begun in 1916. Experience indicated that the safety devices should be applied in order to make better schedules and easier working conditions for one-man service. The fourteen cars on hand have just been converted to the safety type. According to latest advices the railway plans to give 50 per cent more service with fewer men than before.

*Houston, Tex.—Population 120,000*

One-man car service was begun on June 2, 1918, on the Woodland Heights line, which has a round-trip length of 9.53 miles. One mile is the most congested part of the city where the interval between cars is as short as forty seconds. The cars make the round trip in sixty minutes instead of seventy minutes, and this combined with a 33½ per cent to 50 per cent increase in service has enlarged travel more than 52 per cent. The headway on the Woodland line alone is as low as four minutes. The extraordinary increase in service noted has been obtained with approximately two-thirds the former number of platform men.

*Fort Worth, Tex.—Population with Soldiers 100,000*

Fort Worth was the first to demonstrate the ability of the safety car, beginning on the Summit Avenue line on Nov. 1, 1916. On Oct. 1, 1917, four more lines were added. On the Summit Avenue line the schedule speed had been raised 12½ per cent so that a round trip of 6.6 miles could be made in forty instead of forty-five minutes. The average increase in service was 50 per cent and the increase in riding about 20 per cent.

During the past year, Fort Worth has enjoyed the extraordinary increase of 35 to 40 per cent in traffic throughout owing to the presence of Camp Bowie. The remarkable thing is that the one-man cars have absorbed this unexpectedly large increase without suffering in schedule speed or causing a demand for additional cars. At present an increase of more than 50 per cent in travel is handled with 108 instead of 150 man-hours a day.

Of the new lines, it may be pointed out that the East Front-Samuels line, 6 miles round trip, has to run over twenty-four busy blocks. Nevertheless this line has the same schedule as before, although three safety one-man cars are carrying 50 per cent more riders than three two-man cars did, employing fifty-six instead of 107 man-hours. The Henderson-West Weatherford line with nearly 100 per cent increase in travel maintains the old schedule speed of 9.9 m.p.h. and uses 121 instead of 142 man-hours; the St. Louis Avenue line is run at the high schedule speed of 10.2 m.p.h. and it uses fifty-six instead of 110 man-hours to handle 25 per cent more travel; the Forest Park line has reduced its man-hours from seventy-six to thirty-nine.

In view of the extraordinarily heavy traffic at Fort Worth, it is significant that step and platform accidents on these cars have been practically nil.

*El Paso, Tex.—Population with Soldiers 100,000*

On Feb. 14, 1918, the Washington Park line, 6½ miles round trip, was opened with about 15 per cent increase in mileage. The schedule speed was raised from 9.25 to 10.1 m.p.h. Travel has increased 35 per cent while ten men have been replaced by six. Power requirements are now 1 kw.-hr. instead of 1.8 kw.-hr. per car-mile. The Sunset line shows similar results, four men handling 40 per cent more travel than eight men did before.

*Tacoma, Wash.—Population 100,000*

In 1917, the company began to operate old cars with safety equipments, but for all-day use these have since been replaced by new light cars on four lines which operate downtown. The Portland Avenue line, started on Dec. 7, 1917, is giving 15.4 per cent more mileage



and carrying 26.2 per cent more passengers (all comparisons are of May, 1918, and May, 1917). The Sixth Avenue line, started on Jan. 28, 1918, with an individual headway as low as three and one-half minutes, is giving 69.6 per cent more mileage and carrying 55 per cent more passengers. The Old Tacoma line, started on Nov. 19, 1917, is giving 36.8 per cent more mileage and carrying 28.3 per cent more passengers.

*Seattle, Wash.—Population 400,000*

Seattle is the largest city operating one-man safety cars in the congested section. Thus the Summit Avenue line operates in with overlapping lines having a headway as low as thirty-five seconds. This line was completely equipped by June 27, 1918. The round trip of 4.9 miles is made in forty-two minutes. The service has been increased 66 per cent and the patronage 59 per cent with less power and fewer men than before. In this city the men did not believe that the cars could be operated readily by one man. The company agreed to let them go out with two, but at the end of a week the men stated that they were satisfied that the cars could be operated with one man; and they have been operated with one man per car ever since.

*Everett, Wash.—Population 25,000*

All city service is now handled with one-man cars. The service has been increased by 35 to 50 per cent, the cars operated increased from thirteen to eighteen, the traffic increased almost 50 per cent, the average energy per car-mile reduced from 3.34 kw.-hr. to 1.91 kw.-hr. and the platform personnel reduced by 25 per cent or more.

*Bellingham, Wash.—Population 37,000*

This city has also been converted completely to safety car operation. Coincident with a reduction of energy requirements from 214,300 kw.-hr. in May, 1916, to 155,000 kw.-hr. in May, 1918, the car-miles rose from 73,382 to 94,118 and the patronage from 321,284 passengers to 400,239 passengers. The number of operatives has been lowered from seventy-five to forty-nine.

#### SUMMARY

In general these definite points may be brought out from the foregoing data:

1. That the one-man safety car is applicable to a wide range of electric railway conditions.
2. That the safety cars of new construction permit enormous savings in fuel.
3. That all safety cars permit greatly increased service to the public, while still permitting a large reduction in platform personnel.
4. That the safety car, because of the use of automatic devices, can be operated at a higher schedule speed by one man than an older-style car can be operated by two men.
5. That the safety car fully justifies its name as a preventer of accidents through the inter-operation of control, brakes, doors, steps, sander and emergency brake.
6. That only the safety car's economies in operation and improvements in service have made it financially practicable to maintain railway service in small cities where short headways were a necessity and in larger cities where the shortage of labor has seriously im-

paired the ability to give adequate service even with but one man per car, as at Seattle and Tacoma.

7. That the safety car is preferred by the men themselves because it eliminates all manual labor and avoids division of responsibility with a second platform man.

8. That the safety car promotes better public relations in demonstrating the good-will of the railway, thereby paving the way for a solution of the local utility problems.

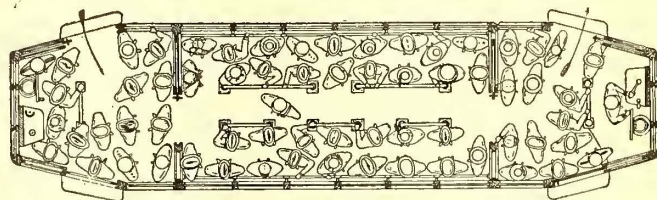
It may be of interest to add that as these modern cars now cost about \$6,700 each, the probability that electric railways can order them in large quantities is remote if operating costs should rise sufficiently to absorb in advance the increased revenues that these cars might bring.

In conclusion, it is respectfully pointed out that the rate of change or turnover of platform men is so great that no man has ever been deprived of work on the properties named because of the introduction of the one-man car. The railways hope, in fact, that the elimination of manual labor on these cars will enable them to offer employment to a wider classification of men and to keep such men longer in the service.

### Seatless Car Being Tried in Rome

ON SOME of its routes the Rome (Italy) Tramways is experimenting with a number of seatless motor and trailer single-truck cars. These cars, as shown by the accompanying loading diagram, are of the inclosed type with bowed ends, and they accommodate as many as sixty-five passengers.

Passengers enter at the rear and descend at the front, both on the near side. The rear platform accommo-



ARRANGEMENT OF PASSENGERS IN SEATLESS-CAR BEING TRIED IN ROME, ITALY

dates seventeen persons, and the front one only thirteen, a space being chained off for the motorman. In the body of the car, separated by a series of hand rails, are three parallel longitudinal aisles. The center one is kept free for fare collection and passenger circulation.

The new cars are clearly marked on the vestibules at each end: "Standing Places Only." The company plans to try them for six months and watch the economic and social results. If there is no serious objection, the public authorities will permit the continuance of the seatless-car service and its extension as traffic demands require.

On July 1, 670 officers and employees of H. M. Byllesby & Company and affiliated companies were engaged in the military service of the United States or Allies. This represents 13.8 per cent of all male employees of the organization. There are now four gold stars in the Byllesby service flag.



Some Typical Posters of the National Safety Council Prepared Under the Auspices of the Electric Railway Section

**Ice = Treacherous**

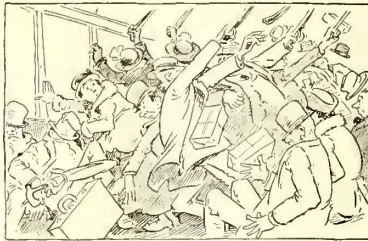


**KEEP THE CAR STEPS AND PLATFORMS FREE FROM ICE**

Begin early with the fall of snow to sweep them clean. If the packed-down snow and ice gets ahead of you, use a very little sand to overcome the danger of passengers slipping. Falls on icy car steps and platforms may easily result seriously, perhaps fatally.

It's Human Nature to Forget One's Awkwardness and Blame the Ice Entirely  
Don't Give Passengers a Chance for Complaint of This Kind Against You

**CURVES**



**Irate Passenger (at the complaint window)—**

"I have been riding home every evening with motorman No. 672. He hits the curves at 40 miles. Last night he threw an old lady from her seat to the floor. The night before two children, standing, were thrown down violently. The rest of us fared little better. I am tired of being

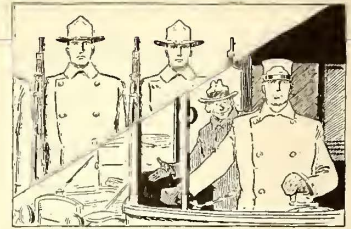
**"Tied in a Knot Every Evening"**

**Fall-in-Car Accidents** are difficult to handle because the trainman very often do not know they occur and cannot report them.

**DON'T CAUSE SUCH ACCIDENTS**

**BY IMPROPER OPERATION AROUND CURVES**

**ATTENTION!**



**Squad Attention!** Brings each soldier's thought to that point of alertness where he instantaneously executes the simplest or the most difficult movement.  
**Motormen Attention!** To the important duty of operating your car with safety.

It's the **BIG COMMAND** of YOUR JOB—and **ALERTNESS ANSWERS ITS REQUIREMENTS**  
**Let Not the Babble of the Thoughtless Passenger Dull Your Mind to Your Duties**

And make you responsible for personal injury to pedestrian or driver

**Send Your Valentines After The Day's Work Is Done**



Your heart may be full to overflowing with sentiment, longing for expression in the form of a sweet-scented missive to HER.

**But Don't Jeopardize the Lives of Persons Boarding Your Car by Inattention to Duty**

**THE ROUGH MOTORMAN**



**He slaps on the "juice," he slams on the air, He heeds not the stress of the straphanger there.**

If his passengers could have their wish, the "rough motorman's sleep would be continually haunted by the spectre of his misdeeds.

**He Shakes Up Their Bones**

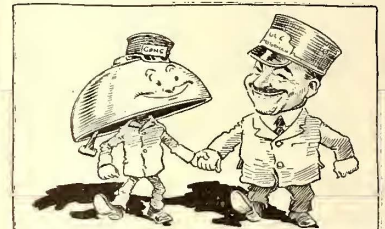
**at Every Start and Stop of the Car**

Many accidents are charged up to him--aged and infirm people, women and children are thrown and sometimes seriously injured.

**Don't Join the Rough Motorman's Class**

**Start and Stop Your Car Smoothly and Easily**

**KNOCK YOUR FRIEND**



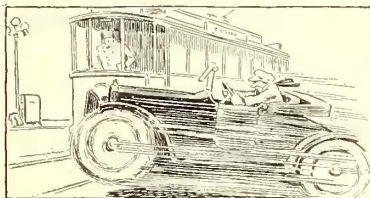
**Knock Your Friend—The Gong!**

It's the best friend the motorman has and, unlike all other friends, doesn't object in the least to the knocking. The gong is on your car for

**YOU TO USE**

**Don't Be Afraid to Wear Out a Little Shoe Leather on It**

**THE SPEED MANIAC**



**His Creed—Save a Second Whatever the Cost**

Collisions between street cars and automobiles are increasing at an alarming rate but investigation shows that nearly always the fault lies with the drivers and not with the trainmen. The streetcar company is not liable, but all such cases are more or less troublesome and expensive. More than that

**TOO MANY LIVES ARE ENDANGERED**

**Do More Than Your Share—Keep An Eye Open At All Street Intersections for the Reckless Driver Avoid Accidents—It Helps Your Record**

**THE SPRING-FEVER BUG**



**Its Sting Is Almost Irresistible**

**The Spring-Fever Bug Takes Your Mind from Your Work and Accidents Happen**

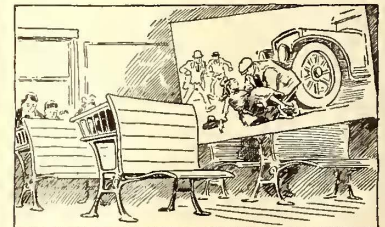
After the long winter months of fighting snow and slush and ice, listening to kicks from chilled passengers and to overheated old gentlemen complaining about the service--when the spring days come they are irresistible in fact.

Give ear to the call of the fresh green of the earth, to the bright sunshine, to the song of the birds. Take down the trusty rod, dig a few worms--and off to the fishing hole.

**The Tonic of the Day Off**

**Will Make You a Safer Street Car Man**

**THE VACANT SEAT**



**"THE LITTLE GIRL WHO SAT THERE WAS KILLED BY AN AUTOMOBILE LAST WEEK"**

The rules require that you operate your car with extra caution when approaching and passing schools; you are responsible, in large measure, for the safety of the children. What do the few seconds lost time amount to in comparison with the injuries which might befall a little child in a street car accident?

**Operate Your Car Past Schools**

**As if the Safety of Your Own Children Were Involved Don't Be Responsible for a Vacant Seat**



# Public Service Says Living Wage Is \$1,115

**Company Avers Present Hourly Rates of 35 and 40 Cents Permit Adequate Living Standard—Says Working Conditions Are as Nearly Perfect as Demands of Operation Permit**

**T**HAT the demands of electric railway employees for a wage of 60 cents an hour are unwarranted in order to give them a living wage is the position taken by the Public Service Railway, Newark, N. J., in its pending case before the War Labor Board. The company calculates that average annual earnings of \$1,115 will give its trainmen their customary standard of living, even in this period of high prices, and that under the present reasonable working conditions this earning power is assured by the existing rates of pay of 35 cents (to end of fifth year) and 40 cents (thereafter) an hour.

### WORKING CONDITIONS ARE FAVORABLE

In its brief the company asserts that working conditions are at least as favorable as on any electric railway and are as nearly perfect as the exigencies of operation permit. The runs are constructed to provide as nearly as possible a ten-hour working period. This, it is said, has been considered the desirable working period for the industry, and it is necessary because of the peculiar characteristics of the business.

The company denies that the hours of work of trainmen are spread over excessive periods of time. The spread periods for all runs of nine hours or more are indicated in the following tabulation:

	Number	Per Cent
Total number of runs paying nine hours or over.....	1531	100.0
Number of runs finishing within twelve hours.....	694	45.3
Number of runs finishing between twelve and thirteen hours....	504	32.9
Number of runs finishing between thirteen and fourteen hours...	294	19.2
Number of runs finishing between fourteen and fifteen hours ...	39	2.6

Thus out of a total of 1531 runs, 45 per cent or 694 conclude the day's work within a twelve-hour period. A total of 1198 or 78.2 per cent have work spread over thirteen hours, and 1492 or 97.4 per cent over fourteen hours. Less than 3 per cent go beyond fourteen hours, while the maximum spread time is fourteen and a half hours.

The brief directs attention to the fact that the Boston Elevated Railway, operating under agreement with the Amalgamated Association of Street & Electric Railway Employees and in compliance with a nine-in-eleven-hour law effective in Massachusetts, has 27.5 per cent of total runs concluding in a period of more than thirteen and less than fourteen hours, whereas the Public Service Railway has but 19.2 per cent in this

TABLE 1—RESULTS OF PROPOSED CHANGE OF SPREAD TIME ON NINE TYPICAL LINES OF PUBLIC SERVICE RAILWAY

	Present Spread Time	Proposed Ten Hours in Eleven
General average pay per day per man @ 30 cents.....	\$2.87	\$2.25
General average pay per day per man @ 35 cents.....	3.34	2.62
General average pay per day per man @ 40 cents.....	3.82	2.99
Number of crews on full runs.....	266	217

This means that forty-nine crews or ninety-eight men, representing 18 per cent of the crews at present working full paid runs, would be forced on the extra list and have to work trippers.

Number of crews on trippers.....	27	155
Additional crews of trippers under proposed plan.....		128
Total crews now required.....	266 plus 27 = 293	
Total crews required in ten in eleven hours.....	217 plus 155 = 372	

This is an increase of seventy-nine, or 27 per cent.

period and 2.6 per cent in the fourteen-to-fifteen-hour period. In connection with these results, there should be considered the great number of trippers operated on the Boston Elevated Railway lines as against the negligible quantity in New Jersey.

Under the ten-in-eleven-hour plan suggested by the Public Service Railway employees, an addition of 31 per cent or 1071 men would be required to maintain the service. The cost to the company would be \$370,344 annually, if the reduction in spread time were practicable.

Table I is an exhibit for nine typical lines, showing results under the present spread of time and the rearrangement of runs that would be required if the company attempted to meet the ten-hours-in-eleven demand. The change would require an increase from 293 crews to 372 crews, an addition of seventy-nine crews or 27 per cent.

With reference to other working conditions the company submits that:

1. Pay for waiting time for extra men is already covered in the amount of guarantee paid them of \$17.50 per week, which assures each man adequate recompense for any time that may be spent at rollcalls when work is not provided.
2. The institution of an additional amount for waiting time would permit of abuses and would be a constant source of friction and dissatisfaction.
3. It would bring about double payment to the men in many cases and would make it necessary to reduce the number of men carried as extras.
4. The amount of waiting time is really negligible under present conditions.
5. The present weekly guarantee is adequate for the service rendered and assures the trainmen a better minimum wage than obtains on other comparable railway systems, even those operating under agreements with the union.
6. Overtime as now defined on the property is the period during which a trainman works voluntarily after he has concluded his scheduled run. The prevailing rate includes an allowance of 5 cents an hour over the regular rate. The demand that overtime "be all work performed or waiting under orders to work in excess of ten hours" is impracticable and discriminatory.

In short, the company states that this is no time to alter conditions that were found satisfactory before the war. The changes now suggested would result in reducing production and artificially increase the cost of service, contrary to the policies and principles of the National War Labor Board and the best interests of the country.

### PRESENT RATES GIVE ADEQUATE LIVING WAGE

The wage rates in effect prior to June 1 were 28 to 34 cents an hour, the maximum being reached at the end of the tenth year. On June 6 a new schedule became effective, providing for 30 cents an hour during the first six months, 35 cents an hour to the end of the fifth year and 40 cents an hour thereafter. The reason for the probationary period is the unsteadiness of work on the part of the less experienced and usually younger and single men.

In introducing the discussion of wages, the brief lays weight upon the point that trainmen are not skilled



mechanics. It cites the finding in the bulletin "Street Railway Employment in the United States," published in April, 1917, by the Bureau of Labor Statistics, Department of Labor, to the effect that the occupation of conductors is "semi-clerical in some respects and one of responsibility rather than skill," and that the work of motormen is "easily learned and should be classed as a responsible rather than a skillful occupation."

These statements are confirmed by an examination of 500 platform men selected at random from employees hired in 1916, 1917 and 1918. More than 50 per cent of the 500 trainmen were recruited from three occupations—laborers, teamsters and clerks. Almost a fourth of the platform men were ordinary laborers before entering the employ of the company. With few exceptions these men were unskilled workers, commanding wages at the bottom of the industrial scale.

In order to show clearly the relative situation of trainmen and men of like ability employed in other industries in the territory the company investigated various enterprises around Newark. The results are shown in Fig. 1. Whereas the average income of the trainmen was in excess of \$1,046 a year, few employees of the four concerns included earned this amount. The classes of labor from which trainmen are recruited—namely, laborers, drivers and clerks—did not in any case earn the amounts paid to trainmen in 1917. While skilled mechanics, such as tool makers, foremen, pattern makers, lathe hands or masons earned more in 1917 than did the trainmen, the excess amounts were not large.

A comparison of the wage rates per hour paid to trainmen in 1917 with the hourly rates paid to the

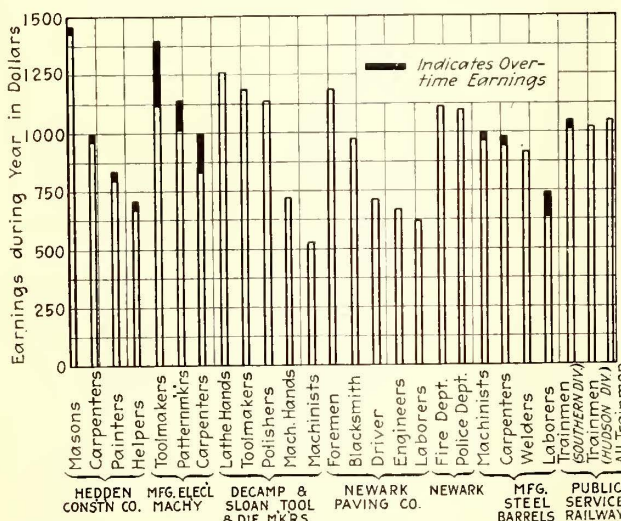


FIG. 1—EARNINGS OF PUBLIC SERVICE RAILWAY TRAINMEN IN 1917 COMPARED WITH THOSE OF OTHER WORKERS IN SAME LOCALITY

classes of labor covered in the above-mentioned diagram is said to be unfavorable to the railway. In almost every case the hourly rate in other industries exceeds that of trainmen, but if an examination is made of aggregate hours of employment of these workers in the course of a year, it will be found that the advantages of the hourly rate are entirely offset. The trainmen averaged more than 3000 hours in 1917. Very few classes of employees in other industries enjoy such great regularity of employment.

