

# Electric Railway Journal

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## Getting the Electric Railway Industry Back Upon Its Feet

THE American Electric Railway Association held in New York yesterday what in many respect was the most successful mid-year meeting in the series of nine. The circumstances surrounding the electric railway industry are such that topics not vital to the continuation of this essential public industry must be put aside for the time, and this was characteristic of the meeting program. The report of the committee on readjustment showed a determination to get down to fundamentals and, while confessedly preliminary, indicates the lines upon which readjustment must be brought about. On behalf of the industry the committee realizes that some relation between income and cost of service must be recognized by the public and its report furnished a fitting prolog to the discussion on the salient features of service at cost franchises, and on modern regulatory plans and theories. It was an excellent idea, also, to have placed before railway operators the points of view of the investors and the regulators, as was done at the afternoon session. A glance in the mirror now and then is beneficial and under present conditions will not conduce to vanity.

The banquet was a "wonder," in point of attendance and spirit. Our distinguished guests of honor must have received the impression that while the meeting was one of great seriousness the occasion was far from being a funereal one.

If it had not been for the war this meeting would have been the tenth in the series. The plan of holding a winter meeting has therefore been under trial long enough to prove its worth or otherwise. It has been a great success and performs a function complementary to that of the annual convention. This year's meeting was the best of all and, coming after the war, it permitted the thought and feeling pent up for two years to find vent.

## A Banker Gives His Views On the Electric Railway Situation

IT IS WELL that the association asked Mr. Sisson yesterday to present the views of the bankers on the present situation. Being so close to their work, electric railway men are exposed to the danger of anyone in that condition of failing sometimes to get the proper perspective of a given situation. Mr. Sisson, however, took the same view of the desperate condition of the utilities without remedial legislation which the executive officers of these companies have been forced to adopt. In addition, he traced the responsibility for the greater part of this trouble to a deplorable indifference on the part of the public and governing authorities, who in their disregard of the rights of the utilities are

jeopardizing the credit of many investment institutions, such as savings banks and life insurance companies.

Mr. Sisson also brought out clearly the evil reflex effect of this persecution on those responsible for it. In attacking the utilities unjustly the public is not only injuring the interests of their own community whose prosperity depends upon an efficient and prosperous electric railway system, but they are depreciating the value of the assets of the organizations for popular saving. The municipal authorities who deny fair treatment to the utilities within their jurisdictions discredit their own municipalities in the eyes of bankers and investors, who are quick to discern which cities have a reputation for treating invested capital within their boundaries fairly and which have not. Finally, the state and federal authorities who are ever ready to pile burdens on these public servants but are slow in lending them a helping hand will find that they are encouraging a popular antagonism to private enterprise, and investments of all kinds, and are encouraging the establishment of a state socialism with its extinguishment of all individual incentive and effort.

It is fortunate that these facts should have been stated so clearly, and that they should have been said by one who is in so good a position to read the signs of the times as Mr. Sisson.

## Conflicting Dates of Two Important Railway Meetings

IT WAS UNFORTUNATE that the American Institute of Electrical Engineers' meeting in Boston, at which Calvert Townley's paper on "Some Possibilities of the Steam Railroad as Affecting Future Policies" was presented, and the mid-year meeting of the American Electric Railway Association in New York, were scheduled for the same date this week. To be sure, Mr. Townley's paper was assigned to the morning program, permitting attendance at Boston in the morning and New York in the evening, but this was only a partial solution of the difficulty. The occurrence suggests that secretaries of societies might co-operate in avoiding conflicts of meetings when any considerable number of men might desire to attend more than one. A few years ago there was an association of technical association secretaries for this very purpose, but apparently it is not functioning at present. We realize, of course, that circumstances beyond control frequently dictate the times and places of meetings. This was undoubtedly true, at least in part, in the present case, for each association was familiar with the plans of the other. Nevertheless the subject is worthy of attention, particularly in connection with the summer and fall convention plans which will be laid in the near future.

### The October Convention Would Be Incomplete Without Exhibits

THERE are many reasons in favor of resuming the exhibit feature at the annual convention of the American Electric Railway Association next October and few reasons against it. For three years there has been no exhibit and consequently no opportunity for a great many electric railway men to study at first hand what the manufacturers have been doing recently in the way of producing improved equipment. Yet, during these three years, in spite of the war, there have been tremendous advances in the manufacture of railway apparatus. Indeed, the extraordinary and arduous conditions which have prevailed in the electric railway field have greatly stimulated the design and manufacture of much of this equipment. For examples, we might cite the one-man car, energy-checking and saving devices and various processes of welding. All of these have become more important than ever before in the electric railway field as the result of the critical condition in which the electric railways have been since 1916.

It may be argued that the electric railway companies are not in affluent circumstances and so are not in a position to extend their purchases greatly. Unfortunately, this is true. But the equipment which would naturally predominate among the exhibits at the fall convention would be designed either to save money or to make money. Some of the devices and apparatus belonging to the former class have already been mentioned. As an example of the latter we might mention collecting and registering apparatus especially designed to take care of the odd and varying fares now so common on railway properties. These, with the equipment and supplies which railways have to purchase to keep their lines in operation will naturally form the basis of any exhibit which may be held next October.

The advantage of an exhibit does not lie entirely in the fact that the railway manager and engineer has an opportunity of seeing in operation a new device or improvement designed for use on his property. He can talk about it at the same time with the manufacturer and other railway men and can ask any questions about it which he desires. The educational value of the exhibits is unquestioned, especially after there have been none for three years, and, indirectly, they increase electric railway traffic by making the service more desirable or by decreasing its cost.

To be sure, an exhibit requires an investment of money, energy, thought and time. Some manufacturers and possibly some railway men may question the wisdom of this expenditure at a time when business conditions are as unsettled as they must be for both at the close of the world cataclysm. This legitimate doubt should receive due weight, but we believe that if a general vote of the members could be taken, the verdict would be: "the ayes have it."

The action of the executive committee on March 13 indicates that unless unforeseen difficulties are encountered in the preparation for the convention the exhibits will be a feature of the fall meeting. The convention committee, soon to be appointed, will be charged with the duty of making provision for them. We bespeak for the committee the hearty co-operation of all manufacturers, to the end that the exhibits this year shall be unprecedentedly successful both individually and collectively.

### An Obvious Duty of the New York Legislature

WE WONDER if the people of New York, through their representatives in the State Legislature, will be sufficiently fair minded to correct a defect in the public service commission law which has been found to work an injustice toward the utilities of that State. The incompleteness of this law is called to the attention of the Legislature in the annual report of the First District commission, recently made public. It is a plain plea for justice, and we hope the lawmakers of the Empire State will rise to the occasion and approve the amendment which will put the commission in a position to save scores of essential utilities from financial disaster.

As pointed out in this report, it was undoubtedly the intention of the Legislature to provide in the public service commission law for tribunals not only to take care of the complaints of consumers and patrons, "but, recognizing that the public service corporations have legal and business rights, to afford them also a tribunal which should impartially inquire and if necessary give relief by way of increased rates." Reference is made to the fact that in isolated cases certain cities and villages have waived franchise conditions so that a fair settlement might be made with the utilities. These acts are mentioned, however, as "but temporary and makeshift devices," and it is suggested that the commission, or the municipalities or the corporations should not be left to such expedients.

Ever since the decision of the Court of Appeals in the Rochester case was announced the commission has found its hands tied. Its members recognize the inequity of the situation, and it should not be too much to expect that the present Legislature will take prompt steps to correct the law so that it will be possible to deal equal justice to the utilities and to the consumer.

### The Detroit City Government Wants to Run the Railway

THE latest report from Detroit is that the city and the company are approaching a settlement on the question of the purchase of the city lines of the Detroit United Railway. This is certainly a wiser plan than the first suggestion that the city build a competitive system. Municipal ownership and operation of the present Detroit city system is a perilous experiment for the taxpayer in Detroit, but the expenditure of a large sum of money to go into competition with the private company would be insufferably stupid. San Francisco stands as a living example that this is so.

Seattle started a similar program on a small scale, but the city and the railway decided that such a course was suicide. At Seattle it was a case of getting together or hanging separately. The start was made toward getting together, and this was finally effected as in Detroit. The recent decision of the Supreme Court, as reported in our issue of Jan. 18, undoubtedly hastened the latter city in deciding because it declared that the city could not compel the company to give service on the lines on which the franchises had expired except at a rate which would earn a fair return on the investment.

If the decision of the city government to engage in railway operation is ratified by the electorate, as it must be to become legal, Detroit will be the third large city in this country to adopt municipal ownership and

operation. There will therefore be an opportunity of judging, after a few years, whether a municipality can operate an electric railway property as successfully, all things considered, as a private corporation. For ill, except possibly the taxpayers in the cities conducting the experiment, the trial will certainly be an interesting one.

### The Electric Railway Industry Is "Coming Back"

**I**N EXPRESSING his pleasure at the success of the recent Cleveland meeting of the Central Electric Railway Association, Charles L. Henry characterized the situation in the happy phrase: "The Central Association is 'coming back.'" We agree with Mr. Henry in this conclusion and will go him one better by saying that the industry as a whole is "coming back," or we mistake greatly the signs that are about. The mere statement is not sufficient in itself, however, and it raises in the mind several questions which are well worth consideration at the dawn of the era of reconstruction and readjustment. They are especially apt as yesterday's meeting of the American Association is reviewed. The questions worth pondering at this time are: Why does the industry need to come back? What is it to come back from? What is it to come back to? Each railway man will have his own answers to these questions, colored by his own experience. There are points, however, on which all of the answers will be sure to agree.

The industry needs to come back in order that the communities which it serves may have good transportation of the types which the electric railways are best fitted to give. A unique combination of circumstances has made it physically impossible of late for the average electric railway to give good service and pay all legitimate expenses. War burdens were superimposed upon others almost unbearable and many fine properties have temporarily broken down under the strain.

The industry needs to come back from the depression under which it has been laboring. The past few years have been a nightmare to owners and operators, as they have tried to meet the demands for better service, better wages and higher prices for money and supplies. These things have increased faster than the ability to meet them, that's all. At last it became imperative to ask the public to overlook franchise stipulations, tradition and general affection for the nickel as a fare unit, and reluctantly the public has done so, at least to a partial extent.

The new status of the industry toward which we are now being impelled forcibly by circumstances will be radically different from that of five years ago. In fact, the difference will be startling when, for example, 1925 and 1915 are compared. Prophecies, particularly in print, are dangerous, but some things are plain. Net income will be surer because the public will take more direct financial responsibility in the business. Service will be better because the needs of the traveling public will be better understood and the general public will be willing to supplement the railway income if necessary to insure first-class service. There will be no speculative profits but capital legitimately invested will be amply secured. The public will have a larger part in the management of properties and there will be

far less delay in adjusting income to expenses. Above all, let us hope, the people in 1925 will be as strong boosters of their car service, and with reason, as they were vigorous knockers in 1915.

### Public Service Proposes Zone System With Stand-By and Mileage Charges

**T**HE zone system proposed by the Public Service Railway is an important step toward the more general adoption of a logical fare for local transportation. By basing the charge for the service upon its cost, accuracy is substituted for guess and a scientifically determined and flexible fare takes the place of one which any change in conditions is likely to make unfair for either the company or the public—and the companies have learned by sad experience that it takes much longer to raise a fare which is too low than to lower one which is too high.

The lighting and power companies for many years have known that their expense of supplying energy can be separated into two factors: the stand-by charge, or that representing the readiness to serve, and the actual operating expense of generating the kilowatt-hours consumed. Water companies have also adopted this method of charge, in a number of instances. The expense of providing transportation is capable of a similar division, but up to this time no one has attempted to allocate fares on that basis. Where fares are based strictly on the distance travelled, as has been the case in the past on the steam railroads in many states except for the additional few cents required to make an even nickel, we have an effort to cover both items of expense by a charge covering only one of them. Where the other horn of the dilemma has been chosen, as by the electric railway companies in establishing a uniform fare which would answer for all distances within a city, we have an example of the extreme which has been reached in the other direction.

Either of these systems can be made to answer for a time and so long as the surrounding conditions are favorable, but both develop weaknesses as soon as the circumstances become less propitious. The uniform fare regardless of the distance is particularly vulnerable with rising prices of operation, because if the system is at all large the charge for transportation has to be made so high as inevitably to drive away the short-haul traffic.

These considerations have led to the various attempts by electric railways in this country, which have been more or less successful, to combine the two plans under the two-zone systems. This is undoubtedly a move in the right direction, but it still runs the danger of discouraging traffic in either the central or outlying zones. The chief impediment in the past to a more exact system has been the seeming difficulty of collecting and accounting for fares, but this the management of the Public Service Railway believes it has overcome. The plan of entrance checks with pay-leave is a bold solution of the problem on such a large system as that in New Jersey, but a trial of the system is certainly worth making. We hope that the Board of Public Utility Commissioners will grant the application, because, while the plan is avowedly designed primarily for the needs of the Public Service system, its success there will be of great technical value to other properties which are struggling with the fare question.

# A Square Deal Is Needed\*

*All the Railways Want Is That They Be Valued at Cost of Establishment and That They Receive an Inviting Return to Compensate Capital for Risks Assumed and Service Performed*

By A. MERRITT TAYLOR

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**B**EFORE the war, in many localities, the public attitude toward public utility companies had become distinctly antagonistic. This antagonism was brought about in part by certain companies which had pursued practices inimical to the public welfare. It enabled designing politicians and public officials to serve their selfish purposes by making reprisals against the electric railway industry.

Such practices have now been outlawed, and the public has been safeguarded against their recurrence by effective legislation. Consequently a reconstruction of public sentiment respecting corporate enterprises is now distinctly in order and is actually taking place.

## SAFEGUARDING BOTH UTILITIES AND THE PUBLIC

Owners and managers of electric railways must accept this favorable opportunity and co-operate in developing and establishing certain specific, vital, fundamental and just principles which will safeguard and advance the interests of the public and of the public utility companies. The most important of these principles are:

1. Electric railways are entitled to franchises which will assure the owners against loss of capital or income resultant from franchise renewals being denied them, or from unreasonable and confiscatory burdens being forced upon them.
2. Electric railways are entitled to have equitable valuations made of their properties as a basis for financing and rate-making.
3. Electric railways are entitled to charge rates which will adequately compensate the owners for the capital invested, for the risks assumed and for the service performed.

Corporations which have engaged in enterprises unjustifiable from an economic viewpoint, or which through gross over-capitalization are unable to accept and adopt the foregoing principles and to serve the public properly, constitute an abnormal class which the American Electric Railway Association cannot justly sustain.

The legislatures, public service commissions and municipal governments are mainly composed of lawyers and laymen who have had little, if any, experience in the financing, construction and establishment of electric railways as going concerns. Consequently many of them have slight conception of the elements of cost which must be included in arriving at a fair valuation of an

established electric railway property as a basis for financing or rate-making; or of what constitutes an equitable and necessary return adequately to compensate the owners for the use of the capital invested, for the risks assumed and the service performed in the public interest; or what franchise provisions are essential to safeguard the public and corporate interests from the broadest viewpoint.

It is, therefore, the duty of railway executives, as operators and as citizens, to lay before these public officials the facts developed during many years of practical experience, with substantiating evidence, which will aid them in arriving at just decisions and in dispensing exact justice to all parties.

## FRANCHISES CAN BE STANDARDIZED

A franchise, as it stands to-day, certainly has no other function or virtue than that of an instrument under which private capital performs a public service, and the idea of any inherent value attaching to it has long ago evaporated in the mind of everyone who knows anything about the subject. Blundering attempts to insure good service and to restrict profits have resulted in tying up most electric railways in unfair, inelastic, impracticable and dangerous covenants which have actually prevented uniform good service, encouraged discriminatory charges and brought capital to the brink of disaster.

In the interest of both parties, therefore, electric railway franchises must be revised along reasonable and scientific lines so that they will produce the result for which they exist. They must assure the owners of the right to possess and operate their properties at least until they are fully reimbursed for the value together with an equitable return.

Electric railway properties should not be subjected to special taxes or other burdens in the nature of taxes, such as street paving, to an extent in excess of the levies laid on other lines of capital and industry. All provisions with regard to service and limitations as to rates of fare can be best left to public service commissions for determination when action becomes necessary under unforeseen and varying conditions which are bound to develop.

The electric railway franchise is susceptible of scientific standardization which will assure the public and the corporate enterprise of a "square deal." It is the duty of the association to develop promptly a standard form of franchise which will by its terms conserve the best interests of both parties.

## WHAT IS A FAIR VALUATION?

More than twenty years of experience in financing, constructing, reorganizing and operating public utility properties, and years of experience gained from the public viewpoint as Transit Commissioner and Director

\*Abstract of address presented before mid-year meeting of American Electric Railway Association in New York, March 14, 1913.

of the Department of City Transit of Philadelphia, and as Manager of the Division of Passenger Transportation and Housing of the United States Shipping Board, Emergency Fleet Corporation, have led me to conclude that there is slight, if any, real ground for a difference of opinion between corporations officered by practical and honest men and honest and practical public officials as to what constitutes a just formula for the valuation of electric railway properties which have been constructed where the present and prospective population and traffic justify their existence.

A just valuation of a legitimate electric railway property must include:

Just compensation for services performed in developing, establishing and financing the project.

The amount of all legitimate costs and expenses incurred in the incorporation of the company and in securing its franchises and rights-of-way, and the cost of maintaining its organization and of engineering during the development period.

The cost of securing the capital required for the development of the enterprise.

The cost of constructing and of equipping its property.

The cost of construction required by the terms of franchises and ordinances, such as street paving, etc.

All operating deficits and depreciation which accrue when these items cannot be met out of income.

All obsolescence charges which cannot be met out of net income without depriving invested capital of its just return.

A just and profitable return on capital invested, which of necessity must accumulate as a capital charge up to the time when such a return can be currently paid out of net income.

On their part, the electric railways must either accept this formula or its equivalent for the valuation of their properties or be open to the charge of unfairness. And the public likewise must be brought to recognize that such companies as agree to accept and abide by such a valuation are standing on an honorable basis which justifies and is entitled to public support.

#### RATES MUST YIELD INVITING RETURN

The elements of the true value of an electric railway property having been thus defined, the question arises as to what rate of return the owners are entitled to receive.

The development of every electric railway property is accompanied by material risk to the capital invested therein which entitles the owners to special compensation. In rare cases where capital invested in such an enterprise is represented solely by stock, each investor assumes the same and equal risk in proportion to the amount of his subscription, and is entitled to his proportionate share of the profits.

Usually, a large portion of the capital is borrowed on bonds or other obligations yielding a fixed rate of return which is assured by the stockholders who supply and place at risk the remaining capital required. Under these conditions, the capital borrowed assumes little, if any, risk, and practically the entire risk of the enterprise is focused upon the investment of the stockholder, who is entitled to be compensated accordingly.

Those not familiar with the practical side of the problem will of course argue that the investor takes no risk if the company be assured the right to charge such

rates of fare as will yield an adequate return on the value of the property. Recent experience has demonstrated the fallacy of this argument, because in the case of many electric railways in this country the travel so declines with increases in fare that an adequate return on the investment cannot be earned at any rate of fare.

The expectation of profits commensurate with the risks assumed is the force which impels courageous pioneers and investors to pool their interests and to engage in constructive public service enterprises. If such a return is to be denied, they will certainly seek other fields which yield adequate profit with ample security.

The investor knows that he can secure a return of from 6 per cent to 8 per cent (varying according to localities) from well-secured first mortgages and upon well seasoned, and in many instances equally safe, standard railroad and industrial stocks which have a wide market and which are readily marketable. He naturally asks why he should invest his money in the development of public service enterprises, the earning capacity of which is yet to be proved but will in any event be limited by a commission to 8 per cent, when he can invest his money and keep it in liquid form without taking any such risks and with the assurance of an equal or greater return at the start, with every prospect in many instances of increasing returns from increasing profits of the business.

Moreover, the man who has the courage, standing and ability which enable him to establish, finance and construct electric railways in anticipation of development and public requirements, and to foster and secure the development of his territory and the resultant earning capacity for his undertaking, is not going to engage in such work unless he is permitted to make a profit (over and above the returns allowed investors) which is adequate to justify his undertaking.

Many electric railway executives and operating men who are not familiar with the circumstances which control the investor in selecting his field for investment, or with the factors which regulate the decision of men and organizations engaged in constructive enterprises in selecting the field for their activities, are prone to regard only the immediate necessities of their companies in discussing what is an adequate rate of return on the capital invested. They must learn to view the subject broadly and have the courage to stand up for their rights rather than for their necessities.

The electric railway which goes before a commission and accepts as satisfactory the fixation of a valuation or a rate of fare which will no more than preserve the life of the property and which will deny to the owners a return that they are justly entitled to receive, is a party to the establishment of a destructive precedent and is a traitor to the industry.

This country is approaching an era of prosperity and vast extension of industry. Money will be in great demand, and those who have money to invest already have the opportunity of investing it in well established, substantial and profitable industrial enterprises and other securities which are now offering high rates of return.

There is some room for difference of opinion as to the rate of return which should be allowed on the value of electric railway properties, and in reaching a conclusion it is necessary to consider the rate of return which can be secured on safe securities issued by other in-

dustries which are immune from the risks which confront the development and operation of the average railway property.

Unless electric railway properties are enabled to charge rates which will yield an inviting return on their cost and adequately compensate capital for the risk assumed and for the service performed, capital is going to be diverted into other channels which are open for profitable investment; and electric railways will be prevented by the action of public officials from establishing and performing such service as the public interest requires.

I have too much confidence in the common sense of the average American to believe that the electric railway industry is going to be denied a "square deal" after the public understands that what the railways want, and all they want and require, is that the properties shall be valued at what it cost to establish them. All they want is the right to charge a rate of fare which will yield a return reasonably compensatory.

#### WHAT THE ASSOCIATION SHOULD DO

I, therefore, make the following constructive suggestion:

The immediate duty of the American Electric Railway

Association is to assemble and print for publication a complete and clear statement which will conclusively demonstrate to the public mind a constructive and mutually beneficial form of franchise, the truth about valuations, and what constitutes a just return.

This information should be placed in the hands of the governors, members of the legislatures, public service commissioners and municipal authorities in all states. It should be furnished to every newspaper. It should be furnished by each electric railway to every one of its passengers and security holders. Moreover, the officers of each member company should be urged to confer with the editors of all local newspapers in the districts which they serve and secure their aggressive co-operation in bringing about a "square deal" between electric railways and the public.

I fully recognize that this is a big, costly and difficult constructive undertaking which will require the best brains and ability in our organization and the thorough co-operation of member companies, but the solvency and life of the industry must be preserved.

We must convince the people that we are prepared to give and receive a "square deal." Then every honest American will become an ally of our industry and our cause will be won.

## Reproduction Cost Is Fair\*

*No Deduction for Depreciation if Property Is in Normal Per Cent Condition, and None Otherwise Unless Utility Is Relieved of Rehabilitation Up to Normal Per Cent Condition*

By H. H. CROWELL

Vice-President Michigan Railway, Grand Rapids, Mich.

**T**HE old order must go. It is evident that new relationships must be established between those who receive electric railway service and those who render it if the various parties are to be satisfied. The parties in interest are the user of the service, the employee in the service, the creditor of the corporation and the owner of the equity. The fundamentals involved are "safe and adequate service" at "just and reasonable rates."

In the formation of new contracts for a continuance of the service, definite agreements should be had in regard to the following points: Fair rate for service; fair return on value of property; maintenance of integrity of capital and recovery of investment upon termination of the contract.

The agreement as to fares, at least in the first instance, will be subject to the right of the State or its duly delegated authority to control public service, but provision must be made for flexibility in order to retain fixed relations under changing conditions.

It has been suggested that an agreement based on service at cost would make for a betterment of conditions and would eliminate opportunity for excess profits to the corporation or excess fares to the public, as well as stabilize the securities of utility corporations and reduce speculation therein to a minimum.

Presuming that the public desires to receive service from a privately owned and operated utility and is willing to pay a fair rate while adequate service is rendered, and that the general plan or agreement under which operations are to be carried on is to be the cost-of-service plan, we must value the property to be used and determine the capital on which a return will be allowed, which capital will from time to time be increased as additions and betterments to property are made. How shall that value be determined, or rather, in the circumstances, what will be fair and equitable to both parties as a base on which to determine the rate of return and the rate of fare that will afford such return?

#### VALUATION OF OLD PROPERTIES RAISES DIFFERENCES

If one were to establish a new utility for public service, it would be comparatively easy to agree upon the value or amount in dollars upon which the owner was entitled to earn a fair return. When a property is well designed and honestly built, the value is at least equal to the cost, including legitimate outgoes required to bring the enterprise to a point where it is ready to operate, or capitalized estimated net earnings at a given rate of interest, the latter being a matter of judgment and opinion.

Unfortunately we have to consider properties which have been in operation for some time, either profitably or unprofitably, and differences of opinion will arise (as in past rate-fixing proceedings) in regard to what

\*Abstract of discussion of report of committee on readjustment at mid-year meeting of American Electric Railway Association, New York, March 14, 1919.

methods of valuation should be used, what should be included, what should be excluded and what really constitutes value.

We are all too familiar with the decisions of courts in favor of present value, and the rulings of many public service commissions, the net result of which is practically to confiscate the difference between reproduction cost new and a value based on the theory that certain physical elements of the plant and property are not new and that a certain portion of their probable useful life is exhausted, irrespective of whether or not capital equivalent in amount has been withdrawn from the enterprise.

#### HOW TO VALUE A PROPERTY

We are not now concerned with the usual rate-fixing proceeding where the regulating authority may exercise its judgment as to the value or rate base. We are considering an equitable agreement for future service.

It would not be excessively difficult to determine the value of a property for purchase or sale. We would undertake to determine the dependable net earnings, and it would be a simple matter to capitalize such earnings at any satisfactory rate of return. This amount, less any cost necessary to restore the physical property to first class working condition, would represent the commercial value. This value would not remain constant but would rise and fall with changing conditions.

Again, we are not presently concerned with net earnings in determining the value for future service, since the earnings are the resultant of a fixed rate made under different conditions.

#### DEDICATION ANEW TO PUBLIC SERVICE

Briefly, the State granted a corporation a charter that it might exist and exercise its corporate functions as defined in its charter during its corporate life.

The State, under its police power, has the supreme right to control public service. It has declared transportation to be affected with the public service and, as such, subject to regulation and control.

When the State offered to the utility the right to function in the public service, it implied that the corporation might function with profit since it has the undoubted need and right to the means of livelihood.

The corporation operated in accordance with its ostensible purpose. Its rate of charge was fixed by franchise or regulated by the State or its duly delegated authority; and, because of the binding force of its contract or of the regulation, it has been obliged to continue service under conditions never contemplated when the contract was made.

The period of sacrifice should end. A fair return should be earned from now on. The property is to be dedicated anew to the public service, and the public accepts anew such dedication rather than furnish its own service. Is there not really a new taking of the property? If so, should not its value be determined by considering the capital that now would be required to create the property and establish it upon its present basis?

#### DEPRECIATION NOT DEDUCTIBLE

The following seems true: No property can be maintained at 100 per cent new condition. Utility properties made up of many elements in various groups, after a period of operation, can be brought to a certain per cent condition, something less than 100, which is the normal per cent condition for that property. The property, in

this normal per cent condition, represents 100 per cent investment; and there having been no actual withdrawal of capital, the value upon which a return should be earned is the full investment value, or 100 per cent. That is, unless the per cent condition is lower than the normal per cent condition for the property, the property should be credited with a value equal to the cost of reproduction at the time of the valuation.

For example, assume that it would cost \$1,000,000 to reproduce a property, that the normal condition is 85 per cent and that the property is in this condition. Then the rate-making base should be 100 per cent of the reproduction cost of the property, it being demonstrated that 15 per cent of the cost of the property has not been withdrawn or returned to the owners.

If the property is in 75 per cent condition, 100 per cent of the reproduction cost of the property should be the rate-making base unless the owner is to be relieved of the liability to rehabilitate to the extent of the 10 per cent deficiency in condition. The public, however, may well require the owner to deposit a sum which, if expended, will bring the property to its normal per cent condition to insure safe and adequate service.

It seems clear that it would be inequitable to require the corporation to furnish safe and adequate service and maintain the property at normal per cent condition under such rate of charge as would permit the corporation to earn only a fair return upon a value or rate base equal to the per cent condition found.

One must bear in mind that, under the cost-of-service plan, the corporation will be required to furnish adequate service, and it must, therefore, first rehabilitate the property and then maintain it at normal per cent condition. A rate base founded on fractional per cent condition cannot be equitable if, ultimately, 100 per cent replacements are made and the whole cost of making such replacements is deducted from revenues before net earnings are found.

We are not attempting to discuss the various methods for determining value that are put forward in rate fixing proceedings, such as reproduction cost new and original cost, or to discuss unit prices or theories of depreciation. Our main purpose is to call attention to the fact that the property is being dedicated anew to the public service, and that the public elects to be served by a privately owned and operated utility in lieu of providing such a property for its own service.

To summarize, therefore, it is believed that in the circumstances, all the obligations the utility will assume being borne in mind, the proper amount upon which the corporation is entitled to earn a fair return is the sum which equals the cost of reproducing the property—such as it is—with no deduction for depreciation if the property is in its normal per cent condition, and with no deduction for depreciation if the property is in less than normal per cent condition unless the corporation is to be relieved of the liability to rehabilitate up to normal per cent condition. Confiscation of a portion of the principal and the right to earn thereon will follow if value is determined differently and a lower rate base is found thereby.