In the company's opinion, the present wages of train-

men are adequate to attract and hold a sufficient number of men and women to meet operating needs. Fig. 2 shows the number of applications and appointments for the position of conductor from January, 1914, to June, 1918. The number of applications has always largely exceeded the number of men appointed. Moreover, out of 765 men hired as trainmen between June 1 and July 3, 221 or more than 28 per cent were former trainmen.

MONEY COST OF LIVING STANDARD

On the basis of investigations into the cost of living in Philadelphia and New York in 1917, the company concludes that a family income of from \$1,200 to \$1,400 a year is required. It directs attention to the fact, how-

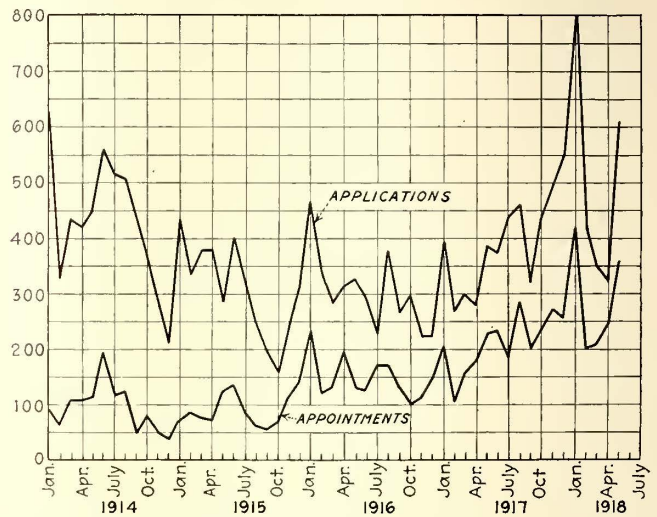


FIG. 2—RELATIONSHIP OF APPLICATIONS AND APPOINTMENTS FOR PUBLIC SERVICE RAILWAY CONDUCTORS

ever, that in adjusting such estimates to local cases due regard should be given to the composition of the family group (as compared to the standard of five members), to complementary family earnings and to the value of welfare and compensation provisions made by the employer.

The company made a census on July 6 to obtain accurate statistics as to size of family, earnings, etc., covering 90 per cent of the platform men. The average household for the married men, it was found, consists of 3.86 members. A readjustment of the \$1,500 standard for five family members, suggested in the April, 1918, Monthly Review of the Bureau of Labor Statistics, upon this and the other points gives the following:

Standard for family of five†	\$1,500.00
Allowance for smaller family	\$156.75
Allowance for complementary family earnings*	210.00
Minimum allowance for welfare and pension plans	17.81
	<b>384.56</b>

Adequate annual earnings per trainman..... \$1,115.44

†This figure, the brief states, was based on statistics covering other sections of this country and Canada, in which living costs are higher than in New Jersey.

\*Railway census showed average annual complementary earnings of family to be \$156 or 14.9 per cent of the average earnings of trainmen.

In 1917, when the wage rates ranged from 25 to 32 cents prior to Oct. 1, and 28 to 34 cents after Oct. 1, trainmen earned the following average amounts: (a) Men now in 35-cent service group, \$827; (b) Men now in 40-cent service group, \$1,140. These averages are determined from reports made by the company to the collector of internal revenue.



By applying the rates of 35 and 40 cents an hour to the actual number of hours worked by each man during 1917 and striking an average for each group, the earnings of trainmen in each group during 1918 are determined as follows: (a) Trainmen receiving 35 cents an hour would receive \$1,237; (b) Trainmen receiving 40 cents an hour would earn \$1,414.

Thus trainmen in the 35-cent group would receive about \$122 more than is necessary to insure their subsistence and that of their families in health and reasonable comfort. Trainmen in the 40-cent group would receive about \$300 in excess of the sum necessary.

In 1917, in divisions of the company where savings clubs were in operation, 62 per cent of the total trainmen were depositors, as compared to 54 per cent in 1914, 56 per cent in 1915 and 65 per cent in 1916. The employees have subscribed \$242,400 to the Liberty Loans, an average subscription of \$55.17 from 41.7 per cent of the total number of trainmen.

In concluding the discussion of a living wage, the company shows that the present annual earnings of its trainmen are considerably higher than the annual earnings fixed by the Railroad Wage Commission for practically all employees of steam railroads. Electricians, station agents, blacksmiths, structural iron workers, car inspectors, telegraphers, masons, carpenters, painters, car repairers, all receive much less than the trainmen of the Public Service Railway. The details are shown in Fig. 3. In the company's opinion, the conclusions of the Railroad Wage Commission, transmitted to the Director General of Railroads in April, 1918, are of prime importance in this case.

The company concludes, therefore, that the wage rates should be fixed at 35 cents and 40 cents an hour, with

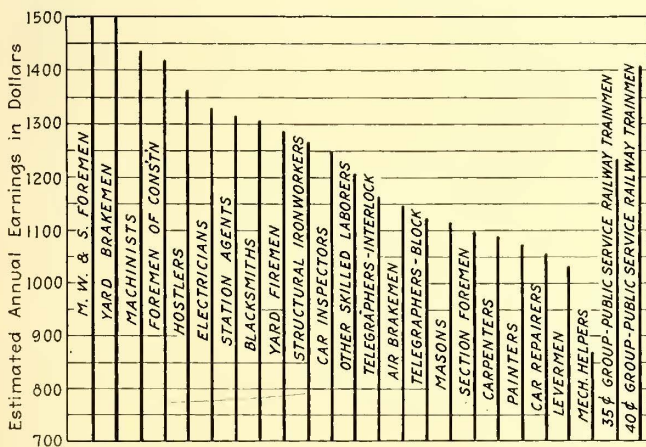


FIG. 3—ESTIMATED AVERAGE EARNINGS OF STEAM RAILROAD EMPLOYMENT FOR 1918 COMPARED WITH THOSE OF PUBLIC SERVICE RAILWAY TRAINMEN AT PRESENT RATES

a probationary period as now obtaining. The demand of the men for 60 cents an hour with 90 cents for overtime the company characterizes in these words:

The saddling of this extra expense upon this company is unwarranted upon the theory that it is necessary to preserve the former standard of living of trainmen, where it has been shown that the present wages insure the maintenance of the standard of living prevailing before the war and enable the trainmen to live in health and reasonable comfort. Under such circumstances, the only justification for increases is to advance the standard of living of trainmen to a standard heretofore unknown, and this can only be justified upon the theory that war-time is a suitable time in which to try social experiments.

## Women Conductors in Baltimore

They Began Service on July 11 and the Force Is Being Increased—Public's Attitude Gratifying to Company

WHILE women conductors have been on the cars of the United Railways of Baltimore only a short time, they have applied themselves to their work so earnestly and the public has taken to this innovation so naturally there appears to be no question that they will be an unqualified success in holding the places of the soldier and sailor boys until the war is won and the "warriors" return to resume their old platform positions. The women went on the cars on July 11. There was not a large number—just half a dozen were in the first little squad that was graduated from the training school at Park Terminal, where the intricacies of their new profession had been explained and its principles expounded. This first installment of women



WOMEN CONDUCTORS IN BALTIMORE WEAR STRAW HATS

conductors was placed on the vestibuled pay-as-you-enter cars of the St. Paul Street and Boulevard lines, and the number has been gradually added to until there were fifteen on the cars on July 19, and more to go into service shortly. The uniform worn consists of a plain skirt and a coat of military cut except that it has wide collars. Straw hats are worn. The lady in civilian clothes in the group is Mrs. Anna Cook, the supervisor of women conductors.

The reception of women conductors by the Baltimore public was similarly gratifying. There may have been in some quarters a belief that, while women had succeeded in this calling in other large cities here and abroad, there might be a difference in Baltimore—a Southern city. If there was a difference in the reception given the women it was difference on the side of respect and hearty co-operation from the patrons of the cars and the press of the city.

The women conductors are paid the same scale of wages as the men—35 cents an hour the first year, with an increase of 1 cent an hour each year of service. They are guaranteed a minimum wage of \$75 per month.

## Forged Axle Bearings Show Economy Over Steel Castings

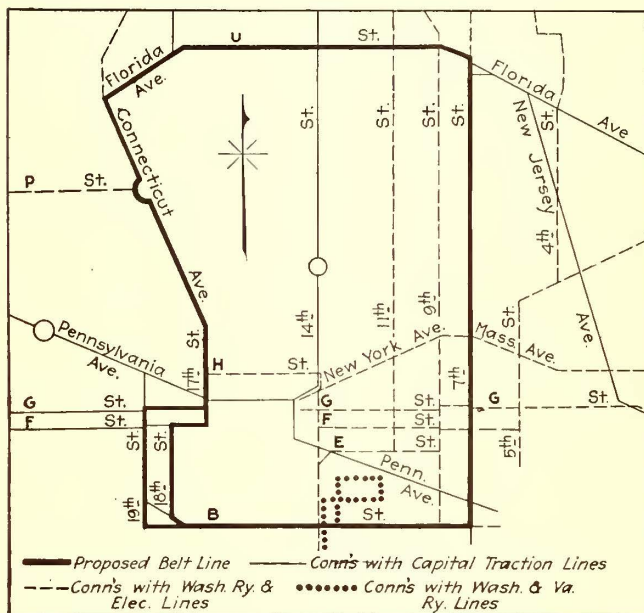
As an economy measure the Portland (Ore.) Railway, Light & Power Company is now forging axle bearings instead of using steel castings. The forgings at present cost \$4.20 per pair, while even a year ago the steel cost \$6 per pair. The oil well required in some of these bearings is cut out with a resistance welder.



## Belt Line Recommended for Washington

John A. Beeler Shows How Vast Growth of Army and Navy Clerical Forces Can Be Handled Comfortably

SECTION 10 of the Beeler report on the traffic situation in Washington has just been issued. It is now under the joint consideration of the Army Department, the Navy Department and the Public Utilities Commission of the District of Columbia. It is devoted primarily to a discussion of the best way of providing transportation to and from a number of the large office buildings which the government has been obliged to erect on park grounds, especially on the Mall and in Potomac Park, Washington, to supply offices for the War and Navy Departments, Fuel and Food Administrations, Council of National Defense, Red Cross and



MAP SHOWING ROUTE OF PROPOSED BELT LINE IN WASHINGTON

War Trade Board. One group of these buildings is at Sixth and B Streets and provides office room for more than 18,000 employees. Another tremendous group of buildings is being completed in the Potomac Park section between Seventeenth and Twenty-first Streets and more than 24,000 people will be located here. These two new groups of buildings are in what were heretofore unimportant sections of the city with limited transportation facilities.

To serve this district the report recommends the construction of a belt line railway as shown in the map, to connect with the three railway systems of Washington. Existing track can be used to a considerable extent so that of the entire distance around the belt of approximately 6.1 miles, only 1.5 miles will have to be built. The report suggests that the line can be operated in several ways but recommends that the Capital Traction Company operate one track in one direction and the Washington Railway & Electric Company the other track in the other direction. Then the operation of each would be entirely independent of the other and the public would have the option of boarding the first car

in either direction. Mr. Beeler adds that the company furnishing the best service would undoubtedly be rewarded with the best patronage.

## LETTERS TO THE EDITORS

### A Push-Button Car Is Practical

SAFETY CAR DEVICES COMPANY

ST. LOUIS, MO., July 23, 1918.

To the Editors:

I have just noticed the editorial on page 90 of your July 20 issue regarding the "Remote Control or Push-Button Car."

I fully agree with you that there is no reason, mechanically, why the remote control, as outlined, should not be an established fact; such control to include the starting of the car, operation of the brakes, doors, sand, etc. It is only a question of whether the industry would pay the added expense and whether the control could be worked out to be entirely automatic, as you state. No doubt the editorial in question will start some of our railway operators to thinking along the lines suggested.

C. P. CASS, President.

### Copies of Fare Circular

SIOUX FALLS TRACTION SYSTEM

SIOUX FALLS, S. D., July 28, 1918.

To the Editors:

We have on hand a supply of extra copies of our little paper *On the Cars* which was used so effectively in our recent campaign for a 6-cent fare, and the thought has occurred to us that it might be of assistance to other roads which are engaged in the same endeavor for increased rates if it was brought to their attention. If you think it advisable to put such a notice in the JOURNAL we shall be very pleased to assist the electric railway fraternity by forwarding to them on request copies of the issue mentioned.

R. C. MILLS, Manager.

### Charging Batteries from a Shop-Motor Circuit

SELMA TRACTION COMPANY

SELMA, ALA., July 25, 1918.

To the Editors:

The method for charging batteries described on page 69 of your July 13 issue is all right for a large road with facilities for doing things easily and where no account need be taken of the cost. But what is the little road to do when it wants to charge its batteries and must of necessity keep down costs?

The writer has always charged batteries, when necessary (and regardless of what the expert battery people say), on a 500-volt circuit without injury to the batteries. If we have a large battery to charge we put it in circuit on the negative side with the motor that runs the shop machinery. This motor is of 10 hp. and uses about 8 amp. on its average load. This is about right for charging the ordinary starting battery on an automobile. If we have a smaller battery to charge



we put it in series with one of the smaller motors in the shop. By charging batteries this way no power is wasted, and the added resistance of the battery is so small that no difference can be noticed in the speed of the motor.

The writer has frequently charged the batteries of a Baker electric automobile by this method when the mercury arc rectifier usually employed for charging it has been out of commission.

W. E. NESS.

### A Plea From a Minor Official

July 18, 1918.

To the Editors:

The present time, when the electric railway industry is in a state of transition, seems most opportune to bring before the proper officials a subject of vital interest to a number of electric railway employees and indirectly to the companies themselves; that is to say, the remuneration of the minor officials.

It is unnecessary to speak of rising costs to a railway executive, but it might be well to remind him, when it comes to a readjustment of wages, of the situation that confronts one group of men among his working force who are faithfully doing their work but who, being unable to press their case, must accept whatever is offered them.

Most of these men have worked their way up to their present positions by years of hard work. They served their apprenticeship on the cars or in the shops and for their industry and special fitness were advanced later to positions of trust that carried increased responsibilities as well as a larger wage. As they showed further ability they were again promoted, but their wages, in most cases, have not kept pace with their increased duties.

The carmen, on the other hand, backed by their unions, have been increasingly active, and every two or three years have presented their demands and have usually obtained what they sought. Their wages are much higher and their working conditions have improved immeasurably. With each increase to the men the companies usually have given the officials some slight advance, but not in proportion to that obtained by the men under them; in many cases, they have actually received less money. As a result it is increasingly difficult to obtain responsible and efficient employees to take the places of those officials who for any reason have left the organization. In fact, in many instances, when a vacancy occurs and a man from the ranks is advanced he finds that instead of receiving a pecuniary reward for his fitness he will have to take a cut in wages. Of course he then refuses the job unless he is given his car rate. This causes him to look upon the place as being merely of a temporary nature, and he considers that he is conferring a favor by even temporarily filling it. Again dissatisfaction arises among the other employees doing a similar work when they see a newcomer with no other reason except that he belongs to a union being specially favored.

If the service is to be kept at the standard maintained in the past, the office force must not be allowed to drift away nor must the work be allowed to deteriorate. Railroading has a certain fascination that is peculiarly its own and this accounts for the large num-

ber of good men still in the service, in spite of the extraordinary opportunities existing in other lines. But it is to be hoped, for the sake of the industry, that the powers that be will see that something besides fascination is necessary to combat the high cost of living and that when further wage increases are considered the minor officials will not be forgotten.

ONE OF THEM.

## AMERICAN ASSOCIATION NEWS

### Progress on Engineering Association Program

THE Engineering Association committee on subjects met in New York on Aug. 1 and arranged the program for the October meeting. Martin Schreiber, E. R. Hill, C. L. Cadle and E. B. Burritt attended. At the first session there will be an address by an officer of the American, British or French army on engineering or transportation activities in the war zone, followed by discussion. In the first period of the second session the difficulties in the way of securing adequate equipment and supplies, with the remedy therefor, will be covered by an engineer, and a purchasing agent and a manufacturer will present prepared discussion. In the second period there will be an address on war activities in the United States by an officer from one of the departments in Washington, followed by discussion.

In addition to the above features the usual reports of the officers and the executive and nominating committees will be presented.

It is understood that Major-General William J. Snow, chief of field artillery, United States Army, has accepted an invitation to be one of the speakers before the Engineering Association.

### Good Fellowship Meeting at Toledo

JOINT company section No. 11 held its closing meeting for the season on June 28, a purely social affair. Music, recitations, dancing, comedy and moving pictures made up the program. A buffet luncheon was served at the close. The section plans to hold a moonlight excursion during the summer and may arrange for a picnic also.

### Connecticut and Rhode Island Companies Have Outings

THE Connecticut Company section held its summer outing at Momauguin, near New Haven, on Thursday, July 25. The program included field events and a ball game in the afternoon. The outing of the Rhode Island section was held at the Warwick Club on July 27.

### Musical Program at Manila

THE meeting of Company Section No. 5, held at Manila on June 4, was largely occupied with a musical program furnished by the transportation department orchestra. The chairman of the program committee read a list of nine names of members who will present papers at coming meetings.



## Reclaiming Old Cars as a War Measure

Seattle & Rainier Valley Railway Remodels Two Cars to Provide Better Entrance and Exit Facilities — Larger Wheels Used

BY K. A. SCHALLER

Electrical Engineer and Master Mechanic, Seattle & Rainier Valley Railway

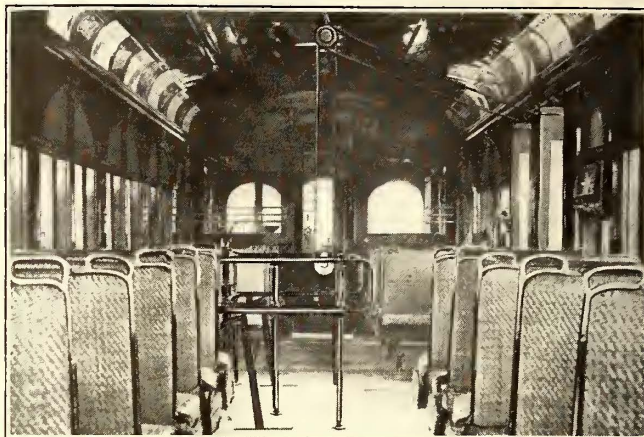
THE Seattle & Rainier Valley Railway serves a section of Seattle which contains a large proportion of shipbuilding employees. The shipyards early in the war had contracts for a large number of ships and were rushing the construction work. As more firms began to enter the shipbuilding business the number of employees increased proportionately. This caused added congestion to the already fully-loaded transportation facilities until the necessity for additional passenger equipment became pressing.

Due to war conditions electric railway lines on the Pacific Coast have found it increasingly difficult to secure reasonable deliveries of cars or equipment from Eastern manufacturers, so the needed cars could not be obtained except with long delays. The constantly rising cost of material of all classes prompted this road to make a careful investigation of old equipment to determine whether in the face of the present cost of new replacing equipment it would not be advantageous to reconstruct some of this and bring it sufficiently up to date to warrant placing it in service. The company had on hand two 35-ton, 55-ft. vestibuled passenger and baggage cars with steel underframes. These were of the three-compartment type with passenger, smoker and baggage sections, a cab for the motorman and a vestibule on the rear. The equipment consisted of four Westinghouse-305 motors and K-34 control for single-end operation. The brakes were straight air with D2 compressors.

These cars had become obsolete due to the increased schedule speed now used and to the inadequate entrance and exit facilities. The maximum speed could not be increased as vertical clearances necessitated the use of 30-in. wheels with these car bodies. The single narrow entrance and exit increased the loading and un-

and a center entrance and exit and a front exit introduced. The original smoking compartment was made a part of the main passenger compartment and the original baggage compartment was converted into a smoker. The car dimensions were left unchanged except that the right side was closed off to make room for the new front exit.

The opening for the center doors and steps was cut through the wall on one side of the car so as to remove two complete double windows. These window casings,

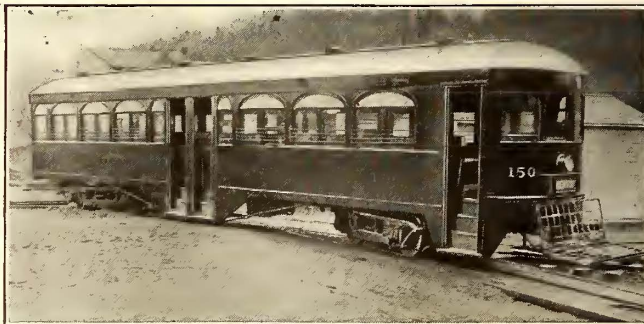
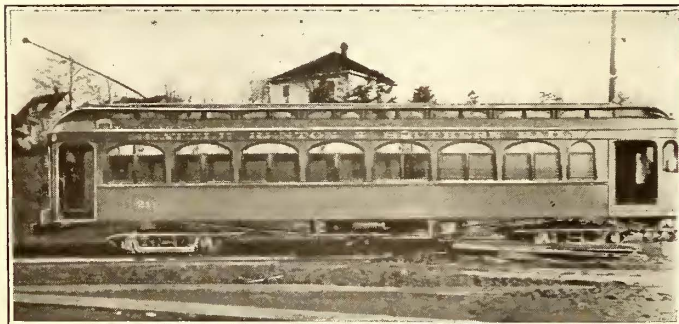


PIPING ARRANGEMENT AT ENTRANCE AND CONNECTIONS FOR DOOR OPERATION

sash, etc., were installed where the baggage doors were removed. In this construction it was necessary to cut but one longitudinal I-beam completely away and to cut off one-half from the top of the next I-beam, making it in effect a T-beam for the length of the well.

In order to retain the strength in the longitudinal sills which were cut, the framework around the doors and steps was constructed of channel and T-iron, the truss rod on that side of the car was lengthened and an additional turnbuckle inserted, and the truss rod was placed in the channel which supports the door and step structure. This maintains the function of the truss rod and gives added bracing to the door and step apparatus.

All the material used for this reconstruction except



VIEWS OF CAR BEFORE AND AFTER ALTERATIONS WERE MADE

loading time and made the stops exceptionally long. An accompanying illustration shows one of these cars before reconstruction.

In January, 1917, the reconstruction of these two cars was undertaken with the idea of lowering the roofs by cutting off the monitor decks and making arched roofs. The rear vestibules were also closed

the new channel and T-iron necessary to build the framework for the doors and steps was taken from the car as originally constructed.

Standing room for about fifteen passengers is possible in the loading well, and a pipe framework with the opening into the car is so located that the passengers must pass the conductor and fare box as they leave the load-



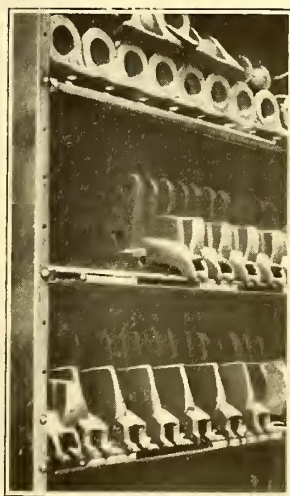
ing well. In using the center doors as exits the conductor controls two openings in the pipe framework which permits quick unloading. All doors are the company's standard for all-steel cars. Those at the center are each made up of two similar sections to each opening, each half being split and hinged. They are operated by the conductor by means of a sprocket and chain through one sectional shaft at the top. The front exit door is operated by the motorman.

As a safety feature a 40-watt lamp was installed over each door. These are connected in series with two lamps in the motorman's cab placed in a box with a red glass. When any door starts to open and the threaded shaft is turned three-quarters of one revolution it releases a spring switch placed on the ground side of the lamps, thus turning them on and warning the motorman that the doors are open and the car must not be moved.

The city ordinances of Seattle require that headlights be dimmed when operating in the city. In compliance therewith two 40-watt lamps illuminating the side roller destination signs together with four lamps in the front destination sign are connected in series with the headlight, thus dimming it. Outside the city the side signs are not needed so these lamps are cut out, thus enabling the headlight to give better illumination.

One of these cars has since been equipped with Westinghouse AMM brake equipment with M22 brake valve which is standard for the company's steel cars. This car is now hauling a trailer during the rush-hour period. The trail car is equipped with AMM trail-car brakes which have all the value of automatic brake equipment with the added advantage of the quick recharge feature. This motor and trailer train have materially relieved the congestion incident to close headway during the rush hour. At a later date the companion car will have a trailer added in the same manner.

### Storing Brakeshoe Heads Symmetrically



CABINET FOR STORING BRAKESHOE HEADS

IN MANY street railway shops, brakeshoe fittings are stored in a heterogeneous pile in some odd corner, with little or no thought as to convenience in picking out the proper style and size. At the Framingham (Mass.) shop of the Boston & Worcester Street Railway, shoe heads are stored on adjustable metal shelves with as much care as though they were incandescent lamps. "Rights" are not carried in the same compartment as "lefts," there being no apparent saving in space by so doing, and time is saved by grouping similar parts together.

Such an arrangement gives a neat appearance to the shop, enables the stockman to tell at a glance what types to order, and saves the repairman much time and labor in making replacements.

### Indicating Tail Lights Prevent Accidents and Save Power

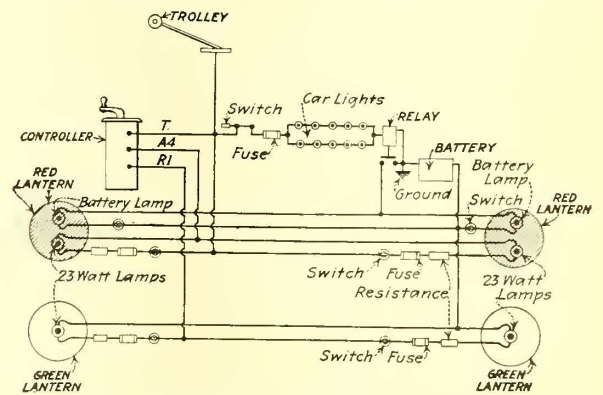
THE cars recently ordered by the Philadelphia Rapid Transit Company for service to the Hog Island shipyard are equipped with Nichols-Lintern indicating tail lights. These consist of two lanterns, one provided



REAR OF A CAR OF THE CLEVELAND RAILWAY EQUIPPED WITH INDICATING TAIL LIGHTS

with a red lens, the other with a green lens. The lanterns are mounted on the ends of the car, one on either side of the trolley catcher. The circuits controlling the lamps in these tail lights are interlocked with the control apparatus so that a red light is visible when the car is stationary or coasting with power off. Both red and green lights are burning when the controller is in

series or half-speed position. With the controller in full-multiple or full-speed position the green light alone burns. The accompanying diagram shows the connections necessary to accomplish these results.



WIRING DIAGRAM FOR INDICATING TAIL LIGHTS WITH AUXILIARY BATTERY SYSTEM

These tail lights are arranged with an auxiliary battery circuit which supplies current to a lamp in the red lens in case the main power supply should fail, as when the trolley leaves the wire.

The safety and economical features claimed for this device are: In congested sections cars can operate closer to the car ahead without danger of accidents. By having an indication as to the operation of the car ahead, the motorman is able to coast more and have less need for applying his brakes than otherwise. Automobile and truck drivers behind cars equipped with these indicating tail lights are able to regulate their speed to that of the car and thus avoid collisions while also saving time.



## Recent Happenings in Great Britain

### Need for Economies Becomes More Pressing as War Goes On— Operating Results in London and Glasgow

(From Our Regular Correspondent.)

The Sheffield Corporation bill has received the sanction of the House of Commons. Evidence was given in support of the clauses to enable the corporation to carry goods and parcels on its tramway system. At the inquiry the general manager of the Huddersfield Corporation Tramways said that in his view the carriage of goods and parcels by tramways was the most economical method of transport, and he considered the powers sought by the Sheffield Corporation were in the interests of the city. Huddersfield's maximum charge for the carriage of coal by tramway is 3d. per ton-mile. In the Sheffield bill it was proposed to charge a maximum of 2d. per ton-mile.

#### WOMEN DRIVERS OPPOSED

The Sheffield tramways and motors committee recommends that should it be necessary to employ women as drivers of cars they should be subject to the same conditions as regards pay, etc., as those under which men now work. The questions of a 12½ per cent increase upon total earnings of tramway employees and equal pay for women have been the subject of a conference, and the executive of the Council of Municipal Tramway Authorities, not being able to advise the granting of the requests, has signified its willingness to submit them to arbitration. With a view to economizing, the tramway committee recommends: (1) blotting out of "Stop-by-request" stations in as many places as possible; (2) requesting the public to refrain from overcrowding and ladies to shop at quiet times of the day; and (3) motormen to economize in every direction.

With economy as its watchword, the Liverpool tramways committee is carrying out more reforms. The latest is the abolition of a number of stops on the various routes. This is being done at the instance of the Coal Control Board. About 300, or roughly 20 per cent of the stops on the Liverpool system, are being abolished. The authorities have aimed at leveling up the distances between the different stops, so that they will average about 200 yards.

#### WOULD MODIFY REQUIREMENTS

The select committee on tramways (statutory requirements) has issued its report. It recommends that the Board of Trade be empowered by legislation to permit, until two years after the war, the modification of statutory requirements with regard to the charges for the conveyance of traffic on tramways and railways constructed wholly or mainly on public roads in the case of undertakings the financial circumstances of which are proved to have been injuriously affected by causes arising out of the war. Evidence was given that wages had increased from 60 to 100 per cent and the cost of materials from

100 per cent to more than 200 per cent on pre-war rates. In addition there was the increased cost of fuel, and consequently of power, coupled with restrictions on supply. Statistics were supplied showing that out of eighty municipal undertakings only twenty-eight are charging maximum fares to ordinary passengers, and forty-four maximum workmen's fares.

#### TRAMWAY BILL GOES TO HOUSE

After three days' consideration, the select committee to which the House of Commons referred the London United Tramways bill, has passed the preamble. The bill was unusual in respect that it asked Parliament to revoke or modify the provisions by which the company had been enabled to secure Parliamentary approval to its schemes. For some time the undertaking of the London United Tramways has been in the hands of a receiver for the debenture holders, and, at present, the tramways cannot earn enough to pay interest on the debenture stock. The bill was promoted as a *modus vivendi* by which the public service given by the company's tramways might be continued and the physical property placed promptly on a satisfactory basis. The scheme of the bill included a drastic reduction of the capital, an increase of the fares, which had been found to be impracticable and unworkable, a postponement of the date, and an alteration of the terms of purchase by the local authorities. The part of the company's undertaking inside the London County Council area and its power station at Chiswick had been acquired by the London County Council. By the clause agreed to accumulated surplus revenue is to be applied to putting the system into good condition and repair. The bill will be reported to the House.

#### INCREASING RAIL LIFE

Important experiments are being carried out by the Leeds tramways committee in order to produce a harder wearing surface on the tram rails in the city. The treatment consists in hardening the rail surface by heating it with an oxy-acetylene jet, and then quenching it with cold water. By this means the normal "pearlite" structure of the steel is transformed to a "sorbite" structure to a depth of ¼ in. to ⅜ in. The temperature to which the rail must be raised before quenching is, roughly, 700 deg. C. The practicability of the process depends partly on the nature of the adjoining paving. It is doubtful if the treatment would be economically sound in normal times, as the process is both costly and inconvenient, but at the present time when new rails are so difficult to obtain, any device which will prolong the life of the existing plant is worthy of consideration.

In the annual tramway estimates for 1918-1919 of the London County Council the total receipts are given as £3,321,750, and the working expenses are £2,593,140, showing a surplus on working of £728,610. This sum, with interest and sundry rents, makes up a total working surplus of £751,889. The charges against this working surplus to be deducted amount to £739,774, leaving a net surplus of £12,115. The estimates, which are to be brought up in a revised form, are based on the assumption that the car mileage during the year will be 50,000,000. The highways committee, reporting on the estimates, says that the realization of the improved revenue required in 1918-1919 is dependent on the revision of fares. The new scale was applied on the tramways south of the Thames in May, and early in June certain fare changes were made on the lines on the north side of the river. Owing, however, to the time occupied in negotiations with other undertakings concerned in through running services, the complete fare revision has not yet been brought into operation. The estimates contain provision of £204,000 for the payment of allowances to officers and employees on war service.

#### GLASGOW SURPLUS A RECORD

At a recent meeting of the tramways committee of the Glasgow Corporation the accounts for the year ended May 31 were submitted. They showed that the surplus available for handing over to the common good was the record one of £177,552, compared with £160,985 a year ago. The traffic receipts were £1,404,110, against £1,245,507 a year ago, while sundry receipts brought in £8,524 against £14,607, making the grand total £1,412,635, compared with £1,260,115 for the previous year. The traffic expenses, owing to increased wages, material and fuel, were £527,151, against £395,735, and as the increase in wages applied only to a small part of the past year, these items will again be greatly increased in the current year's accounts. The expenditure on dependents due to the war was £93,120, which compared with £92,645 a year ago. The total expenditure was £1,044,183, in comparison with £838,065, the respective balances carried to the general account being £368,452 and £422,049.

The report of the British Electric Traction Company for the year ended March 31 makes a slightly improved showing over that for the preceding period, though war conditions have not been more favorable to tramway undertakings. The return from holdings in associated concerns amounts to £210,400, as against £205,300, representing 4.93 per cent as against 4.79 per cent on the book value. The net profit comes out at £118,200, as compared with £108,700. The dividend on the ordinary stock is once more 3 per cent, and after placing £21,200, as against £15,000, to reserve, £112,100 goes forward, or £14,500 more than twelve months ago. Investments now figure for £4,263,000 and the reserve stands at £450,000. A. C. S.



# News of the Electric Railways

TRAFFIC AND TRANSPORTATION

FINANCIAL AND CORPORATE • PERSONAL MENTION • CONSTRUCTION NEWS

## Interest for City Suggested

Manager at Tacoma Outlines Work Necessary and Shows City Way to Obtain Substantial Interest

In a recent report to the citizens' committee of twenty-five, Louis H. Bean, manager of the Tacoma Railway & Power Company, Tacoma, Wash., suggested the financing of further betterment of the railway system by the city, for an equity interest in the company; city control of operation of the system, and a plan of gradual acquisition of the entire properties of the company by the city.

### \$1,615,000 NEEDED FOR IMPROVEMENTS

Included in the report was a list of extensions and betterments which in the opinion of the company managers are necessary to place the system on a completely satisfactory basis with regard to service. This list was made by the management in reply to a request from the committee. The estimated cost of the suggested improvements and extensions is placed at \$1,615,000.

Proceeding from the assumption that the committee will continue the investigation it has commenced as agreed in the contract for temporary service, that is, establish a fair value for the property and a suitable return on capital, Mr. Bean submits a general plan for making the improvements recommended and giving the city control and eventual ownership of the system. Mr. Bean points out that the city could acquire possession of the property by getting an equity for financing betterments and increasing this equity by net returns after giving the company a fair return or by deeding the system to the city, the company leasing the system back at an agreed valuation and percentage of profit, the net earnings for the city and such taxes as were saved to go toward the purchase.

### COMPANY'S PROPOSAL EXPLAINED

In submitting these proposals, Mr. Bean said:

"In order that the interests of the city may be properly protected in the matter, and that the city may proceed on a plan of acquiring the property, we recommend that the city furnish the money for improvements as outlined, acquiring an equity in the property for the amount advanced. The companies will submit direction of their operation to the City Council, or to any committee of citizens or board agreed upon for that purpose, the city granting long-time franchises or entering into a long-time contract in lieu of franchises for that purpose, all net earnings from

the whole property in excess of the amount required for depreciation and a fair return on our investment to go to the city to build up a fund for the gradual acquisition of the property by the city, such extensions as may be found necessary by the City Council, committee or board, to be made on the same basis, that is, the city furnishing the money and acquiring equity in the property.

"Or the companies will agree, on the final report of committee, in case said findings and recommendations are adopted by the city and the companies, provided some legal difficulties in connection with the mortgage can be overcome, to deed the property to the city of Tacoma, leasing the same back from the city at the valuation so fixed, all net earnings over depreciation and percentage agreed upon to go to the city toward purchase price of property. The taxes thus saved to the property would then go toward purchase of property by the city."

## War Labor Policies Fixed

The National War Labor Board on July 18 issued an announcement in connection with the labor disturbances in munitions plants at Bridgeport, Conn., in which it declared that the War Labor Policies Board was not opposed to changes in wage scales during the war but had adopted the principles and policies of the War Labor Board including the following:

1. The right of the workers to organize into trade unions and to bargain collectively with their employers.

2. The continuance of existing union standards where they have heretofore applied, plus the right of the workers to obtain improved conditions, wages or hours or work through decisions of the National War Labor Board or any umpire it may select in specific cases.

3. Equal pay for equal work, whether performed by men or by women.

4. Recognition of the basic eight-hour day where a law requires it and settlement of the question of hours in other cases with due regard to governmental necessities and the welfare, health and proper comfort of the workers.

5. Maintenance of the maximum of production.

6. Due regard for the labor standards, wage scales and other conditions in particular localities in fixing wages, hours and conditions of labor.

7. Declaration of the right of all workers to a living wage, insuring the subsistence of each worker and his family in health and reasonable comfort.

## Wage Increase in Brooklyn

Sixth Increase in Five Years, Effective On Aug. 2, Adds \$1,100,000 to Annual Payroll

Increases of wages to its transportation employees were announced on July 26 by the Brooklyn (N. Y.) Rapid Transit Company. The percentage of increase ranges from 10 to 25 per cent. The statement made by Timothy S. Williams, president of the company, follows, in part:

### PRESIDENT WILLIAMS EXPLAINS

"In order to retain as far as possible the services of its faithful and experienced men in the transportation departments, and to attract the better class of new men seeking employment, the companies of the system have decided that they will anticipate an increase in the average rate of fare (either by official authorization or by reinstating fares previously charged and authorized by franchises and the law), by making substantial increases in the wages of their transportation men.

"The present financial condition of the Brooklyn system does not justify any increase in wages at this time, but the directors believe that it would be a serious mistake not to make every effort possible to preserve the valuable asset which both the company and the public possess in the large proportion of tried men in its service.

"The increase will cost the company on the basis of the number of cars now operated in the neighborhood of \$1,100,000 a year. The percentage of increase ranges from 10 to 25 per cent, and the principle upon which the rates were advanced has been generally that followed by the Federal Wage Commission in its recent recommendation for increase of wages to steam railroad employees, namely, consideration of the increased cost of living.

### SIX INCREASES IN FIVE YEARS

"This is the sixth increase in wages of transportation employees in little more than five years. The new rates on the surface lines range from 30 cents to 40 cents an hour for motormen and conductors, and the new rates for motormen on the elevated and subway lines range from 40 cents to 50 cents an hour. Inasmuch as motormen for the elevated and subway lines are taken from the best men on the surface lines, this means that a surface motorman can look forward to a 50-cent rate through promotion to elevated and subway service. The rates of other transportation employees are increased proportionately."

The increases went into effect Aug. 2.



## Service at Cost for Chicago

New Grant Will Likely Provide This With Properties in Hands of Public Trustees

Service at cost would seem to be assured as the basis of a settlement of the franchise negotiations in Chicago. The public trustee plan recommended by Special Counsel Fisher has been accepted by all parties, and at a meeting of the local transportation committee on July 29 the final draft of the ordinance was all but perfected.

The general features of the proposed ordinance have been set forth from time to time in the *ELECTRIC RAILWAY JOURNAL*, and although there has been a complete reversal of position in accepting the trustee plan the principal changes are in the financial provisions.

### NINE PUBLIC TRUSTEES TO CONTROL

It is now proposed to form a corporation, "not for pecuniary profit," to be known as the Chicago Traction Company, under which a board of nine public trustees would take over for operation all the properties of the surface and elevated lines. The first board would be selected by the companies subject to the approval of the City Council. The members would continue in control until 1927. The method of selecting their successors would be decided by the City Council after that date. It is also proposed to secure State legislation for home rule so that the trustees would have all authority now held by the utilities commission.

The latest financial plan provides that all new money and all refunding is to be paid for at actual cost. Of the present capital account of the combined companies 60 per cent would be covered by bonds at 5 per cent until refunded. The remaining 40 per cent would be in the form of preferred stock with a guaranteed return of 7 per cent during the life of the ordinance and an extra allowance of 1 per cent during the average life of the existing grants, or until July 1, 1932. This would give an average return of 6.2 per cent up to 1932 and 5.8 per cent thereafter on all securities, or an average of 5.96 per cent for the next thirty years. The companies had previously insisted on a return of 6.35 per cent, and the original offer under the trustee plan was 5.6 per cent.

The companies were conceded another point by adding to the total valuation an item of \$542,104 which is for real estate owned by the elevated lines but not used for railway purposes. This makes the total elevated valuation about \$71,000,000, and the capital account of all companies as of June 30, 1916, about \$218,418,000.

### PLAN AN INDETERMINATE FRANCHISE

Another change in the ordinance is the elimination of the thirty-year grant. The arrangement now proposed is for an indeterminate franchise with the right of the city to purchase and take over all the property at any time by paying the capital account. It is ex-

pected that opposition which previously existed to changing the state law in favor of grants longer than twenty years will be removed because of the greater confidence of the public in a plan which does away with private control. All the opposing elements appear to have been silenced by the latest proposal, and even the prospect of higher fares which may be necessary to furnish service at cost has not brought forth any serious criticism.

The ordinance is scheduled to go to the City Council on Aug. 5. If it meets with approval there and at the public referendum in November, the State Legislature will be asked for certain new laws next January. Other necessary steps for approval of the measure might defer the effective date until early in 1920, at which time the financial market is expected to be in shape to take care of the program for raising great sums of money.

## Wage Demand Made in Providence

The demands of the union for an advance in wages approximating 62 per cent have been refused by the federal trustees of the Rhode Island Company, Providence, R. I. The heads of the union were formally notified on July 12 that the granting of the increase is impossible at present.