Every effort on our part should be made to bring out the full worth of the property—and by property we mean something in addition to plant and equipment. In making new contracts, both parties thereto and the supervisory commission, if any, should have a true knowledge of the value of the property in order to insure "safe and adequate service" at "just and reasonable rates."

# Rate of Return in Service-at-Cost Franchises\*

*Commissions and Courts Have Not Established the Basis for Fixing the Rate of Return Necessary to Attract Capital, but Position of Company, Basis of Fair Value and Various Safeguards All Influence the Investor's Demand*

By EDWIN GRUHL

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RETURN on investment is the most important indeterminate factor in the service-at-cost franchise. Next to wages, the rental or return on capital is the largest item of cost of electric railway operation. This is because the turnover of the investment is so long postponed that years are necessary before an equivalent in gross earnings is collected. A large packing concern advertises that its

returns are 2 per cent on sales and 11 per cent on capital invested, indicating a turnover of 5½ times in one year. Compared with this 2 per cent, the turnover in the electric railway business is so small that from 30 per cent to 40 per cent on revenue represents the cost of money with a modest 8 per cent on capital invested. Moreover, the cost of money for future investment is largely beyond the control of either party to the contract. If the return as fixed becomes too low, eventually growth and expansion stop. If it is fixed too high, all advantage to the public of such a contractual arrangement ceases.

One searches in vain among the economic theories of interest, profit and production cost for the fundamental conditions which a service-at-cost contract must anticipate. There are schools of thought that believe that capital and its return are the all in all, and schools, like the socialists, that say it is nothing of the sort. They range in their background from history to psychology and from sociology to finance. They range in their definitions from "pure interest" or cost of money without risk, to "psychic income," that feeling of satisfaction that persists even when money returns are lacking. The electric railway business has no doubt been productive of large income of the latter variety during the last few years, but it is difficult to convey the fact in reports to stockholders or meet the requirements of the bondholders thereby.

## COMMISSIONS AND COURTS HAVE NOT MET THE ISSUE

Nor do we find any fundamentals clearly outlined in decisions of commissions as to rate of return. There are, in rare instances, some discussion on the necessary return or cost of money, some dicta on the risks of the business and some vague references to the equity of encouraging efficient management. Usually no mental

processes are revealed, and the findings of fact as to what is a reasonable rate of return are clothed in judicial patois. The reference to these three factors—return, risk and reward—has suggested a qualified acceptance of the analysis of return in competitive business by the classical economists. In fact, in several decisions, notable among them the State Journal Printing Company case of the Wisconsin Railroad Commission in 1910, the argument is quite fully developed. It is not far afield to examine this analysis, as a mere statement of it discloses the practical difficulties in arriving at what is a reasonable return:

*In theory:* The rate of return on the fair value of the property should conform to that earned in competitive businesses under like conditions. Returns under competition consist of necessary profits and differential or surplus profits. Necessary profits are those which must be earned by the least efficient producer of the same commodity. Should he fail to earn these, he drops by the wayside in the competitive race. Differential or surplus profits are the additional returns earned by the more efficient producers of the same commodity, and they amount to the difference between the cost of production, including necessary profits, and the selling price. Necessary profits, the lowest return which the competitive business must yield if it continues to produce, are defined as being made up of three factors—the cost of money (or interest), indemnity for risks incurred in the business resulting in the possibility of impairment of either interest or principal, and payment for personal skill in the conduct of the business.

*In practice:* The factors are not capable of any exact determination. The mere cost of money, which is only part of necessary profits, is susceptible of proof. But it is difficult to place a valuation upon the inherent risks to which the business is subjected. It is likewise a mere matter of unsupported opinion what measure should be applied to the wages of superintendence or cost of personal exertion and skill in management defined as similar to the wages of labor. Finally, in the determination of differential profits or the addition to necessary profits to care for the inherent economy of one enterprise over the least efficient enterprise which is still able to navigate, one arrives at a factor that no regulating authority has the courage to announce, as is involves the recognition of commendable efficiency. Accordingly, the rule that a regulated monopoly should receive the returns which would exist if a state of competition were imposed upon it, has been supplanted by the rule that returns are properly limited to the amount necessary to attract capital into the business. Differential profits for efficiency have been disregarded.

\*Discussion of report of committee on readjustment at mid-year meeting of American Electric Railway Association in New York, March 14, 1919.



There is, naturally, little in the decisions of the courts reviewing the determinations of the regulating bodies. They have avoided the question as legislative or administrative and have confined their finding, when called upon to do so, to the question as to whether the rate complained of was confiscatory. A return which is less than that necessary to attract new capital into the business may not be confiscatory.

It has been the history of regulation that during periods of high prices and corresponding low returns of public utility service the efforts of regulation have been most pronounced to keep rates down. During periods of general prosperity and low prices, returns which might have been reduced without involving confiscation, have been permitted without the opposition of regulating authorities. It is a curious coincidence that the judicial review has been asserted and denied under the same economic pressure.

In 1878 with prices high and securities at a very low ebb the principle was announced in the Munn case that rates fixed by the legislature are not subject to judicial review and that for protection against rates fixed by the legislature resort must be made to the polls and not to the courts. During the period 1888-1896, with gradually bettering conditions, the principle was recognized that where rates give some compensation, however small, the courts will not interfere. Beginning with 1896, with the index number of prices at its lowest ebb, there was a series of decisions, notably in the New Memphis Gas Company case, that regulation implies such action as shall be just and reasonable and such as "enables the company to maintain its existence, to preserve the property invested from destruction and to receive on the capital actually invested a remuneration or dividend corresponding in amount to the ruling rate of interest." And in the much quoted case, *Symth vs. Ames*, in 1898, the rule was laid down that "what the company is entitled to ask is a fair return on the value of that which it employs for the public convenience."

Since that date there has been a gradually increasing tendency to concede every presumption in favor of the legislative act. Even at this time, when prices are again high and securities low, three dissenting Justices of the Supreme Court affirm that where franchises expire "the question recurs whether the fixing of any rate by the city could be said to confiscate property on the ground that the return was too low," and suggest that "substantial justice is more likely to result from trusting to the sense of fairness of the community in dealing with such cases than from imposing upon a city a contract which a court shall make for them."

#### IMPORTANT POINTS IN THE CASE

It is elementary that unless an enterprise earns a necessary return consisting of the cost of money, indemnity for risks inherent to the business and a return for management, the business will cease. The fact that the capital cannot be readily removed, and that there are arbitrary restraints such as obligations to continue service, may result for a brief period in such a business being conducted at a loss. Unless, however, the full measure of necessary return is earned, no new capital can be expected to enter the business and any growth of plant such as is vitally necessary in public utility enterprises is stopped.

This is the condition in which electric railways find themselves to-day. Necessary returns are clearly a part

of the cost of operation, although the reaction on the business of failure to recognize such costs is not so immediate as in the case of the cost of materials, labor and taxes. Failure to pay the current price for coal and labor, and meet its tax bills promptly, means prompt insolvency. Failure to meet the necessary cost on capital means impaired credit and diverted capital. Because the turnover is large, the amount of starvation to which the patient can submit before it finally dies is greater than in the case of other businesses. If the traction business were in the same position as the packer, with a 2 per cent margin on sales, failure to make returns would very quickly shut off production.

Other questions arise when these principles are applied to a service-at-cost franchise. The nature of the franchise, and the valuation basis upon which the rate of return is applied, will influence the necessary return. Whether a different rate of return is to be specified on capital investment existing at the date of the franchise than on future capital additions; whether the return on the capital investment should be based on the entire investment or represent cost on secured liens and a definite return on the stock equity, and whether the return should be fixed or be placed on a profit-sharing basis are also important questions.

#### AGENCY PLAN IS BEST

The most important circumstance is the nature of the franchise. Will the electric railway be the lessee, the partner or the agent of the municipality? The trouble with many existing franchises is that they are leases, with the landlord holding the whip hand, with every element of doubt resolved against the tenant, with no chance to vacate, and with the certainty at termination that a good deal of the property will revert like a fixture which is part of the land. With such hazards surrounding the business and such uncertainty as to integrity of investment, capital must demand a high rate of return.

Under the provisions of a partnership, which shares obligations and profits, the rate of return is stabilized and lowered. Yet no partnership which is based on mutual mistrust can endure, and no partnership franchise has as yet been drawn which so explicitly defined the rights and duties of the parties that they may henceforth dwell in mutual security even though constrained to deal at arm's length. "Reasonably adequate" service, "necessary" extensions, "prudent" management, "allowable" expenses, "good" behavior are familiar phrases which are the seeds of dissension and the temptation of a political issue. Nor does the community of interest yield any restraining influence. The fact that Chicago has a \$20,000,000 and New York a \$100,000,000 stake in the business does not appear to generate any enthusiasm upon the part of municipal officials for very necessary increases in fare in these cities. The city chest or "common good" has no human impulses of self-interest. Partnership arrangements may become, as some of them have, hazards instead of safeguards.

The agency type of franchise appears to have greater advantages. Prior investment is determined and safeguarded; the return on capital additions is fixed at the actual cost of attracting investment; the service, extensions and expenses are determined and approved by the municipality, and the fares are automatically determined to yield the total cost of service. Safeguards of the annual return (such as preference of return on

capital over all other expenditures except labor, guarantee of return through the tax power and maintenance of contingent reserves) and safeguards of the investment (such as refund of the actual investment by the municipality or a successor licensee) eliminate hazard, lower the rate of return and cheapen the cost of service. The responsibility is not shared; it is shouldered by the municipality. There are no contingent obligations, no contingent profits. There is little doubt that this latter type of franchise would be overwhelmingly preferred by security holders.

#### DETERMINING THE COST OF SERVICE

It is to the mutual interest of both the electric railway and the public that any service-at-cost franchise provide the safeguards of that which will cheapen the necessary return and thus cheapen the cost of service. Recognition must be made of the total cost and provision made for currently meeting it. Expenses cannot be camouflaged by creating a system of operating allowances, with its attendant heritage of deficits to be absorbed in the price paid for future service. To use a homely expression of the Supreme Court of Missouri in the Missouri Southern case, "the intake bung hole in the corporate barrel must be opened simultaneously with the outgo spigot."

Adequate provision must be made for maintaining property and keeping equipment modernized through operating expenses. Adequate provision must be made in reserves to insure replacement of property abandoned or outworn. Bond and note discount must be treated as interest cost. That many existing franchise provisions (contrary to all accepted rules of accounting) say that under certain conditions such operating expenses may be absorbed in capital account or that the cost of money may be an accumulated claim to be disposed of on ultimate settlement if not paid on the due date will not reconcile investors to low returns. Provision is, of course, important for the automatic adjustment of rates through the operations of a return reserve and for competent administration by the city of charges imposed upon the service. The advice of the Wisconsin Supreme Court in the "Soo" case in discussing the regulatory law in that State is particularly in point:

Every unnecessary burden imposed upon the railroad impairs its net receipts and diminishes that margin . . . between the amount sufficient to assure a fair return on the value of its property, plus the amount of its fixed charges and operating expenses, and its gross receipts. In this margin the public and the railroad are interested, . . . to waste this margin is to waste the fund in which the whole public is interested. This should never be done for the benefit of the few, as against the interests of the many.

In a like manner the safeguards of the investment will have an important influence on the necessary rate of return. An actual contract to purchase the property and recoup the investment at the termination of the agreement would mean lower cost of money than a mere option to purchase by public ownership. And the security would be further improved and the necessary return lessened if an option were given the electric railway corporation to sell the property to the city whenever it desired. For it is not merely the preservation of the integrity of the investment during the period of the contract but the ultimate disposition of the property which is of concern to the investor and influences his opinion respecting security and attractiveness of the investment. Lack of such safeguards in the past,

under systems of regulation, explain in large part the high rates of return now necessary to attract money into the electric railway business.

The basis of fair value in the service-at-cost franchise also has an important bearing on the rate of return. Investors in estimating their return discount possible appreciation in the capital invested. They are satisfied with relatively low rates of return on certain real estate, for this reason. If the actual investment is definitely determined in the contract, and if a premium is paid upon the taking of the property by the municipality or a successor in excess of such investment, the necessary return is less than where arbitrary determinations of the then present value are to be made in such events. Uncertainties as to the integrity of the investment have a substantial influence on the rate of return, and it may be readily demonstrated that the compensation demanded to insure against this hazard is far in excess of its probable cost. For the tendency of material and labor costs, and the appreciation of realty values would in all probability, with any fair valuation, yield a more substantial compensation in event of purchase than the actual investment.

#### SLIDING SCALE OF RETURN QUESTIONABLE

Service-at-cost assumes that the going rate of return shall be paid on future investment. It necessitates a fixing of the equitable returns on investment existing at the date of the franchise. There seems no reason why the return on prior capital should not be fixed as an amount rather than a percentage of the capital value. This would facilitate voluntary reorganization and refunding of existing issues and the development of a financial plan, under the conditions of the contract, which would rehabilitate credit.

What return need be paid on new capital is difficult to forecast. Existing investors cannot bind their successors, and even were the contract to specify the rate of return to be permitted on additional increments of capital, existing stockholders cannot be compelled to subscribe, nor existing bondholders be bound to increase their holdings. A concurrent underwriting might be arranged for a short period of time and for a definite additional amount, but it would scarcely be to the interest of the municipality to do so.

The safeguards surrounding the investment and return should be such, in the interest of most economical service, that returns necessary in the future will be less than those in the past. On the other hand, the supply of attractive investments with more active participation in foreign markets is certain to increase, and local electric railways must enter into competition for their requirements of new capital. No more practicable plan can be developed for the future than that additional investment be carried at cost. In no other way can future expansion be assured, and the advantages of better credit conditions brought about by the contract and the dealing thereunder, inure to the benefit of the community.

Provisions for the sharing of excess profits and increased dividends with decreased rates have their appeal, but it is questionable whether they will prove satisfactory in the long run. There must, of course, be incentives for betterment and efficiency in any practicable service-at-cost plan, but there is much merit in the claim that these rewards belong to the working organization, the employees and the management, to whom both parties of the contract must look for its successful operation, and not to the investor.

Prospective surplus profits are so readily dissipated by increased requirements for service and increased demands for wages, that their possibility must be seriously discounted. And it will be found that the investor in his deliberate judgment will most certainly prefer a fair return to a combination of meager returns and possible hopes.

#### PUBLIC SENTIMENT IS INVOLVED

This introduction to the subject would not be complete without reference to the problem of public sentiment. One of the explanations for as low rates as 5 and 6 per cent found in some of the service-at-cost franchises is that they represent a compromise to the public sentiment of what is fair and are not an attempt to measure the cost of money. Unless the safeguards to investment and guarantee of return are sufficient to make such a low return attractive to the future investor, the main purpose of the service-at-cost franchise is defeated.

There is no doubt that in the mind of a large portion of the public interest and profits are regarded as an unnecessary rather than unavoidable part of the cost of service. Those who have conducted campaigns of public information appreciate the difficulties involved in correcting fixed ideas as to the nature and necessity of the electric railway's expenditures for interest and dividends. Such elementary facts—as that electric railways must anticipate the growth of cities; that in the interest of cheap service railways must be built with cheap money; that the rental return of capital invested like the wages of labor employed, is part of the cost of service, and that money cannot be legislated into any business except through taxation of the public—require much ingenuity in presentation before any ready acceptance of them is accorded by the public.

Undoubtedly no more favorable time will ever exist for municipalities to enter into franchise contracts which will minimize the cost of money and reduce the cost of service. During a period of prosperity with fares fixed, costs low and returns assured, considerable difficulty would be encountered in persuading existing investors to accede to the proposition which would deprive the investment of its speculative possibilities. The proposition of supply of service at cost twenty years ago would have been received with open opposition. It is only during times of depressed security values, high costs and meager returns that acquiescence can be secured to any plan so radically restricting the possibilities of the investment. Written in 1896 when the pendulum of prices and cost of operation were at the other extreme, Edward E. Higgins in his book on *Street Railway Investments* states:

THE most important circumstance is the nature of the franchise. Will the electric railway be the lessee, the partner or the agent of the municipality? \* \* The agency type of franchise appears to have greater advantages. Prior investment is determined and safeguarded; the return on capital additions is fixed at the actual cost of attracting investment; the service, extensions and expenses are determined and approved by the municipality, and the fares are automatically determined to yield the total cost of service. Safeguards of the annual return \* \* and safeguards of the investment \* \* eliminate hazard, lower the rate of return and cheapen the cost of service. The responsibility is not shared; it is shouldered by the municipality. There are no contingent obligations, no contingent profits. There is little doubt that this latter type of franchise would be overwhelmingly preferred by security holders.

EDWIN GRUHL

sary to attract capital. The actual cost of money from time to time must be included in the rate of return provided in service-at-cost franchises if the business is to keep going and growing.

3. The questions as to whether the franchise makes the street railway the tenant, the partner or the agent of the city, what the basis of fair value shall be and what safeguards are needed to insure the prompt payment of return and the certain repayment of the investment have an important bearing on the return demanded by investors. Disregard for these safeguards under present practices of regulation afford a partial explanation of the fact that high returns are at the present time required by new capital in the electric railway business.

4. There must be incentives for betterment and efficiency in any practicable service-at-cost plan, but the question is raised whether these rewards do not belong to the working organization of the electric railway companies rather than to the capital invested therein.

5. Public education is necessary as to the unavoidable nature of returns on investment, the possibility of cheapened service through public co-operation, and the relation of adequate returns on investment to future expansion of the service.

6. Present conditions of high prices and low returns make the present time most favorable for the sale of service-at-cost franchises to investors.

The municipal transportation industry in the United States is intrinsically profitable—much more so than abroad. This is due primarily to American peculiarities.

Our national passion for rapid transit forced the introduction of street railways long in advance of their adoption in other countries. "Perpetual" franchises, high fares, freedom from burdensome conditions, all were instantly—almost impatiently—granted in the eagerness for facilities. To-day, these old time franchises are immensely valuable and almost perfectly protect the interests of their owners. This is the first effect of "American energy."

The second is equally characteristic. The average American is careless of small economies. He has no time to "split a nickel;" he despises a penny and, in some parts of the country, will throw it away. He will willingly pay 5 cents to save three minutes in a half-mile ride, and he will doubtless be the same man fifty years hence. Attempts have been made in a few cities to reduce the now almost universal nickel fare. They have rarely succeeded, not always because the reduction could not have been forced, but because no interest could be aroused among the people.

It might appear at first that this argument for the investment value of our street railways is flippant or superficial. It is not. It is fundamental. Americans are free riders, and their insatiable craving for more facilities arouses mingled feelings of gratification and anxiety in the minds of street railway managers.

No one could hope to sell a service-at-cost plan in the face of bullish sentiment of investors such as Mr. Higgins reflects.

Summarizing the discussion, the following conclusions may be stated:

1. Service-at-cost franchises present possibilities of cheaper service to the public through lower returns to capital where the returns are assured and the integrity of investment is safeguarded. Return on the investment is next to labor the largest item of cost of electric railway service, constituting from 30 per cent to 40 per cent of the operating revenues.

2. Neither the writings of economists nor the decisions of commissions and courts establish the basis of fixing or forecasting the rate of return necessary to attract capital. The actual cost of money from time to time must be included in the rate of return provided in service-at-cost franchises if the business is to keep going and growing.

# Electric Railways and Investors<sup>\*</sup>

*The Public Should Awake to the Deplorable Condition of the Electric Railways—Their Financial Condition Is Desperate and Has Been Aggravated by Large Wage Awards—Municipalities Should Realize that They Cannot Be Prosperous without Efficient and Prosperous Utilities, and Commissions Should Grant Reasonable Increases in Rates*

By FRANCIS H. SISSON

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**B**ECAUSE our soldiers are daily returning from the fields of their heroic endeavors abroad, let us not deceive ourselves into believing that the struggle which has just dethroned autocracy is ended. We should likewise avoid the fatal mistake of considering our responsibility to "carry on" fully discharged when the armistice was signed.

The battle that our boys have just fought so victoriously across the ocean has gone on since the dawn of time; it will continue so long as human nature remains as it is to-day and has been through all the centuries. The battle may be waged in the name of democracy or in behalf of this or that cause, but always, in the final analysis, it is the struggle of the lesser thought against the greater thought of the time—the fight for progress—whatever form it may assume.

We may evolve a League of Nations which, perhaps, will prevent armed warfare and the wholesale shedding of blood. Certainly all mankind fervently hopes for such a covenant among the nations. But, notwithstanding, we may be sure that the age-old struggle will proceed. It is going on to-day, in fact, the world over. Under the banner of state socialism the foes of peace are now attacking the very foundation of our national and individual freedom. And we shall have ample need for the same spirit which animated our soldiers "over there" in breaking the Hindenburg line of autocracy to annihilate the "Hindenburg" line of the forces of ignorance and dangerous radicalism here.

## STATE SOCIALISM DOOMED

State socialism can never attain the millennium it extravagantly promised while the mass of people are uninformed about, or worse, uninterested in, the vital economic problems confronting this nation. And when there shall be such general enlightenment and intelligence as are required for the success of state socialism there will be no need, or place, for such specious theories of government, because their fallacy and peril will be apparent to all. Then the people as a whole will understand that the state cannot deprive the individual of the fruits of his initiative and long thrive, or even survive.

That there is a singular and deplorable lack of

appreciation of this fact, however, is plainly evident throughout the land. It is no more pronounced, perhaps, than in the attitude of the people generally toward the public utilities. But, thanks to the costly failure of the government's experiment in controlling the railroads, there may at last come a dawning consciousness among the thinking element of our body politic of the tragic possibilities, as well as fatal limitations, of state socialism.

Let us hope that this awakening will occur before it is too late, in dealing with the problems of the electric railways of the country. And it is with the desire to help disseminate information about some of the fundamental factors of these problems that I shall undertake to discuss electric railways from the point of view of the banker and investor. In this connection, incidentally, it may not be amiss to observe that every progressive banker and investor to-day is well aware that his interests are inevitably and inalienably allied with those of his community as a whole, and that whatever promotes the prosperity and welfare of all the people also profits him. Because the bankers realize this basic principle of their relations to the public, and also because they understand that which the general public does not appear to appreciate, namely, the people's vital financial "stake" in public utilities, they are keenly interested in problems of the electric railways.

## THE PUBLIC'S STAKE

The average person, seemingly, thinks that simply because he owns no public utility securities he is not concerned with the financial condition of these corporations. That is a serious mistake, for the ramifications of the fiscal problems of the public utilities affect, directly and indirectly, every phase of the economic life of the communities they serve.

In June, 1918, substantially all the banks of the country, except private banks, owned \$385,000,000 of public utility bonds. Insurance companies, also, are large holders of such bonds. In New York State, alone, the public generally owns securities of electric railways to the amount of \$1,282,500,000. And more than \$6,000,000,000 is invested in the electric railways of the United States. These figures should be sufficient proof of the fact that direct interest in the welfare of public utility companies is not limited to those who are stockholders in these companies.

Surely the war has taught us that, collectively, the public utilities are national in scope and of incalculable importance to national defense, as well as to national welfare and comfort. Yet, the electric railways, representing an investment of \$6,000,000,000, are rapidly going on the rocks—largely because of public ignorance of, and indifference to, the true conditions of this great industry. The recent receivership for the Brooklyn

<sup>\*</sup>Abstract of address presented before mid-year meeting of American Electric Railway Association in New York, March 14, 1919.

Rapid Transit Company dramatically emphasizes the straits into which the electric railways throughout the country have been forced by various circumstances.

Up to the present, the electric railway companies have struggled alone with this desperate situation, but the problem is really a public one because the functions performed by these companies are essentially public. It is time for the public, which has reaped the benefits of the service rendered by the electric railways despite unbearable handicaps, to share in solving their problems. It is high time, indeed, for the public to realize that when it attacks public utilities, such as the electric railways, or denies them fair treatment, it is attacking and injuring its own interests.

The war imposed unprecedentedly heavy burdens on the electric lines, which were already suffering from a cumulative load that was straining their facilities and resources to the utmost. The prices of materials, for instance, have advanced from 25 to 100 per cent in the last few years. The demands made upon the service of the electric roads likewise have greatly increased. Transportation facilities of electric railways are over-taxed everywhere. But, while gross revenues have probably been larger than ever before during the last twelve months, net income has decidedly decreased.

In view of these deplorable conditions is it surprising that electric railway security owners have seen their holdings precipitately and alarmingly depreciate in value? Is it amazing that, with the opportunities offered to the investing public during the last few years to purchase the securities of industrial companies which have shown extraordinary earnings, electric railway securities should find few buyers? Is it to be wondered at that, with the wartime demands upon capital, these securities should have sold at prices which have been so low that the electric railway companies have had the utmost difficulty in obtaining, and, in some cases, have been absolutely unable to arrange, long-term financing? Is it difficult to understand why they have been compelled to pay such high rates for the capital they did get—and which, of course, still further reduced the return on their securities? Is it any wonder that dividends should be passed and that those to be paid this month, totaling \$3,062,000, should be \$200,000 less than during March of last year?

#### RESULTS OF WAGE AWARDS

I have mentioned some of the burdens laid upon the electric railways by the war as being instrumental in bringing about the existing financial difficulties of these companies and of the unfavorable position of their securities. There is another factor, however, which has contributed largely to the situation, namely, the awards of the National War Labor Board. In this connection, it may be illuminating to quote the following sentence from a letter recently written by the receiver of a New England electric railway company:

The receivership is a direct result of the National War Labor Board's award, which placed an additional payroll burden of \$125,000 per annum upon the company, notwithstanding our having submitted to the board a full statement of our funds and demonstrating to them that any other increase in wages would create the situation which we now face.

In a hearing between the street car companies of Cleveland and Detroit and their men, the companies pleaded that they should not be required to raise wages because they had no income out of which to pay the increase. They said:

We are working under a franchise on which we receive only 3 or 4 cents a passenger carried many miles, and, if a substantial increase in wages be granted, bankruptcy and a receivership must follow.

Yet, the general chairman of the board of arbitrators in these cases held that the financial condition of the companies could not affect the issue at stake.

Such rulings, however, are only in keeping with the general public's attitude toward the electric railways and which has compelled these companies to operate under two distinct, and, in some respects, diametrically opposed kinds of law—legal and economic. The seriousness of this handicap is apparent when it is realized that probably one-half of the gross operating expenses of a railroad consists of direct labor costs, which are constantly increasing while the abnormally low rates for the service rendered by electric railways were, in many cases, fixed years ago by special laws or by provisions in ordinances or franchises. The rate of fare, in effect, was a part of the consideration for granting franchises. But the franchise method of fixing rates is too rigid to meet present-day conditions. The franchise, while holding down the charges for the service, does not hold down costs; consequently, costs have rapidly been overtaking gross revenues and have reduced to the danger point the margin between the two.

The commission form of regulation was developed largely with a view to remedying the evils of the rigid franchise method, but the commission form of regulation is losing esteem among the thinking people because of the attitude many commissions have assumed toward the public utility corporations, and because of the condition into which the Interstate Commerce Commission allowed the railroads to drift.

The public utilities have long been laying their case before the state public service commissions, but relief has come very slowly. And now, of all times, the men composing the rate-making bodies of the various states must have the courage to adjust rates to existing circumstances and prevent ruin from overtaking many of these corporations. Their responsibility is a very grave one, both to the utility companies and to the public.

#### THE NEED FOR POLITICAL INTELLIGENCE

There is equal need, also, for a realization by our legislators of their duty toward the public utilities and the holders of the securities of these companies. Business opportunity means nothing, unless we have coupled with it political intelligence which makes it possible of full realization. We look into our own city here, and we discuss the cost of transportation and the economic problems that are involved in public utility problems generally, but what good is the understanding of the economic problems if we have sitting in legislative and administrative halls a degree of political intelligence that absolutely nullifies it, which defies economic law, which refuses to recognize cost of production and cost of service as a basis of price?

We must consider more than the earning power, or franchise terms, or business opportunity, or the trade development that may follow in any given field; we must consider the political angle which, sooner or later, in our form of government determines the value upon which any security rests. We see rising up all over the world this tide of radicalism which has affected every form of business and unless we, as business men, attempt to understand and interpret and guide that radicalism into right channels, it is going to affect the fundamental values in which we all deal.

We cannot expect to take our position in the economic world unless we put into political halls the same kind of intelligence that enters into business organization.

The political angle is having a very important effect upon our business future, and we, as business men, should study that angle and have intelligent opinions about it and be able to vote, through our duly accredited representatives, intelligently, that our business may be protected and conserved.

The adjournment of Congress, leaving the coffers of the railroads empty and the Federal Railroad Administration facing \$380,000,000 of back debts, is an instance of the evils of political domination of business. It is one which the public should ponder well in considering the problems of the electric railways, for municipal ownership would plunge these arteries of transportation into petty, local politics—which would be a worse fate, if possible, than the railroads have endured.

If there were to be any one criticism made of the American people as a people it is that though we have organized a democracy here we do not function as a democracy in many important instances, and we allow economic fallacies of all sorts to creep into legislative enactment. We allow economic fallacies to have political importance, which, if we gave them the attention they deserve and if we realized the bearing that they ultimately have on our own pocketbooks, we would be quick to correct in their inception, rather than to fight them in their fruition; and it seems that is the message of this hour, if ever, in the history of the world.