The demands of the men were presented to the federal trustees by James H. Coleman, business agent of the union. Theodore Francis Green, secretary of the board, stated that the demands were entirely unlooked for, inasmuch as an agreement reached last May, when increases aggregating \$300,000 a year were granted, was supposed to continue in force until May 31, 1919. The increase requested would amount to approximately \$1,500,000 a year.

Business Agent Coleman admitted that there is an agreement between the union and the railroad company which should be in force until May 31, 1919, but declares that the men cannot live on the present wage.

An agreement has been reached whereby the matter will be tentatively submitted to the Federal board in Washington, but the Rhode Island Company has reserved rights in the matter by consenting to let the War Board handle the dispute only on condition that the status of the company, financially and otherwise, be taken into consideration.

## Wages Increased in Fargo

The wages of the trainmen of the Northern States Power Company, at Fargo, N. D., have been increased to the following scale: first six months, 26 cents an hour; second six months, 27 cents; third six months, 28 cents; fourth six months, 29 cents; after twenty-four months, 30 cents. On Jan. 1, 1917, an increase of 1 cent an hour was made and on Nov. 16, 1917, a further increase of 2½ cents was made. The total increase since Jan. 1, 1917, amounts to 6 cents an hour, or 25 per cent.

## No Minimum Wage Ruling

War Labor Board Will Decide Individual Cases on Basis of Particular Facts Involved

The War Labor Board on July 31 decided against establishing at this time a minimum wage to be applied generally throughout industry. It announced that the determination and the application of a fair living wage will be made in each case on the facts involved.

At the same time the board adopted a resolution, written by William H. Taft and submitted jointly by Mr. Taft and Frank P. Walsh, the joint chairmen, in which the attention of capital and labor is invited to the wisdom of composing their differences upon the basis of the principles and policies of the board as approved by the President in his proclamation of April 8.

The resolution as passed unanimously by the board follows in part:

Resolved: That this war is not only a war of arms, but a contest in industrial resourcefulness and energy.

That the period of the war is not a normal period of industrial expansion, from which the employer should expect unusual profits or the employees abnormal wages; that it is an interregnum, in which industry is pursued only for common cause and common ends.

That capital should only have such reasonable returns as will assure its use for the world's and nation's cause, while the physical well-being of labor and its physical and mental effectiveness in a comfort reasonable in view of the exigencies of the war should likewise be assured.

That this board should be careful in its conclusions not to make orders in this interregnum, based on approved views of progress in normal times, which, under war conditions, might seriously impair the present economic structure of our country.

That the declaration of our principles as to the living wage and an established minimum should be construed in the light of these considerations.

That for the present the board or its sections should consider and decide each case involving these principles on its particular facts and reserve any general rule of decision until its judgments have been sufficiently numerous and their operations sufficiently clear to make generalization safe.

## Would Pool Interests Now

The Public Service Commission for the First District of New York has approved and sent to the Board of Estimate of New York City a form of agreement to be entered into by the city with the Interborough Rapid Transit Company modifying dual subway contract No. 3, so as to provide for the commencement of the forty-nine-year lease of the subways to the Interborough to begin on Aug. 1, 1918. Under the dual system contracts the Interborough has a forty-nine-year lease of the underground lines assigned to it, including the original Interborough subway. One of the terms of dual contract No. 3 was that the lease of the original subway should be abbreviated and made coterminous with the leases for the new subway lines which have been constructed since, and which are to be operated by the Interborough in connection with the old lines. By the signing of this agreement the lease will go into effect and as a result of the pooling of the earnings, the city will begin to share profits months earlier than would otherwise be the case.



## War Labor Board Grants 48-Cent Maximum

This Award Made for Surface Lines in Chicago, Cleveland and Detroit—Maxima in Smaller Cities 42 Cents and 45 Cents—Board Asks President Wilson to Urge Special Legislation Looking to Appointment of Federal Agency to Raise Fares Where Necessary

Wage increases ranging from 35 to 65 per cent were granted on Aug. 1 by the War Labor Board to the employees of twenty-two electric street and interurban railways in various parts of the country. The awards were handed down just as this issue was going to press, and consequently the full details cannot be published until later. From the preliminary data released by the Committee on Public Information, however, a general idea of the scope of the decisions can be secured.

The wages of surface-line trainmen in the larger cities of Chicago, Cleveland and Detroit have been fixed at rates running from a minimum of 43 cents an hour to a maximum of 48 cents an hour. The maximum in the case of the Chicago Elevated Railways is 50 cents an hour. In the smaller cities, where the cost of living is less, the new rates vary in general from a minimum of 38 cents an hour to a maximum of 42 cents an hour, or from a minimum of 41 cents an hour to a maximum of 45 cents an hour. In a few cases the interurban wage rate has been put 1½ to 2 cents an hour higher than the new city rate near by. The general minimum for trackmen, pitmen, oilers and similar employees seems to be 42 cents an hour.

### FEDERAL AID IS NEEDED

In announcing these increases, the War Labor Board said that it had recommended to President Wilson that special legislation be enacted by Congress to enable some executive agency of the federal government to consider the financial condition of the electric railways of the country and raise fares in each case in which circumstances require it.

In explaining this proposal the board said:

"We believe it to be a war necessity justifying federal interference. Should this be deemed unwise, however, we urge upon the local authorities and the people of the locality the pressing need for such an increase adequate to meet the added cost of operation.

"This is not a question turning on the history of the relations between the local electric railways and the municipalities in which they operate. The just claim for an increase in fares does not rest upon any right to a dividend upon capital long invested in the enterprise. The increase in fare must be given because of the imminent pressure for money receipts now to keep the electric railroads running so that they may meet the local and national demand for their service.

"Overcapitalization, corrupt methods, exorbitant dividends in the past,

are not relevant to the question of policy in the present exigency. In justice the public should pay an adequate war compensation for a service which cannot be rendered except for war prices.

"The credit of these companies in floating bonds is gone. Their ability to borrow on short notes is most limited. In the face of added expenses which this and other awards of needed and fair compensation to their employees will involve, such credit will completely disappear. Bankruptcy, receiverships and demoralization, with failure of service, must be the result. Hence our urgent recommendation on this head."

### CASES DECIDED SEPARATELY

The wage increases awarded by the War Labor Board were on a sliding scale and varied, being based on local conditions and facts peculiar to the individual cases. In practically all instances, the awards were made retroactive. In all cases where employees are compelled to work in excess of the period of their regular runs the companies must pay overtime on the basis of time and a half.

While not going deeply into the question of labor unions, the board, in cases where the right of employees to organize was an issue, ordered that workers be protected in the exercise of their right to join trade unions without fear of molestation by the employer.

A step to accelerate the method of graduating men from one wage classification to another also was taken by arbitrarily fixing the limit of apprenticeship on cars at one year, with a probationary period of three months.

### REMARKS IN PARTICULAR CASES

Regarding the Chicago companies the board said:

"The award in this case is an increase in maximum wages from 39 to 48 cents an hour. It was required by an increase in the cost of living and is not more than fair. It does entail on the companies, however, a heavy increase in their operating expenses. The showing made by the companies to us clearly discloses that in order to enable them to render adequate service the fares they are permitted to charge should be substantially increased."

The increase in the case of the International Railway was conditioned upon the continuance in force of the rate of fare recently granted by the City Council. Should this rate be revoked then the wage increases shall automatically terminate.

The board in the case of the Columbus Railway, Power & Light Company ordered that there be no interference

with the employees' right to organize, and that four men who previously had been discharged by the company be reinstated.

In awarding the Detroit increase, the board said that it was substantial but fair. The board, however, recommended a raise in fare. Permission was also given for the employment of women or negro men if the necessity arises. Sunday and holiday runs in Detroit are to be no more than eight hours, the board decided, while night runs will be eight hours with ten hours' pay. The company's open shop policy is to be continued and is "not to be deemed a grievance" by employees.

A wage of \$17.50 per week is to be guaranteed for the first year and \$20 a week thereafter by the Public Service Railway. Regarding other employees the board ordered that men should be paid in accordance with the actual platform time that they work, and their request for a ten-hour day was denied.

### 48-CENT MAXIMUM

The list of awards made by the War Labor Board follows:

Chicago Surface Lines—Motormen and conductors, first three months, 43 cents; next nine months, 46 cents; thereafter, 48 cents; effective on Aug. 1.

Chicago Elevated Railways—Motormen, extra, first three months, 44 cents; next nine months, 45 cents; thereafter, 50 cents; motormen, regular, first year and thereafter, 50 cents; effective on Aug. 1.

Chicago & West Towns Railway—Motormen and conductors, 43 to 48 cents per hour, effective Aug. 1.

Cleveland Railway—Motormen and conductors, 43 to 48 cents per hour, effective June 1.

International Railway, Buffalo, N. Y.—Motormen and conductors, 43 cents an hour for the first three months, 46 cents for the next nine, and 48 cents thereafter. Operators of one-man cars, 5 cents an hour above this scale. Engineers on freight cars, for the first three months 45 cents an hour, the next nine months 48 cents, and thereafter 50 cents. Conductors on freight cars, 44, 47 and 49 cents an hour. Brakemen on freight cars, 41, 44 and 46 cents an hour. Increases retroactive to June 1.

Detroit United Railway—Motormen and conductors, 43 to 48 cents an hour.

### 45-CENT MAXIMUM

Public Service Railway, Newark, N. J.—Motormen and conductors, first three months, 41 cents an hour; next nine months, 43 cents an hour and thereafter 45 cents an hour.

Scranton Railway—Motormen and conductors, first three months, 41 cents an hour; next nine months, 43 cents an hour, and thereafter 45 cents per hour.



Columbus Railway, Power & Light Company—Motormen and conductors, 41 to 45 cents an hour, effective July 1, 1918.

Evanston (Ill.) Railway—Motormen and conductors, 41 to 45 cents an hour, effective Aug. 1.

Omaha & Council Bluffs Street Railway—Motormen and conductors, 41 to 45 cents an hour; minimum for other employees, 42 cents an hour, effective July 17.

East St. Louis lines, East St. Louis, Ill.—Motormen and conductors, 41 to 45 cents an hour; interurban, 47 cents an hour, effective July 1.

Schenectady Railway—City lines, motormen and conductors, 41 cents an hour for the first three months; 43 cents for the next nine and 45 cents thereafter. On interurban lines, 46½ cents an hour.

New York State Railways (Rochester)—City lines, the same as for Schenectady; interurban lines, 47 cents an hour, and the West Shore Railway, 50½ cents an hour.

#### MAXIMUM OF 42 CENTS OR LESS

Cleveland, Painesville & Eastern Railway and Cleveland, Painesville &

Ashtabula Railway—Motormen and conductors, 38 to 42 cents an hour.

Cleveland, Southwestern & Columbus Railway—Motormen and conductors, 38 to 42 cents per hour; other employees, minimum of 42 cents an hour, effective April 1.

Cleveland & Eastern Traction Company—Motormen and conductors, 38 to 42 cents an hour, effective May 1.

Galesburg Railway, Lighting & Power Company—Motormen and conductors, 38 to 41 cents an hour, effective July 13.

New Jersey & Pennsylvania Traction Company, Trenton, N. J.—Motormen and conductors, first three months, 38 cents an hour; next nine months, 40 cents an hour; and thereafter 42 cents an hour.

New Orleans Railway & Light Company—Motormen and conductors, 38 to 42 cents an hour, effective July 1.

Joplin & Pittsburgh Railway—Motormen and conductors, 38 cents an hour for the first three months, 40 cents an hour for the next nine months and 42 cents an hour thereafter.

United Traction Company, Albany, N. Y.—Minimum wage of 40 cents an hour.

weighed and determined by those most competent to know of them and to deal with them."

#### FEDERAL AID SHOULD BE ONLY ADVISORY

In conclusion the committee stated its suggestions to President Wilson in the following words:

"The special war committee is of the opinion that there is no provision or decision of statute which can be construed to empower the federal government to fix the rates of utilities except where they are taken over and operated by the government as a war measure, and even in such cases the right of the national government to fix intrastate rates would be open to question. But at this time we are considering methods of administration rather than questions of authority. We feel that the national emergency calls for action.

"There is nothing objectionable in the suggestion that you appoint a national administrator of electric railways, whose power and duty shall be the crystallizing and expression of the national view and interest as to war-time conservation of this essential public service.

"Therefore we respectfully advise:

"1. A national administrator or board of three, with power of recommendation, advice or request to the state and municipal authorities.

"2. No disturbance of the rate and service powers of the state commissions or the contractual powers of the municipalities, except as the state or municipal authorities may subordinate these to the federal recommendations for the emergency, as we believe would almost universally be done.

"3. Use of the state commissions by the federal administrator or board for all purposes of inquiry, investigation, ascertainment and report of facts, and co-operation in recommendations, where needed, to the state or local authorities.

"Any increases granted should, of course, be for the war period only. The foregoing machinery as to increases in rates should be available also to accomplish betterments in service, to meet the needs of workers in war industries or for the general public."

## Commissions Ask Federal Advice

### War Committee Requests President Wilson to Appoint Federal Administrator or Board to Recommend Railway Relief Without Disturbing Local Regulatory Powers

President Wilson has been asked by the war committee of the National Association of Railway and Utility Commissioners to appoint a federal electric railway administrator or board to aid commissions and municipalities by recommendation and advice in assuring the maintenance of adequate rates and service. While recognizing that electric railways need assistance, the regulatory association opposes the idea of direct federal control over local utilities and asserts that the powers of commissions or municipalities should not be disturbed except as these are voluntarily subordinated to federal recommendations in this emergency period.

#### RAILWAY EFFICIENCY MUST BE MAINTAINED

The request to President Wilson is contained in a communication signed by Charles E. Elmquist, president of the association, and submitted on July 3. This communication reads in part as follows:

"The committee fully recognizes, as must every open-minded analyst of the conditions confronting public utility service, that the war has brought sharp advances in operating cost, a necessity for readjusting wage scales upwards, and severe inroads upon the revenues ordinarily applied to the upkeep of the property and the payment of some degree of return to the investors. The requirements of the war situation have, in many instances, made abnormal demands upon the facilities and resources

of the local electric lines. Almost everywhere it is true that the maximum efficiency of the nation in war-time industry would be seriously menaced by the breaking down or the abridgement of service.

"It would seem clear that whatever action is taken under federal auspices or otherwise should properly recognize that each application for an increase in rates or a curtailment in service should be separately considered and determined on its own merits by a tribunal representative of the public interest. Not every application which is made should be granted. Not every rate should be increased above the figure charged before the war. No way should be opened whereby the existence of a war-time emergency could be made a cloak or cover for an effort to rehabilitate enterprises unprofitable and foredoomed to failure before the war started. No federal action should seek to prompt an increase greater than is commensurate with the burdens placed upon the particular utility by the war.

"It would seem equally clear that the need of an electric railway for a rate yielding more revenue than that afforded by the rate permitted in the existing franchise does not in itself establish that, through federal recommendation or otherwise, such a change in the franchise rate should be brought about without a change in other franchise terms. That, again, is a question as to which the merits and equities of the particular situation ought to be

#### "H" System Subway Service Started

On Aug. 2 the Interborough Rapid Transit Company in New York City began subway operation under what is termed the "H" plan. This involves such a combination and separation of the old and new subway lines as to form distinct East Side and West Side systems, furnishing through service north and south. Connection between the two is provided by a transfer shuttle service on Forty-second Street between Times Square and Grand Central Station, and the old through service via Fourth Avenue, Forty-second Street and Broadway is discontinued.

The inauguration of the new through services was celebrated by a meeting



at the Hotel Astor on the evening of Aug. 1 after a special train carrying the guests of the Public Service Commission had made the circuit of the Fourth Avenue and Seventh Avenue lines from Grand Central Station to Times Square with Mayor John F. Hylan acting as motorman. The rapid transit situation in the city was covered from various angles in addresses by Charles B. Hubbell, chairman of the Public Service Commission for the First District; Mayor Hylan; Oscar S. Straus and William R. Willcox, ex-chairmen of the commission; George McAneny, former president of the Board of Aldermen; Theodore P. Shonts, president of the Interborough Rapid Transit Company, and A. E. Marling, president of the New York Chamber of Commerce.

### Milwaukee Electrification Proceeding

The electrification of the lines of the Chicago, Milwaukee & St. Paul Railway, between Othello, Seattle and Tacoma, is proceeding so rapidly that service may be expected within less than one year, according to C. A. Goodnow, Chicago, vice-president in charge, who recently returned to Seattle.

The eight substations are nearing completion, and by Aug. 15 will be ready for the electrical apparatus. The stations will cost approximately \$200,000. The trolley, transmission and other copper wires needed will be drawn at a new wire mill which has been constructed by the Anaconda Copper Mining Company at Great Falls. Stringing of wires will begin on Aug. 11 at Hyak, just east of the summit of the Cascade Mountains, and at Rockdale, just west of the summit.

It is expected the locomotives will be delivered during the spring of 1919. They will be tried out in the electric zone in Montana before being brought to the coast.

### Wants Provision for War Workers

Two government officials appeared before the Council and citizens' advisory committee on street railways at Cincinnati, Ohio, during the week ended July 27 to urge that in the proposed revised franchise to the Cincinnati Traction Company, provision be made for ample facilities for accommodating munition workers, even at the expense of an increase in the rate of fare. They were Charles L. Harrison, district chief of the United States Ordnance Department, and Capt. T. F. Geraghty, of the Ordnance Department. They declared that good street railway facilities are necessary to keep production of munitions up to the standard.

The committee assured the officials that the revised ordinance would make it possible for the company to pay its men higher wages and thus insure the employment of a sufficient number to operate the cars. Company officials had complained of difficulty in securing men under present conditions.

## News Notes

**Wage Request Met.**—The Montreal (Que.) Tramways has acceded to the request of its employees for higher wages. For a time it appeared as if the wage negotiations might fail.

**Increase in Wages in Easton.**—The conductors and motormen in the employ of the Northampton, Easton & Washington Traction Company, Easton, Pa., have received an increase in wages, amounting to 2 cents an hour. Under the new schedule the first-year men will receive 30 cents an hour. The five-year and over men will receive 36 cents an hour.

**Wage Increase for Municipal Employees.**—Employees of the municipal railway in Tacoma, Wash., have been conceded by the Tacoma Railway & Power Company, which operates the line, ten hours' pay for eight hours' work. Before the recent raise in wages, the employees working split shifts were allowed ten hours' pay for six or seven hours' work.

**Week-End Industrial Conference.**—A conference whose theme will be "Human Relation and Betterment in Industry and Transportation During the War" will be held at Silver Bay on Lake George, N. Y., Aug. 9 to 11. H. H. Westinghouse is chairman of the promotion committee. Horace E. Andrews, president of the New York State Railways, will preside at the meeting on the evening of Aug. 9.

**Service-at-Cost Agitation.**—A movement is on foot in the Twin Cities for a joint cost-of-service franchise for the Twin City Lines. The Mayors of Minneapolis and St. Paul and other officials do not seem to be very favorably disposed toward the Twin City Rapid Transit Company's request for a 6-cent fare and the whole matter is to be threshed out at conferences with the railway officials. The first joint municipal official conference has taken place.

**No M. O. Planks in New York.**—The New York Democratic State Convention rejected the Hearst plank declaring for public ownership of public utilities and recited merely that cities "ought" to have the right to enter upon public ownership if they desired. The Republican Convention was silent on the subject. Col. Theodore Roosevelt, who addressed the Republicans, declared it would be very unwise to disturb the present control of public utility properties.

**Men Ratify Wage Agreement.**—At a conference held recently at the office of H. S. Newton, manager, at Parkersburg, W. Va., between officials and representatives of the employees

of the Monongahela Valley Traction Company the contract concerning the recent 20 per cent increase in wages allowed employees of the local division was signed by the men representing the employees with only a few minor changes. The contract has now been sent to Fairmont for the signature of the company officials, when it will become effective.

**Seattle Inquiry Under Way.**—The Public Utilities Department of Seattle, Wash., has begun an investigation of the books of the Puget Sound Traction, Light & Power Company to obtain data with which to determine the amount of increased earnings to which the company is entitled in the proposed plan of bettering railway service. Superintendent of Public Utilities Murphine will supervise the work, which will be done by employees of the city comptroller's office, aided by employees of Mr. Murphine's office. It is expected that two weeks' time will be required to complete the work. The plan under which this inquiry is being conducted was referred to at length in the *ELECTRIC RAILWAY JOURNAL* for July 27, page 166.

**Butte Electricians at Fault.**—The arbitrators appointed to adjudicate the differences between the Butte (Mont.) Electric Railway and the International Brotherhood of Electrical Workers, have found, that if the company violated the contract between it and the union in permitting a subforeman to remove and replace burned out coils at the Florence Street substation it was at most a technical violation. The arbitrators further found that the union in imposing a fine of \$100 without prior notice to the company failed to conform to the provisions of its contract requiring that any difference arising over the interpretation or application of any part of the contract be referred to arbitration. The electrical workers shut off power and tied up the railway. Motormen and conductors had no grievance.

**Storm Interrupts Service at Dallas.**—Service on the Dallas-Fort Worth interurban line, operated by the Northern Texas Traction Company, was interrupted for twenty-five hours and considerable damage was done recently to the poles and lines of the company by a storm that passed between Dallas and Fort Worth. Nearly 2 miles of wire were blown down by the storm, and the high-tension line which supplies current from the power station at Handley for operating the cars of the Dallas Railway in Oak Cliff was broken. On this account, the Dallas Railway found its service badly crippled, as it had to cut its power from the lines east of the Trinity River over so as to supply part of this current for the Oak Cliff lines. This curtailed service on all lines in the city. Ordinarily there are about eighty cars in operation on the Oak Cliff lines, but during the period in which the damage was being repaired only thirty-six cars could be operated.



# Financial and Corporate

## Baltimore Costs Mount

Net Income of United Railways & Electric Company for 1917 Drops 21 Per Cent

Operating revenues increased \$646,785, and net operating expenses, taxes and depreciation rose \$816,668—such were the results of operation for the United Railways & Electric Company, Baltimore, Md., during the calendar year 1917. The net income amounted to \$875,586 as compared to \$1,108,124 in 1916, a loss of \$232,538 or 21 per cent.

### NO FLOATING DEBT

After paying dividends of 4 per cent or \$818,448 on the common stock, \$50,000 for Red Cross work and \$25,536 for other war incidentals the company had a profit and loss surplus of \$1,066,989 on Dec. 31, 1917. At the end of the fiscal year, the company had no floating debt and had cash on hand from current revenues amounting to \$671,190.

For maintenance of way, structures and equipment, there was charged to operating expenses during the year 1917 \$923,640, which with the \$528,041 credited to depreciation reserve and included in operating expenses made a total of \$1,451,682, an increase of \$121,863.

### TAXES AND PUBLIC CHARGES \$1,260,712

The total taxes and public charges in 1917, including the park tax, cost of paving streets, track changes necessitated by regrading of streets and highways, widening of streets, etc., were \$1,260,712, or about 24 per cent of the net receipts after paying operating expenses. This represented an increase

employed in and around Canton and Sparrows Point on the left of the harbor, and Curtis Bay and Locust Point on the right of the harbor, strained the capacity of those lines.

### ONE HUNDRED NEW CARS

The company received in the early part of last year 100 new cars and in May ordered eighty more to meet the conditions stated. These cars were to be delivered in October, but not one car of this lot was received during the year. The failure on the part of manufacturers to deliver cars upon the dates agreed upon prevented the company

## New Orleans Net Falls

Higher Operating Costs More Than Absorb the Gains in Revenues for 1917

During the calendar year 1917 the New Orleans Railway & Light Company, New Orleans, La., suffered a loss of \$69,126 or 9.60 per cent in net income. This was due mainly to the increase in operating expenses, for while the gross operating revenues gained \$545,518 or 7.57 per cent the net operating revenue fell off \$22,632 or 0.63 per cent.

### OIL AND COAL INCREASE IN COST

The principal items of increased costs were oil and coal. The proportionate share of the railway department in the operating results of the company is shown by the tabulation below in this column.

COMPARATIVE INCOME STATEMENT OF NEW ORLEANS RAILWAY & LIGHT COMPANY FOR YEARS ENDED DEC. 31, 1916 AND 1917

	1917		1916	
	Amount	Per Cent	Amount	Per Cent
Operating revenue.....	\$7,746,259	100.00	\$7,200,740	100.00
Operating expenses.....	4,172,010	53.86	3,603,859	50.06
Net operating revenue.....	\$3,574,249	46.14	\$3,596,881	49.94
Revenue deductions—taxes, etc.....	816,901	10.55	781,841	10.84
Net operating income.....	\$2,757,348	35.59	\$2,815,040	39.10
Miscellaneous income and outside operations.....	64,186	0.83	68,391	0.95
Gross income.....	\$2,821,534	36.42	\$2,883,431	40.05
Income deductions—interest, etc.....	1,944,000	25.09	1,907,196	26.49
Balance.....	\$877,534	11.33	\$976,235	13.56
Charges for renewals and replacements.....	226,308	2.92	255,883	3.55
Net income.....	\$651,226	8.41	\$720,352	10.01

from expanding its service as fully as planned. On a per capita basis the new cars would have been able to provide for 66,560 additional passengers a day.

The actual charges for maintenance during the year amounted to \$883,755. In addition to this amount there was expended \$346,694 for renewals and

## Electric Roads Under Government

Among the electric railways definitely retained and made part of the government system according to recent announcements are the following:

DEPARTMENTAL SUMMARY OF NEW ORLEANS RAILWAY & LIGHT COMPANY FOR 1916 AND 1917

	1917	1916	Increase	Per Cent
Operating revenue:				
Railway.....	\$4,669,389	\$4,422,777	\$246,612	5.5
Electric....	1,618,552	1,433,814	184,738	12.9
Gas.....	1,458,316	1,344,149	114,167	8.5
Total.....	\$7,746,259	\$7,200,740	\$545,518	7.5
Operating expenses:				
Railway ..	\$2,686,362	\$2,437,364	\$248,998	10.2
Electric....	886,161	635,358	250,803	39.5
Gas.....	599,486	531,136	68,349	12.8
Total....	\$4,172,010	\$3,603,859	\$568,151	15.8
Net operating revenue.....	\$3,574,248	\$3,596,881	*\$22,632	0.6

\* Decrease.

replacements, making a total charge of \$1,230,450. There was reserved from surplus for renewals and replacements, \$409,641, resulting in a net credit of \$62,946 for the year.

The expenditure for construction, improvements and betterments amounted to \$1,070,538, divided as follows: Railway roadway and line, \$130,567; electric line system and accessories, \$583,393; gas distribution system and accessories, \$93,355; plant equipment, \$193,909; rolling stock and miscellaneous equipment, \$9,685, and engineering and miscellaneous, \$59,626.

OPERATING RESULTS OF UNITED RAILWAYS & ELECTRIC COMPANY FOR YEARS ENDED DEC. 31, 1916 AND 1917

	1916	1917	Increase	Per Cent Increase
Operating revenues.....	\$9,914,051	\$10,560,836	\$646,785	6.52
Operating expenses.....	\$4,567,949	\$5,267,395	\$699,445	15.31
Depreciation.....	495,702	528,041	32,339	6.52
Taxes, licenses, etc.....	\$5,063,652	\$5,795,436	\$731,784	14.45
	994,840	1,079,723	84,883	8.53
Ratio of operating expenses to operating revenues:.....	\$6,058,492	\$6,875,160	\$816,668	13.48
Operating expenses (per cent).....	46.08	49.88	....	3.80
Depreciation (per cent).....	5.00	5.00	....	....
Taxes, licenses, etc. (per cent).....	51.08	54.88	....	3.80
	10.03	10.22	....	0.19
	61.11	65.19	....	3.97

of \$102,123 over 1916. The park tax for the year was \$671,711 as against \$631,018 in 1916, an increase of \$40,693. The total amount paid to the city of Baltimore in the park tax alone, since the consolidation of the railway lines in 1899, aggregates \$8,567,676.

There was considerable shifting in the company's traffic loads during the last year. The large expansion in the industries and the number of men em-

Colorado Springs & Cripple Creek District Railway.

East St. Louis & Suburban Railway. Fort Dodge, Des Moines & Southern Railroad.

Gallatin Valley Railroad.

Oregon Electric Railway.

St. Louis & Belleville Electric Railway.

Waterloo, Cedar Falls & Northern Railway.



## Mr. Warburg on Utilities

Says War Finance Corporation Expects to Deal Only With Corporations that Are Solvent

Paul M. Warburg, discussing public utilities securities and their relation to war financing in the current issue of the *Journal of the American Bankers' Association*, takes the view that the national interest at this time requires that state governments and the municipalities do their utmost to find a *modus vivendi* for their public service corporations. Concerning the outstanding franchise and contractual obligations he says that in every instance the utmost care should be used to determine whether proposals for constructive new developments are essential to the successful prosecution of the war and the health and necessary comfort of the people. Mr. Warburg continues:

### UTILITY CREDIT IMPAIRED

"The drastic shrinkage in the value of public utilities investments and the impairment of the credit of these corporations is a source of great danger to the general financial situation at this time. The credit of these companies must be maintained on account of innocent investors and the necessity for preserving the physical development of corporations whose operations are needed because of their direct and indirect effect upon the successful prosecution of the war.

"Franchises in many cases have become excessively onerous for such corporations, due to the fact that labor, coal, steel and copper can be secured only at exorbitant prices, while charges for services rendered often cannot be properly adjusted without the consent of the community.

"When the old Capital Issues Committee first undertook its work it arranged for a conference with public service commissioners representing the various states of the union. The committee was delighted to find that these state commissioners were not only open to suggestions made by the committee but that they were in fullest sympathy with its program and eager to cooperate in every respect.

"It is gratifying to know that a number of the leading municipalities have decided to make such equitable adjustments as to enable their public service companies to weather the storm, and it is hoped that their example will be emulated by all.

### WHERE THE W. F. C. WILL HELP

"The thought may have occurred to many that the War Finance Corporation has been created to cope with this very problem. Without attempting to speak for the War Finance Corporation and restating only what its directors have publicly expressed, I may say that this corporation, in a majority of cases, expects to deal only with concerns that are solvent and able to provide a bankers' guaranty. The amount that may be advanced

without that guaranty is strictly limited by law and it is safe to assume that, except where the public interest absolutely requires, the corporation will not consider itself warranted in making advances to companies on the brink of insolvency. Where advances from the War Finance Corporation are to be sought, it appears advisable, therefore, that the communities involved do their share in placing their public utilities companies on a self-sustaining basis."

## North Carolina Reports Progress

The successful operation of the North Carolina Public Service Company, Greensboro, N. C., for the year ended March 31, 1918, is indicated by the fact that the gross earnings were \$641,270 (the largest since organization) as compared with \$580,491 for the previous year, an increase of \$60,778. The net earnings credited to surplus were \$99,082, as compared with \$81,875 for the previous year, an increase of \$17,206. During the year many economies were effected which resulted in

## North Shore Improving

First Report Since Receivership Shows Substantial Revenue Increases and Capital Expenditures

The report of the Chicago, North Shore & Milwaukee Railroad, Highwood, Ill., for the period ended Dec. 31, 1917, shows gratifying progress since the company's receivership. The company acquired the properties of the Chicago & Milwaukee Electric Railroad on July 26, 1916, and owing to the change of accounting year by the Interstate Commerce Commission the present first report covers seventeen months.

The accompanying statement gives the operating results for the period to date, as well as some comparative figures for the calendar year 1917 as compared with the last full year of operation under receivership. It is said that earnings are improving monthly.

In the change from receivership operation to private operation there was required an expenditure of not only a great amount of labor but money in bringing the road up to the standard

COMPARATIVE INCOME STATEMENT OF CHICAGO, NORTH SHORE & MILWAUKEE RAILROAD

	July 26, 1916 to Dec. 31, 1917	Jan. 1, 1917 to Dec. 31, 1917	*July 1, 1915 to June 30, 1916
Revenue from transportation.....	\$2,227,482	\$1,682,874	\$945,088
Revenue from other railway operations.....	64,100	45,345	46,541
Total operating revenue.....	\$2,291,582	\$1,728,219	\$991,634
Operating expenses:			
Way and structure.....	\$209,193	\$149,218	\$101,531
Equipment.....	107,503	77,279	46,158
Power.....	334,660	250,548	165,221
Conducting transportation.....	486,681	373,950	180,458
Traffic.....	37,278	27,657	10,373
General and miscellaneous.....	293,309	227,154	115,884
Total operating expenses.....	\$1,468,624	\$1,105,807	\$619,625
Net operating revenue.....	\$822,958	\$622,412	\$372,009
Taxes.....	118,648	92,679	63,538
Operating income.....	\$704,311	\$529,733	\$308,471
Miscellaneous income.....	5,925		
Gross income.....	\$710,236		
Deductions from gross income.....	364,767		
Net income.....	\$345,469		

large savings. Much of these savings, however, was offset by the increased cost of operation.

The electric railway department suffered on account of the increasing cost of supplies and labor. The total number of passengers carried during 1918 was 3,818,623 as compared with 3,936,827 the previous year. The decrease in the number of passengers carried is attributed to the privately owned automobiles. The gross earnings of this department for the fiscal year amounted to \$172,876, as compared with \$168,885 in 1916. By the operation of the light one-man cars recently delivered it is expected that a large saving will be effected.

During the past year it is said the management was greatly impressed by the fairness with which both the local and state authorities met their requests for increased rates or other needed relief and also the willingness of patrons to pay more in order that the company might continue to serve the community efficiently.

of maintenance and operation expected and demanded by both the public and the governmental authorities. Between July 26, 1916, and Dec. 31, 1917, the company expended \$1,046,996 for betterments, additions and rehabilitation.

The road serves the United States Naval Training Station at Great Lakes, as well as Fort Sheridan. On account of the war the traffic to and from the Great Lakes Station has been very heavy, as a great number of men (approximating 25,000) are stationed there.

## Director of 104 Companies

With the growth of management corporations a sort of multiple director has arisen in the utility field. A partner in one of these managing firms has, according to the *Directory of Directors*, a seat as director on the boards of 104 companies. Of these he is president of sixteen, vice-president of seventy-five, and director only of thirteen. Another partner is president of fifty, chairman of three, and director of sixty-six.



# Financial News Notes

**\$150,000,000 Mortgage Filed for Record.**—A mortgage for \$150,000,000 was filed in the office of the Register of Kings County, Brooklyn, by the Brooklyn Rapid Transit Company on July 26. It was dated June 1. The mortgage was made to the Central Union Trust Company, New York, as trustee. It was issued as a result of a decision of the stockholders at a meeting in May in connection with the refunding of the company's notes mentioned previously at length in the ELECTRIC RAILWAY JOURNAL.

**Would Abandon Part of Road.**—The Westchester Street Railroad, White Plains, N. Y., has filed with the Public Service Commission for the Second District a petition asking for approval of the abandonment of a part of its line in the town of Greenburgh, which, it is claimed, is running behind. The company, it is said, has no means of financing operation or meeting the daily deficit. The commission will set an early date for a hearing. The New York, New Haven & Hartford Railroad, as owner of the Westchester road, has approved the proposed abandonment.

**Stock Issue Approved.**—The Capital Issues Committee has notified the Union Street Railway, New Bedford, Mass., that after due investigation into the purpose of the issue of new stock,

it has determined that the sale thereof is not incompatible with the national interest. The company plans to issue \$812,500 of new stock, the proceeds to be applied principally to paying for a new power house. The Massachusetts Public Service Commission has approved the issue. The proposed issue was referred to in the ELECTRIC RAILWAY JOURNAL for May 11, page 933, and June 29, page 1250.

**Monongahela Plans \$5,500,000 Issue.**—Bankers representing financial institutions of New York, Baltimore and Washington spent July 22 and 23 in Fairmont, Clarksburg and Parkersburg, W. Va., going over the lines and various plants of the Monogahela Valley Traction Company, which is arranging to float a loan of \$5,500,000. The proceeds of the loan will be used to refund about \$3,000,000 of outstanding obligations and to complete a big power plant at Rivesville, a gas-producer plant at Lynn, an addition to the Hutchinson power plant, the development of several gas wells and the building of about 8 or 10 miles of pipe lines.

**Successor to Dan Patch Line.**—The Minneapolis, Rochester & Dubuque Electric Traction Company, Minneapolis, Minn., the former Dan Patch line, has been reincorporated as the Minneapolis, Northfield & Southern Railway. The new company has bought the 38 miles of the Dan Patch road to Northfield and the 14 miles from Automobile Junction to the Luce line junction, from which it runs over the Electric Short Line to the station at Seventh Street and Third Avenue N., Minneapolis. The purchase of the property was financed by T. B. Walker, W. O. Winston, and others. James H. Ellison, of Winston Brothers Company,

is president of the successor company. H. A. Whittier, Northfield, is vice-president, R. H. Benham is secretary and W. O. Winston is treasurer. The whole line is included in the deal, both from Fifty-fourth Street, Minneapolis, to Northfield and the cut-off to get into the downtown terminals.

**Appeal to Alton, Granite & St. Louis Bondholders.**—A circular addressed by the company to the holders of bonds of the Alton, Granite & St. Louis Traction Company says that the increased operating costs of the company together with fixed rates of income have resulted in the company being unable to pay the interest coupons due on Aug. 1. It is explained that applications are pending before the State Public Utilities Commission and the Interstate Commerce Commission for increases in rates, and that it is possible that before the note is received by the bondholders favorable action will have been taken. The company points out that it will be impossible to know the effect of such increases until after at least one month's experience, and that the net results of such increases will be affected by a possible increase in wages of employees through arbitration of the National War Labor Board. If the net results prove satisfactory, and the company is in position to pay the coupons, the holders of bonds will be notified. The company expresses the hope that both the bondholders and the trustees will be willing not to take any action under section sixteen of the mortgage securing the bonds until the management has had sufficient time to determine the effect upon the earnings caused by increase in rates and such changes in wages as may be awarded by the National War Labor Board.

## Electric Railway Monthly Earnings

### BATON ROUGE (LA.) ELECTRIC COMPANY

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$20,455	*\$11,221	\$9,234	\$3,776	\$5,458
1m., May, '17	17,792	*10,383	7,409	3,498	3,911
12m., May, '18	240,609	*125,228	115,381	43,939	71,442
12m., May, '17	221,329	*106,159	115,170	42,274	72,896

### BROCKTON & PLYMOUTH STREET RAILWAY, PLYMOUTH, MASS.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$8,692	*\$10,017	†\$1,325	\$1,386	†\$2,712
1m., May, '17	9,586	*10,916	†1,330	1,222	†2,552
12m., May, '18	119,734	*122,492	†2,758	15,696	†18,454
12m., May, '17	125,193	*116,962	8,231	13,653	†5,422

### CAPE BRETON ELECTRIC COMPANY, LTD., SYDNEY, N. S.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$38,916	*\$27,740	\$11,176	\$6,535	\$4,641
1m., May, '17	36,029	*25,167	10,862	6,683	4,179
12m., May, '18	483,028	*335,899	147,129	78,434	68,695
12m., May, '17	419,412	*245,679	173,733	78,741	94,992

### COLUMBUS (GA.) ELECTRIC COMPANY

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$101,017	*\$38,403	\$62,614	\$33,004	\$29,610
1m., May, '17	84,410	*33,300	51,110	28,244	22,866
12m., May, '18	1,166,369	*459,522	706,847	379,937	326,910
12m., May, '17	973,048	*369,711	603,337	341,975	261,362

### EASTERN TEXAS ELECTRIC COMPANY, BEAUMONT, TEX.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$94,395	*\$53,320	\$41,075	\$13,052	\$28,023
1m., May, '17	74,232	*43,957	30,275	11,674	†20,333
12m., May, '18	996,074	*554,905	441,169	149,541	†314,464
12m., May, '17	883,414	*477,162	406,252	115,991	†293,491

### EL PASO (TEX.) ELECTRIC COMPANY

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$105,575	*\$73,101	\$32,474	\$6,645	\$25,829
1m., May, '17	103,174	*66,437	36,737	4,652	32,085
12m., May, '18	1,277,199	*830,315	446,884	74,934	371,950
12m., May, '17	1,198,303	*751,061	447,242	60,554	386,688

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

### HOUGHTON COUNTY TRACTION COMPANY, HOUGHTON, MICH.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$25,122	*\$17,118	\$8,004	\$5,009	\$2,995
1m., May, '17	26,466	*16,291	10,175	5,117	5,058
12m., May, '18	339,555	*218,696	120,859	60,702	60,157
12m., May, '17	338,980	*196,938	142,042	62,387	56,975

### JACKSONVILLE (FLA.) TRACTION COMPANY

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$83,210	*\$55,601	\$27,609	\$16,822	\$10,787
1m., May, '17	56,762	*38,673	18,089	15,754	2,335
12m., May, '18	776,083	*529,673	246,410	192,257	54,153
12m., May, '17	650,994	*438,689	212,305	186,459	25,846

### NORTHERN TEXAS ELECTRIC COMPANY, FORT WORTH, TEX.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$247,016	*\$156,341	\$90,675	\$28,172	\$72,086
1m., May, '17	180,238	*109,050	71,188	29,151	42,037
12m., May, '18	2,999,061	*1,694,123	1,304,938	344,583	†1,037,021
12m., May, '17	2,058,447	*1,212,833	845,614	348,814	496,800

### PUGET SOUND TRACTION LIGHT & POWER COMPANY, SEATTLE, WASH.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$919,763	*\$590,677	\$329,086	\$207,170	\$121,916
1m., May, '17	762,662	*460,938	301,724	191,344	110,380
12m., May, '18	10,329,753	*6,436,360	3,893,393	2,428,163	1,465,230
12m., May, '17	8,689,133	*5,290,270	3,398,863	2,248,576	1,150,287

### SAVANNAH (GA.) ELECTRIC COMPANY

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$93,022	*\$62,857	\$30,165	\$25,106	\$5,059
1m., May, '17	74,213	*52,139	22,074	24,144	†2,070
12m., May, '18	1,053,943	*705,680	348,263	295,166	53,097
12m., May, '17	877,833	*582,620	295,213	285,654	9,559

### TAMPA (FLA.) ELECTRIC COMPANY

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., May, '18	\$82,798	*\$51,526	\$31,272	\$5,087	\$26,185
1m., May, '17	82,012	*48,366	33,646	4,370	29,276
12m., May, '18	998,742	*578,020	420,722	59,982	360,740
12m., May, '17	992,882	*539,245	453,637	52,281	401,356



# Traffic and Transportation

## Boston Accepts Gracefully

Newspaper Comment Shows Disposition to Accept Without Question the Seven-Cent Fare

Public opinion in Boston as judged by newspaper comment shows a general realization of the need of the company for going to the 7-cent fare put into effect on Aug. 1 and a willingness to accept the decision of the board of trustees as sound and in conformity with public interest. The significant fact, of course, is that the board found the statements and claims of the company to be true; that the need for an immediate increase in fare was imperative and that in this particular case an increase to 6 cents would not meet the situation. Looked at from the broad viewpoint of the industry as a whole it would seem that this finding by a public board representing no investment but only the good of the general public can hardly be without importance to companies elsewhere, struggling desperately with problems similar to those which confronted the Boston company. Space limitations make impossible the publication of extended extracts from the editorials, but the following quotations show the trend of the comment:

"GLOBE"

"The affairs of the elevated are in the hands of men whose first consideration is not corporate, but public, interest. They have taken their action only after careful study of the elevated situation. The best we can do is to trust to their judgment."