This condition must be remedied. The causes which have permitted and fostered its growth must be removed.

"The difficulty," aptly declared Lloyd George, "is not with interests, it is with prejudices. People talk about vested interests. It is not the vested interests I am afraid of, it is the vested prejudices. We must sweep aside prejudices."

#### IMMEDIATE REMEDIES NEEDED

But the present critical situation of the electric railway companies cannot wait for a solution of the future; it demands immediate betterment. And there is but one remedy.

Transportation cannot be rendered at less than cost, without the money to make up the deficit coming either from the security holders or the taxpayers, or both. It should be obvious to all that the cost of transportation ought to be borne by the users of transportation, and that some plan should be worked out at once by which such provision is made.

If municipal authorities maintain the position they have held, and unwarranted additions are continuously made to the tax burdens of our communities, the bonds of our municipalities will not be attractive to bankers or investors, and the growth and prosperity of various cities will be seriously threatened. Indeed, as has been pointed out, there is involved in the situation the validity of a huge structure of investment and credit, the undermining of which cannot fail to have far-reaching effects upon general credit and business prosperity, for the credit of our transportation lines cannot be placed in jeopardy and the effects localized or even restricted to these utility companies. Cities cannot be prosperous without efficient utilities, and utilities cannot be efficient without prosperity. Public regulation involves public protection of credit.

There can be no possible justification for imposing

such burdens as are being inflicted upon the security holders and taxpayers to-day in a quixotic attempt to give something for nothing, by allowing the users of transportation lines to enjoy the conveniences provided them at less than cost. Fares must be raised to an equitable basis, for they constitute the only source of income for the electric railway companies.

One of the sanest and fairest views on this vital subject which I have ever encountered, and one of special interest to public utility companies in general and to the holders of their securities, is the following opinion rendered by the Superior Court of Pennsylvania:

A rate that is too low may deprive the members of the corporation of property that cannot be returned, and if too high, the public is unjustly deprived of property. Rates should not be speculative or put in operation for the purpose of determining whether too low or too high. Before that question can be answered, a loss of property might result. The business of rate making should not be an effort to impose on either the public or the corporation; and, while it may be true that some corporations in the past have acted unfairly to the public, that would not justify a confiscatory valuation by the commission or a lowering of rates causing a confiscation. Rate making contemplates fair dealing between the company and the public. When the question of rates to be fixed is before the commission, the value of the whole property and the net return thereon must be considered.

The public is entitled to be served at reasonable rates on the value of the property used in the public service. The company is entitled to a rate that will allow it a fair return. To induce investment and the continuance of capital, there must be some gain commensurate with that of any other business. The mere assurance that the investment will not be confiscated will not suffice.

The very recent final decision of the New Jersey Court of Errors and Appeals upholding the legality of the increase in street car fare to 7 cents in the State of New Jersey, is significant and promising. But, more encouraging, as revealing the extension of an enlightened point of view, it has been almost generally admitted by the citizens of New Jersey that the companies needed the extra revenue if the quality and quantity of service was to be maintained.

Approximately 400 cities have raised fares as war emergency measures, but in many cases the increases have been inadequate and, unfortunately, the companies in some of our largest cities, whose financial burdens are proportionately heavier than the smaller lines, have been denied this assistance.

The electric railway security holders do not seek exorbitant increases in fares; quite the contrary. They are fully cognizant of the fact that it is to their interest, as well as to that of the public, to keep rates for service as low as possible, for low fares benefit the companies through stimulating business.

In facing this situation municipal authorities should not forget that they are holding in their hands the credit of their cities, savings banks, life insurance companies and other investment institutions, and a large portion of the invested wealth of the country.

The problem is not merely local or political, but of nation-wide business importance, and, if it is not fairly met, is capable of having a widespread and disastrous effect on business—an effect which every business interest, directly or indirectly, but inevitably, must share.

"Unless some relief is given," declared A. J. Hemphill, chairman of the board of the Guaranty Trust Company, in testifying a short time ago before the Public Service Commission of the Second District of New York, "there will be a cataclysm from which we will not recover for a generation."

# Through a Commissioner's Eyes<sup>3</sup>

*Electric Railways Should Get Together in Handling Questions of Municipal Ownership, Procedure in Rate Cases, Valuation and Indeterminate Franchises—Only Known Preventive of Municipal Ownership Is Satisfied Public*

By CHARLES E. ELMQUIST

President National Association of Railway and Utilities Commissioners

GOVERNMENT control and operation of rail, water and wire lines will probably force the issue of government ownership in the 1920 campaign. This is indicated by the testimony and views of government officials and by the action of organized labor and certain groups of farmers and other interests. If the people decide to continue government control or to purchase the properties, a strong sentiment may be expected to develop for municipal ownership of other public service corporations.

While there is no direct relationship between steam railroads and electric railways, the question of ownership is going to be ultimately determined on principle. Should it be decided to purchase the steam railroad and wire systems, there is no escape from the conclusion that public sentiment will also demand the purchase and operation by the people of street cars and other utilities in a great many places.

In a local sense this sentiment will be augmented by the condition which now confronts the electric railway lines. The increased operating costs have forced many companies to secure higher rates in order to avoid bankruptcy, and the nickel fare has become the exception rather than the rule. But every rate increase takes from the customer something which was given to him by contract or by the order of a commission, and he is likely to feel that he has been deprived of his just rights.

Hence in the near future one may expect an insistent demand for the reduction of fares, tolls and charges. Petitions will be filed with the proper authorities challenging the reasonableness of the higher rates. In all such cases the commissions or courts must be governed by the facts presented, because there is nothing more certain than that the regulation of rates must be controlled by facts rather than by sentiment. Naturally, the operating costs and operating ratios of utilities will decrease, but it is more than likely that adjustments will not be sufficiently rapid to satisfy the public demand for reduced rates.

During this period the pathway of regulating officials will not be strewn with roses. If the facts will not permit a reasonable reduction of rates, an agitation for municipal ownership of these plants may be expected. The people will feel that by possession alone can they secure the rates which in many instances were agreed to as a condition precedent to the occupancy of the streets.

These preliminary observations lead me to the following conclusions:

## *Municipal Ownership*

Immediate attention must be given to the question of municipal ownership. Facts for and against should

be compiled and distributed so that the people may have a chance to decide the question upon its merits. The only known preventive is a satisfied public. Efficient service, reasonable rates, courteous treatment of patrons and justice to employees as well as to investors should characterize the conduct of these utilities. No company can successfully defend itself against a hostile public.

## *National Co-operation*

While electric railways are local and perform a service which is largely local, yet their interests are identical in that most of them are confronted with the same kinds of difficulties. It might be profitable for the national organization to continue a study of all questions dealing with improvements and economies in service and to make suitable recommendations to the local companies.

Reforms cannot be made in a month or a year, but if all the managers take hold of the problem in a broad way and endeavor to follow the recommendations of a central body, they will be able to accomplish much to the mutual interests of themselves and the public.

## *Uniform Rate Procedure*

Rate adjustments should be, and as a matter of fact are, largely questions of facts. They involve considerations affecting the revenues and expenses, competition, prospective earnings, investment and value. The controlling principles should be the same everywhere in this country. In the consideration of petitions for reduced rates, the courts and regulating tribunals are entitled to have the questions fairly, honestly and intelligently presented. The same theory of defense should be presented in California and Maine, Illinois and Texas.

A large saving could be made of the time, labor and expense of these utilities, as well as of courts and commissions, if a substantially uniform method could be adopted for the presentation of rate questions. It would seem that such a plan could be successfully worked out by a committee representing the American Electric Railway Association.

Corporations try their cases before courts with great skill and ability, but unfortunately it is a too common practice for them to appear before commissions without proper preparation. Times without number, representatives of the carriers have appeared before the Minnesota commission to favor or oppose a petition, without having agreed upon a course of action, and with no one there prepared to offer an intelligent statement. Each carrier, when called upon, would re-state the opinion of the first speaker. Frequently their cause was just, but it had to be denied because there was no evidence. This practice is not local to Minnesota.

The purpose of a public hearing is to give a fair trial, at which time evidence may be offered by both sides. Hearings would result in a farce if real consideration

<sup>3</sup>Abstract of address presented at mid-year meeting of American Electric Railway Association, New York, March 14, 1919.

were not to be given to the evidence in the case. Commissions are busy, and their burdens would be greatly relieved if corporations presented cases in a clear-cut manner. They should give facts instead of opinions, and always bear in mind that public servants are watched and that an order made in a litigated case, which is not supported by the evidence, is arbitrary and illegal and subjects the commission as well as the corporation to serious criticism, and that such proceedings are likely to result in unfriendly legislation.

#### *Accounting Uniformity*

Considerable progress has been made in an effort to establish a uniform accounting system for utilities. It is not always easy to harmonize the conflicting ideas of the accountants who represent the states and the federal government, and this problem is made even more difficult because the views of utility representatives should also be considered. Uniformity is desirable, and every effort should be made to bring it about.

Of course, there may be local conditions necessitating the compiling of special or additional information. As president of the National Association of Railway and Utilities Commissioners, I shall urge the committee on accounting to give special consideration to this matter, and I earnestly hope that real progress may be made during the year. May we not look for co-operation from a committee appointed by the American Electric Railway Association?

#### *Definite Valuation Plan*

Public ownership involves the purchase of the utilities. This is brought about by agreement or condemnation. In view of the prominence which is to be given to the question of municipal ownership, the utilities should not be guilty of "watchful waiting." Preparation should be made for the day when the properties may be taken over. The people should not pay more than the properties are worth, and it is difficult to determine the price in the absence of a physical valuation.

The principles of valuation are not definitely settled. Unfortunately, there are as many different ideas upon this subject as there are lawyers and engineers who make a study of it. Hence it is important that the American Electric Railway Association investigate the problem through a proper committee, authorized to formulate rules and suggestions for the guidance of the companies. A definite plan would be exceedingly helpful to the public as well as the corporations, and it might result in an early judicial determination of the correct principles of valuation for use in purchase, rate-making, taxation and capitalization proceedings. I strongly urge that conservative action be taken by this committee. In the last analysis, nothing is to be gained by claiming everything of present or prospective profit, elements both tangible and intangible, visible and invisible, in the heavens above or the earth beneath.

The steam carriers believed there was advantage in united action. When the government began the valuation, the steam railroads appointed a conference committee, which selected able lawyers, engineers and accountants who were to devote their attention exclusively to this work. This committee brought to the attention of the Interstate Commerce Commission all the law upon the subject, and it compiled a mass of statistical data and expert opinions which greatly aided the commission to arrive at its conclusions in the early valuation cases.

Valuation will play a more important part in rate cases than it has in the past. We seem to have drifted away from the anchorage of contract fares. Rates should be determined by facts rather than by negotiation or compulsion. The public suspects that there is over-capitalization in many of the electric plants. This suspicion will not be allayed until the people know what these plants are really worth.

If the securities are excessive, they should be written down to the basis of the real value of the properties used in the public service. In connection with this subject, it will not do to overlook the fact that original cost is an important element to be considered in arriving at value, and that commissions are insisting that this item be shown.

#### *Indeterminate Franchises*

The experience during the war will result in a greater assertion of authority by the states over the rates of electric railways than heretofore. The rapid increase in the cost of wages, fuel and supplies brought the public face to face with the fact that public service cannot be efficiently rendered by a company which pays out more money than it takes in.

Fixed rates and flexible costs are inconsistent. Every student realizes that both elements must be variable in order to meet changing conditions, and that the determination of the rate to be charged should be made by a body of expert men. Courts no longer attribute sacredness to a franchise rate. The doctrine that a state may fix a reasonable rate for a local utility unless restricted by constitutional limitations has become the accepted law.

We have entered upon a new era in the regulation of local utilities. At this time emphasis should be given to the importance of transferring to the state authorities the ultimate determination of rates, subject of course to an appeal to the courts. The fairest way to meet necessary changes in conditions and to secure for the public, as well as the corporations, that enlightened consideration to which all are entitled, is for the state to issue indeterminate permits in lieu of existing local franchises.

It is not necessary to discuss the merits of this plan. It has been tried out in several jurisdictions and found to be acceptable. The advantages to the companies, the investors and the public are many; the objections, few. Tested by experience and the judgment of earnest and competent men, it seems to come nearer meeting the requirements than any other plan that has been suggested.

But this presents a legislative question, and laws must be passed to suit the needs of a particular state. The American Electric Railway Association should arrange to have prepared an article fully setting forth all of the advantages and the disadvantages of the indeterminate plan. Then all interested parties could have the benefit of the best arguments on both sides of the question.

The extent of state control depends entirely upon local conditions. I have found that state commissions do not relish the idea of exclusive control of street car companies by the state. Many of them believe that the municipalities should retain their powers over these utilities, subject, however, to an appeal to the state commissions. This is not a denial of the right of home rule. It substitutes a board of experienced men for a court in passing upon disputes between utilities and municipalities.



# It Is Time for Valuation Compromise\*

*New Phase of Valuation Subject Is Going to Lead to Agreements Based on a Give-and-Take Policy and on the Mutual Needs of Railways and the Public*

By PHILIP J. KEALY  
President Kansas City (Mo.) Railways



THE SUBJECT of valuation has taken up enough space in technical journals during the last ten years for it to be familiar in all of its multifarious details to everyone in any manner associated with the public utility industry. It has received the attention of committees, bankers, lawyers, operators, commissions, engineers, newspapers, civic leagues, reformers and politicians. It has been cussed

and discussed in the degree that it was your valuation or the other fellow's.

Volumes have been written upon the subject in its entirety and upon all of its subdivisions and the subdivisions of the subdivisions. It has contributed a new vocabulary to the engineering profession. It has been theorized upon and moralized about. For these reasons I do not care to try your patience by attempting to touch upon any of the technical or theoretical angles of the question.

Theoretically, a properly conducted valuation proceeding should produce a result that would justly represent the present actual worth of an electric railway property within a reasonable degree of variation. The great difficulty lies in the fact that those determining the value frequently attempt to make the result fit the particular purpose of those whom they represent. Upon reviewing the several values determined for any given property by those representing different interests, one is almost led to the conclusion that while "figures do not lie, liars will figure."

A case in point is mentioned in the *ELECTRIC RAILWAY JOURNAL* of Feb. 8. In the case of a large property the engineers representing the city arrived at a valuation of \$24,346,113; those representing the company, \$30,712,101; the majority report of a franchise committee, \$22,156,951, and the minority report of this same committee, \$15,470,630.

## PRESSING REASONS FOR VALUATIONS

There is nothing new in the subject of valuation, but there is something new in the reason now existing for an agreed valuation for every electric railway property. It seems to be the consensus of opinion that something must be done, and done quickly, if immediate financial disaster to the holders of securities be prevented. Owing to the kindly ministrations of the National War Labor Board already some of the largest, and at one time financially strongest, companies are in the hands of

receivers. Many are operating properties in the interest of the beneficiaries of the War Labor Board and are passing interest payments in order to pay a wage scale which is not possible to the industry as at present organized.

If such conditions are to continue, some plan of operation whereby the traffic pays the cost of operation will have to be devised, because even a receivership will not satisfy the present conditions for long. The plans proposed present two outstanding solutions. The first, which is advocated by perhaps the large majority of operators and which seems the common sense solution of the difficulties, is the service-at-cost theory. In any event this reflects the point of view of those optimists who are not inclined to the idea that crape has already been hung upon the front doors of our offices. The other solution of the situation is presented from the more pessimistic standpoint that the "jig is up" as far as private ownership and operation of electric railway properties go. It holds out as a panacea of all ills the disposal of railways to the municipalities. Either one of these propositions must be bottomed upon the ascertainment of the value of the properties.

## COMPROMISE IS NECESSARY

Unfortunately we cannot in all cases have this value determined by strict adherence to the fundamentals which theoretically and justly should form the basis of every valuation proceeding. We are forced into the position of not only having to fight for the right to earn interest on money actually invested, but we have to battle for a recognition of the investment itself. The dollars which we have poured into these magnificent properties throughout the United States, in the minds of many of those with whom we must finally agree, should shrink to 50-cent pieces in valuation proceedings. In the last analysis we should arrive at a compromise so what we lose from our own estimated value may in some measure be made up through stability given our investment and the possible assurance of getting what we have not had for some years, *i.e.*, the certainty of a fair return upon this value. After all, an adequate guaranteed return upon a dollar is better than nothing upon a dollar and a half.

In entering upon one of these pseudo-political valuations either for the purpose of determining the cost of service or of turning a property over to the politicians, statesmen and job-hungry political engineers, we might as well at once get away from any idea that we are going to determine the value of the property entirely by a slide rule or solely on basic valuation principles. What we are going to do is to agree on one of several different valuation results as purporting to establish cost of reproduction new less actual depreciation. Then from this as a starting point we will try to arrive at some reasonable and fair compromise on

\*Abstract of discussion on report of committee on readjustment at mid-year meeting of American Electric Railway Association in New York, March 14, 1919.

the various other elements of value which distinguish a going concern from the bare-bone skeleton of an electric railway property.

The entire subject of valuation has been upset in the last few years by present material prices. Thus, in the Minneapolis valuation, it is interesting to note that A. L. Drum, consulting engineer for the Twin City Lines, estimated that the property would cost to reproduce under present prices 70 per cent more than the various values determined by the different engineers. In other words, the questions of actual investment and capitalization have been entirely eliminated if in valuation proceedings we receive enough justice to give us an advantage at all from the present reproduction cost. Not even the most extravagant reformer will assert that any property is over-capitalized to the extent of 70 per cent.

The Interstate Commerce Commission in the progress of its \$50,000,000 twenty-year valuation experiment has about come to the conclusion that the steam railroads valued at the present cost of reproduction will show an actual physical value in excess of outstanding securities. I am hopeful that the trend of valuations before courts and commissions will follow this viewpoint; that to a greater extent than ever before the public and the multitude of governing bodies will recognize a fact which has been true of most properties for the last ten years (which is that the outstanding securities represent good hard dollars invested in a public service) and that justice to the investor demands an

honest legal rate of interest upon his money invested.

I am no more pessimistic upon the outcome of valuation proceedings than I am upon the electric railway situation in general. I believe that agreements based on a give-and-take basis over the various items that go to make up the complete value of our systems can be reached, which will place the stamp of authoritative approval upon our outstanding securities. I do not believe that the American people as a whole are in accord with the spirit of "pink tea" Bolshevism evidenced by some reformers who fill the magazines with high-sounding phrases and desire the confiscation of our properties on the theory that political might makes economic right.

There are already a number of examples of valuations reached by agreement with municipalities. In these, while the owners did not get all for which they contended, they at least received a fair value, all things considered. Cleveland, Kansas City and Chicago now have for several years been free from worries arising from the question of valuation.

There are now pending a number of valuation proceedings, noticeably Cincinnati, Buffalo, Detroit and Minneapolis, where the value determined will form the basis for the cost of service.

We have entered into a new phase of the entire valuation subject and the final result is not going to be so much that of the slide rule and the adding machine as one of conference and compromise based on the necessity of a public service and a public need.

## Maintenance and Depreciation Allowances in Service-at-Cost Franchises\*

*An Analysis Is Made of the Allowances on Various Bases Predicated on Existing Conditions—A Suggested Classification of Maintenance and Depreciation Allowances Is Then Outlined*

By A. L. DRUM

A. L. Drum & Company, Chicago, Ill.



**A**CTUAL experience during the last ten years with the more recent form of cost-of-service and partnership franchises, as well as more clearly defined rules of accounting, has furnished a clearer insight into the requirements for maintenance, renewal and depreciation allowances.

Prior to ten or fifteen years ago the frequent changes and improvements in the art of transportation

had resulted in the custom of meeting from current revenue only the current maintenance, repairs and renewal of the short-lived parts of the physical property, while the renewal or rehabilitation of the major parts of the property was provided for by additions to

the capital account. This was a natural development, as the renewal or rehabilitation of the major parts of the property, which ordinarily should have had a long period of service but were replaced prior to the expiration of their useful life, was required on account of: (a) The improvements in the art of transportation which effected improvement in service and economies in operation, (b) the demands of the public to receive the benefit of new and improved transportation methods, and (c) civic improvements, compelling the replacement of property prior to the expiration of its useful life, such as usable track replaced on account of new street paving being installed.

The changes and improvements in the art of transportation in all but a few of the large cities occurred at frequent intervals. The period of use of the horse-car lines was from ten to fifteen years; cable lines five to ten years; the early electrical development period comprising the single-truck car and belt-driven electrical generators eight to ten years; engine-driven direct-connected generating power stations about ten years. The result of this rapid replacement of usable property was that it would have been necessary to charge a rate of

\*Abstract of discussion on report of committee on readjustment at mid-year meeting at American Electric Railway Association in New York, March 14, 1919.

fare high enough to have provided net earnings of 20 per cent to 25 per cent upon the capital invested during these development periods in order to provide a fair return on the capital risked at that time and the amortization of this capital within the short period, usually about ten years, during which the property representing it was used for transportation purposes.

During the past fifteen years the street railway art has become fairly standardized with respect to tracks, cars and power supply, but it is now apparent that further changes in the art are taking place, particularly with respect to the passenger car, so that a new period of development is arriving. In this period, it is very probable that due to the inadequacy and inefficiency of the present type of car many of these cars will be replaced for service and economical reasons by light-weight one-man cars and light-weight two-car units. In general it seems probable that the principal parts of the street railway system have arrived at a permanent stage of development unless some very radical unforeseen improvement in the art is developed and consequently it seems desirable to place in effect a uniform and standard system of maintenance and depreciation allowances in existing and future service-at-cost franchises.

#### ANALYSIS OF EXPENDITURES BY INDIVIDUAL COMPANIES

An analysis of the actual expenditures for maintenance and renewals made by nine of the largest electric railway systems in the United States during the seven to ten-year period just passed shows a wide variation of these expenditures from the standpoint of the various comparative unit costs. For illustration, the total maintenance and renewal expenditures per year by these properties indicate a variation in fairly comparative cities of from \$2,600 to \$7,400 per mile of single track operated, from \$900 to \$2,000 per car operated, and from 2.9 cents to 5.6 cents per car-mile operated. These actual expenditures for maintenance and renewals represent the actual outgo for all classes of maintenance and renewals of physical property but do not include any unexpended balance in the so-called maintenance, renewal and depreciation reserves of the companies. Consequently, the unit costs are comparative and indicate a wide range of expenditures as between old and worn-out street railway systems and recently rehabilitated and newly constructed systems.

In the case of several of the electric railway systems which have been rehabilitated during the past ten years the average total expenditures, both maintenance and renewals, indicate a yearly requirement of about 13½ per cent of the gross revenue, about 4 cents per car-mile, \$3,000 to \$5,000 per mile of single track operated and \$1,400 to \$1,800 per car operated. Certain of these street railway systems made appropriations of from 18 per cent to 21 per cent of the gross revenue for maintenance, renewal and depreciation, and the part of the appropriations remaining unexpended during the eight-year period has amounted to from 20 per cent to 35 per cent of the total amount appropriated. The physical property of these last mentioned street railway systems has been rehabilitated during the past ten years, and the average age of the physical property would not exceed eight years.

General conclusions reached by a study of the actual maintenance and renewal expenditures of the nine large street railway systems of the country indicate that the

amount required for current maintenance and renewals is extremely variable and dependent upon the age, previous standard of maintenance and present physical condition of the property, so that it is almost impossible to arrive at a uniform standard of appropriations for current maintenance and renewals of street railway properties. It, therefore, seems necessary that in a service-at-cost franchise the amount of the appropriation for current maintenance and current renewals should be determined by the operating board in control of the property year by year and in effect be the actual amount of expenditures incurred by the property for current maintenance and current renewals during each year.

The allowances to be made to cover renewals of the long lived portions of the property require a separate determination for each electric railway system on account of the great differences in age, types of construction and remaining life of the long lived portions of the physical property of the different street railway systems in the country.

Replacements due to lack of efficiency, inadequacy, improvement in the art, etc., will be encountered in the future by all street railway properties, but are in the nature of a contingent liability for extraordinary replacements, each of which should be judged upon its own merits at the time the problem arises and an additional renewal allowance be determined for each specific item in order to spread the cost of these extraordinary renewals over the period benefited, viz., the estimated remaining life of that specific part of the physical property that has been abandoned. In effect, this method means the deduction from property account and a charge against an abandoned property account of the portion of the amount of the original cost of the abandoned property represented by its remaining life when abandoned and the extinguishing of this item by appropriating from gross revenue annually a sum for extraordinary renewals sufficient to equal during the remaining life of the abandoned property item the amount deducted from the property account.

#### CLASSIFICATION OF MAINTENANCE AND DEPRECIATION ACCOUNTS

To state briefly the suggestions made herein, it seems advisable to classify maintenance and depreciation allowances as follows:

##### (A) *Current Maintenance and Renewals*

These expenditures are dependent upon the amount and character of the service and the present physical condition of the property and are widely variable for different properties. Consequently, it seems advisable that the actual expenditures for current maintenance and repairs of the physical property and for the current renewals of short lived parts of the physical property should be provided from the gross revenue of each year as part of the operating expenses.

##### (B) *Renewal Reserve for Existing and Added Property*

The amount of the appropriations to this renewal reserve for the long lived parts of the physical property is dependent upon the replacement cost, age and expected remaining life of the property and therefore should be made annually in sufficient amount to provide for the replacement, at the end of their useful life, of the various parts of the physical property that are not replaced by the expenditures for current renewals as part of the operating expenses.

The appropriation for the renewal reserve for existing property should be determined by grouping the physical property under a classification of the same or similar types and having reasonably close remaining lives, estimating a replacement value and remaining life in years on the various

items of each group, from which the amount of the average annual renewal appropriation for each group may be determined with an allowance for interest accumulations.

The appropriation for renewal reserve for additional property should be determined annually by grouping the added property under a classification of items of the same or similar types and from the actual replacement cost of the property and an estimated life the amount of the average annual renewal appropriation for each group may be determined.

The renewal reserve fund so accumulated should be held for and applied to the replacements and renewals of the portions of the property, the cost of renewals or replacements of which shall not have been charged to current renewals and included in operating expenses. When any portion of the property is retired from service an amount equal to its replacement cost should be provided from the fund and expended on new physical property. In the event of any part of the physical property being withdrawn from service before the expiration of its useful life then only such portion of its replacement cost as is represented by its expired life should be withdrawn from the fund and expended on new physical property.

### (C) Abandoned or Superseded Property, Reserve

Replacements of property due to lack of efficiency, inadequacy, improvements in the art, etc., represent contingent expenditures for the future benefit of the public or the property and represent definite ascertainable losses of capital that naturally should be provided for from future gross revenue.

Whenever any part of the physical property is retired from service before the expiration of its useful life, there should be deducted from the property account and charged to an abandoned or superseded property account the portion of the amount of the original cost represented by the remaining life of the property when abandoned. The amount of this item should be amortized by setting aside from gross revenue annually an appropriation for abandoned property reserve sufficient to equal with interest during the remaining life of the abandoned property item the amount deducted from the property account. The funds derived from such appropriations may be invested in trust funds or in the securities of the company so that there shall be available as a charge against future revenue or invested in new property an amount to offset the capital outstanding and represented by the abandoned property.

## Variables Prevent One General Solution\*

*Electric Railway Problems Must Be Solved in Light of Local Conditions, with Attention to Merchandising, Zoning, Commutation Rates, Lighter-Car Equipment and Possibly One-Man Cars, with Higher Fares Where Needed*

By WILLIAM D. B. AINEY

Chairman Pennsylvania Public Service Commission



IT IS self-evident to all that a satisfactory solution of electric railway problems has not yet been obtained. In that connection I suggest that in no single conclusion does the solution lie. But we will without doubt agree upon the following as essential to the well being of electric railways as efficient public servants: (a) The securities must be stabilized. (b)

They must bear some fair

relationship to the money invested in the properties. (c) The revenues must amply provide for operating expenses, reserves, depreciation and a fair return upon the investment. (d) The service must be adequate to the public needs. (e) The fares must be high enough to meet these requirements and enable companies to render that service and low enough to attract sufficient patronage. (f) The rate structure itself must take into consideration services rendered and received, that the costs thereof may be equitably distributed among the ratepayers.

A general program applicable to all companies or to all localities cannot safely be adopted. Unless it can be assumed—and I am firmly convinced to the contrary—that all companies are similar in regard to corporate and financial histories, physical conditions, topographical and geographical situations and localities, character and number of population to be drawn upon, with their riding habits, there are variables which prevent a conclusion with respect to one company being applicable to

another. To illustrate this point—there are in Pennsylvania electric railways which on a 5-cent fare are meeting their increased operating expenses and have suffered no diminution in the dividends upon their capital stock nor defaulted in the payment of bond interest. On the other hand, there are companies which on 6, 7 or 8-cent fares are scarcely able to cope with their operating obligations and fixed charges. Under such circumstances we are forced to predicate our analysis upon particular cases rather than rely upon a composite view of all the companies.

### A METHOD OF DIAGNOSIS

While we may not generalize our conclusion, we may with reason adopt a method of diagnosing the difficulties of each particular company under consideration and thus reach some fairly accurate if not a satisfactory conclusion. It will at least support a prognosis. In this program of self analysis, let me suggest the following line of thought:

First: With respect to corporate organization. The simpler it is the more efficient it is bound to be. Corporations, in a sense, follow the law of mechanics. Every useless wheel contributes to lost motion. Every corporate complexity not essential to the maintenance of the working organism spells waste in efficiency or money. Every underlying company which has no operating responsibility and exists solely as a conduit for revenues to its stockholders or bondholders, is an economic loss to the operating road.