"TRANSCRIPT"

"There will be general agreement that the trustees, in taking this course, have acted according to the necessities of the situation. Their earliest surveys of the elevated finances proved only too plainly the drastic nature of the relief which must be applied if Boston's surface and rapid-transit lines were to cease giving service at less than cost and to begin operations on the sound, economic basis described in the public control act."

"POST"

"So let us pay the extra 2 cents cheerfully in the vast and cheering hope that we shall soon get our money's worth of service on a rehabilitated and satisfactory system of transportation."

"AMERICAN"

"The need of more revenue for the road is immediate and imperative, and the trustees, in announcing the coming fare increase, have only done what they were ordered to do by the Legislature in the act which placed them in control of the line."

Later the *American* replied to an anonymous communication in which the writer took the paper to task for its comment on the new fare. The editor replied in a 24-in. editorial which he concluded by reiterating his plea to the readers to be patient.

## Portland Fare Agreement Company to Charge Five Cents on Three Lines and Six Cents on Others, Zones Outside

An agreement between Attorney General Sturgis of Maine and William S. Linnell representing the Cumberland County Power & Light Company, Portland, on fares for the Portland Railroad brought the hearings on the increased fares asked for by the company in a petition to the Public Utilities Commission to an end on July 24, the company agreeing to the rates of fare suggested by Robert M. Feustel, acting as engineer for the State.

### PLAN OF EXPERTS ADOPTED

The Public Utilities Commission on July 27 rendered a decision ordering the adoption of the fare plan previously agreed upon. The commissioners said in their decision:

"It is believed that no individual or body of individuals is likely to devise a scheme to meet the present situation with greater success than that so constructed. It is the work of a body of experts eminently qualified by training and experience and manifestly possessing the confidence of a wide clientele, and has the approval of counsel for the public who have devoted great labor and fidelity to the interests intrusted to them. While it does not promise the amount of revenue to which the company deems itself entitled, the latter has expressed its willingness to undertake to operate under it in the hope that it may tide over the present emergency, and that this concession may be accepted by the public as an earnest that it is not insistent upon any particular plan or upon any relief which is not absolutely necessary.

### SUMMARY OF PLAN

"It is not necessary to describe the plan at length—the order will be very explicit. It is sufficient to say that it retains the 5-cent base rate for three lines in Portland characterized by the greatest density and largest percentage of short rides; exacts 1 cent for a transfer from a 5-cent car, and retains the free transfer system otherwise. Outside of these three lines it fixes 6 cents as the minimum cash fare; inaugurates the 2-cent zone system beyond the minimum cash fare limit except in a few cases where it did not seem practicable to divide into such units; makes appropriate concessions in some instances, notably that of Westbrook, in consideration of the density of travel and the recent withdrawal of reduced rate tickets; removes certain discriminations now existing as to comparative haul on different lines for the same fare; recognizes to some extent

the claims of distant communities built up on the present low fares; and retains the principle of reduced rates for school tickets.

"The plan thus presented and indorsed by all of the parties will be adopted. All parties agree that its actual results can be told only by a reasonable trial. It may provide less revenue, or more, than is anticipated. It may work out entirely fair to all, or inequalities and hardships may develop. It is necessarily an experiment, as all such radical departures are, and either the company or the public may appeal to this commission for a revision or modifications after a fair trial has been given it. But a reasonable trial should be given before complaints are entertained."

## Wheeling Fare Case Presented

The hearings on the applications of the Wheeling Traction Company and the Panhandle Traction Company for fare increases were held before the Public Service Commission of West Virginia during the week ended July 27. The two companies consolidated their claims for rights to increase fares 20 per cent.

Attorney M. L. Brown asked whether the company expected to be permitted to increase fares in the State of Ohio. In reply Attorney McCahill said, in his opinion, the increase in Ohio might have to be obtained through the Interstate Commerce Commission. The question then arose whether the whole matter was not one for the Interstate Commerce Commission to decide, since it involved the proposal that a passenger from Martins Ferry, Bridgeport or Bellaire to Wheeling would enjoy 5-cent transportation, as at present, while the passenger from Wheeling Island to Wheeling would be obliged to pay a 6-cent fare. Mr. McCahill said that out of courtesy to the State commission the companies had made the application for the West Virginia increase direct to the State authorities rather than go before the Interstate Commerce Commission.

Attorney Everett Moore of Moundsville made a plea before the commission for improved service, as did also Attorney Brown of McMechen. The attorneys for the companies replied that the commission was familiar with the efforts they were making to improve the service. Fifty-two new cars have been promised for delivery soon and four are already in operation.

With the closing of the companies' plea, attorneys opposing the application moved its dismissal on the ground that the need of the increased fare had not been proved. The commission asked for additional statements from the companies.



## Company to Decide for Itself

### Milford, Attleboro & Woonsocket Company Given Choice of Seven-Cent Fare or Modified Zone System

The Milford, Attleboro & Woonsocket Street Railway, one of the properties controlled by the New England Investment & Security Company, has been authorized by the Public Service Commission of Massachusetts to establish a new schedule of increased fares, in a finding dated July 15. The road operates about 30 miles of single track in the territory southeast of Worcester and near the Rhode Island line, and connects with the lines of the Rhode Island Company. Fares have not been changed materially since operation began. The unit is 5 cents, and there are seven zones ranging from 5.4 to 1.3 miles in length.

The company proposed to establish a mileage system with twenty-eight zones averaging about 1 mile length each, making the rate 2.5 cents per zone, with a minimum fare of 5 cents good for a ride in any two adjacent zones. When the total fare computed shows a half-cent, the company proposed to collect the full cent. The cash fare under this plan for a ride of three zones would thus be 8 cents, rather than 7.5 cents; but provision was to be made for the sale of ten tickets for 25 cents. It was estimated that the new tariff would yield a total increase of 76.3 per cent in revenue (from \$96,810, as in 1917, to \$170,643 for 1918).

The company hoped to earn 7 per cent on its stock investment by this change in rates; and the commission concedes that under the circumstances this rate would not be unreasonable in normal times. A 5 or 6 per cent return, the board holds, should be regarded as very satisfactory under present war conditions. The increase in fares proposed by the company averages 96 per cent, and between twenty typical points the fare total is \$5.10 by the proposed rates as compared with \$2.60 under the present schedule.

The company's estimate of the revenue to be derived from the new schedule was based upon traffic conditions covering only one day; but the board is of the opinion that the estimate that the increase in revenue would amount to about 76 per cent if the traffic loss were not more than 10 per cent is not far wrong. Estimates of the gain in revenue from increases in rates, however, are most unreliable, in the experience of the commission. This company has little steam road competition, and few jitneys have operated in its territory; but the effect of a jump in rates ranging from 25 to 200 per cent is beyond calculation.

The towns in which the road operates are not opposed to a fare increase, but are all hostile to the proposed mileage system of charging. They urged that the present zones be retained and the fare unit raised from 5 to 7 cents, contending that the mileage zone system,

with its violent and disproportionate increases in the rates between the various centers, would destroy the good feeling previously existing, discourage travel, encourage every feasible form of competition and prove of little financial benefit. It was urged that there would be general willingness to pay 7 cents.

The commission concludes that the company needs additional revenue, but suggests that it be obtained either by reducing the number of zones planned between Milford and Franklin and the Rhode Island boundary, where the traffic is heaviest, and not changing the present rates; or by the adoption of the 7-cent fare unit. The advantages of the mileage zone system in relation to the development and retention of short-haul traffic are important, the commission points out, for the stimulation of short-distance travel by a low minimum fare is highly desirable.

On the other hand, a straight 7-cent fare has less disadvantage on this road than on many others, for the proportion of short-haul traffic is low and the riding is mainly between centers of population some distance apart. The commission points out that much of the trackage runs through sparsely settled territory; that the communities are accustomed to the present system of charging, apparently are satisfied with it, and by retaining this system the company could not only preserve the good feeling now existing but also save the trouble and expense of a rather complex and experimental new method of fare collection.

Upon the evidence the commission is inclined to favor giving the 7-cent fare unit a trial. It says:

"A friendly community is a better asset for a street railway than an anticipated gain in revenue, which, however reasonable it may be, is still largely a matter of uncertain speculation. However, the local management is better able to judge this question of expediency than we are. \* \* \* The towns which the company serves ought not to forget that they have been receiving service at less than cost, including a reasonable profit to the stockholders, ever since the road began operation, and they ought not to oppose any plan which is likely to increase its prosperity and enable it to secure the credit which it will presently need."

### Explains Matters to the Editors

Joseph K. Choate, chairman of the special committee on ways and means to obtain additional revenue, representing the electric railways of New York State, addressed to the editors of the daily papers throughout the State on July 31 a statement in which he said that the situation confronting the electric railways of the State was "one that

must give alarm not only to the owners and operators of these properties, but to the public as well."

Mr. Choate reviewed very briefly the trend of regulation from the passage of the public service commission laws in 1907, and pointed out the chaos which has followed the decision of the Court of Appeals in the so-called Rochester case. Mr. Choate says that the idea in establishing the commissions was to remove public utility regulation from politics, but that the effect of the decision of the Court of Appeals in the so-called Rochester case is to make regulation again a matter of politics.

As a result of the decision of the court, questions of increases in fares are now before the common councils of various cities. None of these governing bodies has the machinery or the facilities for such impartial and technical investigation of the fare question as will alone provide the proper solution of the matter.

### Question of Authority Raised

Kansas City, Kan., Contends City Has Sole Right to Negotiate Any Change in Fare

Out of the effort which officials of Kansas City, Kan., are making to prevent the charging of a 6-cent fare by the Kansas City Railways has grown a controversy between the city and the Public Utilities Commission of Kansas which may have far-reaching consequences. On Aug. 8 the Supreme Court at Topeka will decide whether or not the Public Utilities Commission can hold a hearing in Kansas City, Kan., on the application of the railway for an increase in revenue in that city. Before the commission had arranged for the hearing, the city officials of Kansas City, Kan., secured a temporary injunction from the Wyandotte County Court preventing the commission from considering the facts in the case. Later E. L. Fischer, district judge, ruled out a demurrer of the utilities commission and automatically the temporary injunction was granted, and continues in effect till the case is settled in the Supreme Court. The fact that the Supreme Court recently refused to issue a writ of mandamus against Judge Fischer, maintaining that the District Court had jurisdiction in the matter, gives the city officials confidence that the decision rendered will be favorable to the city.

The commission contends that it was created by the State legislative body, and has the power to go into any county or city in the State for the purpose of holding a hearing to determine what action, if any, should be taken. It maintains that having been created by the State for the specific purpose of passing on questions of this nature, the District Court has no jurisdiction in such matters. The commission declared that the restraining order should have been against an order and that no order was issued. The indirect result would be that future acts of the



commission might be set at naught and the body shorn of its power as a rate-fixing commission.

On the other hand, the Commissioners of Kansas City, Kan., contend that the city has a franchise contract with the railway which does not expire for five or six years, in which the fare is fixed at 5 cents. They also maintain that the utilities commission has no power to come into Wyandotte County and hold a hearing to change the rates, and that as a party to the contract, the city should hear the application.

## Seeks Further Increase

### Springfield Street Railway, After Short Zone Trial, Will Increase Basic Fare to Six Cents.

Three months' trial of the zone system of fares on the Springfield (Mass.) Street Railway has convinced the management that the existing 5-cent fare in the central zone will have to be increased to 6 cents. A tariff embodying this change will shortly be presented to the Public Service Commission.

The present zone limits are to be retained, but various other changes in tickets and rates are scheduled. The 8½-cent tickets now entitling the holder to ride from any point within the inner zone to the limit of the outer zone are to be abandoned, and the 6¾-cent tickets, used between points in the inner zone and the mid-points of the outer zone will be replaced by tickets costing 8½ cents.

It is planned to increase the rate from 2 to a basis of 2½ cents per mile on the rural lines radiating from Westfield and Palmer, but the existing 6-cent fare unit in Westfield is to remain unchanged. The new rates will probably go into effect on Sept. 1.

The Public Service Commission authorized the company to establish a zone system with a central 5-cent fare unit, in a decision issued in March, 1918, and estimated at that time that the company's annual earnings should be increased \$400,000. The quarter's trial of the zone rates shows that the maximum increase to be expected is at the rate of \$300,000 a year, and this increase will be absorbed in the recent wage increase granted the employees by Henry B. Endicott, executive manager of the Massachusetts Committee on Public Safety, who arbitrated the wage question between the union and the company and authorized increases estimated at a total of \$400,000 a year.

The company plans to sell tickets good for a 6-cent fare at the rate of seventeen for \$1. These, with the 8½-cent tickets, would be on sale at central points throughout the city, but would not be vended by conductors. The 8½-cent ticket, replacing the present 6¾-cent ticket, would be honored only on the line for which it was sold. In general, the new tariff will establish a fare of 6 cents on present 5-cent lines; 8½-cents on 6¾-cent lines, and 11 cents on 10-cent cash and 8½-cent ticket lines.

## New Boston & Worcester Schedule

### Massachusetts Interurban Authorized by Public Service Commission to Charge Rate of 2.5 Cents Per Mile

A new rate schedule based upon a charge of 2½ cents per mile will shortly be approved by the Public Service Commission of Massachusetts for use by the Boston & Worcester Street Railway. The company has been notified that if it files a schedule amended according to a decision of the board dated July 16 it will be allowed to go into effect upon short notice.

Since Oct. 1, 1917, the road has been operating under a mileage zone system which was substituted for the former system of irregular and overlapping zones, in each of which the cash fare was 6 cents. The later schedule is based upon a rate of 2 cents per mile, the zones being about 1 mile long in each case, with a minimum fare of 6 cents for a ride covering three zones or less. One-hundred mile books are sold for \$1.70, round-trip tickets are sold at a discount of 15 per cent, and in Marlborough special workingmen's tickets are provided at the rate of thirty for \$1.

The Public Service Commission also required the sale of twenty-trip tickets, limited to the person named, and good for one month, enabling the purchaser to ride between any two designated points on the road at a rate of 50 per cent in excess of the old cash or trip-ticket rate. It is estimated by the company that the new rates would increase revenue about \$74,000 a year.

#### TRIAL FOR SIX MONTHS

This schedule was approved for a six-months' experimental period. The new tariff, approved in general by the commission, leaves the mileage zones unchanged except in the increase of the base rate to 2½ cents, and makes a similar increase in all reduced-rate tickets except the workingmen's tickets in Marlborough. The minimum fare of 6 cents for a ride of three zones or less is retained. It is estimated that this new tariff would increase passenger earnings not more than \$146,830. The results from the schedule effective last fall have been disappointing, but in the company's opinion this is due to the weather conditions last winter and to changes resulting from the war.

There are some apparent inconsistencies in the new schedule. One is the minimum fare of 6 cents for a ride of three zones or less, as a result of which the fare jumps suddenly in the fourth zone from 6 to 10 cents. The commission intimates that a more logical minimum would be 5 cents for a ride of two zones or less. The company states, however, that in view of its high-speed operation it would be difficult to collect fares within a space of two zones on certain portions of the line.

The principal change in the tariff required by the commission is in connection with fares between Chestnut Hill and the Overbrook section of Wel-

lesley. The company proposed to establish a cash fare of 20 cents per ride, a mileage rate of 17 cents, and a twenty-ride monthly ticket rate of 14½ cents. The present monthly ticket rate is 11¼ cents. This is the only section served by the road in which commutation business is a main factor in the travel, and the commission feels that commutation rates should be retained between points where the present twenty-trip tickets are available, selling these tickets, however, on the basis of fifty rides instead of twenty rides per month. This will confine their use more certainly to the regular riders to whom it is reasonable to make this concession, and while the sale of such tickets is a departure from the logical mileage zone system, it meets a real need, especially in view of the federal railroad administration's disinclination to raise commutation rates by radical amounts.

## Wants Ten-Cent Cash City Fare

The Ithaca (N. Y.) Traction Corporation recently filed with the Public Service Commission for the Second District of New York a supplemental petition in which it asks that "the rate, fare or charge to be received by your petitioner within the limits of cities and incorporated villages shall be 10 cents per passenger or that received by the sale of ticket representing twelve for \$1."

The commission will give a hearing upon the petition.

The Ithaca Company, in 1917, asked permission to increase its rate of fare in Ithaca from 5 cents to 7 cents. There were no restrictions in the franchises held by the company and the commission on Nov. 21 approved an increase to 6 cents.

Accompanying the petition just filed were statements by the company giving the value of the property used in the public service, income, schedule of prices of labor and material from 1910 to March 1, 1918, and other information upon which it makes its petition for a 10-cent fare.

## Cities Attack Fares in Court

The hearing of the appeals of the cities of St. Louis and Kansas City from the Public Service Commission rulings granting increased rates from 5 to 6 cents to the United Railways, St. Louis, and the Kansas City Railways, were begun at Jefferson City, Mo., on July 22 before Judge John G. Slate. The two cases are being heard at the same time.

Both cities are attacking the jurisdiction of the Public Service Commission, their arguments being that the commission has no right or authority to increase street railway fares.



### Six Cents for Fishkill

Permission to charge a 6-cent fare was granted by the Public Service Commission of the Second District of New York on July 25 to the Fishkill Electric Railway. The company operates in Beacon to Fishkill with a branch extending to the foot of Mount Beacon. The road is divided into two fare zones. A 5-cent fare has been charged in each zone, but under the commission's order, effective on five days' notice, the zone fares will be increased to 6 cents. The commission holds that present rates of fare "are unjust and unreasonable for the reason that they are insufficient to yield a fair return on the value of the property used in the public service."

The investigation by the commission disclosed that there were no franchise restrictions fixing rates of fare and no opposition to the company's petition developed. In concluding its finding the commission said:

"While the increase of fare asked for will probably not permit of any dividends to stockholders, it should be granted, and although the method by which the determination is arrived at can hardly be said to be strictly scientific, it will probably afford temporary relief and permit this road to continue to serve the public in these abnormal times."

### Hearing on New York City Fares

The committee on franchises of the Board of Estimate of New York City on July 27 heard argument in favor of the application of the New York Railways for permission to charge 6 cents on its lines during the war and for one year thereafter, should the Public Service Commission give its assent.

Henry J. Smith, counsel for the company, was questioned by Mayor Hylan, chairman of the committee, and by City Comptroller Craig concerning rents paid to underlying companies. These he explained after the fashion of Mr. Shonts, president of the company, in the statement published in the *ELECTRIC RAILWAY JOURNAL* for July 27, page 171. Mr. Smith said that the rate of fare received by the company was only 3.6 cents instead of 5 cents, because of the transfers that the company was compelled to issue. The Mayor suggested that the company use its influence with the stockholders of the leased lines to accept lower rentals.

Timothy S. Williams, president of the Brooklyn Rapid Transit Company, read a statement to the effect that if the company was not allowed to charge a 7-cent fare on its surface lines it would be compelled to go back to the zoning system. If the zoning system was restored it would cost as much as 15 cents to make a trip in Brooklyn where the cost now was 5 cents.

Assemblyman Mark Goldberg appeared in opposition. He stated that the American Federation of Labor was against the increase and that the company's employees did not accurately represent the sentiment of workingmen.

## Transportation News Notes

**Skip Stops in Springfield.**—The skip-stop system will be adopted in Springfield, Ill., according to an announcement from the office of the Springfield Consolidated Railway.

**Five-Cent Fare for Rockford.**—The Public Utility Commission of Illinois has authorized the Rockford City Traction Company to charge a straight 5-cent fare for adults. School children will pay a fare of 2½ cents.

**New East St. Louis Fare Suspended.**—The Public Utility Commission of Illinois has suspended until Nov. 18 the proposed increase in fares asked by the East St. Louis (Ill.) Railway. The company asked a rate of 7 cents.

**Nashua Tariff Suspended.**—The Public Service Commission of New Hampshire on July 11 notified the Nashua Street Railway that it has suspended until Sept. 1 the increase in fares and schedule changes of the road, proposed to be put into effect on July 13 pending a hearing.

**Steam Rates Allowed.**—Authorization of the Director General of Railroads to the Electric Short Line St. Paul, Minn., to increase its rates to accord with those charged by the steam lines under federal control has been approved by the Railroad & Warehouse Commission of Minnesota.

**Court Prevents Interference With Fares.**—Federal Judge H. C. Niles has issued an order restraining the city officials of Meridian, Miss., from interfering with the Meridian Light & Railway Company in raising fares to 7 cents, and increasing the electric light and power rates 28 to 40 per cent and gas rates 30 per cent.

**North Shore Appeals to the I. C. C.**—Permission to increase its ticket fares from 2 to 2.6 cents per mile and to increase its cash fares to 3 cents per mile between points in Illinois and Wisconsin, was asked of the Interstate Commerce Commission on July 19 by the Chicago, North Shore & Milwaukee Railroad, Highwood, Ill.

**Law Stands in Way of Fare Increase.**—On applying to the Commissioners of Franklin County, Ohio, for an increase in the rates of fare, the Columbus & Southern Traction Company was referred to Assistant Prosecuting Attorney J. H. Summers, who advised that the law does not permit the commissioners to change the terms of franchises.

**City Will Not Object.**—The City Council of Boulder, Col., on July 16 decided not to interfere in the application made by the Denver & Interurban Railway for the right to increase fares between Boulder and Denver. The

Council also will not insist upon running the full number of cars required by the company charter, which will be quiescent during the war.

**Albany Southern Tariff Put Over.**—The Albany (N. Y.) Southern Railroad on July 22 filed with the Public Service Commission for the Second District, notice that its increased rate schedule, which it intended to put into effect on Aug. 4, will not become effective until Sept. 1. The schedule, filed on July 5, increased one-way and round-trip fares between Albany and various points on the road.

**San Antonio Wants Fare Increase.**—The San Antonio (Tex.) Public Service Corporation is planning to make application to the City Council for a permit to increase its railway rates to 6 cents or establish the zone system, limiting the distance to be traveled on a single 5-cent fare. Notice of this fact has been conveyed to Mayor Bell by W. B. Tuttle, vice-president and general manager for the company.

**Buffalo Fare Referendum on Aug. 20.**—The special election on the 6-cent fare agreement with the International Railway will be held on Aug. 20. The date was fixed by the City Council on July 24 after the petition for a repeal of the fare resolution was denied. The proceedings which resulted in the fare matter being submitted to a vote have been reviewed from time to time in the *ELECTRIC RAILWAY JOURNAL*.

**Must Show Proof.**—The Western New York & Pennsylvania Traction Company, Olean, N. Y., will be asked to show proof of necessity in the matter of the proposed increased fares at a hearing before the Public Service Commission for the Second District. The company is seeking to increase its city fares in Olean from 5 cents to 7 cents. The investigation was asked by the Common Council of Olean.

**No Women in Des Moines.**—The Des Moines (Iowa) City Railway is giving little attention to using women as conductors. The franchise which the company secured a few years ago provides that the cars shall be operated by two men, and as long as the labor situation does not become any more critical than it is at present no attempt will be made by officials of the company to secure relief from this feature of the franchise.

**Zone Modifications in Providence.**—In compliance with petitions filed by patrons, officials of the Rhode Island Company, Providence, R. I., have agreed to extensions of the 5-cent fare limits on three lines of the road. The objections to the previous limitations on the distance which the 5-cent fare represented were chiefly that hardship was imposed upon passengers living just beyond the zone line and required to pay an extra 2-cent fare.

**Skip-Stop Results in Des Moines.**—The first month's trial of the skip-stop plan on the Sixth Avenue line has been entirely satisfactory to the Des Moines (Iowa) City Railway. According to the



report submitted to the City Council by Car Supervisor Smock two minutes have been cut from the running time of the cars on the Sixth Avenue line during the regular hours, and during the rush hours the plan has provided car capacity for eighty more passengers per hour.

**Hearing on Transfer Charge Postponed.**—The Public Utilities Commission of Illinois has postponed until Sept. 23 the hearing on the petition of the Peoria Railway to charge 2 cents for transfers. The company wished to proceed with the case at once, but after conference between counsel, it was decided to delay the hearing. The granting of a straight 5-cent fare to the company was noted in the *ELECTRIC RAILWAY JOURNAL* for July 20, page 135.

**Skip Stops for Chicago.**—Skip-stop operation for the Chicago Surface Lines was approved by the City Council on July 17, and is scheduled to go into effect within a few weeks. It is estimated that the plan will eliminate about 30 per cent of present stops. The ordinance provides for eight stops per mile, the places being where house numbers are "100" or multiples thereof. A penalty of from \$10 to \$25 is fixed for any person or corporation violating the ordinance.

**Class and Express Rates Advanced.**—The Reading Transit & Light Company, Reading, Pa., on July 23 filed with the Public Service Commission a supplement to its tariff of class and express rates, becoming effective on Aug. 12, and making the following changes: All class rates increased 25 per cent, minimum express charge increased, rates for milk in cans increased. Maximum weight of express shipments under graduation changed from 50 lb. to 20 lb.

**A. C. Ventnor Fare Six Cents.**—Clarence I. Cole, receiver of the Atlantic City & Shore Railroad, has notified the authorities of Ventnor, N. J., of the company's intention to increase the fare from Atlantic City to Ventnor City from 5 cents to 6 cents on Aug. 6. He says the railroad wants to increase the income so that the receivership can be lifted. The company some time ago agreed to extend the 5-cent zone system twelve blocks further down the beach after a lapse of ten years.

**Mr. McCarter's Statement Reproduced.**—The Montreal (Que.) Tramways reproduced as an advertisement in the *Montreal Gazette* of July 24 the statement on the preservation of utilities which was made by President Thomas N. McCarter of the Public Service Railway, Newark, N. J., chairman of the American Electric Railway Association War Board, to the *ELECTRIC RAILWAY JOURNAL* and published in this paper for July 13, page 43. The advertisement was three columns wide and a full page in depth.

**Feels Vote Necessary.**—It was announced on July 22 that the City Commission of Kalamazoo, Mich., would not grant the Michigan Railway permission to increase its fares on the Kalamazoo

city lines to 6 cents. This action was taken after a committee from the commission investigated the railway's claims. It was found that while an advance may be warranted at this time, the commission was not authorized under the new city charter to grant such an advance without the proposition going to a vote of the people.

**Complete Control of Jitneys Recommended.**—Mayor Ole Hanson, Seattle, Wash., recently received a report of the committee which he appointed to investigate jitney conditions in Seattle. The committee report asks city regulation of all jitneys, and suggests that the work be placed under direction of some city department subject to approval of the Board of Public Works. The committee prepared its report after six public hearings had been held, and thorough investigation made into the jitney and traffic situation in Seattle.

**Fare Petition Withdrawn.**—The Public Service Commission for the Second District of New York on July 25 granted the request of the Corning & Painted Post Railway to withdraw the petition asking for a 6-cent fare in cities and incorporated villages in which it operates. The company operates in Corning and Painted Post under franchise fare limitations coming within the decision of the Court of Appeals in the Rochester rate case and for this reason the attorneys for the road requested permission to withdraw the increased fare petition.

**Still Fighting at Columbus on Service.**—At the regular meeting of the City Council of Columbus, Ohio, on July 22, a resolution was unanimously adopted providing for the appointment of two car inspectors, whose duty will be to check up the cars and ascertain whether the Columbus Railway, Power & Light Company is operating according to the terms of the franchise. The company has been insisting upon an increase in the rate of fare for some time in order that it may give full and sufficient service and make such improvements as are necessary.

**Abolition of Tickets Upheld.**—The Supreme Court at Olympia, Wash., recently held that the Public Service Commission was within its legal rights when it abolished the 4-cent tickets in Seattle. The Supreme Court's decision states that the Public Service Commission has no authority to change or to relieve the company of franchise provisions not relating to rates, but that the commission law gives power to fix reasonable rates. The commission could not interfere with paving or bridge provisions or with the gross revenue tax, but can regulate rates up to 5 cents.

**Twin City Lines Will Run Jitneys.**—The Minneapolis (Minn.) Street Railway has been authorized to operate the jitney buses in Minneapolis and has acquired the thirty-nine buses in operation at a reported cost of \$200,000. Except on request of a majority of citizens on the street no new jitney license will be granted for five years. It is not

proposed to duplicate travel by having jitneys on the same streets as trolley cars, but the North Side, which is now reached in a roundabout way by several lines, will profit by the new jitney service. Transfers will be given.

**Jamestown Transfer Arrangement Canceled.**—The Chautauqua Traction Company, Jamestown, N. Y., in a new tariff schedule filed with the Public Service Commission for the Second District of New York, will cancel all transfer arrangements between the company and the Jamestown Street Railway beginning on Aug. 1. The traction company will not accept transfers from nor give transfers to the Jamestown city lines of the Jamestown Street Railway. The Chautauqua Traction Company operates an interurban line along the shores of Chautauqua Lake between Jamestown and Mayville and other Chautauqua County points.

**Slight Fare Change Approved.**—The Public Utilities Commission of Illinois has announced an increase in fares on the St. Louis-Alton interurban line of the East St. Louis & Suburban Railway. It changes the rule of charging a fixed fare from one station to another, and places the fare on a mileage basis. The rate will be 2 cents a mile for persons who buy tickets and for persons who pay cash fare when getting on at stations where there are no ticket offices. Those who board cars where there are ticket offices, and fail to buy tickets, must pay a cash fare at the rate of 3 cents a mile. The commission deferred a 10 per cent increase on commutation books until Nov. 21.

**Trenton Fare Briefs Submitted.**—Briefs for and against the application of the Trenton & Mercer County Traction Corporation, Trenton, N. J., for the elimination of six-for-a-quarter tickets and the charging of a 6-cent fare were submitted to the Board of Public Utilities Commissioners on July 16 by the company and by the city. The city's brief was filed by Charles E. Bird, city counsel, and George L. Record, special counsel for the city. The company's brief was filed by Frank S. Katzenbach, Jr., and Edward M. Hunt for the company. The final argument in the case was reviewed in the *ELECTRIC RAILWAY JOURNAL* for July 20.

**Special Industrial Service With Women.**—Women conductors made their appearance in Indianapolis on the morning of July 15, running between the downtown district and the plant of the Nordyke & Marmon Company. Arrangements have been made between the Indianapolis Traction & Terminal Company, operating the local lines in Indianapolis, and the Nordyke & Marmon Company whereby ten cars are to be used on the Kentucky Avenue line, the crews to be paid for by the Nordyke & Marmon Company. The cars will be in service from 6.15 to 8.15 o'clock in the morning and from 4.30 to 8.30 in the evening. The motormen will be selected from employees of the Nordyke & Marmon Company who have had railway experience.



## Personal Mention

R. I. Brown has been appointed commercial manager of the Little Rock Railway & Electric Company, Little Rock, Ark., to succeed A. E. Smith.

W. H. Curtis has been appointed master mechanic of the Little Rock Railway & Electric Company, Little Rock, Ark., to succeed A. R. Koonce.

Thomas M. Paterson, president of the Fresno (Cal.) Interurban Railway, has also been appointed general manager of the company to succeed J. J. Mahoney.

F. L. Farrell has been appointed claim agent and general freight and passenger agent of the Fresno (Cal.) Interurban Railway to succeed M. I. Dohner.

J. A. Walden has been appointed general freight and passenger agent and claim agent of the Ocean Shore Railroad, San Francisco, Cal., to succeed I. N. Randall.

N. D. Moore, formerly chief engineer of the Pacific Coast Railway, Seattle, Wash., has been appointed first vice-president of the company to succeed W. M. Barnum.

George P. McNear, treasurer of the Petaluma & Santa Rosa Railway, Petaluma, Cal., has also been elected first vice-president of the company to succeed E. T. McMurray.

J. M. Sims, superintendent and general freight and passenger agent of the Pacific Coast Railway, Seattle, Wash., has also been appointed claim agent to succeed H. M. Watkins.

James T. Price has resigned as master mechanic and roadmaster of the Lincoln (Ill.) Municipal Street Railway to become connected with the Vesta Battery Company at Pittsburgh, Pa.

F. A. Riehle has been appointed secretary of the Los Angeles & San Diego Beach Railway, San Diego, Cal., to succeed W. R. Lyon, who retains the title of vice-president and purchasing agent.

Thomas N. McCarter, president of the Public Service Railway, Newark, N. J., has resigned as a member of the New Jersey Bridge & Tunnel Commission because of the pressure of other business. Governor Edge has accepted the resignation.

H. M. Watkins, formerly auditor and chief engineer of the Pacific Coast Railway, Seattle, Wash., has relinquished his position as claim agent, and in addition to being auditor has been appointed secretary of the company to succeed J. W. Smith.

D. C. Green, vice-president of the Fort Smith-Oklahoma Light & Traction Company, Fort Smith, Ark., has also been appointed general manager of the company. The office of general manager was formerly held by R. E.

Ballard in conjunction with his duties as president of the company.

J. J. Caufield, general superintendent for the Twin City Lines, Minneapolis, Minn., on Aug. 1, also became superintendent of the St. Paul City Railway, taking over the duties of G. O. House, who has been appointed to the Northern States Power Company as noted in the ELECTRIC RAILWAY JOURNAL for July 27.

George W. Buchanan has resigned as assistant secretary and assistant treasurer of the Chattanooga Railway & Light Company, the Lookout Incline Railway and the Lookout Mountain Railway, Chattanooga, Tenn., effective on Aug. 1, to accept a position with the Wright-Martin Air Craft Corporation at New Brunswick, N. J.

C. M. Marsh, recently appointed general superintendent of the Wheeling (W. Va.) Traction Company, has been connected with the company and its predecessors since 1888, when he entered the service as a shopman. Later he served as motorman and then as conductor. In 1902 he was appointed dispatcher. In 1904 Mr. Marsh became superintendent of transportation. He continued in that capacity for twelve years and was then made assistant general superintendent, from which post he was advanced to general superintendent.

Samuel H. Ordway, New York City, has been named by Governor Whitman as a member of the Public Service Commission for the First District of New York to fill the vacancy caused by the resignation of Oscar S. Straus. Mr. Ordway was formerly president of the State Civil Service Commission, under appointment of Governor Whitman. Before holding that office he was chairman of the executive committee of the State Civil Service Reform Association. Mr. Ordway was a member of the law firm of Spencer, Ordway & Wierum, and has been active in civil service reform work for several years.

Charles Bulkley Hubbell has been designated by Governor Whitman as chairman of the Public Service Commission for the First District of New York to succeed Oscar S. Straus, resigned. Mr. Hubbell was born in Williamstown, Mass., on July 20, 1853. He was graduated from Williams College in 1874, and then practiced law in New York until 1913, when he retired. In 1889 he was appointed to the Board of Education. He served three terms, and became president of the Borough Board of Education. He has served on three subway commissions, and has made a close study of rapid transit problems.

E. E. Lillie, for several years superintendent of the Spokane traction di-

vision of the Spokane & Inland Empire Railroad, Spokane, Wash., has been attached to the Portland office of the Spokane, Portland & Seattle Railway as assistant federal manager. Mr. Lillie was formerly superintendent of the telegraph and car service for the Spokane, Portland & Seattle Railway, taking that position when the line was built. Later he was made superintendent of the Inland Empire line. Subsequently he was made superintendent of the telegraphic service for the Great Northern and again went back to the Inland Empire as superintendent.

F. S. Elliott has been elected president of the Spokane & Inland Empire Railroad, Spokane, Wash. He will have his office at the Spokane terminal, coming from Portland to assume charge. This brings the president of the Inland Empire System to Spokane for the first time since Jay P. Graves sold his control and resigned the presidency. This condition has resulted from the fact that the president of the Spokane, Portland & Seattle Railroad, who is also president of this line, has always been stationed at Portland. Mr. Elliott was formerly general superintendent of the lakes district for the Great Northern, with headquarters at Superior, Wis.

Milan V. Ayres has resigned from the division of valuation, Interstate Commerce Commission, to become a major in the National Army. Mr. Ayres was born in Kansas in 1875 and was graduated from the Massachusetts Institute of Technology in 1898. He is well known in electric railway and electric light circles through his connection with the Boston & Worcester Street Railway, the Rockland Light & Power Company and Ford, Bacon & Davis and through his affiliation with the American Institute of Electrical Engineers, American Electric Railway Association, American Statistical Association, New England Street Railway Club and the New England Railroad Club.

## Obituary

Thomas J. Marlow, for thirty years superintendent of track construction for the Des Moines (Iowa) City Railway, died on July 20 from cancer of the stomach. Mr. Marlow was fifty-seven years of age. He had lived in Des Moines for forty-five years.

First Lieut. Warren Harries, son of General George Herbert Harries of Washington and Louisville, Ky., was killed in an automobile accident, on July 25, in France where he was on duty. Lieutenant Harries has been acting as an aid on the staff of his father, Brigadier-General George Herbert Harries, who has charge of one of the debarkation zones for American forces in France.



# Construction News

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

## Franchises

**Los Angeles, Cal.**—The City Council of Los Angeles has granted a franchise to the Pacific Electric Railway over a short strip of land between 116th and 117th Streets and over a portion of Vermont Avenue, connecting its track with those of the Los Angeles Railway.

## Track and Roadway

**Muscle Shoals Traction Company, Florence, Ala.**—A contract has been awarded by the Muscle Shoals Traction Company to the firm of Waddell & Son, consulting engineers of Kansas City and New York, for the survey and for the supervision of construction of the line the company proposes to build from Huntsville to Florence, via Athens, 65 miles. They will also aid in financing the enterprise. A branch line will be built to Lexington, 12 miles, and will furnish transportation facilities to the site of Dam No. 3. Construction will be begun at both terminals. It is estimated that the main line will be completed within a year. Preliminary surveys are now being made. The consent of the United States Railroad Administration will have to be obtained before the work can be begun. Thurston Allen, Florence, secretary. [March 2, '18.]

**Tucson (Ariz.) Rapid Transit Company.**—An extension will be built by the Tucson Rapid Transit Company of its University Avenue line from its present terminus at the University campus main entrance, along Park Avenue to East Sixth Street, along Sixth Street to North Fourth Avenue, and south on North Fourth Avenue to and through the subway, connecting with the South Fourth Avenue line.

**Municipal Railways of San Francisco, San Francisco, Cal.**—The Board of Public Works of San Francisco has awarded a contract to A. J. Raisch for the construction of the Taraval line of the Municipal Railways.

\***Baton Rouge, La.**—Following the passage of an act by the Legislature at its recent session empowering municipalities in Louisiana to combine and co-operate with each other in the construction, ownership and operation of interurban railways, John B. Rucker, manager of the traffic bureau of the Baton Rouge Chamber of Commerce, has taken steps to effect organization

of the business and commercial interests of the different cities and towns in order to lay the groundwork for the construction of interurban lines throughout the State as soon as the war situation adjusts itself so that bonds can be floated and material secured for construction purposes.

**Indian Head, Md.**—It is reported that a contract has been awarded by the Bureau of Yards and Docks of the United States Navy Department, Washington, to the New Jersey Cement Construction Company, Newark, N. J., for the construction of the proposed railway from White Plains to Indian Head, 14½ miles. [July 6, '18.]

**Public Service Railway, Newark, N. J.**—The Public Service Railway is laying new tracks and making other improvements on the court house division at Somerville.

**Westchester Street Railroad, White Plains, N. Y.**—Application has been made by the Westchester Street Railroad to the Public Service Commission for the Second District of New York for its approval of the abandonment of a part of its line in the town of Greenburgh.

**Tidewater Power Company, Wilmington, N. C.**—It has been announced that financing has been arranged for the construction of an extension by the Tidewater Power Company to the new shipbuilding plant.

**Toledo Railways & Light Company, Toledo, Ohio.**—Plans are being made by the Toledo Railways & Light Company for the construction of an extension to the proposed site of a new nitrate plant at Ironton.

**South Bethlehem & Saucon Street Railway, South Bethlehem, Pa.**—A report from this company states that during the next three weeks it expects to place contracts for 1 mile of signal equipment, 1 mile of brick paving and 1 ton of railway spikes.

**South Carolina Light, Power & Railways Company, Spartanburg, S. C.**—An extension will be built by the South Carolina Light, Power & Railways Company to Whitney and Converse.

**Mount Vernon & Camp Humphries Railway, Mount Vernon, Va.**—Construction work has been begun by the Mount Vernon & Camp Humphries Railway on its line from Mount Vernon to Camp Humphries, and it is expected that the line will be completed in about a month. James R. Caton, Alexandria, president. [June 8, '18.]

**Seattle (Wash.) Municipal Railway.**—The City Council of Seattle recently passed an ordinance authorizing the Board of Public Works to spend \$9,500 in double-tracking the municipal street car line from Twentieth Avenue N. W. and Leary Avenue to Twenty-second

Avenue N. W. and West Sixty-fourth Street. The Council also authorized the expenditure of \$1200 for rehabilitating the Loyal Railway division of the municipal line.

## Shops and Buildings

**Washington, Baltimore & Annapolis Electric Railway, Baltimore, Md.**—Work will soon be begun by the Washington, Baltimore & Annapolis Electric Railway on the construction of a new freight terminal on the property recently acquired by it at Eutaw, Lombard, Howard and Pratt Streets.

**Interborough Rapid Transit Company, New York, N. Y.**—Bids will be received by the Interborough Rapid Transit Company at the office of the chief engineer, 165 Broadway, until Aug. 9 for completion of the passenger station electric lighting and electric heating systems for portions of a rapid transit railroad in the boroughs of Brooklyn and Manhattan, as follows: Portion of Clark Street, Eastern Parkway line and Nostrand Avenue lines. Further information, specifications, etc., may be obtained at the above office. George H. Pegram is chief engineer.