Second: I need not dwell upon the subject of the proper relationship between the investment and the capital issues, although it is a matter of grave moment to the corporate life and activity of railway companies and presents a situation which brings travail to the soul of many utility companies. Nevertheless, there never can be a stabilization of securities without a recognition of the requirement that they must rest

\* Abstract of address presented at midyear meeting of American Electric Railway Association, New York, March 14, 1919.

upon the bed rock of fair value. I admit that serious difficulties frequently stand in the way of a readjustment, but these are difficulties which often bind the financial freedom of the company.

Third: If a particular company finds itself wholehearted with respect to corporate complexities and financial disparities between its stock and bond issues and the value of its property, it comes to the intimate question of revenues. It goes without saying that every electric railway must receive a gross revenue generously sufficient to maintain its service, care for depreciation and yield an adequate return to its investors. This fact is more easily stated than accomplished. How to secure such an adequate revenue is not a simple question and, I must firmly assert, is not one primarily determinable by public service commissions. The initiative rests with the railway companies, and the accomplishment lies with the company and its patrons.

#### INCREASE THE CAR RIDERS

Theoretically gross revenues are increased by increasing rates of fare; the alternative method, not now overmuch emphasized, is in increasing the number of car riders.

A careful study will, of course, advise every company of the per mile per passenger costs of transportation service. Ignoring for the moment rush-hour periods but not overlooking their importance, let me inquire whether the railways generally have given sufficient attention to the merchandising side of their business to increase the carriage of passengers. I doubt whether energetic campaigns to that end, during these staggering days of high costs, have with many companies received the attention which other lines of business have evidenced for similar purposes. I am not attempting to state this matter argumentatively, and it is mentioned with full recognition of the increased cost which increased service imposes.

The fundamental difference, as viewed by the public, between electric railway service and steam railroad transportation is that the former is a cheaper type of service. I do not believe that difference can in the public estimation be successfully bridged. Companies may promulgate and commissions approve increased rates, but their value is dependent upon a public willing to pay.

In Pennsylvania the curve of lost riders rises very rapidly as rates are increased from 5 to 6, 7 and 8 cents, and the loss in car riders at the higher rates has to be compensated in part by a shortening of car service and lessened operating expense.

In one of our large cities a 5-cent rate was imposed by the company for an inner zone where there was no anticipated increase in the riding habit, and a 7-cent rate was established as an interzone rate and to apply in an outer area surrounding the inner zone. In this outer territory there were fair prospects of an increase in passengers. The actual experience of the company was a material loss in passengers carried under the 7-cent rate and more than 16 per cent increase under the 5-cent rate.

#### ZONING IS PROMISING FIELD OF STUDY

The whole rate scheme of many railways needs readjustment. Let me instance cases where electric railways are carrying passengers from 12 to 16 miles for a single fare. Every passenger so carried is a financial

burden to the company and to all the other car riders of that company. This leads me to the subject of zoning, particularly with respect to interurban and suburban service. It has at least the advantage of usually retaining the short distance rider, and when based upon a carefully studied plan has arguments of its justice to support it.

Zoning is one of the most promising fields of railway investigation, and while I doubt whether it can be made to follow arbitrarily mathematical formulas or be based upon strictly imposed mileage, and while it has perhaps some serious collection difficulties to be overcome, it nevertheless is a subject worthy of the most careful study.

One Pennsylvania company is trying the experiment of an initial zone rate of 6 cents with 3 cents for each additional zone, all of shortened length. It is attempting to meet local objections by some overlaps and is providing monthly commutation tickets at slightly reduced rates to care for regular riders. I shall watch with interest the results with respect both to the methods of fare collection and to the results in passengers carried.

Have the railways in times past sought to rival the railroads in the high class of equipment used for carriage? Will lighter cars and perhaps in some localities one-man cars meet the public requirements at lessened initial costs and lower operating expenses?

In conclusion I have but this to offer—that the electric railway problem is not to be solved except in the light of local conditions affecting each company, and that to its solution we must bring our attention to merchandising, zoning, commutation rates in special instances, lighter car equipment and possibly one-man cars where they can be operated. Increased rates where apparently required must be imposed with a full recognition of the public's veto power. It is an operative rather than a banker's problem, although we may not minimize the importance of the latter angle of approach.

#### RIDING PUBLIC MUST RECOGNIZE FACT THAT ALL COSTS HAVE INCREASED ENORMOUSLY

I would be equally unfair to the electric railways, to the public and to myself were I not to say with all frankness that the very great increases in the cost of labor and material have entered as largely into the expense of railway operation as they have in any other line of business activity, with a result which the riding public in the spirit of fair play and exact justice is in duty bound to recognize. This recognition it has apparently given to almost every other item of daily expenditure. That such recognition requires at its hands in many and perhaps in most instances increased fares to preserve electric railways in a condition where they may continue adequate service is apparent.

The time has not yet come when we may dispense with electric railway service. No other later certain or better form of local transportation has been devised. Electric railway service is entitled in the public interest to public support, and the public is entitled to adequate service but not at a rate less than it costs the companies to provide it.

I have no hesitation in saying that it shall be my earnest endeavor to preserve the carriers in Pennsylvania on a sound financial basis with sufficient revenue to meet the requirements of good service and to yield a fair return to their investors.

# Large Attendance at Mid-Year Meeting

*Delegates, Deeply in Earnest, Endeavor to Reach a Solution of Electric Railway Problems—In Morning Listen to Report and Address by Mr. Gadsden—Afternoon Devoted to Papers from Viewpoint of Operator, Banker and Commissioner*

THE critical condition in the affairs of the electric railways of the country brought a large attendance to the mid-year meeting in New York of the American Electric Railway Association on Friday, March 14. The programs of the technical sessions were devoted almost entirely to financial questions and were arranged so that views of the status of electric railways from the standpoint of the operators and from those of the bankers and commissions could be obtained. The meetings were held in the Engineering Societies Building, 29 West Thirty-ninth Street. The morning session was convened at 10 o'clock.

President Pardee occupied the chair and introduced the sessions with a brief address, a considerable part of which was devoted to a description of the facilities of the association for assisting companies needing special information on different topics, and to the work of the committee on national affairs with headquarters in Washington. He mentioned as an example of the first service, evidence on the value of one-man cars which the association was able to supply to a member company in one of the Southern states. By presentation of this evidence to the Legislature, a bill aimed to prevent the operation of such cars was defeated.

At the conclusion of Mr. Pardee's address he suggested that a committee should be appointed to consider any resolutions which might be offered at the meeting. Upon motion the following committee of five was appointed: P. H. Gadsden, chairman, and Messrs. Henry, Kealy, Mortimer and Ely.

## REPORT OF THE COMMITTEE ON READJUSTMENT

The first subject on the program was the presentation of the report of the committee on readjustment. It was presented by Mr. Gadsden, chairman.

Mr. Gadsden stated that the position taken by the association in the resolution which created the committee was absolutely justified. Statistics prepared by the association show that one-tenth of the total mileage of the United States is to-day in the hands of receivers. Such increases in revenues as have been secured from higher fares are inadequate, and in many cases they have been granted for such short terms as to be of little if any avail in the settlement of the underlying problems.

The committee believes that the questions submitted to it must properly be divided into two phases: (1)

Those dealing with urban electric railways, and (2) those dealing with interurban electric railways. While the conditions of both classes are, in the main, the same, and while the causes of the condition are practically identical, the remedy often differs.

The committee now has under consideration plans which, it believes, will assist in meeting the situation confronting the industry. These will be reported from time to time in detail. In the committee's opinion, there are certain fundamentals which must control the readjustment of the relations between the companies and the communities they serve. Mr. Gadsden presented the following summary of these:

1. The electric railways of the country are breaking down under present conditions of operation. As a result, the public is being deprived of service and is facing certain financial losses through the depreciation of electric railway securities which are held by savings banks, life insurance and trust companies and other similar institutions in which its savings are invested.

2. This condition is primarily due to the economic error of establishing an inflexible fare regardless of the cost of the service rendered or the distance hauled.

3. To correct this difficulty, flexible fares must be established which will be automatically adjusted to the cost of the service demanded by and furnished to the community.

4. A necessary element of the cost of service is such a return on the fund employed as will attract capital to the public service. To provide incentive to enterprise and initiative, there must be an additional reward for economical management.

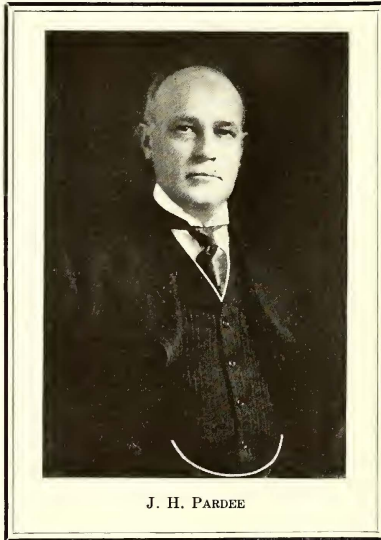
5. In the interest of the car rider, who must ultimately pay the cost of local transportation, every special impost and tax which cannot be justified upon the ground that it is payment for benefits received should be abolished.

6. To secure satisfactory service and keep fares as low as possible, the public must act on the principle of the "greatest good to the greatest number" and must cooperate with the operating companies in making effective economies by the use of "skip-stops," one-man cars, etc.; and the speeding up of schedules by reduction of vehicular interference.

7. Electric railway transportation is a community problem to be solved by the community and the company acting together and animated by a spirit of civic interest and devotion to the public service and having as its objective the establishment of such regulations as will give the public the greatest efficiency, economy and enterprise in the operation of their transportation utilities.

8. The committee proposes to carry out as rapidly and as effectively as possible the following program:

a. To furnish to members of the association at as early a date as possible, information concerning franchise settlements and agreements along service at cost and other lines.



J. H. PARDEE

b. To analyze these various agreements and present for the information of the companies such a summary of their provisions as will provide a guide in the drafting of new ordinances or agreements.

c. To directly assist communities in which the readjustment of franchise relations are under way.

d. To furnish at the instance of the railway company to civic organizations and similar bodies, information as to, and studies of, public utility questions.

In conclusion the committee recommends that the scope of the association's activities be so enlarged as to provide machinery for carrying out these purposes.

After the presentation of the report Mr. Gadsden elaborated the points made by it in an address. He said that the members had been meeting under conditions which had never before confronted the industry. Though the status of the electric railways before the war was discouraging, the war had emphasized the fact that the industry had been predicated on a false economic basis and was now practically in a bankrupt condition. Ten per cent of the properties were in the hands of receivers. During the past year a new phase of the industry had developed and had assumed startling proportions. The public impression up to last year had been that no matter what burdens were placed on any individual property it had to continue service. Whether it was successful or not, it must furnish transportation to the community. The war had brought a realization to the American people that the service must be paid for, and if a community was not able or not willing to pay for this service, the courts would permit a company to junk its property. Thus, in 1918, more than 500 miles of electric railways had been abandoned and the track torn up. The public should realize that if it pushes the railways too far, the people must walk. This aspect should receive more publicity, and the speaker urged the members to take this view back to their respective communities.

Mr. Gadsden then presented two tables, one prepared from statistics obtained from the government giving the status of electric railways in 1912 and 1916, the other made up for ten states from the preliminary reports issued by the census department. The states were Idaho, Wyoming, Vermont, Mississippi, Oregon, Colorado, Arizona, New Hampshire, Connecticut and Rhode Island, thus representing all parts of the country. These tables are presented herewith.

The speaker also presented a table showing the shrinkage in value during the past four years of the securities of seventy-five railway companies whose securities are quoted on various exchanges. They were thus representative of the larger and higher class railways, and showed an aggregate of value of securities in January, 1914, of \$495,157,418 and in January, 1918, of \$245,680,950, or a shrinkage of \$249,476,468. Mr. Gadsden emphasized the fact that these were market quotations and so could not include any watered stock, but were real values. He also explained that these figures did not include the shrinkage in the securities of the Interborough Rapid Transit Company, which alone had amounted to about \$126,000,000. He said that the figures were not cited to arouse electric railway managers to the situation, with which they are fully acquainted, but to give them definite data on the subject so that they could prove the facts to the public.

The speaker said that in his investigations he has not found any other industry or any other phase of human activity which had attempted to do business in violation of fundamental economic principles. The mistakes of other utilities, such as electric light, gas and

water, were based on cost. No other business had attempted to do business on a flat rate which had no relation to capital or cost. It was essential to get away from this inflexible rate. An electric railway property is not free from the tyranny of the balance sheet, and the only outcome of the present plan is that the railway investors will lose their money and the public will lose its service.

A popular reply when a company asks for an increase is that the patrons do not mind the increase if the company will give the service. The speaker's answer to that was that in every other industry, as compared with the period before the war, patrons are paying a higher price for an inferior service, and are doing it cheerfully.

#### ONLY TWO WAYS OUT

In regard to possible ways out of the present situation, Mr. Gadsden said that in the judgment of the committee on readjustment there are only two alternatives: (1) The general acceptance of some sort of service-at-cost plan throughout the country, and (2) in the event of failure of the first plan, the adoption of some kind of municipal or government ownership. The basic reason for each plan is the same, *i.e.*, private capital will not flow into the electric railway business under present conditions, even in spite of the fact that it is essential to community welfare, and capital can only be secured through some sort of support by means of public credit. It is the duty, however, of electric railway operators as representatives of security holders and as citizens to work out a solution of the problem which will keep the railways in private hands and guarantee the efficiency and the initiative of private enterprise.

Mr. Gadsden pointed out that the primary requisite of any service-at-cost plan is a valuation. Unless the electric railway industry is willing to have the value of the properties ascertained, the service-at-cost idea offers no aid. If it is willing to effect agreements on the subject of valuation, relief along the lines of the service-at-cost idea can be secured in many cases. The questions involved are grave ones upon which the association in the near future must take a positive stand. Some interests may not be benefited under service-at-cost franchises, but these are exceptional cases, for the great majority of the companies are not able to make a fair return upon a fair valuation.

#### SITUATION IN WASHINGTON

Mr. Gadsden also noted the decided change which has taken place in Washington. The claim for federal assistance for electric railways last year was based upon their essentiality in connection with the war program. The problem now before the government is not the winning of the war but the stimulating of buying so as to stabilize the market and restore confidence. The electric railway industry is of such magnitude as to require consideration also in connection with this problem. Involving an investment of nearly \$5,000,000,000, these carriers employ from 350,000 to 400,000 operatives and have a potential purchasing power of at least \$500,000,000. At the present time the industry is prostrate and out of the market. Hence the government has begun a serious study of the electric railway situation, not out of tender sympathy for security holders, but out of a desire to restore the lost buying power of the companies.

TABLE I—COMPARATIVE CENSUS STATISTICS OF ELECTRIC RAILWAYS FOR TEN STATES\*

	1917	1912
Gross revenues.....	\$34,966,172	\$31,365,087
Operating expenses.....	24,154,798	17,750,612
Deductions from gross income.....	11,355,858	9,312,755
Net income.....	7,544,554	4,301,710
Mileage.....	2,669.23	2,536.20
Number of companies.....	72	76

†Deficit.

\*States included are: Idaho, Wyoming, Vermont, Mississippi, Oregon, Colorado, Arizona, New Mexico, Connecticut and Rhode Island.

Mr. Gadsden recalled that last year the electric railways had the support of practically all of the departments of the federal government, and he added that encouraging support recently came from the Conference of Governors and Mayors which was held in Washington on March 3-5.

Telegrams from chambers of commerce and leading business and industrial organizations in practically every state and every large city had been sent to President Wilson and were turned over directly by him to the committee on resolutions of this conference. The conference then went on record with a resolution, noted in the ELECTRIC RAILWAY JOURNAL of March 8, 1919, to the effect that the delegates disclaimed "any disposition to trespass on the rights of municipalities" but earnestly recommended "that the federal government continue its helpful offices with the view to averting serious consequences in the financial affairs of public utilities."

Mr. Gadsden said that there was apparently under way a movement to set up a Federal Utilities Commission composed of representatives of the Department of Labor, the Department of Commerce, the Treasury Department, one or two public service commissions and possibly the electric railway industry. There is no warrant in law for such commission to regulate rates, but it hoped that its deliberations and recommendations would be as effective as those of the Industrial Price Commission, which has been appointed with similar powers to take up the question of fixing prices for certain basic industries. The results secured by a Federal Utilities Commission, of course, would depend upon the personnel and the tact and the forcefulness of the members.

#### CLOSER CO-OPERATION MUST BE GIVEN

In closing, Mr. Gadsden most emphatically directed attention to the vital necessity of closer co-operation on the part of the industry. As a case in point, he mentioned the fact that the companies did not appear to appreciate the great need of co-operating fully with the committee in Washington. For example, the committee received 168 replies to a questionnaire sent out to 1200 companies. It now has in Washington a record of gross receipts for 1918 of only 188 companies, although complete figures should have been on file in Washington by this time. He described forcibly the

ignominious position in which the Washington representatives of the industry are placed, when after two years of steadfast work on their part the industry has not yet given to them sufficient information to make possible a statistical summary that covers the whole situation. He added that the committee itself is unwilling to continue its efforts unless it receives better co-operation on the part of the electric railway companies.

#### Afternoon Session

At the opening of the afternoon session President Pardee announced that the International Shipbuilding Corporation had invited all delegates interested to witness the launching of the eighteenth ship built at Hog Island, the event to take place at 10 o'clock on Saturday. The invitation was extended through M. C. Brush, formerly president Boston Elevated Railway but now connected with the shipbuilding corporation.

Francis H. Sisson, vice-president Guaranty Trust Company of New York, then presented a paper on "Electric Railways and Investors." This paper is published in abstract elsewhere in this issue.

After the presentation of this paper, Mr. Sisson continued by saying that the only answer which the Legislature gives to this problem is municipal ownership and operation, but this, in the speaker's opinion, would be attended with poorer service, higher taxes and costs and less efficiency. The idea that the government could conduct a business better than private initiative was a fallacy. This is a time when the burden of sound thinking rests on business men. The present problems, he said, are not necessarily new but perhaps they are more acute than before. The only solution is that of a higher personnel in politics.

At the close of Mr. Sisson's remarks, President Pardee extended, on behalf of the association, his hearty thanks to him for his paper. Mr. Pardee then introduced Hon. Charles E. Elmquist, president National Association of Railway and Utilities Commissioners, who presented a paper on railways and regulating commissions. Mr. Elmquist was followed by Hon. W. D. B. Ainey, chairman Public Service Commission of the Commonwealth of Pennsylvania, who presented another paper on the same topic. These papers appear in abstract elsewhere in this issue.

After expressing the appreciation of the association to all those who had presented papers, President Pardee announced that the papers were open for discussion.

#### DISCUSSION

Charles L. Henry, Indianapolis & Cincinnati Traction Company, was the first speaker. He declared that he was not prepared yet to attend the funeral of the electric railway industry. Nothing, in his opinion, can take the place of electric railway service, and it must continue. The increase in prices of material and labor had begun long before the war but had come gradually. Electric railway men are not responsible for these conditions, but he did consider that they would now be responsible if they did not make any attempt to correct them. In his opinion there was only one solution—absolute service at cost. As a preliminary, he believed it necessary to determine the value of the railway property. The public is interested in the service and has a right to say what the service will be, but when the question of higher fares is raised, the charge is often made

TABLE II—STATISTICS OF STREET AND ELECTRIC RAILWAYS

	1912 United States Census	Treasury Department 1916 Returns	Decrease	Per Cent
Number of companies.....	1,260	1,260	.....	.....
Number of employees.....	282,461	.....	.....	.....
Capitalization.....	\$4,708,568,141	.....	.....	.....
Income.....	579,208,430	\$561,991,749	\$17,216,681	0.3 of 1
Expenses.....	497,782,682	491,949,698	.....	.....
Net income.....	81,425,748	70,042,051	11,383,697	13



that the company wants to pay dividends on "watered stock." That is the reason he advocated a valuation, but he thought the value of the property is much more than its replacement value. As an example he quoted the case of the old national road, which first required the felling of the timber, then draining, then was a corduroy road, then was a plank road, then became a macadam road and finally was a concrete road. It would be improper to say that the cost of that road was simply the cost of laying the concrete.

Walter A. Draper, Cincinnati Traction Company, said that any service-at-cost plan should consider the item of control in addition to that of valuation and the rate of return. It is not enough to decide merely what the public utilities should receive but it is necessary also to decide what is to be given to the public. No public utility corporation can work out its salvation according to any one cut-and-dried plan, but each individual locality must work out its own problems according to the conditions encountered.

Mr. Draper stated that from his experience he had found that the further one can get away from local con-

ditions to exist there must be sufficient return to induce those who have money to put it at the disposal of these utilities. Several plans have been discussed during the past few years for providing a suitable return upon the capital invested. Any plan adopted should restore confidence to the investor in order to prove satisfactory. Otherwise the government will have to take over these enterprises or the public will have to go without them. Mr. Morgan said that he believed all members of this association could agree upon some plan provided no attempt was made to force each individual to accept definite instructions as to how it would be carried out. No specific method should be emphasized which would tend to antagonize any of the members. A railway business is not one that can be sold out and moved away from when the owners get tired of it. They must go on with it forever.

Mr. Morgan said that a matter which has concerned him very much, particularly during the past year, has been the necessity for developing some point of contact between the federal point of view and that of the communities. The electric railway business is a serious

## Other Speakers at the Mid-Year Meeting



L. M. GARRISON



P. H. GADSDEN



B. A. HEGERMAN, JR.

trol the better and easier it is to accomplish beneficial results. If it is possible to secure satisfactory action from state or federal bodies this appears to work out better than from bodies nearer at home. The great object of any service-at-cost plan is to get an adequate return for the service which railways provide and for what they are expected to furnish.

Randall Morgan, United Gas Improvement Company of Philadelphia, said that he came to this meeting to listen rather than to give advice, for it is at meetings such as this that all must obtain their instruction and gather facts to aid in carrying out their work. Railways are public servants and the law provides that they shall give service which is efficient, continuous and of the highest character. It is for this that public regulation was instituted. When these regulating bodies were first established there appeared to be a feeling of irritation on the part of those coming under their control, but such utilities now feel that it is suitable that they should have these regulating bodies in order to insure satisfactory service to the public.

It is now apparent that in order for the public util-

undertaking. It involves possibly 60 per cent of all the money invested in utilities.

The industry is in great distress and it must get together somehow on a general plan. The private investor is in a position where he no longer trusts anyone connected with the utility business, either operator or regulator. Hence there is the necessity for the doing of something definite.

P. J. Kealy, Kansas City Railways, closed the discussion by saying that as it is necessary to have a little jollity even at a "wake," he would attempt to state some of the more cheerful aspects of the situation. Probably no utility has had more to contend with recently than the Kansas City Railways, with three strikes in sixteen months, the last costing \$1,000,000. In the discussion at the meeting there has been passing through the contributions a strain which makes for encouragement. For example, take the attitude toward the rate of fare. The mere fact that a service-at-cost plan is being discussed is hopeful. Again, 400 or more roads in the country have been able to break away from the 5-cent fare. Another example is afforded by the changed at-

titude of regulating bodies toward the one-man car; where only a few years ago commissions opposed the introduction of this promising improvement they now favor it. Powerhouse economies are increasing too. Who knows but that some power company will develop a super-station, so economical that it will pay railways to take their power.

The owners of securities ought to take more interest in conserving the electric railway business. They are after all the ones most intimately concerned. The manufacturers should help also, as the utility furnishes them an enormous aggregate annual business. It must be remembered that if there is nothing developed to supplant the electric railway it must continue, and this involves the provision of means for supporting it. The attitude of public officials is indicated by a remark made recently by a mayor who said: "These fellows are up against it and must be helped."

Public sympathy also will assist in solving problems, as it did recently in connection with the labor troubles in Kansas City. There is a great deal of support not now used which can and must be enlisted. The situation is not hopeless, it is going to clear. There are manhood, brains and energy enough available to pull the industry up the grade which it is now climbing.

At the close of Mr. Kealy's remarks President Pardee called upon the committee of resolutions for its report.

Mr. Gadsden, in reporting for the committee, presented four resolutions. One extended the thanks of the association for the speakers who had presented papers at the meeting. Another was that the report of the committee on readjustment be approved. A third was to refer the suggestion made by Mr. Taylor in his paper as to dissemination of information on the electric railway situation to the committee on readjustment for its action. The fourth read as follows:

It is self-evident that the electric railways of the United States are breaking down under conditions of operation which have forced a tenth of the railway mileage of the country into receivership; have depreciated securities of the companies so that there has been a shrinkage of nearly four hundred million dollars in the market value of the securities of one typical group of seventy-six companies; have wiped out the net income of practically all corporations furnishing local transportation; have caused, during the last year, the abandonment of about 500 miles of track and which are everywhere threatening a loss of service essential to the communities, so that there is not to-day a company that is earning a normal interest rate upon the cost of its physical property, to say nothing of the other costs of creating the property.

In this crisis a readjustment of the relations between these companies and the public is essential to the preservation of service. A proper solution implies that the fares charged must be so adjusted as to meet the varying costs of furnishing the service.

Such adjustment when made should be adequate to provide for the growing need of the community served.

The American Electric Railway Association, impressed with the gravity of the present crisis, appeals to all national, state, and civic governmental bodies promptly to accord the relief for the electric railways which the facts so clearly justify, and to afford means of placing the electric railways in position to meet the requirements of their respective communities.

These resolutions were all approved. Mr. Kealy then presented a resolution extending the thanks of the association to Mr. Gadsden for his services in Washington, with the Electric Railway War Board, the committee on national affairs and the committee on readjustment. It was adopted by the association by a rising vote. Mr. Gadsden in replying spoke of the great credit which should be given to his associates on these committees

and then said that he greatly appreciated the resolution and that if anything could compensate for his work of the last two years in Washington that did.

In closing the session, President Pardee announced that at the meeting of the executive committee on Thursday it was decided to expand the work of the committee on readjustment. He also said that a decision had been reached to hold a convention next October and that an exhibit might be held in connection with it.

The meeting then adjourned.

### Banquet a Brilliant Success

A DINNER and dance at the Waldorf-Astoria Hotel closed the 1919 mid-winter meeting. Nearly 800 members and guests attended. President Pardee acted as toastmaster at the dinner. He referred to the tremendous extent to which the electric railways have grown in a few years until the per capita rides are 155 per annum and the corresponding gross revenue is \$600,000,000. Unfortunately the net income has fallen to a negligible quantity, partly because the railway men failed to see the coming storm. The present is a time of "isms" of one kind and another and it is difficult to see in what direction the electric railways are tending. However, a solution for every important problem has been found in the past and the present problem of this industry will be solved. All of the people cannot be wrong all of the time, to paraphrase a familiar quotation.

Mr. Pardee introduced Hon. Lindley M. Garrison, former Secretary of War and now receiver for the Brooklyn Rapid Transit Company. Mr. Garrison said that as a newcomer in the railway field he would not venture to discuss traction matters before a railway audience. He then analyzed the plan proposed for a league of nations, urging that the people of this and other nations be given an opportunity to discuss the plan. He expressed the hope that the peace treaty and the league covenant will be kept separate, the latter to be considered with due deliberation after a plan had been made effective to prevent the former Central Empires from again provoking war.

The next speaker was Hon. Francis Burton Harrison, Ex-Governor-General of the Philippines. He paid a tribute to the efficiency of the electric railway system in Manila and explained how the Filipinos are rapidly being prepared for complete self government. They are, he said, loyal Americans. Mr. Harrison defended the league plan at present under consideration, saying that world affairs are now so interwoven that some kind of a world pact is necessary.

The manufacturer members of the association were represented by B. A. Hegeman, Jr., who assured the traction men of co-operation in every possible way, and of the desire of the manufacturers to help in revitalizing the industry. He said, "Your success is our success; your failure, ours." Mr. Hegeman outlined briefly the elements of the present difficulty but said that there is no doubt that much has already been accomplished along the lines of better understanding between the railroads and the public. Those responsible for the operation of the roads must realize the value of taking the public into their confidence, and the people are beginning to believe that the corporations are not quite as black as they have been painted and are showing a much better spirit toward them than formerly, but much remains to be done.

Among other features of the banquet was the unfurling of an electric railway service flag, indicating that there had been 25,893 railway men in the service, of whom ninety-three were known to have died. Mr. Pardee also told of the work done by the association, under the direction of Past-President L. S. Storrs, in preparing for the government a set of 630 maps showing the locations of electric railways, power plants, bridges, etc. This work had been highly commended by the Army officials.

During the dinner there was excellent music and the meeting closed with the general feeling that there is a big work ahead, but that it can be done.

## Executive Committee Meeting of March 13

Convention with Exhibits Was Favored—Desire for Completion of Plan for Affiliated Manufacturers' Association Was Expressed

EVERY officer of the American Association was present at the executive committee meeting held on March 13, namely: J. H. Pardee, New York City; Richard McCulloch, St. Louis, Mo.; T. S. Williams, Brooklyn, N. Y.; R. I. Todd, Indianapolis, Ind.; P. J. Kealy, Kansas City, Mo., and E. B. Burritt, New York City. Other members of the executive committee present were F. R. Phillips, Pittsburgh, Pa.; R. E. McDougall, Rochester, N. Y., and Thomas Finigan, Chicago, Ill., representing the engineers, claim agents and manufacturers, respectively. The manufacturers were represented also by W. S. Rugg, Pittsburgh, Pa., and C. C. Peirce, Boston, Mass. Past-presidents in attendance included Charles S. Sergeant, Boston, Mass.; H. H. Vreeland, New York City; W. Caryl Ely, New York City; Charles L. Henry, Indianapolis, Ind., and J. J. Stanley, Cleveland, Ohio. A number of other men prominently identified with the industry were present by invitation.