**Wheeling (W. Va.) Traction Company.**—Bids will be asked by the Wheeling Traction Company for the construction of a new carhouse at Wheeling Island in place of the one destroyed by fire on Feb. 4. At the same time the company will ask for bids for the construction of a one-story shop about 125 ft. square, to be built at its Wheeling Island station.

## Power Houses and Substations

**Pine Bluff (Ark.) Company.**—Contracts will be placed during the next thirty days by the Pine Bluff Company for two 500 or 600-hp. high-pressure water-tube boilers, with stokers.

**Philadelphia & Western Railway, Upper Darby, Pa.**—This company reports that during the next three weeks it expects to place contracts for the construction of two new substations and will purchase seven 750-kw. rotaries complete.

**Charleston-Dunbar Traction Company, Charleston, W. Va.**—Excavation work has been begun for the foundation of a new power house for the Charleston-Dunbar Traction Company, the old power house of the company having been destroyed by fire in December, 1917. The new structure will have a floor space of 50 ft. x 92 ft., and will be fireproof. The company has arranged to increase the capacity of the plant in order to take care of increased business on the traction line and to meet a heavier demand for the electric lighting system of Dunbar. It is expected the plant will be completed by Nov. 1.



# Manufactures and the Markets

DISCUSSIONS OF MARKET AND TRADE CONDITIONS

FOR THE MANUFACTURER, SALESMAN AND PURCHASING AGENT

ROLLING STOCK PURCHASES • MARKET QUOTATIONS • BUSINESS ANNOUNCEMENTS

## Shortage of Spools and Reels for Wire and Cable

**Explanations of Low Stocks—Trade Accumulations Fail to Meet Demand—Metal Devices Substituted**

Attention was recently called to what may be considered a minor but is yet an important phase of the electrical trade in the rather acute shortage of spools for magnet wire. The shortage is ascribed to various causes. A great deal of magnet wire has been exported, but the spools were not expected to be sent back, as is the custom in the domestic trade. The war created a heavy demand abroad, but the restraints recently placed on exportations, even to neutral countries, has reduced this business to a minimum. Attempts to ship magnet wire in coils proved a failure and were abandoned, as the insulation was affected by moisture during the sea voyage and the rough handling in stowing and discharging cargo. Spools had therefore to be employed with the package wrapped in a metal casing.

The practice is to charge the full value of spools in the invoice, with credits given when they are returned. Ordinarily the spools were shipped back within a few weeks, but with the freight congestion six months and more would pass before they reached their destination. A year ago the spool shortage was more acute than now. Conditions at the present time, however, are such that the market is being combed to obtain a sufficient supply. Some wire manufacturers and distributors are experiencing more difficulty than others in gathering a sufficient assortment of spools to meet the demand, and this may possibly lead to a higher price for magnet wire.

Substitutes for basswood and pine spools are being used with marked success. Two large Eastern manufacturers are using a copper-plated steel spool with a welded reinforced head, which far outlasts the wooden kind and is claimed to be safer and more economical in the long run. A compressed-paper spool has also been tested, but, though answering for small weights of about 5 lb., those who have given it a trial say it does not serve for 50 lb., the usual quantity sold the trade.

A shortage of reels for lead cable also exists in some quarters of the manufacturing field. As the government now controls the output of lumber, assertions are made that this is the basic reason for the curtailment in the supply. A recent government order called for reels made up on special specifications for which a priority order

had to be obtained to secure the particular lumber designated. It has been said, moreover, that the government is buying cable reel and all. As a result the reels are not as a rule returned to the jobber.

## Higher Prices of Traction Material

**Malleable Iron Situation Serious—Frogs, Switches, Crossings, etc., on a Rising Market**

In their applications for an increase of fares to public service commissions and other state boards and officials, traction road managers and executives have submitted tabulated increases of cost in the price of rolling stock, general equipment and every class of material necessarily entering into the practical operation of their properties, several of which have appeared in this department of the *ELECTRIC RAILWAY JOURNAL*. On many items the advances have been startling. Increases are still being made and, judging from what the manufacturers say, there is no end in sight of these revisions upward.

On July 25 frogs, switches and all overhead material were advanced 15 per cent by a Middle Western company. Bonds went up 7½ per cent three weeks ago. Deliveries are being made out of stock. Another company announced an advance on frogs and crossings of 25 per cent on July 1. The last increase in switches was made about four months ago, the average being 25 per cent over the quotations in the spring. The shortage in malleable iron for line material is making for higher costs of production and consequently in the selling price. The government has taken over the entire output of three malleable iron foundries, and therefore the needful requirements of the manufacturers of railway equipment are accordingly restricted.

Just what will be done with prices on car window glass no one seems to be sufficiently informed to venture an opinion. Sales at present are slow at figures which have prevailed since February last. The production of window glass for 1918-1919 is likely to be further restricted. With the continuation of the war the plants might be forced to close down entirely, excepting at isolated works where the labor and transportation difficulties are not so acute. There is every indication that the current high prices will continue, owing to the scarcity of stock in the hands of jobbers—the main avenue of railway trade distribution—and the lack of reserve at the plants.

## Restriction of Rattan Imports Affects Car Seatings

**Also Track Sweepers and Brooms—War Trade Board Revokes Shipping License Aug. 5**

By a ruling of the War Trade Board on July 26 rattans and reeds are placed on the restricted import list. All outstanding licenses have been revoked as to ocean shipments made after Aug. 5, 1918. Hereafter no licenses for the importation of rattans and reeds will be issued, except for shipments from Canada or Mexico by other than ocean transportation and except, further, for shipments coming as return cargo from convenient European ports or from convenient Mediterranean North African ports, and then only when coming from a convenient port where loading can be done without delay.

In effect this means a sharp curtailment of the supply of rattan for car seatings or webbing, revolving brushes for snow sweepers and track brooms, with probably an advance in price. The last increase made by the manufacturers of rattan seats for electric passenger cars, and also brushes and brooms, was made in March last, when 10 to 15 per cent was added. Rattan, in a year's time, has gone up more than 100 per cent. Normally the price is 14 to 15 cents a pound; now it sells for 33 to 35 cents.

The ruling of the War Trade Board came as a surprise to the makers in the lines specified, and it is probable a representation will be made to the authorities either to modify the order or rescind it altogether. Rattan, the major portion of which comes from Singapore, Straits Settlements, a British possession, is used in various ways besides in the manufacture of car seats and track cleaning equipment. When the British government prohibited the shipping of rattan the car seat manufacturers and other industries interested succeeded in having the restriction removed.

Conservation of tonnage is the objective of the War Board ruling, and, of course, on this score its action may not be reversed. Inquiry has disclosed that while the market for rattan and reed has recently been extraordinarily active, car seating manufacturers have strong stocks in warehouse and heavy shipments en route to American ports. The other lines are not so fortunately placed, but their requirements are smaller. With the retrenchment in the purchase of cars, especially within the past six months, the greater part being orders emanating from the United States Shipping Board Emer-



agency Fleet Corporation, buying has been comparatively quiet on the part of the electric railways.

Of course, the ruling has caused some concern in car building and supplies circles, but unless a brisk demand springs up for rolling stock between now and the close of the year the manufacturers are reported as being in a fair position to meet the supply. The other branches will not be hit so hard, although they are already making inquiries for rattan stock. Substitutes are generally being discussed as the inevitable result of the threatened shortage, in the event that rattan should become impossible to obtain, excepting at prohibitive figures.

### Conversion to War Work of Less Essential Industry

Regional Organizations Present New Requirements in the War Program as They Arise

A great many classes of manufacturers are by their very nature in what might be termed a less essential group. Some of these are automatically suffering a decrease in output owing to decreased demand. Others are having their output curtailed because the government will permit them to use only a limited amount of fuel and is making it difficult for them to obtain raw materials.

In either case it will be of particular interest to a number of manufacturing concerns engaged in producing electric railway materials to note that the government has taken steps through regional organizations in the twenty regions into which the country has been divided to permit plans thus slowed down to continue to operate by diverting their machinery to more essential work.

The object of these regional organizations is to furnish the government with the necessary knowledge of national conditions in providing new resources and converting industries to war work. As the various departments of the government develop new requirements in the war program, they are presented to the business men of the country through these regional organizations.

As an indication of what is possible in the conversion of industry to meet war requirements and of the changes which can be made in the product of a factory, a few radical instances may be related. For instance, a Pennsylvania factory that formerly made lineoleum in now machining 4.7-in. shells. A Duluth horseshoe manufacturer is turning out trench picks for the army, and a New Jersey terra-cotta tile concern is making dummy drop bombs. A Milwaukee factory, the former output of which was rowboat motors, is making hand grenades and trench pumps. In Rhode Island a manufacturer of finger rings has turned his activities to making adapter plugs. A Detroit stove concern is producing trench bombs and anchor parts. Instances of this sort might be multiplied indefinitely.

### Output of Coal Is Holding a High Record

Shipments of Bituminous and Anthracite Increasing—Object of the Fuel Administration

The weekly report on the production and shipments of bituminous and anthracite coal, compiled by the United States Geological Survey, ending July 27, indicates that bituminous production during the week of July 20 while not equaling the record week of July 13 was higher than any previous week. The output during the week ended July 20 (including lignite and coal made into coke) is estimated at 12,950,000 net tons as against 13,273,000 net tons during the week preceding or a decrease of 2.4 per cent; and as against 11,230,000 during the current week of 1917 or an increase of 15.3 per cent. The average production per working day during the week of July 20 is estimated at 2,159,000 net tons as against 2,212,000 tons during the week previous and 1,872,000 tons for the week in 1917.

Anthracite shipments during the week ended July 20 declined 1755 carloads or 4.2 per cent compared with the week preceding, the total movements amounting to 40,664 carloads.

The United States Fuel Administration issues the following: "The aim of the United States Fuel Administration to accomplish the movement of two-thirds of the annual anthracite allotment to New England before the winter season begins is being steadily realized. For the months of April, May and June shipments into New England amounted to approximately 3,250,000 gross tons. The total allotment for the New England States for the year amounts to 10,331,000 gross tons.

"Equalization as between communities and dealers will not be difficult once the coal moves through the New York 'bottle necks.' New York City received during April, May and June slightly more than its allotment for the three months." So far eight months' shipping has been accomplished in seven months, with indications of continued improvement.

### Rolling Stock

Schuylkill Railway, Girardville, Pa., expects to purchase GE-247 motors.

Southern Cambria Railway, Johnstown, Pa., expects to purchase one double-end control for a 25-ton freight car.

Portland Railway, Light & Power Company, Portland, Ore., has purchased a lot of new Birney one-man cars.

Monongahela Valley Traction Company, Fairmont, W. Va., as mentioned in last week's ELECTRIC RAILWAY JOURNAL, ordered four express or interurban cars from the Jewett Car Company, the specifications of which follow:

Number of cars ordered	.....2
Builder of car body	.....Jewett Car Co.
Type of car	.....Express—All steel
Weight:	
Trucks	.....15,500 lb.
Equipment	.....7,000 lb.
Bolster centers, length	.....25 ft. 0 in.
Length over all	.....45 ft. 0 in.
Truck wheelbase	.....73 ft. 0 in.
Width over all	.....8 ft. 4 in.
Body	.....All steel
Interior trim	.....Plain
Roof, arch or monitor	.....Arch
Air brakes	.....Westinghouse A. M. M.
Axles	.....A. E. R. A.—E. A.
Bumpers	.....Steel
Center and side bearings	.....Plain
Conduits and junction boxes	.....Plain
Control	.....Westinghouse "HL"
Couplers	.....M. C. E.
Gears and pinions	.....Nuttall "BP"
Hand brakes	.....Peacock
Heater equipment	.....Consolidated Car Heating Co.
Headlights	.....General Electric Co.
Journal bearings	.....Plain
Journal boxes	.....4 1/2 x 8 in.
Lightning arresters	.....Westinghouse
Motors, type and number	.....Westinghouse 306-CV-4, inside hung
Paint, varnish or enamel	.....Stain
Sanders	.....De France
Slack adjuster	.....Automatic
Springs	.....Semi-elliptic
Trolley catchers or retrievers	.....Ideal No. 2
Trolley base	.....Nuttall
Trucks	.....Baldwin class 73-22-K
Wheels	.....Carnegie 34 in.

Sand Springs Railway, Tulsa, Okla., is building three new 60-ft. four-motor cars in its own shop.

South Bethlehem & Saucon Street Railway South Bethlehem, Pa., expects to purchase fenders, electric heaters, registers and two single cars.

Columbus (Ga.) Electric Company has been advised by the builders, with whom it recently placed an order for six new Birney cars, that they will be shipped, according to a local report, some time in November.

City of San Francisco, Cal., has awarded the General Electric Company, Schenectady, N. Y., a \$40,000 contract for furnishing electric locomotives for the Hetch Hetchy water property enterprise. This is the new source of water supply to San Francisco in the Yosemite Valley.

Richmond Light & Railroad Company, New Brighton, S. I., N. Y., through the United States Shipping Board Emergency Fleet Corporation, has ordered twenty new cars from the Cincinnati Car Company, for delivery along in October or November. It is reported that the specifications as to cars and equipment are a duplicate of the rolling stock purchased by the Public Service Railway, Newark, N. J., which appeared on page 1217 of the ELECTRIC RAILWAY JOURNAL of June 22.

Seattle (Wash.) Municipal Street Railway has ordered six safety or one-man cars from the American Car Company; Thomas F. Murphine, superintendent of public utilities, St. Louis, Mo., recommends that the city of Seattle purchase twenty-five cars for use on its new line. Twenty of the new cars are desired for operation over the city's proposed new elevated line, and the other five are for increased business of the present municipal lines. It is expected that the completion of the elevated will increase traffic over other



municipal lines. The cars which Mr. Murphine proposes to buy are second-hand to cost \$6,611 each, a bid given by the United Logging & Railway Supply Company. Twenty new double-truck cars have also been ordered for the system.

Wheeling (W. Va.) Traction Company in January, 1917, placed an order for fourteen double-truck passenger cars. There was a long delay in delivery. Four of the cars have now been received and the remaining ten are expected soon. These cars are 50-ft. body, seat fifty-two passengers and have Baldwin M.C.B. trucks. Williston Fish, senior vice-president, in furnishing this report to the ELECTRIC RAILWAY JOURNAL, under date of July 27, adds that on Feb. 4, 1918, the company lost twenty-nine double-truck passenger cars by a fire which burned one bay of its Wheeling Island carhouse, noted in the ELECTRIC RAILWAY JOURNAL of Feb. 9. The loss was complete. The company before the end of February made contracts for replacing the twenty-nine cars. Practically all the equipment has been delivered and the Cincinnati Car Company is about ready to begin delivery of the car bodies. These cars are also 50 ft. over all, 8 ft. 9 in. wide, seat fifty-two, with Hale & Kilburn seats and Brill trucks. The weight per car complete will be about 34,500 lb. At the same time that the order for twenty-nine cars was placed the Wheeling Traction Company also ordered nine double-truck passenger cars with which to inaugurate a new through line between Wheeling, W. Va., and Steuben-

ville, Ohio, a distance of about 26 miles. These cars are 56 ft. over all, center-entrance, and seat seventy persons, and are equipped with Brill trucks, Westinghouse motors and couplers. The company will shortly order one snow sweeper, in addition to the cars above mentioned.

New Advertising Literature

W. N. Matthias & Brother, St. Louis, Mo.: Catalog-handbook No. 9, furnishes additional information about the firm's pole line accessories.

Armstrong Cork Company, Pittsburgh, Pa.: Illustrated, four page folder, in colors, descriptive of the company's Nonpareil insulating line.

Joseph Dixon Crucible Company, Jersey City, N. J.: Illustrated catalog descriptive of Dixon's standard graphite productions. New prices are furnished on application.

Steel City Electric Company, Pittsburgh, Pa.: Catalog No. 33, the first edition, cancels and supersedes all previous bulletins from No. 21 to 32. It illustrates, describes in detail and gives prices of the company's long list of products.

Sprague Electric Works of the General Electric Company, New York, N. Y.: Bulletin No. 48,938, superseding No. 902, entitled "Electric Grab-Bucket Hoists." Illustrations of the hoists, accompanied by detailed specifications of the various types, are given.

Green Engineering Company, East Chicago, Ind.: Sixteen-page booklet entitled "Capacity," describing and illustrating "Sealflex" arches, which are designed to increase the boiler rating. The booklet tells the story of the development of these arches and illustrates features of their construction.

Trade Notes

Economy Electric Device Company, Chicago, Ill., announces that the Sangamo Economy Railway watt-hour meters have been specified on the six safety cars and twenty double-truck cars which are about to be built for the Seattle (Wash.) Municipal Street Railway.

Consolidated Car Fender Company, Providence, R. I., through Wendell & MacDuffie is equipping the twenty new cars ordered by the Richmond Light & Railroad Company, New Brighton, S. I., N. Y., with its H-B life guards or fenders. The cars are being built by the Cincinnati Car Company.

Metal & Thermit Corporation, New York, N. Y., announces that the address of Anton Lucas, its representative in that part of the country, is now 2542 Troost Avenue, Kansas City, Mo. As Mr. Lucas spends considerable of his time traveling, however, it is recommended that communications be addressed directly to the company's offices in New York City, in cases that need prompt attention.

NEW YORK METAL MARKET PRICES

	July 24	July 31
Copper, ingots, cents per lb	26	26
Copper wire base, cents per lb	29.25	29.25
Lead, cents per lb	8.05	8.05
Nickel, cents per lb	40	40
Spelter, cents per lb	8.62½	8.23
Tin, Chinese*, cents per lb	99	94
Aluminum, 98 to 99 per cent., cents per lb	†33.00	†33.00

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

OLD METAL PRICES—NEW YORK

	July 24	July 31
Heavy copper, cents per lb	23½	23½
Light copper, cents per lb	20	20½
Red brass, cents per lb	22	22
Yellow brass, cents per lb	14	14
Lead, heavy, cents per lb	7	7
Zinc, cents per lb	5½	5½
Steel car axles, Chicago, per net ton	\$41.52	\$41.52
Old car wheels, Chicago, per gross ton	\$29.00	\$29.00
Steel rails (scraps), Chicago, per gross ton	\$34.00	\$34.00
Steel rails (relaying), Chicago, gross ton	\$60.00	\$60.00
Machine shop turnings, Chicago, net ton	\$16.25	\$16.25

ELECTRIC RAILWAY MATERIAL PRICES

	July 24	July 31	July 24	July 31
Rubber-covered wire base, New York, cents per lb	30 to 37	30 to 37		
Weatherproof wire (100 lb. lots), cents per lb, New York	36.75	32.40		
Weatherproof wire (100 lb. lots), cents per lb, Chicago	37.50	37.50 to 37.72		
T rails (A. S. C. E. standard), per gross ton	\$70.00 to \$80.00	\$70.00 to \$80.00		
T rails (A. S. C. E. standard), 100 to 500 ton lots, per gross ton	\$67.50	\$67.50		
T rails (A. S. C. E. standard), 500 ton lots, per gross tons	\$62.50	\$62.50		
T rail, high (Shanghai), cents per lb	4½	4½		
Rails, girder (grooved), cents per lb	4½	4½		
Wire nails, Pittsburgh, cents per lb	3½	3½		
Railroad spikes, drive, Pittsburgh base, cents per lb	4½	4½		
Railroad spikes, screw, Pittsburgh base, cents per lb	8	8		
Tie plates (flat type), cents per lb	*3½	*3½		
Tie plates (brace type), cents per lb	*3½	*3½		
Tie rods, Pittsburgh base, cents per lb	7	7		
Fish plates, cents per lb	*3½	*3½		
Angle plates, cents per lb	*3½	*3½		
Angle bars, cents per lb	*3½	*3½		
Rail bolts and nuts, Pittsburgh base, cents per lb	4.90	4.90		
Steel bars, Pittsburgh, cents per lb	5	5		
Sheet iron, black (24 gage), Pittsburgh, cents per lb	4.90	4.90		
Sheet iron, galvanized (24 gage), Pittsburgh, cents per lb	5.80	5.80		
Galvanized barbed wire, Pittsburgh, cents per lb	4.	4.35		
Galvanized wire, ordinary, Pittsburgh, cents per lb	3.95	3.95		
Car window glass (single strength), first three brackets, A quality, New York, discount†	80%	80%		
Car window glass (single strength, first three brackets, B quality), New York, discount	80%	80%		
Car window glass (double strength, all sizes AA quality), New York discount	82 & 3%	82 & 3%		
Waste, wool (according to grade), cents per lb	11½ to 22	11½ to 22		
Waste, cotton (100 lb. bale), cents per lb	13 to 13½	13 to 13½		
Asphalt, hot (150 tons minimum), per ton delivered	\$38.50	\$38.50		
Asphalt, cold (150 tons minimum, pkgs. weighed in, F. O. B. plant, Maurer, N. J.), per ton	\$42.50	\$42.50		
Asphalt filler, per ton	\$45.00	\$45.00		
Cement (carload lots), New York, per bbl	\$3.20	\$3.20		
Cement (carload lots), Chicago, per bbl	\$3.34	\$3.34		
Cement (carload lots), Seattle, per bbl	\$3.68	\$3.68		
Linseed oil (raw, 5 bbl. lots), New York, per gal.	\$1.82	\$1.86		
Linseed oil (boiled, 5 bbl. lots), New York, per gal.	\$1.83	\$1.88		
White lead (100 lb. keg), New York, cents per lb	10½	10½		
Turpentine (bbl. lots), New York, cents per gal	66	63		

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