Secretary Burritt explained plans for interesting non-member companies in the work of the association and co-operation in these was promised by the men present. The feeling was that the benefits of association membership will be better appreciated now than in the past. It was decided to invite newspaper men to the March 14 meeting in order that full publicity might be given to the proceedings.

### POLICY ON THE SUBJECT OF CARRYING MAIL TO BE FORMULATED

The carrying of United States mail matter by electric railways was discussed, and it appeared that while this business is comparatively small it is important. The committee on national relations was therefore asked to formulate a general policy on the subject with suggestions. A letter from B. C. Cobb, of Hodenpyl, Hardy & Co., was read outlining a comprehensive plan for publicity. It was referred to the committee on readjustment. The executive committee then, after discussion, approved the holding of a fall convention with exhibits, the president to appoint a committee to arrange all details.

Reports of the committee on readjustment, P. H. Gadsden, chairman, were considered. One prepared for presentation to the association was approved for the purpose, and the other which contained recommendations for enlarged work by the association was referred

back for detailed recommendations. The executive committee also approved of co-operation with the Bureau of Standards and with technical and other associations in regard to electrolysis. Mr. Gadsden reported for the committee on national relations (the successor of the war board) showing a substantial cash balance on hand and a record of useful work done. It was decided to continue the Washington office until June 15, the president to make such arrangements for the remainder of the association year, after that date, as he may find desirable.

The executive committee reviewed the status of the manufacturers and it was explained that now that the association has resumed normal activities the report of the sub-committee which is preparing a plan for an affiliated Manufacturers' Association will be ready in time for the convention. This committee was appointed prior to the war period.

### SECRETARY-TREASURER'S REPORT TO EXECUTIVE COMMITTEE

Mr. Burritt reported on the resumption of committee work and other activities of the association. He said that the affiliated associations have resumed active work, but in view of present conditions will confine their investigations to subjects having special importance and application at this time. The Accountants' Association in addition to its usual work will co-operate with the Transportation & Traffic Association in a study of methods of fare collection and registration.

In the Engineering Association the following committees have been appointed and subjects have been assigned each: Committees on standards, equipment, power distribution, power generation, way matters, buildings and structures, heavy electric traction, and electrolysis; joint committee to consider safety code of United States Bureau of Standards, joint committee on standardization of method for determining the cost of power, and committee on issuance and distribution of engineering manual. Representatives from member manufacturer companies have been appointed to each of these.

The Engineering Association will also co-operate with the Transportation & Traffic Association in a study of the operation of one-man cars from a transportation standpoint.

The Claims Association has continued its subscription to the Hooper Holmes Information Bureau and the usual work of the association will proceed.

The Transportation & Traffic Association has this year departed from its former practice in the way of committee work and will undertake but four subjects as follows: (1) Collection and registration of fares, giving consideration to the difficulties presented in the collecting and registering of two or more coins for one fare. (2) Code of traffic principles. (3) Proper basis of compensation to city companies by interurban companies for the use of city tracks and terminal facilities, and proper traffic regulations and contract obligations relating thereto. (4) Operation of one-man cars from a transportation standpoint.

Mr. Burritt stated that there are now 521 company members, 844 individual members and 1319 company section members. He presented a revised estimate of receipts and expenditures, showing an estimated surplus to Nov. 1, 1919, of \$16,900.

Notes on the Norfolk & Western

SOME interesting facts on existing heavy traction installations were given in a talk on "Railroad Electrification" at the annual meeting of the Engineering Institute of Canada at Ottawa on Feb. 13 by F. H. Shepard, director of heavy traction Westinghouse Electric & Manufacturing Company. In referring to the electric locomotives on the Elkhorn division of the Norfolk & Western Railway, he said that on the lesser grades, trains of 5000 tons are operated, and on the 2 per cent grades trains or 3250 tons, at twice the speed of former steam operation when three large Mallet engines were used per train. With electricity the trains are accelerated to a speed of 14 m.p.h. on a 2 per cent grade in a little more than a minute. The input during acceleration ordinarily equals 12,000 hp., and plans are under way to increase the size of trains so that inputs as high as 18,000 hp. will be reached. On the heaviest grades a second locomotive is used as a pusher.

On account of the length of trains, curvature and the intervening mountains, it was found to be very difficult to communicate to the pushers at the rear even by whistle, so that it was a problem to secure a union of effort between locomotives at each end necessary to start these large trains. Formerly this was secured by dropping the slack of the train back against the pusher, the bump being taken as a signal for the pusher to open up and help start. With electric operation, this problem has been solved, because at any fixed speed the ammeters on the load engine and those on the pusher are made to read alike, so that each engine takes its share of the load. As the load engine controls the movement of the train, a shift more or less than its share of the load is made, depending on whether speeding up or slowing down is desired. The operator of the pusher is thus advised instantly of such a desire by the indication on his ammeter, so that slowdowns and stops as well are negotiated very smoothly.

During an emergency shortage of electric power on this road, it was found necessary to retire from service four electric locomotives, and sixteen of the heaviest Mallet engines were assigned to the division for emergency service.

More 1917 Census Figures

IN THE CASE of six more states preliminary figures of the forthcoming quinquennial report on electric railways have been given out by Director S. L. Rogers of the Bureau of the Census, Department of Commerce. Like the statistics for eight states published in the ELECTRIC RAILWAY JOURNAL of March 1, 1919, the additional figures all indicate the tendency of operating expenses to increase more rapidly than operating revenues.

The statistics relate to the years ended Dec. 31, 1917, 1912 and 1907, but only those for the decade are reproduced in the accompanying table. The totals include electric light plants operated in connection with electric railways and not separable therefrom, but they do not include mixed steam and electric railways or electric railways under construction.

New Jersey and Georgia showed general gains during the decade, these being divided between both of the five-year periods from 1907 to 1912 and from 1912 to 1917. Tennessee, however, showed substantial gains in the industry for the first five-year period, followed by somewhat smaller increases, and for some items actual decreases, during the second period. The companies in Tennessee did a much larger light and power business in conjunction with their railway operations in 1917 than in prior years.

The figures for Montana show substantial gains for both periods, and those for Florida a general gain for the decade. In the case of Arkansas the gains from 1907 to 1912 were not maintained during the period for 1912 to 1917.

PRELIMINARY 1917 STATISTICS OF CENSUS BUREAU FOR ELECTRIC RAILWAYS OF SIX STATES

	New Jersey		Tennessee		Georgia		Florida		Arkansas		Montana	
	1917	Per Cent Increase Over 1907	1917	Per Cent Increase Over 1907	1917	Per Cent Increase Over 1907	1917	Per Cent Increase Over 1907	1917	Per Cent Increase Over 1907	1917	Per Cent Increase Over 1907
Number of companies	39	.....	14	.....	14	.....	8	.....	10	.....	6	.....
Operating	32	.....	14	.....	13	.....	8	.....	10	.....	6	.....
Lessor	7	.....	0	.....	1	.....	0	.....	0	.....	0	.....
Miles of line	902.09	1.9	332.26	67.0	339.73	31.0	151.73	42.0	94.81	49.4	100.86	74.3
Miles of single track	1,354.43	2.6	460.00	53.3	473.31	3.3	183.03	54.8	131.36	50.3	120.92	74.6
Miles of single track in state (a)	447.36	5.3	147.36	53.1	449.28	28.0	.....	.....	121.83	48.2	.....	.....
Cars	3,364	14.8	840	12.4	777	25.7	333	50.7	262	23.6	184	44.0
.....	2,980	16.2	761	11.2	697	27.0	280	48.1	232	14.9	156	46.4
All other	384	5.2	79	25.4	80	15.9	53	65.6	30	20.0	28	.....
Electric locomotives	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Number of persons employed	7,461	10.7	2,963	31.2	3,669	49.6	1,029	28.6	645	3.2	486	93.6
Salaries and wages	\$7,888,127	84.7	\$2,238,014	65.7	\$2,838,349	107.7	\$886,192	72.8	\$555,839	42.0	\$572,604	77.7
Total horsepower	18,966	*78.9	53,533	36.1	201,243	430.8	33,905	211.3	16,650	58.5	.....	.....
Steam engines	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Number	18	.....	27	.....	28	.....	23	.....	14	.....	.....	.....
Horsepower	18,966	*78.9	53,483	36.1	57,858	98.7	31,770	266.5	16,650	58.5	.....	.....
Internal-combustion engines	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Number	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Horsepower	.....	.....	50	.....	3,000	.....	735	*10.9	.....	.....	.....	.....
Water wheels	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Number	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Horsepower	.....	.....	.....	.....	140,385	2321.7	1,400	.....	.....	.....	.....	.....
Kilowatt capacity of dynamos	14,550	*78.2	38,205	48.0	129,282	417.3	34,300	187.4	12,457	69.9	.....	.....
Output of stations, kilowatt-hours	22,895,276	*87.1	90,682,350	42.5	319,184,303	803.5	31,101,546	97.8	33,080,677	102.4	.....	.....
Current purchased, kilowatt-hours	245,049,086	.....	79,354,017	.....	45,506,100	.....	971,610	.....	4,360,889	.....	17,927,151	.....
Passengers carried	555,286,203	60.9	122,655,470	23.6	114,021,766	58.8	38,625,356	73.9	30,525,360	45.9	25,948,387	84.2
Revenue	432,874,767	60.9	101,824,749	38.1	93,640,506	56.9	32,771,128	73.5	26,283,177	53.3	22,196,885	60.1
Transfer	109,970,183	58.6	17,722,205	82.2	19,000,810	87.1	5,047,468	62.0	3,406,850	10.7	3,052,359	2001.7
Free	12,441,233	83.7	3,058,516	13.6	1,380,450	29.8	806,760	283.6	835,333	20.7	699,143	750.7
Revenue car mileage	68,966,244	23.9	21,400,684	34.4	20,907,644	43.2	7,008,885	64.2	5,917,302	36.6	3,591,815	47.7
Railway operations—revenues	\$22,204,776	.....	\$5,386,465	45.9	\$5,006,481	62.3	\$1,663,350	9.2	\$1,299,244	30.0	\$1,501,383	97.5
Auxiliary operations—revenues	59,305	72.6	2,132,199	204.6	5,086,031	239.3	759,604	99.9	658,187	71.6	.....	.....
Non-operating income	269,212	43.9	36,333	*2.1	338,601	224.8	1,560	.....	33,336	*43.9	18,800	*87.0
Income from all sources	\$22,533,293	72.2	\$7,554,997	68.6	\$10,485,113	122.1	\$2,444,514	78.2	\$1,990,267	56.1	\$1,519,883	68.4
Operating expenses	\$13,646,048	70.0	\$4,594,774	88.8	\$5,487,899	114.7	\$1,387,107	45.0	\$1,079,569	58.0	\$1,111,411	101.4
Deductions from income	\$8,174,260	42.0	2,336,533	64.7	3,993,534	251.4	516,556	177.4	649,580	146.4	215,805	78.6
Net income	\$922,985	.....	\$623,690	*0.7	\$1,044,180	0.4	\$540,851	136.7	\$261,318	*20.5	\$192,667	*16.2

\* Decrease of deficit.

(a) Excluding track lying outside of state but owned by companies within state, and including track in state owned by outside companies.

# Zone System for New Jersey

After Extensive Study Public Service Railway Asks for Power to Put in Zone Fares on Distance Basis—Five Cents Is Charge for First Mile, One Cent for Each Additional Mile—Transfers Are Also One Cent a Mile with Readiness-to-Serve Charge of One Cent—Collection System Worked Out—Zone Systems in Other Cities Described—Commission Takes Plan Under Advisement

AT A HEARING before the Public Utility Commission of New Jersey on March 11, President Thomas N. McCarter of the Public Service Railway of New Jersey presented the plan of the company for a zone system of fares on its lines in New Jersey. The proposal and the reasons leading up to this recommendation on the part of the company are contained in a printed report of 207 pages, well illustrated with maps and other engravings. Briefly, the report outlines the needs of the company in the way of an adequate fare, and the history of its plea for higher fares before the commission. It then describes the methods followed in conducting an extensive traffic survey on the system and the conclusions reached from this investigation. Finally it recommends a stand-by or ready-to-serve charge of 4 cents and a distance rate of 1 cent a mile, making the fare for the first mile 5 cents, for the second mile 6 cents, etc. In the same way the readiness-to-serve charge for transfers is 1 cent, with a distance rate of 1 cent a mile. The fare is collected on the pay-leave plan, passengers entering by the front and leaving by the back platform. As they enter they receive an identification zone slip or ticket indicating the zone in which they enter the car and this ticket is given up when they leave the car and pay the correct fare.

In presenting the report, Mr. McCarter asked that it become operative on April 1. The commission has taken the report under advisement and will probably announce its decision soon.

## REPORT IS WORK OF A COMMITTEE

After the commission on Sept. 25, 1918, had indicated its desire to have the company establish "an equitable zoning system over its entire territory" and had granted an increase in flat fares as an emergency measure, President McCarter appointed a committee to study the subject. The committee consisted of himself, as chairman; L. D. H. Gilmour, general solicitor, R. E. Danforth, vice-president and general manager; H. C. Donecker, assistant general manager, and M. R. Boylan, general auditor. Dr. Thomas Conway, Jr., professor

of finance of the University of Pennsylvania, was retained by the company as expert adviser. A sub-committee to take active charge of the work was then appointed with Dr. Conway and Messrs. Donecker and Boylan as members. A large staff of clerks, checkers and other employees was assembled, the total number reaching a maximum of 171.

A complete check of the traffic of the entire property was first taken and the results carefully compiled. The

data thus secured furnish a comprehensive picture of the riding habits on the property and are believed by the company to be the most complete body of information in existence concerning traffic conditions on a street railway. These investigations included studies of relative density of population throughout the territory served by the Public Service Railway; the location of factories, theaters, railroad stations and other centers controlling traffic; the co-relation of residential and business districts; the extent and location of new residence construction in the territory served by the Public Service Railway within recent years; the commutation rates on steam railroads competitive with the Public Service lines and the comparative scheduled running time

## Rates of Fare to Be Established in New Jersey

(From Company's Petition)

"PASSENGERS boarding cars and paying cash fares shall pay a fare based on a rate of 5 cents for the first zone-mile, and 1 cent for each succeeding zone-mile. A passenger riding in one zone, therefore, will pay a 5-cent fare; a ride in two zones will cost 6 cents, while a ride through ten zones will cost 14 cents.

"A stand-by or ready-to-serve charge of 1 cent is to be made for each transfer, representing a fraction of the cost involved to the company of providing the facilities necessary to be ready to serve the transfer rider. In addition, a charge of 1 cent per zone-mile will be made for each and every zone-mile ridden on the transfer car. Transfers will be issued under the same general regulations as now prevail, concerning the period of time in which they must be used, the direction in which transfers will be given as between intersecting lines, etc."

The company says that it is entirely practicable to collect and account for fares of this kind.

on steam railroads and electric lines. President McCarter and the members of the sub-committee also visited every city in the United States in which the zone method of fare collection had been tried and the conclusions of their trip are given in the report.

A map of the system is shown on page 525. The railway serves practically the entire State with the exception of the local service in Trenton, the seashore resorts and the distinctly rural districts. It embraces 849,036 miles of track and serves 141 municipalities, having a combined population of more than 2,100,000.

The account given in the report of the traffic check conducted by the company last fall is so extensive that a review of it must be postponed until a later issue. Briefly, however, the study led to the following conclusions which the committee believed that the Public Service Railway should adopt as the groundwork of its zone system:

First. That the best interests of the people of the State of New Jersey and of the Public Service Railway would be served in considering the property as a unit, and applying the same system of zoning to the entire property.

Second. That the traffic conditions on the lines of the Public Service Railway are such that a system of central city areas with outlying zones was neither advisable, equitable nor practicable; that each rider should be treated as nearly as possible like every other rider, and that rates should be as nearly uniform as possible for all riders taking journeys of the same length. Thus, no artificial advantage or discrimination would be created in favor of or against any locality; all communities being allowed to develop in a normal manner.

Third. That the above results could be accomplished only by the employment of a series of zones each of a standard length rather than by the creation of certain arbitrary zone areas. It was found upon investigation that the difficulties of fare collection were no greater with a system of zones of standard length than they would be under a system such as heretofore has been applied in this country.

Fourth. In consequence, therefore, the Public Service Railway finally decided upon and herewith recommends a zone-mile system as the most equitable, practicable and desirable method of fare collection upon its lines. Such a system involves the creation of zones of 1 mile in length, having fixed limits, applied to every line operated by the Public Service Railway, a passenger being charged just and reasonable rates, varying with the number of zones through which he rides. It is impracticable to have a zone of lesser length than 1 mile because of the collection difficulties which would thereby be created. Zones of greater length than 1 mile are neither necessary from an operating standpoint nor desirable from a public standpoint, because a wider variation of fares between zones would naturally be occasioned and a measure of unnecessary discrimination, therefore, introduced against those persons whose journeys began or ended within a short distance of a zone point.

#### STUDY OF OTHER METHODS

Before the adoption of these principles, however, or during the months of October and November, after the work of checking the lines of the Public Service Railway, and compiling the results thereof, was well under way, the chairman of the committee on fare zones and the members of the sub-committee visited every city in the United States in which a zone system has been tried. The systems studied were those of the Pittsburgh Railways, the Milwaukee Electric Railway & Light Company, the Bay State Street Railway in Massachusetts, the Shore Line Electric Railway in Connecticut, the Rhode Island Company, the Portland (Me.) Railroad, the Holyoke Street Railway and the Springfield Street Railway of Massachusetts. In addition, visits were made to St. Louis, where the United Railways was studying the matter of a zone system, and to Cleveland, where a study was made of the experience of the Cleveland Railway with the very low fares formerly existing upon the property and the "pay-leave" system of collecting fares. The report summarizes the experience in these cities. While most if not all of these zone systems have been described in this paper, the main features will be repeated here with the conclusions of the committee and data not hitherto published.

#### MILWAUKEE

In Milwaukee, in 1914, the Wisconsin Railroad Commission authorized a zone plan on the basis of a 5-cent fare for the central city area and a base rate of 2 cents per mile on the suburban lines outside the central district. The limits of the central 5-cent area conform substantially to the then city limits, but the corporate limits were disregarded as a controlling factor. In the suburban area the minimum charge is 5 cents, which minimum permitted a passenger to ride through two suburban zones.

At that time the company sold six tickets for 25 cents, good within the central 5-cent zone, and thirty commutation tickets for 50 cents, each ticket being good only for a ride in one zone in the suburban area. With-in recent months, the State Railroad Commission has authorized the discontinuance of the tickets referred to, so that now the company collects only cash fares at the rate of 5 cents for the central zone and 2 cents for each suburban zone. The abolition of the special rate tickets produced a reduction in traffic as shown by the fact that the revenue shows an increase of only 12.91 per cent in different months, instead of the theoretical 17.65 per cent which it should indicate.

In general, the financial results of the zone system were more satisfactory than under the system which it displaced. The method of collecting fares is described in detail in the report.

The Milwaukee Company has recently petitioned for larger revenues by suggesting the addition of one extra fare zone within the present central area and an increase in the outer zone fares. The officials of the company are satisfied that the zone system as thus far applied on their property has been a success. However, the reduction of net revenues brought about by the increased cost of operation demands additional revenues which it is expected would be realized by a plan of restricting the central zone and increasing the fares in the other zones.

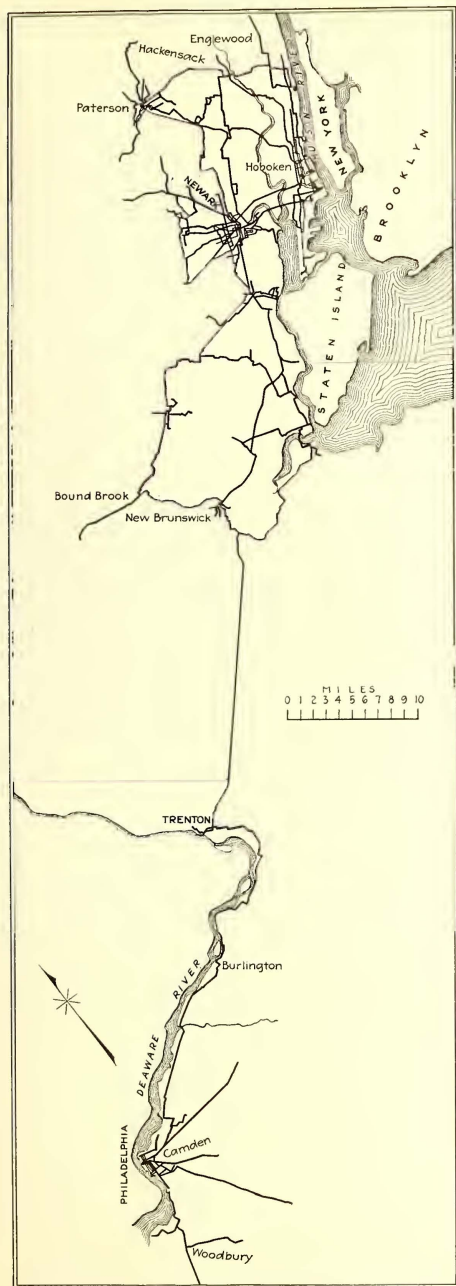
#### PITTSBURGH

In January, 1918, the Pittsburgh Railways increased its flat fare from 5 cents to 6 cents, but sold two tickets for 11 cents and eleven tickets for 55 cents. During the following very severe winter months the service was badly crippled and a comparison of the results obtaining in these months is, therefore, of little value. In May, 1918, however, when the service had again become normal—the car mileage being about 5 per cent below that of May, 1917—the traffic, as compared with that in May, 1917, was as follows:

	Passengers	Passenger Revenue
May, 1917	26,222,000	\$1,159,693
May, 1918	24,392,000	1,165,153
Decrease	1,830,000 or 7%	*\$25,459 or 2.23%

\* Increase.

As the revenue produced by this system of fares was insufficient to meet the requirements of the company, a system of fare areas was devised and put into effect on June 20, 1918. The plan as instituted and now in force provides, in substance, for a central 5-cent fare area with a radius of approximately 2½ to 2¾ miles, the limits being somewhat irregular, with a 2-cent outer zone. The pay-enter-pay-leave plan of payment is followed. There is practically no riding across the center of the city, all but one or two lines looping in the center instead of being through routed. On the basis of the studies made from "on and off checks" the company estimated that some 63,000,000 passengers a year would pay fares wholly within the 5-cent area, while approximately 200,000,000 people would ride in, to or from the proposed outer area. Of the traffic originating in the outer area the company estimated that there would be a 10 per cent loss because of the higher rate of fare. The actual results showed that the traffic in the 5-cent area had been under-estimated, while the traffic in the 7-cent area had been very largely over-estimated. In



MAP SHOWING THE SYSTEM OF THE PUBLIC SERVICE RAILWAY OF NEW JERSEY

other words, the area system has not produced the revenue which was anticipated.

Transfers are given when requested at the time the passenger pays his cash fare, or in other words, when he gets off the car. Should the passenger leave the car in the central area, outbound, paying a 5-cent fare, and secure a transfer, this transfer is good only within the boundaries of the central area. If the passenger rides on his transfer to a point beyond the limit of the 5-cent area into the outer area he must pay 2 cents additional at the time he leaves the car. Transfers are collected as the passenger leaves the car just as is the case with cash fares. Transfers issued in the central area on a 5-cent fare are distinguished by three punch cuts inserted by the conductor at one end of the transfer ticket in a space in which appears the following: "If no coupon attached the hour punched is the A. M. hour." These three punch marks which are in addition to the regular punch marks appearing on the transfer showing the time, the day of the month and the month notify the conductor on the line to which the transfer is given that the passenger has paid a 5-cent fare, and that if he rides beyond the 5-cent limit into the 7-cent area the second conductor must collect an additional 2 cents. Both cash fares and transfers are dropped in a locked fare box as are the 2 cents collected for each transfer issued on a 5-cent fare. Fares are also rung up on an overhead register.

Observation by the members of the fare zone committee and of the officials of the Pittsburgh Railways showed that a large proportion of the passengers who formerly boarded the cars on inbound trips within a distance of  $\frac{1}{4}$  to  $\frac{1}{2}$  mile of the area limit walked to the area limit in order to escape the additional fare. The revenues produced by the plan have not in the opinion of the officials of the company been sufficient to meet the requirements of the property.

#### BAY STATE SYSTEM

The most extensive application of a zone system, from the standpoint of mileage affected, has been on the property of the Bay State Street Railway, operating 928 miles of track covering a large portion of eastern Massachusetts.

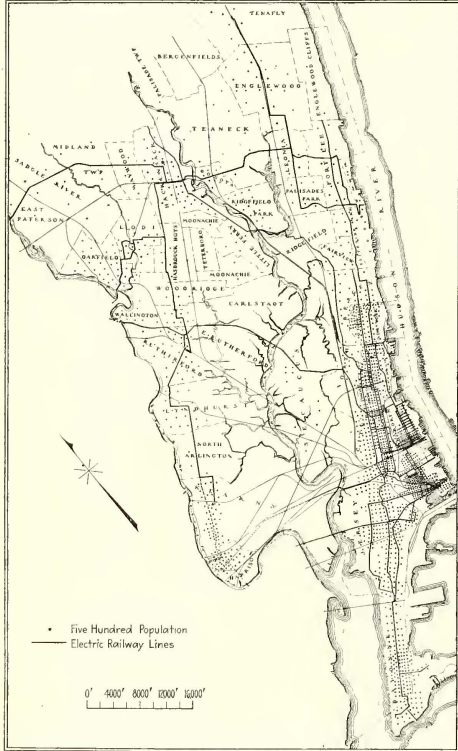
For many years the company operated under a system of 5-cent zones varying in length, but on Aug. 31, 1916, the Massachusetts Commission authorized the company to increase the rates on all of its lines except those operating in the large urban districts by advancing the unit fare from 5 cents to 6 cents per zone. This new plan became effective in October, 1916. In June, 1917, the commission authorized the company to increase the fare to 6 cents over the remainder of the system comprising the populous urban districts. The new rate became effective July 18, 1917.

The increase in revenue secured from these changes was, however, insufficient and on June 11, 1918 the commission authorized in all the cities which the company serves, except three—Gloucester, Woburn and the Hyde Park District of Boston—a new inner zone of greatly restricted area, the radius averaging less than 2 miles. Outside this central zone and, as a rule, within the limits of the former free transfer territory, a second zone was created, its width averaging about one mile. The balance of the territory was divided into zones substantially a mile in length.

The cash fare in the city zones thus created was 6 cents and the rate in the interurban mile zones was in

most cases 2 cents. In a relatively small part of the territory the zone charge was 2½ cents and on some of the very sparsely settled interurban lines it was 3 cents. The city zone limits were also the city transfer limits, free transfers being issued upon payment of a 6-cent fare where necessary to enable the passenger to reach his destination traveling in the same general direction.

As an experiment to try to encourage short riding, tickets were sold at the rate of six for 30 cents, good for a ride from any part of the city zone to the traffic center, but not across the center to points beyond. A corre-



MAP SHOWING POPULATION DENSITY, ESSEX DIVISION, PUBLIC SERVICE RAILWAY

sponding ticket was sold at the rate of six for 25 cents, good within the same limits but during the off-peak hours only. Suburban tickets were sold at the rate of seven for 50 cents on which the passenger could travel from any point in the first zone outside of the city zone to the traffic center of the city zone; and a corresponding ticket was sold at the rate of four for 25 cents, good between the same limits during off-peak hours only. Several other classes of tickets were provided under order of the commission.

An extended account is given in the report of the system of fare collection and registration used with these fares from June 24, 1918, to Jan. 7, 1919, and of the modified system used after the latter date. The results, however, secured under these rates were unsatisfactory

in that the multiplicity of fares was confusing to both the riders and the company, the fare collection scheme was almost impracticable, and insufficient revenue was obtained. Great difficulty was also experienced in securing an accurate registration of the fares on the part of the conductors.

After several months of control the receiver, who had taken over the property on Dec. 12, 1917, petitioned the commission for permission to institute a minimum fare of 10 cents with a revision of suburban and city zones so as to place the enlarged city areas on a 10-cent basis and 2-mile suburban and interurban zones on a 5-cent basis. The area of the central city zone was enlarged so as to create a zone having a diameter of approximately 5 miles, including practically all of the built-up territory. The outlying lines were rezoned, the plan in substance being the combination of two 1-mile zones into one new zone for which a fare of 5 cents would be charged. The proposed plan was modified by the Massachusetts commission by providing for the sale of 7-cent tickets, sold by conductors on the cars at the rate of five tickets for 35 cents, each good for a ride within the new city area or for one zone in the country. The minimum cash fare in the country territory is 10 cents.

The simplification of collection and the greater check which was secured on dishonest passengers and conductors was an important reason for the modification of the original zone plan. It was found, moreover, that the use of the many classes of tickets provided under the original zone plan gave opportunity for dishonesty on the part of passengers and conductors, and all city zone tickets, except the new tickets for 7 cents, were abolished at the time the plan now in effect was inaugurated. The latest plan of the Bay State Street Railway is but little different from that which has prevailed for many years on street railway properties. A central area with definite limits for a flat fare is provided, in addition to which a series of 5-cent zones of greatly reduced length are created in each of which a 5-cent fare is collected and registered in the time-honored fashioned.

#### THE RHODE ISLAND COMPANY

The report then contains an account of the zone system which the Rhode Island Company used from May 5, 1918, to Oct. 23, 1918, and which has been described in past issues of the *ELECTRIC RAILWAY JOURNAL*. The results from a financial point of view the report says, were unsatisfactory, and on Oct. 23 the company reverted to a system of flat 5-cent zones. The former zone limits were revised so the new scheme provided for a central zone with a 2-mile radius, a second zone of approximately 1½ miles in length, with succeeding zones of approximately 1½ miles each in length. A flat 5-cent fare is charged in each zone. The revision in rates thus accomplished provided 10-cent fares in the built-up area in the city of Providence. There is very little riding in Providence from one side of the city across the business center to points on the opposite side. Only 3 per cent of the traffic crosses the central zone. A 1-cent charge is made for transfers which are good only within the central zone. Fares are collected at zone limits with the Rooke register. With one exception no overlaps exist. The increase in revenue following the introduction of this system, while substantial, was not sufficient to meet the obligatory payments involved in operating expenses and fixed



charges, with the result that on Jan. 30, 1919, a receiver was appointed for the company.

PORTLAND RAILROAD

On Aug. 2, 1918, the Cumberland County Power & Light Company, controlling the Portland Railroad, which furnishes electric railway facilities to Portland, Me., and surrounding territory, instituted a zone system of fares.

The plan in substance provided for the creation of a 6-cent central zone with a radius of 3 to 4½ miles, the limits of which practically coincided with the old 5-cent limits. Three lines, within this central zone, for local reasons, carried passengers for 5 cents, but 1 cent was charged for transfers on these cars. Outside the central zone, on most of the suburban lines, the fare was 2 cents per mile-zone. In a few cases the outer zones were 4 or 6-cent zones. During August and September the increase in revenue over the corresponding months of the preceding year was approximately only \$1,800, of which \$1,400 came from the sale of transfers. This was considerably less than estimated.

On March 2, 1919, with the approval of the commission, the company put an increased fare in effect. This new system subdivides the old 6-cent central area into three 2-cent zones. The old 4-cent and 6-cent outer zones were also divided into 2-cent zones. The new system provides for the use of tickets in the place of cash and curtails the transfer privilege. No tickets are sold for a single ride. The passenger when he boards a car either pays a 10-cent cash fare to the conductor and obtains a 4-cent rebate check, or he purchases from the conductor a ticket good for five rides within the central zone area at a cost of 30 cents, and has one coupon punched which entitles him to ride through not more than three fare zones. The passenger who boards a car without a ticket, pays a cash fare and, riding in more than three zones, pays the conductor for his ride at the cash rate of 3 cents per zone; for each zone fare thus paid in cash the conductor will issue a rebate check good for 1 cent. For example, a passenger who boards a car without a ticket and rides through six zones pays the conductor 18 cents and receives six 1-cent rebate checks. In all cases the passenger is entitled to receive a sufficient amount in rebate checks to reimburse him for the difference between the cash fare rate and the ticket rate. Rebate checks will be redeemed only if presented for redemption not later than the following day at places designated by the company. Conductors are not permitted to redeem rebate checks or tickets.

RESULTS IN OTHER CITIES

The report also describes the zone systems used on the Shore Line Electric Railway and the Springfield and the Holyoke Street Railways. It also describes the

FARE STATISTICS OF HOLYOKE STREET RAILWAY SINCE ZONE SYSTEM BECAME EFFECTIVE

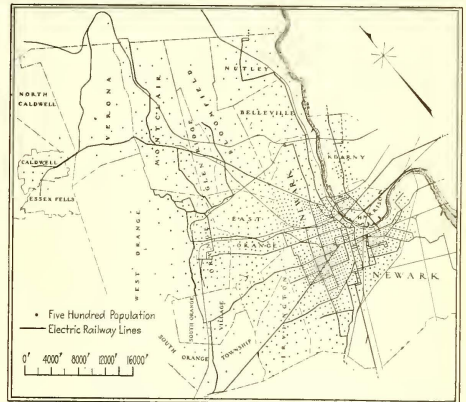
1918	Amount of Increase or Decrease in Revenue	Per Cent of Increase or Decrease in Revenue
February (18 to 28, inclusive).....	\$634 39	12.89
March.....	586 88	1.06
April.....	191 18	0.36
May.....	8,062 69	7.28
June.....	1,680 44	2.67
July.....	12,118.31	12.87
August.....	1,611.01	2.22
September.....	1,003.50	1.62
October.....	17,111.07 <sup>1</sup>	112.85
November.....	111,668.14 <sup>2</sup>	122.50
December.....	732.33	1.32
1919		
January*.....	17,588.94	35.21
February (1 to 17, inclusive).....	12,275.78	49.24

\* New system of fares effective Jan. 1, 1919.  
<sup>1</sup> Indicates decrease.  
<sup>2</sup> Decrease due to influenza epidemic.  
<sup>3</sup> Decrease due to seven days' strike; no cars operated.

system proposed at St. Louis. No attempt will be made to abstract those parts of reports here except to give the accompanying tables relating to Springfield and Holyoke.

CENTRAL ZONE NOT PRACTICAL IN NEW JERSEY

The study of the traffic count conducted by the committee showed that for the conditions existing in many parts of the property a central zone was not practical



MAP SHOWING POPULATION DENSITY, HUDSON AND BERGEN DIVISION, PUBLIC SERVICE RAILWAY

and that it would bear with especial severity upon factory workers in Newark, Jersey City and some of the other communities served by the company.

With a central zone, whose radius was determined by the average distance which the company could afford to haul passengers traveling therein for a 5-cent fare, the greater proportion of the manufacturing establishments would lie in the outlying zones. The consequence would be that those journeying from these manufacturing establishments, or other traffic centers situated in the outlying zones, to residential sections just within the limits of the central zone would pay a fare considerably higher than other classes of riders within the same community. The individuals to whom such a system would appeal are those employed at or near the traffic center of the city; or, in other words, those employed or conducting business in office buildings and retail establishments or in such manufacturing enterprises as are situated in proximity to the great traffic centers, which would naturally be taken as the center of the central zone.

FARE STATISTICS OF SPRINGFIELD STREET RAILWAY SINCE FARE INCREASES BECAME EFFECTIVE ON MAY 1 AND SEPT. 16, 1918

Month	1918		1919	
	Passenger Revenue	Revenue	Passenger Revenue	Revenue
May, 1918.....	\$210,045.32	4,238,110.00	\$29,722.04	16.48
June.....	212,627.41	4,338,295.00	22,187.12	11.65
July.....	228,855.10	4,491,875.00	26,171.87	12.91
August.....	233,206.17	4,618,352.00	24,099.20	11.58
September.....	235,365.81	4,181,016.00	3,072.75	1.32
October.....	185,878.59	3,216,397.00	125,542.73	112.08
November.....	211,910.81	3,654,509.00	22,106.30	11.65
December.....	236,326.89	4,022,483.00	30,170.44	14.63
January, 1919.....	232,775.83	4,040,772.00	43,529.85	23.01
*Sept. 16-18.....	120,693.13	.....	12,070.31	11.69
*September 16-30.....	114,872.66	.....	5,143.00	5.69

† Indicates decrease.

Moreover, the conditions on the Public Service Railway are very different from those of many other companies in that in northern New Jersey a very great part of the travel is from people traveling to and from the end of the line, i.e., to or from the ferries to New York, while in Southern New Jersey the same condition prevails as regards Philadelphia. The conventional situation of a thickly populated district of restricted area with a gradually diminishing density of population as one travels from the center of the city, the suburbs finally melting away into rural districts, is not typical of conditions on the Public Service Railway.

**DETERMINING THE ZONES**

After the zone-mile system was decided upon, much study and thought was given to the most equitable and practicable method in applying to the lines of the company. The first step concerned the question as to the point which should be taken as zero, or the place from which the zoning should begin. There are certain points on the system at which a very large volume of travel originates, and as these represent the beginning and ending of the journeys of a large proportion of the persons traveling in the region surrounding these points, they were selected as zero points. The zoning of each route was then undertaken. An endeavor was made to approximate as nearly as possible a mile in distance for each zone, departing from this limit only in cases whereby a reasonable exception would bring about the location of a zone point at a natural traffic dividing line, such as an intersection with another line, a point of heavy loading due to the existence of traffic-controlling industries, railroad stations and the like, although a general tolerance rule of 500 ft. was adopted, that is, where the exigencies of the case seemed to call for it. It was found by the sub-committee that in applying this rule the property admirably adapted itself to the zone-mile plan.

Wherever possible, transfer intersections were fixed as zone limits, and as stated before, points of heavy loading were similarly adopted. The adoption of the transfer intersection as the zone limit, where possible, is important in that it tends to permit the passenger to take advantage of a full zone at his mileage rate instead of paying for a short distance which might be necessary were the transfer intersection disregarded and the zone limit placed a short distance therefrom. A characteristic exception to the literal observance of the zone-mile is where two lines pass a common point and reach another common point by different routes, as it is obviously impossible, except in cases where very heavy variation obtains, to bring about a condition which would involve two zones on one line and three zones on another line between such points. Another of the principles adopted was that of fixing one zone limit for all the lines operating across the same point, as any other rule would establish varying rates of fares between two points.

**DETERMINING THE FARE**

The next question was that of determining the proper fare. To do this the estimated operating expenses for 1920 were first segregated into four groups as follows:

- (a) Expenses independent of traffic, varying with the track-mile.
- (b) Expenses varying with the car-miles run.
- (c) Expenses varying with the car-hours run.
- (d) Expenses varying with the passengers carried.

Summarizing these figures the committee obtained the following results:

	Stand-by Cost, Cents	Movement Cost, Cents	Total Cost, Cents	Fare Recommended, Cents
For Passenger Traveling				
1 zone-mile	4 03811	0 99007	5 02818	5
2 zone-miles	4 03811	1 98014	6 01825	6
3 zone-miles	4 03811	2 97021	7 00832	7
4 zone-miles	4 03811	3 96028	7 99839	8
5 zone-miles	4 03811	4 95035	8 98846	9
6 zone-miles	4 03811	5 94042	9 97853	10
7 zone-miles	4 03811	6 93049	10 96860	11
8 zone-miles	4 03811	7 92056	11 95867	12
9 zone-miles	4 03811	8 91063	12 94874	13
10 zone-miles	4 03811	9 90070	13 93881	14

**COMMITTEE'S CONCLUSIONS AS TO FARES**

The rate of fare, therefore, which was recommended to the commission is as follows:

First. Passengers boarding cars and paying cash fares shall pay a fare based on a rate of 5 cents for the first zone-mile, and 1 cent for each succeeding zone-mile. A passenger riding in one zone, therefore, will pay a 5-cent fare; a ride in two zones will cost 6 cents, while a ride through ten zones will cost 14 cents.

Second. A stand-by or ready-to-serve charge of 1 cent is to be made for each transfer, representing a fraction of the cost involved to the company of providing the facilities necessary to be ready to serve the transfer rider. In addition, a charge of 1 cent per zone-mile will be made for each and every zone-mile ridden on the transfer car. Transfers will be issued under the same general regulations as now prevail, concerning the period of time in which they must be used, the direction in which transfers will be given as between intersecting lines, etc., etc.

**REST OF REPORT**

A digest of other parts of the report will be made in later issues. These later abstracts will include some particulars of the traffic count conducted by the company and a detailed description of the proposed method of fare collection.

**"Don't Talk to the Motorman"**

THE Northern Ohio Traction & Light Company has adopted a simple "silent reminder" of this rule. It consists of a card 2½ in. x 5½ in., reproduced below. Motormen are expected to carry a supply of these cards in the upper left-hand coat pocket. Whenever a passenger, policeman, fireman, or other employee attempts to engage the motorman in conversation, the motorman does not reply but hands over his shoulder to the interlocutor one of the silent reminder cards. This is part of the safety campaign which the company is now conducting.

**Safety—Co-operation**

**DO NOT TALK TO THE MOTORMAN**

— A Silent Reminder —

We want to carry YOU SAFELY to your destination. Whenever YOU speak to the motorman YOU temporarily distract his attention.

Whenever he looks at YOU and listens to what you are saying, he concentrates his mind on that and not on the operation of his car. This increases the danger to YOURSELF and others and might cause an accident.

We ask YOUR co-operation to avoid accidents.

Do not TALK to the MOTORMAN.

THE N. O. T. & L. Co.

CARD USED IN SAFETY CAMPAIGN



BANQUET IN HONOR OF RETURNED SOLDIERS AND SAILORS OF THE CHICAGO ELEVATED RAILWAYS

### Banquet to Service Men

Chicago Elevated Railways Gives Welcome Home Banquet to 230 Returned Soldiers, Sailors and Marines

ON MARCH 4 a reception and banquet in honor of their returned soldiers, sailors and marines was given by the Chicago Elevated Railways in the Auditorium Hotel, Chicago. Complimentary tickets were given to all of the returned men, and any other employees were invited at a nominal charge of \$1 per plate. The returned men up to that time numbered 320 and there were between 600 and 700 persons present at the banquet.

Following the dinner President Britton I. Budd paid a tribute to those who had gone and those who had remained to "keep the home fires burning." Among other things he said:

"This meeting being held to-night in honor of our returned soldiers and sailors is something in the nature of a family reunion. We are gratified to know that so many have come back unscathed to rejoin the family circle. A few will not return to us. They gave their lives in the greatest cause the world has ever seen, and although we miss their presence here, we can console ourselves with the thought that the cause for which they made the supreme sacrifice lives and will continue to live. Some who are with us to-night have suffered severe and painful wounds. To them we offer our sympathy, while we rejoice that their lives were spared. Some who wear the uniform among us to-night did not have an opportunity to take an active part in the great battles of the recent war. They, nevertheless, are as much deserving of our thanks as if they had. They were ready and we know that they would have acquitted themselves creditably had the opportunity presented itself. We welcome them all, and I wish to say on behalf of the Chicago Elevated Railroads that every man who left to enter the service of our country will find, when he returns to the company, his old position open to him."

In speaking of what those who remained at home had done to help win the war Mr. Budd referred to the Elevated war record which was as shown in the following table:

Employees in active service.....	656
SUBSCRIPTIONS TO LIBERTY LOANS	
Subscribers	
First.....	2,470
Second.....	1,894
Third.....	4,047
Fourth.....	5,486
	\$1,004,450

CONTRIBUTIONS TO WAR ACTIVITIES	
February, 1918	
War Community Service Fund.....	\$5,937.97
United War Work Fund.....	\$10,873.50

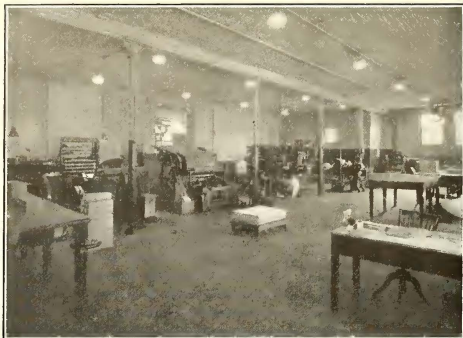
Other speakers were W. S. McClenathan, secretary of Local No. 308; Samuel Insull, chairman of the board of trustees, and some returned soldiers and sailors.

### Draft Status of Electric Railway Employees

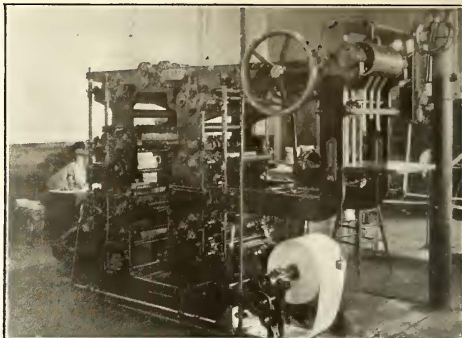
THE second report of Provost Marshal General Crowder to the Secretary of War in regard to the operations of the selective service system up to Dec. 20, 1918, contains in one of the numerous appendices an industrial index which shows how the draft affected electric railway employees. The figures follow:

	Male Employees of All Ages		Ages 21-30 Within Selective Service Law		Deferred Classes Within Selective Service Law		Class I Within Selective Service Law	
	Number	Per Cent	Number	Per Cent of All Ages, 21-30	Number	Per Cent of All Ages	Number	Per Cent of All Ages
Conductors.....	65,471	17,777	27	13,376	75	20	4,401	25
Motormen.....	67,855	15,777	23	11,432	72	17	4,345	28
Laborers.....	31,978	28,872	90	4,580	16	14	24,292	84
Officials and superintendents.....	2,798	163	6	118	72	4	45	28
Switchmen and flagmen.....	2,476	399	16	307	77	12	92	23
Inspectors.....	2,640	366	13	281	77	10	85	23
Semi-skilled employees.....	5,965	2,638	44	1,852	70	31	786	30

The registration covered by the foregoing figures is only the first, that of June 5, 1917, covering the ages 21-30. The second registration, covering the age 21, on June 5, 1918, and the third registration, covering ages 18-20 and 32-45, on Sept. 8, 1918, are not represented. The figures for the total number of employees were projected from the thirteenth census.



A SECTION OF UNITED RAILWAYS OF ST. LOUIS PRINTING DEPARTMENT, CONTAINING FOUR PRESSES AND A SPECIAL ENVELOPE MAKING AND PRINTING MACHINE



ROTARY PRINTING PRESS WHICH TURNS OUT 240,000 TRANSFERS AN HOUR PRINTED WITH TWO COLORS ON EACH SIDE, NUMBERED, DATED AND FOLDED

## A Complete Printing Department for an Electric Railway

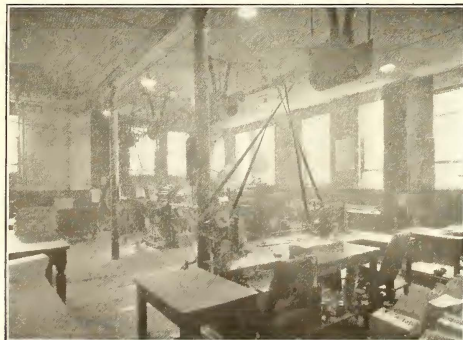
St. Louis Company Installs New Rotary Press to Handle 700,000 Transfers a Day—All Other Company Printing and Binding Also Done in Own Shop

THE United Railways of St. Louis inaugurated its own printing department for transfers in 1904, installing at that time a Harris automatic press giving two colors, and also numbering, dating and perforating the transfers in one operation. As the company gradually increased in size the number of transfers demanded was greatly increased and a second Harris press was installed. Later the double transfer came into use and this necessitated the installation of two folding machines. Instead of the issuing of a transfer on a transfer the whole operation, on this system, is handled by the first conductor, who issues a double transfer folded back to back. Both are punched in one operation.

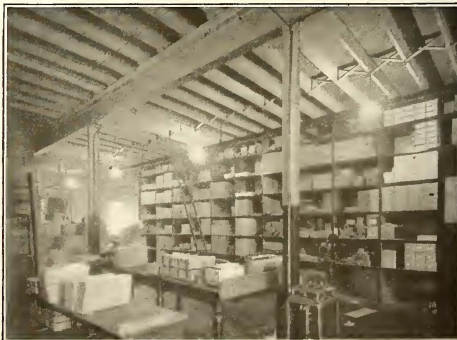
Thus this means no extra work for the first conductor and eliminates the necessity of the second conductor duplicating the operation of the first.

The company operates more than 450 miles of city and suburban lines with about 1600 cars, and the daily demand for transfers amounts to approximately 700,000. The two Harris presses have given a combined output of from 175,000 to 200,000 transfers an hour, but when advertising has been placed on the back of the transfers, as is frequently done, this has necessitated a second run and consequently cut the production in two.

It was deemed advisable to increase the facilities to provide for both present and future needs and a Meisel



SECTION OF PRINTING DEPARTMENT SHOWING HARRIS PRESSES AND NEW JERSEY STITCHING MACHINES



STOCK ROOM OF UNITED RAILWAYS PRINTING DEPARTMENT SHOWING COMPLETE LINE CARRIED

rotary press was installed late in October, 1918. This press running at normal capacity turns out 240,000 transfers per hour complete, printed with two colors on each side, numbered consecutively, dated and folded. The old Harris presses required flat sheets 12 in. x 18 in. and printed eighteen transfers to the sheet, while the new Meisel takes a 12-in. roll and makes 20,000 impressions an hour, with twelve transfers per impression. With the Meisel in operation one Harris machine and two folding machines have been shut down. The second Harris will serve as an auxiliary machine and **will be kept busy on special work.**

From the Meisel press the transfers go to the stitcher and are stitched into packages 100 sheets thick for the single transfers and fifty sheets thick for the double transfers. These packets are then taken to the cutter and cut into books, about thirty books at each operation, and then to the packing room where they are placed in containers each holding enough for one day for a single line. Some thirty lines are included in the system and the transfers for each bear the name of that line in large type. As this necessitates a change of plate for the run on each line the machine has to be frequently shut down for a short interval.

Transfers are printed thirty days in advance of the date upon which they are to be used. If some unforeseen occasion arises during that interval and notification of the number of extra transfers needed is received by the printing department in sufficient time an extra emergency run is made. To provide for conditions which cannot be taken care of in this way the company has an emergency transfer on which is printed a calendar for each month and each day of the month with a list of the various lines. These are punched at the outlying stations, fifty sheets at a time, by special punches. The gross consumption of paper for transfers amounts to from twelve to fourteen carloads a year.

In addition to the printing of transfers the company maintains a complete printing department. Here is printed the monthly company publication known as the *Bulletin*, all brief work such as annual reports, petitions to the Public Service Commission, etc., all record forms, including more than 1000 different varieties, all car card color display company advertising and dashboard signs, children's and 6-cent tickets. In addition many special filing envelopes and devices are made, leather and cloth book binding is done, including the binding in three-quarters leather of the issues of the ELECTRIC RAILWAY JOURNAL, and various leather novelties such as brief cases are occasionally turned out.

Most of this work is accomplished in a room approximately 100 ft. square in which is located the following equipment: One 10-in. x 15-in. Gordon press, one 12-in. x 18-in. Gordon press, one cylinder press, one Meisel press, two folding machines, one National rotary perforator, two Harris presses, two special New Jersey No. 4 wire stitching machines, one 34-in. Seybold cutter, one S. & T. punching machine, one Rosback power stitching machine, and the usual equipment of a composing room.

In addition to this equipment special mention should be made of a machine which has been especially designed and built to make and print at the same operation 120 No. 6 side seam coin trip envelopes a minute for the use of conductors, half of the quantity being printed in red and the other half in black. The two colors are to differentiate between the direction of the trips, e.g., east from west and north from south.

Many of the machines in this shop have special attachments and improvements developed by J. G. Robertson, superintendent of the printing department.

Twenty-eight persons are employed in the department, five of whom are girls, and three-fourths of the working time is spent on general work other than transfer printing. Before the Meisel press was installed it was a common practice for the department to run twenty-three hours a day, but since that time the work is generally confined to a period of nine hours. This is the only department of the company which is not operated by organized labor.

## Welding Engineering Takes on New Dignity

New Association to Be Called the American Welding Society Assumes Concrete Form to Advance the Art of Welding

THE temporary association formed to organize the American Welding Society has issued a call to all engineering associations, scientific societies, governmental departments, manufacturers and others interested in the development of welding, to join in the formation of this society. The first meeting will be held on Friday, Mar. 28, at 10.30 a.m. in the Engineering Societies Building, New York City.

Now that industry is again becoming normal, it is desirable that the advance in welding, which has resulted from war conditions, should be continued and extended to accomplish more important results. The objects of the new society include the bringing together of persons from all branches of the industry who are interested in any type of welding. This society will create and assist in maintaining what may be termed a "Bureau of Welding," which will afford a means for conducting any investigation which may be considered desirable by any of the engineering societies or manufacturers.

Several classes of membership are contemplated. These include companies that manufacture or sell apparatus or supplies for welding or that employ welding as a process in their output, also individual membership of the employees of these companies, consulting engineers, college professors or members of any engineering society.

As a part of its routine the new society will ascertain what specific investigation or assistance is needed in any branch of the welding industry. If this assistance involves research, a definite program will be arranged and presented to the portion of the industry affected, indicating the benefits to be derived therefrom. The funds which will come from the annual dues are intended primarily to maintain the society, and will obviously be sufficient for any extensive research. It is the intention therefore to finance each research separately. Any investigation desired by the industry will be made if sufficient financial support can be secured to conduct it efficiently.

The benefits of a proper standardization both to the producer and to the consumer are well recognized, but as some of the manufacturers interested in the new society have expressed fears that standardization might be carried too far, from the commercial point of view, it seems desirable to provide uniform methods that will secure in each case co-operation and support of all

the organizations whose interest may be affected. Such a method of establishing a standard by this society would not only assure that all interested organizations or groups may participate in the work, but it also requires practically the unanimous consent of the standard before it can be issued. It is intended that the work of the new society in standardization shall conform to the procedure established by the American Engineering Standards Committee, and shall be subject to its approval.

In many localities the application of welding to certain classes of structures is now prohibited by law. When the technical work of the Bureau of Welding has demonstrated that such restrictive measures are no longer necessary, it will be appropriate for the society to take steps to have them modified by supplying authentic information that the law makers will respect. Investigations of the welding committee have thus far shown that one of the most important elements in the success of welding operations lies in the skill of the operator. To secure this uniform method of training is essential, and the society will take an active part in planning how welders should be trained, and how their proficiency may be determined.

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## AMERICAN ASSOCIATION NEWS

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### Chicago Section Meets

A MEETING of the Chicago Elevated Railroads company section was held Feb. 19, and about seventy-five members were in attendance. E. A. Brion, comptroller, talked on the various issues of Liberty Bonds; J. H. Mallon, safety engineer, and C. B. Scott of the Bureau of Safety, discussed various problems of the safety question, and P. F. McCall, general storekeeper, explained how the store department handled materials.

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### Meeting of Felicitation at Manila

AT THE forty-sixth monthly meeting of the "Meralco" section held on Jan. 7, nineteen railway members were elected. Eight were from the accounting department, six from the transportation department and the others from the power plant, claim and medical departments. Retiring President J. M. Bury reviewed the remarkable record of the section with regard to the winning of medals and honorable mention for papers prepared by its members. The new president, C. H. Van Hoven, continued along the same line and closed as follows: "We are going to make this company section a clan, a family group. We want to foster and promote loyalty and closer relations among ourselves. We want to be missionaries in this community that the public may know what we stand for, and that it may know that in our efforts to serve them as they should be served we are also serving ourselves. Meralco has been placed on the electric railway map, and with the aid of every member we are going to keep it there." M. Fariñas and P. Castillo, who had received awards from the American Association, were also presented with checks by the company, and B. H. Blaisdell, chief engineer of power plants, supplemented the medal with a personal check for 100 pesos.

The section itself also awarded the following medals for the best three papers presented during the year:

Gold medal to L. C. Bewsey, carhouse foreman, for his paper on "The Human Element as Applied to Electric Railways"; silver medal to M. T. Borja, watch engineer, for his paper on "Economic Production and Transmission of Electric Power," and bronze medal to I. G. Obligation, chief clerk transportation department, for his paper on "Menace of the Transfer." Cash prizes were also awarded to conductors and motormen for excellence in the performance of their duties, according to the company's custom.

The following amendment to the by-laws was adopted: "There shall be seven standing committees, consisting of program, entertainment, refreshments, papers, discussions, awards and membership committees, appointed by the executive council immediately after the annual election each year and serving for one year. Special committees may be appointed by the president when authorized by motions passed by the executive council or by the section." The entertainment program at this meeting comprised vocal and instrumental music and a volley ball game played between the employees of the accounting and transportation departments.

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### Slogan for Public Service Section

THE new president of company section No. 2, N. W. Bolen has suggested as a slogan for the year the expression "A Full House." The recently elected secretary, A. H. Nelson, has sent a letter to each member asking him to keep the slogan in mind and to assist in making it a fact.

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### Western Red Cedar Association Elects New Officers

AT THE fourteenth annual meeting of the Western Red Cedar Association, held at Sandpoint, Idaho, on Feb. 20, R. G. Jones, Lost Creek Cedar Company, was elected president. J. M. Montgomery, Humbird Lumber Company, was chosen as vice-president. Three directors were also elected and committees on advertising, posts, railroads, poles, piling and official inspection were appointed.

The chairman of the 1918 advertising committee stated that \$5,664 had been expended during the year for advertising and the members had displayed more interest than heretofore in this matter. Suggestions were made as to how more vigor could be put into the advertising during the coming year, continuing the advertising of Western red cedar poles for one year more. A committee was appointed to confer with members of the Lifetime Post Association with a view to securing the services of a man competent to inspect poles, piling and posts in the woods, on the landings and in the cedar yards of the members of the Cedar Association with the object of improving the quality of the stock.

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A recent bulletin of the United States Labor Department is authority for the statement that appropriations made by Congress to pay the federal government proportion of the cost of state road-building projects now total \$48,500,000, and that an addition of \$200,000,000 probably will be available during the next three years. Then follows a list of approved projects by states, from which it is evident that each state is expected to contribute for the improvement of the highways considerably more than the federal government.

# News of the Electric Railways

FINANCIAL AND CORPORATE • TRAFFIC AND TRANSPORTATION  
PERSONAL MENTION

## New Jersey Men Strike

Public Service Railway Men Seek to Enforce Recognition of Amalgamated Association

The employees of the Public Service Railway in Northern New Jersey who are members of the Amalgamated Association went on strike at 4 a. m. on March 12. Service was seriously interrupted, but the company is proceeding with its plans for getting the lines back to normal as soon as possible. Ordinarily the company operates about 1500 cars on the lines affected. Up to noon on the first day more than 300 cars had been placed in service.

### MEN DEMAND UNION RECOGNITION

The principal issue involved is recognition of the union. In a final effort to avert the strike, T. N. McCarter, president of the company, on March 11 conferred with certain employees of the company who were local officers of the Amalgamated Association on the railway. By way of concession he offered three things:

1. To withdraw and abandon forthwith the welfare and collective bargaining plan recently promulgated by the company, which has not received the approval of the men.
2. To submit to the arbitration of the National War Labor Board any question of difference there might be, including the demands of the employees that the company sign a contract recognizing the Amalgamated Union.
3. To submit to the arbitration of the Public Utilities Commission any questions of difference there might be, including the demand of the employees that the company sign a contract recognizing the Amalgamated Union.

The representatives of the Amalgamated Union present declined all of these propositions and declared that the strike must go forward unless the company signed a contract with and formally recognized the Amalgamated Union, none of whose general officers reside in New Jersey or have anything to do with the affairs of the Public Service Railway. This Mr. McCarter declined to do.

### SUBORDINATE DEMANDS

There are twenty-six sections in the demands presented by the men to the company. In addition to recognition of the union, these demands include a system of arbitration of disputes, no discrimination against the union or its members; the men to agree not to discriminate against employees who refuse to join the union; provisions for discipline of workers breaking rules; day's work for all conductors and motormen to be nine hours consecutively, with pay as at present for ten hours; all runs to be straight runs; runs of six hours and less than eight hours to pay nine hours' pay; runs of eight hours and

less than nine hours to pay ten hours' pay; all work in excess of scheduled runs to be considered overtime and to pay time and a half; the company to pay all extra men who answer the roll-call at the rate of \$20 per week, \$5 more than the men are getting now, and men on snow sweepers, sand cars and special work to be paid time and a half.

The company is confident that the public will place the responsibility for the strike where it belongs.

Late on March 13 it was announced that officials of the railway would confer in Washington with the War Labor Board in an effort to arrange a settlement of the strike. The representatives of the men were invited. The War Labor Board requested the men to return to work pending a settlement.

## Rotarian Makes His Company Solid

A. W. McLimont, vice-president and general manager of Winnipeg (Man.) Electric Railway, is an enthusiastic Rotarian. When the conference of the Rotary Nineteenth District was held in Winnipeg on Feb. 9, 10 and 11, Mr. McLimont determined to put the Winnipeg Electric Railway organization behind it, and do everything he could to boost rotary and the conference. In this way the company's name was constantly before the public, linked with the rotary idea of service.

A special edition of 20,000 copies of the *Rotary Whizz*, a small publication issued weekly by the Winnipeg Rotary Club, was paid for by Mr. McLimont, and placed in the small box in the street cars, from which the company's own publication is distributed. The only reference to the Winnipeg Electric Railway in the issue of the *Whizz* was in a small panel on the front page.

To draw the attention of the car riders to the fact that the publication was in the box for distribution, a window poster was placed in each car.

Each car also bore a large banner on the fender calling attention to the conference.

Commencing on Feb. 12, immediately after the close of the Rotary Conference was the annual bonspiel of the Manitoba Curlers Association, which lasted two weeks. Further to exemplify the rotary idea of service, Mr. McLimont had window posters printed.

In the special rotary section of the *Winnipeg Free Press*, Mr. McLimont took half a page and published an advertisement.

The part the company took in boosting the rotary idea and the conference was very much appreciated by the Rotary Club of Winnipeg.

## Detroit Purchase Arranged

Difficulties Overcome in Tentative Agreement With \$31,500,000 as Compromise Price

The purchase of the properties of the Detroit (Mich.) United Railway within the city by the city has been arranged for at a compromise price of \$31,500,000. All that remains to make the deal binding are some details which the two contending parties were to endeavor to settle at a meeting on March 12.

### AGREEMENT REACHED MARCH 11

The meeting at which the compromise price was agreed upon began at 4 p. m. on March 11 and continued three hours. At the conclusion of the conference Edward T. Fitzgerald, secretary of the Street Railway Commission, gave out the following statement:

The Board of Street Railway Commissioners and the officials of the Detroit United Railway have conditionally agreed upon a price of \$31,500,000. They have not agreed upon important practical details connected therewith. Failure to do so will prevent the submission of the purchase price to the people. The board and the railway officials will meet on March 11, at 10 o'clock, for a further discussion of the details not yet agreed upon.

The price originally asked by the Detroit United Railway for the properties in question was \$33,500,000. The final and unalterable price offered by the city for the same properties was \$29,653,936. So that the price agreed upon is a straight compromise of about \$2,000,000 by each side.

That a compromise has been effected is also apparent from the language of the letter written on Feb. 22 by the Street Railway Commission to the Detroit United Railway. In this it was said:

It will be useless apparently for us to discuss with you the question of valuation of the property because you advise us that your company unanimously concludes that the price we offered was wholly inadequate. We are firmly of the opinion that the offer we made is entirely fair and adequate.

### BRIEF REVIEW OF NEGOTIATIONS

Things have moved fast in Detroit since James Couzens came into office as Mayor on Jan. 1. A goodly part of his inaugural message was given over to a review of the local railway situation. He promised action at once, looking toward purchase by the city, with a view to having a municipal ownership plan ready to submit to the voters in April. Appointments to the street railway commission, among them that of Edward T. Fitzgerald as secretary, and the retention of M. M. O'Shaughnessy, San Francisco, as special advisor, followed. Detroit then offered the com-

pany \$29,653,936 for the city lines. This was on Feb. 11. On Feb. 18 the company turned this offer down. It suggested as an alternative a price of \$33,500,000 or a lease to the city for a period of fifty years on a rental tentatively fixed at \$2,010,000 per annum

—6 per cent on a valuation of \$33,500,000. This counter leasing proposal the city rejected. The city authorities then announced that they would ask for \$10,000,000 to build municipal lines to compete with the privately-owned ones.

## Seattle Takes Over Its Railway

### Washington State Supreme Court Decision Validates Purchase—Transfer Probable on April 1

When the State Supreme Court at Olympia, Wash., on March 5, handed down a decision sustaining the legality of the \$15,000,000 purchase by the city of Seattle of the railway property of the Puget Sound Traction, Light & Power Company, all legal questions involved in the transaction were cleared away. Seven judges of the Supreme Court favored the purchase, while two judges dissented. It is stated by Thomas F. Murphine, superintendent of public utilities, and A. W. Leonard, president of the railway, that the city may be in possession of the lines by April 1.

#### PREPARED TO TRANSFER PROPERTY

Anticipating a favorable decision in the "friendly" suit, city officials and officials and officers of the company have been preparing for the transfer for weeks, and practically every arrangement has been made, with the exception of minor details, among which is the signing of 15,000 bonds for \$1,000 each by the Mayor and city comptroller.

Under the terms of the purchase contract, the company has forty-five days, following the filing in the trial court of the remittitur from the Supreme Court, in which to deliver its property, free and clear of all encumbrances to the city. In event of failure to make the delivery at the expiration of the time set, the company must pay the city \$400 a day, until the property is so delivered. At the end of six months, the city may continue to collect \$400 a day, or may declare the deal off.

With the transfer of the property, Seattle will acquire 206 miles of track, 540 cars of all kinds, seven carhouses, much valuable real estate, and about \$350,000 worth of materials and supplies. The city payroll will be increased by about 2000 workers, of which 1500 are motormen and conductors. With the exception of the legal department, the maintenance of streets and a few other departments, employees of the private company in all branches of the railway work will be taken into the city service in the same line of work they are now performing.

#### PLANS FOR MUNICIPAL OPERATION

Superintendent of Public Utilities Murphine has made plans for taking over the railway system. It is considered probable that one and possibly both of the present city-owned carhouses will be discontinued, and extensive rerouting of cars will be put into

effect to avoid duplications of service that now exist between the company's lines and those operated by the city. Express service will be installed on as many lines as possible, with no stops between the outlying residence sections and the downtown district.

#### POWER CONTRACT INCLUDED

In the traction deal is a contract which binds the Puget Sound Traction Light & Power Company to sell the city electric current to operate the railway system until such time as the city is prepared to develop its own power, at a price of 1 cent per kilowatt. The current will be delivered to the substations now operated by the Traction Company in connection with railway service.

One of the next steps by the city will be to acquire the lines of the Seattle & Rainier Valley Railway, arrangements for which have been agreed upon, with only details to be taken up.

#### NEGOTIATIONS STARTED LAST SEPTEMBER

Preliminary negotiations for the purchase of the railway system by the city were started on Sept. 6, 1918, in answer to a demand from the United States Shipping Board Emergency Fleet Corporation for better transportation for the shipyard workers. The offer to pay \$15,000,000 in utility bonds was telegraphed to the board of directors of Stone & Webster at Boston, and was accepted one week later. On Sept. 24 the City Council passed the ordinance authorizing the deal. Before the deal was agreed on, the armistice was signed, and the shipyard emergency passed. The transaction was continued as a straight municipal ownership proposition. At the November general election, the deal was submitted to the electors on an advisory ballot, and carried three to one.

#### FRIENDLY TEST SUIT DISMISSED

The Supreme Court's decision sustained dismissal of an injunction proceeding brought by F. A. Twichell and Charles E. Horton, as a "friendly" measure to remove all legal obstacles. They attacked the proposed purchase bond issue as exceeding the city's charter authority and constitutional limit of municipal indebtedness, also pleading the failure to submit the proposed purchase to an election to validate the indebtedness contracted. The main point in the majority opinion handed down is that a bond issue to be paid

in principal and interest entirely out of the revenues of the utility purchased is not a general indebtedness charged against taxation, and therefore not subject to popular ratification by the voters of the city before the fixed limitation can be exceeded.

On the question of pledging revenues, the majority opinion of the Supreme Court reads:

Appellant contends that because of certain provisions of the ordinances and the statute general indebtedness, transaction may not be consummated without the ratification of the voters. If the completion of the purchase and sale as planned would create a general debt, it would doubtless require the sanction of the voters of the city, otherwise not admissible.

Our attention is called to certain provisions of the plan or system. Ordinance No. 39025, to the effect that the city, after providing for the payment of the amount sufficient to meet payments of interest and principal of the bonds as they fall due, stating the amounts and maturity of the same, and providing for the payment of such gross revenues are hereby pledged to such semi-annual payments of interest and principal, and that the amount of such gross revenues superior to all other charges whatsoever, including charges for maintenance and operation; and the obligation of the city in the bonds to pay them with interest, although out of the special fund, even though the balance of gross revenues received therefrom remaining may be insufficient to pay the cost of maintaining and operating said system and said additions and betterments thereto.

Judges Chadwick and Mackintosh, who dissented, said in part:

The legal effect of the majority opinion is that all of the gross revenues are pledged to the payment of the purchase price; that if the one who renders labor or service as a motorman, conductor or about the tracks and barns of the railway system is to be paid he may be paid out of the general revenues; that instead of making his pay in a warrant which is a first charge upon the gross revenues as the law contemplates, he may not, if the gross revenues are insufficient to meet the maturing bonds and interest, have his pay out of the earnings of the utility at all but must take his chances with the general fund. A warrant which may be subject to discount and unless sanctioned by subsequent decree of this court will be doubtful validity.

The ordinance but clumsily conceal the reserve purpose of the Council to maintain and operate the street car system at the expense of the general fund, either by a system of loans from the general fund or by levying a direct tax for that purpose. If the Council intend to charge the general fund it might have said so in words. It might have had due regard for the costs of maintenance and operation as the statute directs, by reserving an amount or proportion of the revenue of the utility, or being mindful of a possible charge it should have submitted the measure to the people.

The net results of the ordinances as construed by the court is that the cost of maintenance and operation is not to be provided for. By the employment of an indirect method dressed for the occasion in a cloak of words the law is circumvented and the people whose rights of participation and self-determination was so carefully safeguarded have been denied the sovereign right to franchise.

It was suggested in consultation that the Council could raise the rate charged for fare and thus make up the balance necessary and operation out of the revenues of the street car system.

Counsel made no such suggestion, as if counsel could not, for with the gross revenues of the system pledged irrevocably to the payment of the purchase price the seller or the bondholder, as the case may be, can insist that the gross revenues belong to him whether they are accumulated by a charge of 5, 7, 10 or 50 cents for a single fare.

Believing that the ordinance was drawn with intent to, whether with intent, it does in fact effect the removal of the general fund or leave the way open to levy a direct tax, thus violating the spirit of the law we are constrained to dissent.



## State Regulation Stands

Chicago "Home Rule" Element, Lacking Support of Other Cities, Fails in Attack on Commission

Opponents of state regulation in Illinois failed in an effort to kill the state public utilities act in a hearing before the Senate committee on March 4. Accordingly they have decided to direct their efforts toward safeguarding the contractual relations already existing as the result of franchises granted to public utility companies by various municipalities. There is already pending in the Legislature a bill which would prevent the state commission from interfering with rates established by franchise.

Agitation for repeal of the utilities act has been under way for some time in Illinois. This law has been opposed by the "home rule" element in Chicago ever since it became effective, but until recently it had the united support of the other cities in the State. Developments of the past year, such as the granting of higher rates in certain cities, added to the opposition, and there has been considerable activity during the current session of the Legislature.

An interesting situation has developed in Chicago where it was recently announced that the management of the Chicago Surface Lines had dismissed its appeal attacking the jurisdiction of the state commission over service matters. The city of Chicago also was a party to this appeal, and its special counsel has announced that the city will not let up in its fight to do away with state control over service even though the local companies are willing to be governed by the commission.

## Right to Organize Upheld

The War Labor Board on March 6 handed down a decision upholding the contention of the employees of the Brooklyn Rapid Transit Company that they have the right to organize and bargain collectively with their employers through chosen representatives. The demand was submitted to the War Labor Board by Paul Millman, representing the motormen, who complained of "insufficient wages, hours, general poor working conditions, discriminations and discharges for joining an organization."

The evidence submitted at the hearing dealt almost entirely with the question of discrimination and the refusal of the company to permit the employees to join the Amalgamated Association and it was to this question that the board directed its attention in the finding. The recommendations follow:

It appears from the evidence, uncontroverted by the company, that the officials of the Brooklyn Rapid Transit Company and the operating companies owned and operated by it are violating the policy of the National War Labor Board in not permitting their employees to join the Amalgamated Association of Street & Electric Railway Employees of America. Under the principles of the President's proclamation creating the National War Labor Board and under the rules of the board all of the employees of this company and its subsidiary companies should be free to organize and to join such unions as they choose.

If these employees follow a lawful course toward the company, advised or directed by the national or international union, it is their right, and the company should not prevent them from so doing. Discharges for legitimate union activities, intimidation of workers by officials of the companies as to union affiliations, espionage by agents of the company and like actions, the intent of which is to discourage and prevent men from exercising this right of organization, must be deemed an interference with their rights as laid down in the principles of the board.

We recommend, therefore, that the Brooklyn Rapid Transit Company and its subsidiary companies operating electric railway lines in New York City give full and free permission to the employees to organize into labor unions in conformity with the announced principles of this board and as a matter of plain right and justice.

The finding was signed by Basil M. Manly and F. H. Judson, acting as joint chairman and section chairman.

The company has not issued any statement with respect to the decision.

## Indeterminate Franchise Proposal

The committee on general legislation of the House of Representatives of Minnesota has before it a bill introduced by C. H. Warner, Aitkin, providing for granting of state franchises to electric railways after the surrender of local franchises. The bill would put electric railways under a state franchise, subject to the rule of the State Railroad & Warehouse Commission.

Under the provisions of the bill electric railways would have the right of appeal from any municipal regulation as to fares and service, first to the state commission and then to the courts. The bill would give municipalities the right to purchase electric railways, but the price fixed would be made subject to review by the state commission.

An electric railway would receive a state franchise by filing, before the expiration of its local franchise, permit or license, a written declaration with the Secretary of State and the clerk of the municipality where the franchise, permit or license was granted, to the effect that it surrenders its local franchise.

## United States Employment Service Broadened

The United States Employment Service has further extended the scope of its work by the establishment of two new zone offices of the professional and special section, in Philadelphia and Boston, and it plans to establish other offices of this section in the near future. The new zone offices are in addition to the two main offices at New York and Chicago. They will serve the particular zones in which they are located. The main offices of the professional section are daily receiving the lieutenants, captains, majors and even colonels who led their men to victory, and without exception these men ask for but one thing—opportunity to win new successes in the business world. They are men of proved tenacity, of the quickest intelligence, hundreds of them experienced in executive, professional and technical work.

Employers, representing every line of special endeavor in the industrial world, have been quick to recognize the opportunity to obtain high grade men, and equally quick to forward their requirements to the professional section. Those requiring the services of such men are asked to state definitely the nature of the positions available, to the nearest of the following United States Employment Service, Professional and Special Section Offices:

New York office, 16 East Forty-Second Street; Chicago, 62 East Adams Street; Philadelphia, 1518 Walnut Street; Boston, 16 Tremont Street.

## Five Cents More For Kansas City Men

The Kansas City (Mo.) Railways on Feb. 26 announced an increase in pay for trainmen of 5 cents an hour, and a discontinuance of the strike bonus, effective March 1.

The new wage scale, together with the present scale, is announced as follows:

	New Hr. Wage, Cents	Pres. Hr. Wage, Cents
Length of service:		
First six months.....	36	31
Next six months.....	37	32
Second year.....	38	33
Third year.....	39	34
Fourth year.....	40	35
Fifth year and over.....	41	35

One-man car service 2½ cents an hour over scale.  
One additional hour a day allowed for training students.

Minimum monthly wage for extra trainmen, \$75, formerly was \$60.

Uniforms as part of the wages are abolished and the amount formerly spent for them added to the wage scale.

The company announced that trainmen who did not strike on Dec. 11 would become members of a "Uniform Club" and receive uniforms without charge, based on years in the service. Men who had worked for the company more than a year were given one uniform a year free, and men in the service more than five years were given two uniforms a year. Men who struck on Dec. 11, but returned to the service before Jan. 31, may be added to this club upon approval of the superintendent of transportation, it was announced. Philip J. Kealy, president of the company, is quoted as follows:

Our purpose in fixing this new scale is to build up a permanent staff of employees. Everyone knew that the bonus was temporary.

These changes in the wage scale are made possible by the fact that practically the entire transportation force is made up of first year men, drawing the minimum hourly rate.

For these reasons this average 5 cents an hour increase is possible, with but a slight increase in the present total transportation payroll.

Under the new schedule the average daily wage for trainmen will be \$3.65, as the men work an average of 10.4 hours a day. Everyone knows that the present minimum salary, without the bonus, is not a sufficient wage. Because 50 per cent of our old employees were maximum wage men and 90 per cent of our present employees are minimum wage men we are able to make this increase.

We are anxious to furnish uniforms except to members of the Uniform Club. This amounted to about 2 cents an hour in pay. All former strikers who want their jobs back now must start in at the minimum wage. Under the new schedule, those who formerly were getting the maximum wage can return at a wage 4 cents an hour less than they formerly were getting.

## News Notes

**Additional Power for Ohio Commission.**—Representative Miller has introduced a bill in the House of Representatives of Ohio which will give the Public Utilities Commission authority to order the abandonment of public utilities in case sufficient cause for doing so is shown.

**An Income Tax Reminder.**—The Tri-City Railway, Davenport, Ia., included in a recent pay envelope a statement of the income of each individual for the year 1918 with a reminder as to the conditions under which the individual will be required to make a return to the Government.

**Would Isolate Motormen.**—Representative A. O. Hauge, of Polk County, member of the Legislature of Iowa, has proposed a bill in the House which would compel electric railways operating in that State to provide inclosed compartments for all motormen. The bill required that the compartment must be sound proof.

**Progress on City Ownership Bill.**—The electric railway ownership bill authorizing cities to purchase the railways has passed the House of Representatives of Kansas and it is expected to pass the Senate. An effort has been made to tack on a rider prohibiting Kansas owning the transportation system unless Missouri does likewise.

**Recent Railway Measures in Iowa.**—Two measures in which the electric railways of Iowa are interested were introduced recently in the House of Representatives of the Iowa Legislature by representative Epps of Wapello County. One bill would prevent the operation of one-man cars and the other would require power brakes on all cars more than 30 ft. in length.

**Wants Norwalk Franchise Renewed.**—The Lake Shore Electric Railway, Cleveland, Ohio, has submitted a twenty-five-year franchise to the City Council of Norwalk, Ohio, for consideration. The terms are about the same as those contained in a franchise submitted a year ago. F. W. Coen, general manager of the company, told Council that in the last fourteen or fifteen years the cost of operation has increased from 14½ cents to 35 cents per mile.

**Mr. Ford Threatens Competition.**—Henry Ford is a big asset as newspaper copy. Accordingly much space has been given lately by the daily press to plans which he and his son are said to have in mind for establishing factories to make a new auto to sell at \$250 to \$350. Mr. Ford would make of this car "a competitor of the street car, rather than of the Ford." He is reported to have said that the new car would be

for the use of people who have no urgent need for a motor car except to go to and from work, or for infrequent pleasure trips.

**Recommends Free Right to Organize.**—The National War Labor Board has decided in favor of the men in questions involving the workers and the Union Railway and the Third Avenue Railway, New York, N. Y. The board said: "We recommend that the Union Railway give full and free permission to its employees to organize into labor unions, in conformity with the announced principles of this board and of the proclamation of the President, under which the board was created." The complaint of the employees of the Third Avenue Railway was similar to that of the Union Company employees and the findings were identical.

**Stimulate Business by Advertising.**—At the conference of officials of the government, Governors of the States and Mayors of large cities in Washington on March 3, 4 and 5, a nation wide publicity campaign to stimulate business was proposed by Roger Babson, chief of the bureau of information and education of the Department of Labor. He declared that the same direct interest which encouraged people of the country to save in time of war should actuate them to spend during the period of reconstruction, and that the necessity for immediate resumption of business could best be brought to the attention of the nation through extensive advertising.

**Municipal Line Would Put Profits First.**—City Engineer O'Shaughnessy of San Francisco, Cal., who has been advising Mayor Couzens of Detroit, Mich., on street railway matters, has returned to San Francisco and is backing up Fred Boeken, superintendent of the San Francisco Municipal Railway, in opposing the Parkside extension of the San Francisco municipal lines. Mr. O'Shaughnessy thinks an extension there would represent a loss of \$32,000 to \$48,000 annually. While this subject was being discussed it was brought out that the auto buses now handling traffic across Golden Gate Park may be continued even though operating at a loss. They provide a necessary service at a loss much less than would be entailed were the same service provided by means of an electric railway.

**Must Have Help in Paducah.**—A. S. Nichols, manager of the Paducah Traction & Light Company, Paducah, Ky., appeared before the City Commissioners on March 6, and stated that the city would have to take over and operate the railway or grant a more liberal franchise. He said that the organization had been losing money for ten years, and that under the conditions that obtain at present in Paducah it was absolutely impossible to operate the railway so as to return a profit. The company would be glad to sell to the city at a reasonable price for plant and equipment, said Mr. Nichols. In the event that the city was not interested in purchasing,

a broader franchise should be granted. This would enable the company to interest outside capital. The Commissioners took the matter under advisement.

**Reviews Spokane Franchise Provisions.**—In response to a request from the City Council of Spokane, Wash., J. M. Geraghty, the corporation counsel, has reviewed the franchise provisions of the city charter in detail with reference to their application to railway franchises. He finds that no new franchise can be issued earlier than three years prior to the expiration of an existing franchise. Mr. Geraghty finds that all of the Spokane Traction Company's franchises have more than three years to run. This is also true of many of the franchises of the Washington Water Power Company. The city charter gives the right of referendum on all franchises except as otherwise provided by law. The Supreme Court, however, has held that an electric railway franchise is not subject to referendum. According to Mr. Geraghty the two Spokane railway companies cannot consolidate or receive a new franchise from the city without the city charter being amended.

## Programs of Meetings

### Southwestern Electrical & Gas Association

The fifteenth annual convention of the Southwestern Electrical & Gas Association will be held at Galveston, Tex., on May 12, 13 and 14 at the Hotel Galvey.

### Wisconsin Electrical Association

The program of the eleventh annual convention of the Wisconsin Electrical Association to be held at the Hotel Pfister, Milwaukee, Wis., on Mar. 26 and 27 will include the following papers:

"Comments on Overhead Distribution," Frank A. Robbins, Superior Light, Water & Power Company, Superior, Wis.

"High Tension Out-Door Substations and Switching Equipment," Alfred Alfaker, consulting engineer, Chicago.

"Safety Cars," H. L. Andrew, General Electric Company, Schenectady, N. Y.

"Public Utilities Services to Industries," N. J. Whelan, Wisconsin-Minnesota Light & Power Company, Eau Claire, Wis.

"A Review of Policies of Service Extensions as Laid Down by State Commissions," A. J. Goodjen, statistician, Wisconsin Public Service Company, Milwaukee.

The program for the joint meeting with the Wisconsin Gas Association on March 26 is not yet complete, but will include an address by Chester Corey, vice-president of the Harris Trust & Savings Bank, Chicago, Ill., on "Public Utilities Securities," also an address by John S. Allen of the Railroad Commission of Wisconsin.

# Financial and Corporate

## 1918 a Year of Deficits

Pittsburgh and San Francisco Subsidiaries of United Railways Investment Company Suffered Heavy Losses

The latest fiscal year was one of decided loss for the operating electric railway subsidiaries of the United Railways Investment Company. In Pittsburgh, Pa., the net income of \$362,446 for 1917 was changed into a deficit of \$467,665 for 1918, and in San Francisco, Cal., the net income of \$263,479 in 1917 fell to a deficit of \$1,677,691 for 1918.

The United Railways Investment Company, it will be recalled, is solely a holding company, having interests in two widely separated fields. Its interests in the Pittsburgh district are represented by holding of stock in the Philadelphia Company, which controls the Pittsburgh Railways and other utilities. Its properties in California are held

through ownership of stock in the California Railway & Power Company, which in turn controls the United Railroads of San Francisco and lighting companies.

The consolidated income statement of the Pittsburgh Railways and its allied lines for the latest fiscal year, which closed on March 31, 1918, is presented herewith. The maximum of industrial activity in this district was reached in the spring of 1917. The gradual growth in traffic during the previous year continued until July, 1917, when the largest month's traffic in the history of the company occurred. After this time there was a monthly decrease. The departure of men through enlistment and the draft for service with the government and the attraction of high wages on government work elsewhere for mechanics and laborers resulted in a curtailment of general business that was reflected in reduced traffic.

The high labor costs and the uncertainties regarding necessary materials and supplies caused a gradual increase in operating expenses, the operating ratio, excluding taxes, increasing from 64.1 per cent for 1917 to 73.41 per cent for 1918; and, including taxes, from 67.97 per cent for the previous year to 77.7 per cent for the last year.

The gross earnings of the Pittsburgh Railways proper for the year ended March 31, 1918, were \$13,421,934, an increase of but \$66,962 over the previous year. The operating expenses were \$9,855,009, an increase of \$1,307,602. Taxes rose \$57,923, and the cost of power increased \$490,156 owing primarily to the unprecedented prices of coal.

### \$540,388 FOR IMPROVEMENTS

There was expended during the year \$540,398 for improvements, betterments and extensions on the properties operated by the Pittsburgh Railways. Of this \$359,487 was charged to capital account and \$180,910 was charged to a deferred account, owing to extraordinary expenditures for improvements, replacements and realignments. There was charged to income account \$91,277 as amortization of the deferred account for the same class of work.

The deficit of the combined lines in Pittsburgh for the year ended March 31, 1918, after all charges, was \$570,533. This more than equaled the surplus at the beginning of the year, so that on March 31, 1918, there was a deficit of \$68,972 to be carried forward.

The income statement of the United Railroads of San Francisco, also published herewith, is for the fiscal years ended June 30, 1917 and 1918. The decline of this company during the last year is evident without extended description, the falling off of \$1,196,247 in passenger revenue and the increase of \$808,122 in operating expenses casting a terrific burden upon the company. The decrease in net income is said to have been due principally to the lesser receipts occasioned by a strike and the heavy expenditures incidental thereto.

Profit and loss charges for last year totaled \$598,050, of which \$550,000 was for depreciation. The surplus of \$992,091 at the beginning of the year was reduced to a deficit of \$1,269,368 on June 30, 1918. During the last year the additions and betterments to property cost \$225,953, while sales and property removed involved \$107,196.

## Passenger Traffic Decreased

The Carolina Light & Power Company, which supplies electric railway service in Raleigh, N. C., carried 2,362,428 passengers during the calendar year 1918, as compared to 2,411,319 for the preceding year. The electric railway earnings amounted to \$108,740, or approximately 10 per cent of the total earnings from operation. The allied Asheville Power & Light Company also showed a decrease in passenger traffic from 5,566,567 in 1917 to 5,519,038 in 1918. The electric railway revenues of this company amounted to \$267,906 or 50 per cent of the total.

CONSOLIDATED INCOME STATEMENT OF PITTSBURGH RAILWAYS FOR YEARS ENDED MARCH 31, 1917 AND 1918

	1918		1917	
	Amount	Per Cent	Amount	Per Cent
Gross revenue from railway operation.....	\$13,726,741	100.0	\$13,648,579	100.0
Operating expenses and taxes:				
Maintenance of way and structures.....	\$1,184,094	8.6	\$1,141,119	8.4
Maintenance of equipment.....	1,288,869	9.4	826,687	6.1
Traffic.....	4,754,334	34.6	3,155,636	23.1
Power.....	2,083,981	15.2	1,552,410	11.4
Transportation.....	5,907,432	43.0	3,681,353	26.9
General and miscellaneous.....	1,589,660	11.5	1,524,233	11.2
Total.....	\$10,095,890	73.5	\$8,757,748	64.2
Taxes.....	581,653	4.2	524,484	3.8
Total.....	\$10,677,543	77.7	\$9,282,233	68.0
Income from railway operation.....	\$3,049,198	22.3	\$4,366,346	32.0
Income from auxiliary operations.....	44,866	0.3	74,268	0.5
Total operating income.....	\$3,094,064	22.6	\$4,440,614	32.5
Other income.....	128,989	0.9	172,526	1.3
Gross income.....	\$3,223,053	23.5	\$4,612,940	33.8
Rentals and interest.....	3,690,718	26.9	4,250,494	31.1
Net income.....	†\$467,665	3.4	\$362,446	2.7
† Deficit.				

INCOME STATEMENT OF UNITED RAILROADS OF SAN FRANCISCO FOR YEARS ENDED JUNE 30, 1917 AND 1918

	1918		1917	
	Amount	Per Cent	Amount	Per Cent
Passenger revenue.....	\$6,203,164	99.1	\$7,399,411	99.2
Other operating revenue.....	28,835	0.9	58,730	0.8
Total operating revenues.....	\$6,261,999	100.0	\$7,458,141	100.0
Maintenance of way and structures.....	\$286,642	4.6	\$418,983	5.6
Maintenance of equipment.....	346,703	5.5	379,696	5.1
Transportation.....	3,786,404	60.5	3,292,903	44.1
General.....	1,178,255	18.8	672,719	9.0
Total operating expenses.....	\$5,572,423	89.0	\$4,764,301	63.8
Taxes.....	434,400	6.9	487,900	6.6
Total operating expenses and taxes.....	\$6,006,823	95.9	\$5,252,201	70.4
Operating income.....	\$255,176	4.1	\$2,205,940	29.6
Other income.....	170,409	2.7	163,121	2.2
Gross income.....	\$425,585	6.8	\$2,369,061	31.8
Income charges.....	511,413	8.2	511,218	6.9
Income before deducting bond interest.....	†\$85,828	1.4	\$1,857,843	24.9
Bond interest.....	1,591,863	25.4	1,594,364	21.4
Net income.....	†\$1,677,691	26.8	\$263,479	3.5

\* Less \$25,581 for transportation for investment.  
† Deficit.

## Bay State to Be Reorganized

### Plan Provides for \$3,582,633 of New Cash from Stockholders and Scaling Down \$20,000,000 of Capitalization to Conform to Public Control Act

The plan of reorganization for the Bay State Street Railway and Massachusetts Electric Companies has been completed. It provides for raising \$6,082,633 of cash; places the capitalization of the new company at approximately \$52,396,950 and annual interest and dividend requirements at \$2,760,000, and provides for cash payments of \$3,582,633 by the sale of new securities to stockholders who subscribe.

reduction of more than \$20,000,000 from the outstanding debt and capital stocks of the Bay State and Massachusetts Electric companies.

The new company is entitled to earn 1.88 times the fixed charges under the reorganization plan. A further safeguard is that the compulsory cash requirements for fixed charges are made exceedingly small during the first two years of operation. A condensed

#### APPROXIMATE CAPITALIZATION OF NEW BAY STATE COMPANY

	Amount	Annual Return
Underlying bonds and undisturbed securities.....	\$8,053,700	\$439.64
New refunding mortgage 6 per cent one-ten year serial bonds.....	2,500,000	150.00
Total securities on which fixed charges must be paid in cash from the beginning.....	\$10,553,700	\$589.64
New refunding mortgage bonds with security under the same mortgage as the one ten-year serial 6, above mentioned, but with the provision that in the event of "available income" being insufficient, interest accruing prior to June 30, 1921, may be postponed to not later than Dec. 31, 1925:		
5 per cent bonds, due 1948.....	2,871,000	143.550
4 1/2 per cent bonds, due 1948.....	14,956,000	673,020
6 per cent bonds, due 1927.....	972,000	58.320
Total securities bearing fixed charges.....	\$29,352,700	\$1,464,535
New first preferred stock and sinking-fund stock, 6 per cent cumulative.....	4,097,000	245,820
New preferred B stock, 6 per cent cumulative.....	2,998,500	179,910
New adjustment stock, 5 per cent cumulative.....	8,719,000	435,950
New common stock, 6 per cent (approximat).....	7,229,750	433,785
Total capitalization (approximate).....	\$52,396,950	\$2,760,000

The plan of reorganization, when put into effect, will permit the acceptance of the special legislative act of 1918 and the formation of the new Eastern Massachusetts Street Railway under public trustees. The trustees, it will be recalled, will have absolute power to fix fares sufficient to pay a return covering all interest requirements, the stated dividends on the preferred stocks and 6 per cent on the common stock of the new company. Based upon the Public Service Commission's appraisal of \$40,282,340 in its decision of Aug. 31, 1916, plus subsequent additions, the property valuation will be about \$46,000,000, on which \$2,760,000 is the approximate amount of the permitted initial annual return.

The credit of the State is pledged for the payment of the principal of not exceeding \$4,000,000 of serial mortgage bonds of the new company maturing within ten years from the date of issuance. The act requires that \$2,500,000 of these bonds be sold immediately so as to produce \$2,500,000 cash, of which \$2,000,000 must be used for future additions and improvements and \$500,000 set aside as a reserve fund; and that \$1,000,000 of cash additional must be realized from sale of other securities of the new company and applied to the rehabilitation of the properties or other corporate purposes. This makes a total of \$3,500,000 of new cash which must be obtained, as a prerequisite to the formation of the new company under the act.

The proposed capitalization of the new company conforms to the act, so that the permitted return will always be sufficient to pay all fixed charges and regular dividends. It represents a

approximate statement of the capitalization of the new company is given in the table above.

The amounts of new securities to be received by subscribing shareholders (per share) are as follows:

	Per Each Share, of Bay State Preferred Upon Payment of \$15	For Each Share of Mortgage Bonds of Electric Preferred Upon Payment of \$10	For Each Share of Mortgage Bonds of Common Upon Payment of \$5
New refunding mortgage 6 per cent.....	\$15	\$10	.....
New first preferred stock, 6 per cent.....	.....	.....	\$6
New preferred B stock, 6 per cent.....	100	.....	.....
New adjustment stock, 5 per cent.....	12	2	.....
New common stock.....	.....	24*	10
Total par value, exclusive of option warrants.....	\$127	\$36*	\$16
Option warrants for adjustment stock at par.....	.....	\$25	\$10

\* Estimated.

† The option warrants give the right to purchase new 5 per cent cumulative adjustment stock (par value \$100) at \$36 per share during the first year, \$38 per share during the second year and \$40 per share during the third year after reorganization, subject in each case to an interest and dividend adjustment.

Lee, Higginson & Company, Boston, New York and Chicago, have underwritten the purchase of \$2,500,000 of serial bonds and \$1,000,000 of the cash subscriptions offered to stockholders. There will, however, be no commitment by the underwriters until at least \$2,000,000 of the above-mentioned \$3,582,633 cash has been subscribed by the present shareholders. If the shareholders subscribe less than \$2,000,000, the reorganization plan will fail.

Lee, Higginson & Company are offering temporary negotiable receipts for the refunding mortgage one ten-year serial 6 per cent bonds at 100 and interest. The bonds will be in coupon form for \$1,000, registerable as to principal only. They will be callable at 105 on any interest date on sixty days' notice.

### Rhode Island Deficit Increases

The annual statement of earnings of the Rhode Island Company, Providence, R. I., just filed with the Public Utilities Commission, shows a net deficit of \$777,523 for 1918. This is about \$265,000 larger than the deficit for 1917.

The total operating revenue for 1918 was \$6,311,285, which is \$310,682 or slightly more than 5 per cent more than in 1917. Operating expenses totaled \$5,115,551, an increase of approximately \$600,000 or 13.2 per cent. The net operating revenue for 1918 was \$1,195,734.

Deductions totaled \$2,084,591, more than half of which represented rental charges. Taxes showed an increase of 7.78 per cent or \$51,000, totaling \$604,249. Interest and discounts registered a 9 per cent advance, aggregating \$316,501.

A detailed report of operations for December, which was filed with the annual statement, showed an increase of \$78,371 or practically 17 per cent over December, 1917. The total passenger earnings for December, 1918, reached \$541,590.

The company's policy in discontinuing non-paying lines in order to reduce as far as possible the deficit is reflected in the December statement. This shows a decrease of approximately 150,000 car-miles, the total mileage for the month being 1,194,663 against 1,347,055 in 1917. The receipts per car-mile increased from 34.39 cents in December, 1917, to 45.33 cents in December, 1918.

### Want Tax Rate Reduced

Representatives of electric railways in San Francisco, Los Angeles, Oakland and other cities of California have petitioned the State Board of Equalization for a reduction in tax rate on gross earnings. To support the plea, the California Electric Railway Association promised the board to present figures showing a tremendous loss in earnings due to increased cost of labor and materials. It is intended to show that unless a reduction in taxation is granted by the State the railroads will be forced to raise fares. Taxes collected from railroads, including electric railways, amount to \$7,982,910 for the present fiscal year. Of this amount the Southern Pacific, Santa Fe, Salt Lake, Northwestern Pacific and Western Pacific pay \$5,995,572. This leaves a balance of \$1,987,337, which is paid by the non-government railroads and electric railways of the State. The rate of taxation is 5 1/2 per cent of the gross earnings.

## Protective Committees for New York Surface Lines

It was announced on March 8 that because of financial problems confronting the New York (N. Y.) Railways, committees had been appointed to represent the holders of both the real estate and refunding 4 per cent bonds and the adjustment 5 per cent bonds.

Harry Bronner is chairman of the first committee and the other members are William A. Day, Casper W. Morris, Charles A. Peabody, W. H. Remick, Frederick H. Shipman, and Harold Stanley. F. J. Frost is secretary and J. P. Cotton counsel. This committee said that its members already represented directly \$4,000,000 of the bonds. Holders of the bonds have been invited to deposit them with the Guaranty Trust Company, New York, N. Y., under a deposit agreement.

The committee of the income bondholders are John Candler Cobb, chairman; Oscar Cooper, Haley Fiske, Frank L. Hall, Duncan A. Holmes, Ernest Stauffren, Jr., and Richard H. Swartwout. B. W. Jones is secretary and Murray, Prentice & Howland are the counsel. Holders of these bonds have been invited to deposit them with the Bankers' Trust Company, New York, N. Y., the Old Colony Trust Company, Boston, and the Commercial Trust Company, Philadelphia. The deposit agreement is being prepared.

## Aurora, Elgin & Chicago Protective Committee

A protective committee has been formed to represent holders of Aurora, Elgin & Chicago Railroad first and refunding mortgage 5 per cent bonds, due 1946, and three-year collateral trust notes, due 1921, secured by the first and refunding mortgage bonds.

The committee comprises R. M. Stinson, chairman, of R. M. Stinson & Company, Philadelphia; George H. Stuart, 3d, treasurer, Girard Trust Company; Lewis B. Williams, of Hayden, Miller & Company, Cleveland; W. T. Goodale, Saco & Bideford Savings Institution, Saco, Me., and A. B. Conant, of A. B. Conant & Company, Boston.

The Girard Trust Company, Philadelphia, Pa., is depository and the International Trust Company, Boston, and the Citizens' Savings & Trust Company, Cleveland, are subdepositories. Deposits of securities are to be made before March 31.

On Jan. 1, 1919, default was made in the payment of the interest due on the first and refunding mortgage 5 per cent bonds, \$3,079,000 par value of which are outstanding in the hands of the public and \$1,626,000 par value of which are deposited as collateral security for the three-year collateral trust notes, of which there are \$1,219,000 outstanding. The company has notified holders of these three-year notes that the interest due on same on March 1 will not be paid.

On Dec. 1, 1918, default was made in the payment of the interest due on

\$1,546,000 par value of Elgin, Aurora & Southern Traction Company first mortgage bonds, which interest must be met before June 1, 1919, or the holders of the Elgin, Aurora & Southern Traction Company bonds will have the right to compel the foreclosure of the mortgage securing same.

## Receivers' Powers Defined

Presiding Justice Tanner of the Rhode Island Superior Court has approved the decree defining the powers of the three permanent receivers appointed for the Rhode Island Company, Providence, R. I., on March 4.

Specific reference is made as to the payment of wages, salaries, etc., the receivers being authorized to pay, subject to the order of the court, any such claims as have been incurred within six months past and now unpaid. As the payment of back wages to employees of the company has not yet been settled, this clause it is believed will govern the future disposition of these claims, although this matter was not specifically referred to at the hearing.

As to the surrender or continuance of any of the leases, or contracts now vested in or belonging to the Rhode Island Company, the court reserves the right hereafter to direct the receivers to surrender, reject or adopt any such leases or contracts.

Presiding Justice Tanner read the decree that had been drawn by the attorneys and called attention to the provisions of the ninth paragraph in relation to making various payments, including salaries. He said that such a payment must follow the statutes and that the priority rule therein contained must be observed. The court reminded counsel that although wages accruing during the six months next preceding the adjudication of insolvency to the extent of \$100 in any case are regarded as a preferred claim, they are not necessarily a first preferred claim under the statutes.

Upon the entry of the decree by the court, Eugene A. Kingman of Edwards & Angell, asked leave to file an intervening petition in behalf of leased lines requiring the receivers to elect as soon as possible whether they will adopt the leases under which the roads have been operated by the Rhode Island Company.

The court granted permission to file the intervening petition and assigned it for hearing on April 2. The petition also asks that the receivers shall pay all the back rent that accrued under the leases prior to the appointment of the receivers. The petitioners ask specifically:

That the receivers pay all rentals accruing under said leases prior to the date of appointment of said receivers and in accordance with other terms of said leases and

That the receivers be directed by this honorable court to apply for leave to adopt all of said leases in their entirety and

That failing such election your petitioners be declared entitled to resume and take possession of all the demised premises and property and

That your petitioners may have such other and further relief in the premises as to your honor shall seem meet.

## Financial News Notes

Car Trust Certificates in Trenton.—The Board of Public Utility Commissioners has authorized the Trenton & Mercer County Traction Corporation to issue \$121,000 of 6 per cent car trust certificates in part payment for twenty one-man safety cars.

If You Have a Claim, File It.—All creditors of the Fort Wayne & Northern Indiana Traction Company, Fort Wayne, Ind., and all parties having or holding any claim of any kind against the company, or its property or franchises, are ordered to file their itemized and verified claims with the receiver on or before April 10, 1919.

Wants to Extend Its Bonds.—Unable to finance payment at maturity on April 1 of the \$2,000,000 of its first mortgage twenty-year gold bonds, the Denver (Col.) Tramway offers to holders to extend the securities for five years. The bonds will be subject to redemption at 102½ on any interest date on thirty days' notice. Interest at 6 per cent a year will be paid.

Abandonment Case Put Over.—An application on behalf of the Huntington (N. Y.) Railroad to discontinue the system came up before Public Service Commissioner Fennell on March 10. As there is a petition before the Supreme Court to dissolve the corporation Commissioner Fennell said that he would await the court's action in the matter. Meanwhile the road will be operated as usual. According to the company, the road was operated at a loss of \$55,000 for 1918.

No Action on the Common Dividend.—According to W. W. Lanahan & Company, Baltimore, Md., no action has been taken on the common stock dividend of the Monongahela Valley Traction Company, Fairmont, W. Va., and probably none will be taken until conditions justify such action. Lanahan & Company say that this seems wise under the circumstances, "for traction companies generally have been having an unusually hard time of it during these days of high prices and increased labor costs."

Inactive Company Dissolved.—The East St. Louis & St. Louis Traction Company, which was formed by officials of the East St. Louis & Suburban Railway, East St. Louis, Ill., to operate cars on the free bridge, has returned its charter to the Secretary of State of Illinois and dissolved. The charter allowed the company to operate cars on the free bridge if the consent of the city of St. Louis was obtained. The consent was never sought and inasmuch as St. Louis proposes to operate on the bridge, the East St. Louis & St. Louis Traction Company decided to dissolve.

**Junking of Entire Line Threatened.**—The entire Spokane & Inland Empire Railway, with the possible exception of the Coeur d'Alene division, may be junked unless the people of Spokane give the company their whole-hearted financial and moral support. Waldo G. Paine, vice-president of the company, said recently that the two city lines of the company might be abandoned if the merger of the lines in Spokane failed. Fred E. Conners, receiver of the company, has added that the whole of the company's property might be torn up in order to prevent further loss to the bondholders.

**Alleged Default by Philadelphia Railways.**—A suit in equity was filed on March 11 in Common Pleas Court by the Real Estate Title Insurance & Trust Company against the Philadelphia (Pa.) Railways alleging that default has been made in a three months' payment on a \$400,000 issue of 5 per cent bonds. The trust company asks the court to sell the property in order to pay the overdue interest. The United States Shipping Board, Emergency Fleet Corporation, is also named as defendant, having operated the line for the transportation of workmen to Hog Island since 1918.

**Union Traction Expenses High.**—The revenue of the Union Traction Company of Indiana for the year 1918 was \$3,198,820 as compared to \$3,066,466 for 1917, an increase of \$132,354 or 4.32 per cent. The operating expenses for 1918 were \$2,236,487 as compared to \$2,023,609 for 1917, an increase of \$212,877 or 10.32 per cent. The result for 1918 was a deficit of \$34,966, without deduction of sinking-fund payments, a decrease of \$77,138 from the net income of \$42,141 in 1917. After the deduction of sinking-fund charges the deficit was \$98,542 as compared with a deficit of \$17,649 in 1917, a loss of \$80,893.

**Winnipeg More Hopeful.**—The gross earnings of the Winnipeg (Man.) Electric Railway for the calendar year 1918 at \$3,588,723 showed a gain of \$249,713 as compared to these of the preceding year. The increased wages and other operating expenses, however, swelled the operating charges so that the net income of \$289,784 (excluding depreciation) represented a falling off of \$63,845. The year 1918 was one of difficulty on account of the influenza epidemic and a sympathetic strike with the city fire brigade. On the other hand, jitney competition was eliminated. The outlook is said to be much brighter than for a number of years past.

**Bills in Equity in B. R. T. Case.**—Two bills in equity have been filed in the United States District Court to protect the formal rights of the Central Union Trust Company, New York, N. Y., as trustee under two mortgages of the Brooklyn Rapid Transit Company in pursuance of orders granted a few days ago by Judge Julius M. Mayer. In one instance the issue was of \$60,000,000 of long term bonds issued by the New York Municipal Railway Cor-

poration and in the other \$29,000,000 of 6 per cent ten-year bonds dated June 1 last issued by the Brooklyn Rapid Transit Company. In each case the terms of the mortgage provided that the establishment of a receivership should be accounted a cause for foreclosure. It is probable, however, that the two bills may be regarded as of a formal character designed chiefly to protect the rights of the trust company.

**Beneficial Results Likely to Follow.**—Francis T. Homer, president of the American Cities Company, New York, N. Y., in a statement to banking houses, which have distributed securities of the New Orleans Railway Light Company, said: "The appointment of a receiver for the New Orleans Railway & Light Company should ultimately be beneficial to all security holders. The receiver, with the approval of the court, can refuse to perform certain large power contracts which still have some years to run and which by abnormal increases in cost have resulted in a loss to the company. It is expected that with this power and with the fact that the overwhelming majority of this class were willing voluntarily to modify their contracts the receiver will be able to adjust the contracts on a basis of fairness, which will result in an increase of revenue from \$140,000 to \$200,000 a year. Injunction suits against an increase in fare to 6 cents and an increase in electric and gas rates have been decided by the court of first instance in favor of the railway company."

**Further Hearings on Spokane Abandonment.**—Further negotiations between the city of Spokane, Wash., and the Washington Water Power Company will be held before the future of railway lines sought to be abandoned by the company is settled. The City Commissioners in conference declined to approve the adjustment whereby the company agreed to operate its cars on North Hamilton Street and South Maple Street, provided it was allowed to discontinue service on Second Avenue. The Commissioners felt that it would not be proper to secure service for one section of the city at the expense of another and that all lines should operate if the city was to give its approval to any settlement. D. L. Huntington, president of the Washington Water Power Company, expressed a desire to meet the wishes of the City Commissioners if it could be done and asked that the matter be allowed to remain open until further investigation. City officials are hopeful that the matter will be settled satisfactorily and that service will be restored on all lines.

**More Rhode Island Bondholders Organized.**—The Rhode Island Suburban Railway, owner of the main power house and considerable trackage operated under leases by the Rhode Island Company, Providence, for which permanent receivers have been appointed by the Superior Court of Rhode Island, has appointed a protective committee to

conserve the interests of the bondholders. Holders of bonds of the company are requested to deposit them with all coupons attached on or before April 15, with the National Exchange Bank, Providence, as depository under a deposit agreement. Michael F. Dooley, president of the National Exchange Bank, is chairman of the committee. The other members are Edward B. Aldrich, trustee of the Estate of Nelson W. Aldrich; Benjamin A. Jackson, president of the Rhode Island Suburban Railway; George L. Shepley, president of the Rhode Island Insurance Company; Frederick S. Peck, treasurer of Asa Peck & Company, Inc.; and Francis E. Bates, secretary pro tem of the National Exchange Bank, all of Providence.

**Slight Increase in Interest Fund.**—The operating statement of the Cleveland (Ohio) Railway for January shows that \$12,158 had been added to the interest fund, bringing it up to about \$35,800. From this it will be seen how close this fund, which is the barometer for the rate of fare, came to being wiped out. It was supposed not to go lower than \$300,000. No reduction in fare can be made until it reaches \$700,000. The company was forced to set aside \$123,000 from the January income to take care of the 6 per cent extra income tax on last year's revenue to comply with the new revenue law this year. Had it not been for this, a much larger sum would have been added to the interest fund. As this amount will not have to be set aside hereafter, some hopes are entertained that the interest fund will increase rapidly for the remainder of the year. January traffic showed a decline of 1.40 per cent from that of the same month in 1918, but the passenger earnings were about 40 per cent greater. The average fare for January, 1918, was 3.74 cents and for January, 1919, 5.31 cents.

**Results in Jersey in January.**—The Public Service Railway, Newark, N. J., in its monthly report, comparing January, 1919, and January, 1918, filed with the Board of Public Utility Commissioners as required by that board's order of July 10 last, shows that with the increased fare to 7 cents and a 1-cent charge for initial transfers the total passenger revenue for last January was \$1,892,145 and that for January, 1918, was \$1,385,095, while the total operating expenses for January, 1919, were \$1,425,259 and for January, 1918, they were \$942,325. While the increased rate of fare brought an increase to the company in passenger revenue the sum of \$507,049, operating expenses increased \$484,923. The report shows that the total income deductions were \$429,333 for January last and \$432,185 for January, 1918, and the net income deductions for last January \$65,990 and for January, 1918, \$76,873. For January, 1919, the revenue passengers carried were 26,366,858; transfer passengers, 6,266,321; revenue from cash fares, \$1,831,689; revenue from transfers at 1 cent each, \$60,455.

# Traffic and Transportation

## Courtesy Campaign

Chamber of Commerce, Springfield, Mass., Wants a "Courtesy City"—  
Railway in Plan

The convention department of the Chamber of Commerce of Springfield, Mass., has initiated a plan to encourage courtesy in the various groups of men who come in contact with the public, and from whom the visitor will obtain his first impression of Springfield. The campaign embraces the conductors and motormen, policemen, hotel clerks, red caps, newsboys and messenger boys as having unusual opportunities for rendering service to the traveling public. The general public has also been invited to participate in the campaign by the Chamber of Commerce.

### TO PATRONS OF SPRINGFIELD STREET RAILWAY

The Springfield Chamber of Commerce through its Courtesy Campaign Will Put Springfield on the Map as the

## Courteous City

Teach Courtesy by Practising Courtesy

If You See an Act of Courtesy by the Conductor or Motorman of this Car, write to the Committee about it. Your Letter will assist us in selecting the Most Courteous Conductor and Motorman. Your cooperation is solicited.

Address Chamber of Commerce Courtesy Committee.

CAR CARD AND DASHER SIGN USED IN COURTESY CAMPAIGN

Arrangements which the convention department submitted, applying especially to the conductors and motormen of the Springfield Street Railway Company, are as follows:

1. A committee shall be appointed, comprised of representatives of employees and officials of the street railway company and members of the Chamber of Commerce. This committee shall determine the conductor and motorman best liked by the public each month, during a period of six months, beginning March 1 and continuing to Sept. 1.
2. Notices shall appear in the trolley cars, announcing this contest and requesting the co-operation of the public by communicating with the committee whenever a conductor or motorman has exhibited any unusual courtesy to passenger or passengers. This committee shall determine at the end of each month, by the correspondence received, which motorman and which conductor have been most polite.
3. The Chamber of Commerce offers as a reward for this service a bonus of \$5 and an attractive medal to the contestants selected by the committee.
4. Arrangements shall be made with local newspapers to publish weekly articles concerning the contest, and at the end of each month, feature pictures and story regarding the successful contestants.

To encourage interest in this competition the cards reproduced in the accompanying engravings were prepared. One is a car card; the other is a dasher sign. The Chamber of Commerce also arranged for two talks on courtesy to the motormen and conductors by Dr. Stanley L. Krebs, member of the Institute of Mechanical Art, New York. These talks were given in the morning

and in the evening of Feb. 28 at the Assembly Room of the Hooker Street carhouse and attracted large attendance.

The courtesy campaign started on March 1 and will continue for six months. It is receiving much favorable comment in the local press.

## New Orleans Suggestions

Speaker Before Louisiana Engineers Points Out Ways of Improving Electric Railway Service

In a paper recently presented before the Louisiana Engineering Society W. T. Hogg discussed means of overcoming the "long, circuitous routes," and "clumsy transfer system" that in his

trof, Mr. Hogg said that in view of public distrust and the credit condition, only two courses are possible—foreclosure and the organization of an entirely new company or the purchase and the operation of the present railway property of the New Orleans Railway & Light Company by the city.

## Still Feels the Pinch

Flat Five-Cent Fare Established in Washington Last November Not Sufficient

Declaring that since the 5-cent fare became operative on Nov. 1, it has failed to meet its operating expenses, taxes and interest charges by \$65,911, the Washington Railway & Electric Company, Washington, D. C., has applied to the Public Utilities Commission for additional financial relief.

### SUBMITS THREE METHODS

No specific railway fare is recommended in the petition submitted, the railway proposing three methods by which revenue may be increased and recommending that these methods be considered by the commission. They are:

1. Increase in the initial rate of fare in the District.
2. Establishment of a zone system in the District, with the initial charge in one zone and an additional lesser charge in the second zone.
3. A charge for transfers issued by the company to its own lines and a charge for inter-company transfers issued to and received from the Capital Traction Company, the latter charge for inter-company transfers representing a differential in favor of the company. In lieu of the establishment of joint rates between said companies arising out of the issuance of inter-company transfers.

The company says that the increased gross receipts resulting from the increased fares in the District and Maryland have been more than absorbed by operating expenses. In this connection the petition says:

The net results from railway operation for the month of December, 1918, we estimated would show a decrease in operating income of \$35,829, compared with the pre-war period. Since then our actual figures for December show this decrease to be \$37,103; and for January, 1919, a decrease in operating income of \$41,139, compared with the pre-war period, a loss further increased by additional interest charges of \$9,144, making a total of \$50,284.

### PETITION PRESENTS FIGURES

The petition then sets forth detailed figures for the months of November, December and January under the 5-cent fare showing that, out of its own earnings, it has failed to meet operating expenses, taxes and interest charges by \$65,911, in comparison with a surplus above such charges in the pre-war period. "From which it appears that decrease in net income would amount to \$550,183 annually," the petition avers. Previous to last November six tickets were sold for a quarter in Washington.

On March 10 the Public Utilities Commission fixed March 21 as the date for the hearing on the application of the company. The Capital Traction Company, which also operates in Washington, has not signified whether it will ask for a similar increase.

COURTESY CAMPAIGN  
**SMILE**  
SAY PLEASE  
AND THANK YOU  
IT COSTS NOTHING

opinion characterize the electric railway system in New Orleans as operated by the New Orleans Railway & Light Company.

General principles upon which any changes for the New Orleans Railway & Light Company should be made were said to be the following:

1. Adoption of a standard spacing of parallel car lines according to (a) comfort and convenience and (b) traffic density (e.g., a spacing of six blocks is deemed acceptable).
2. Prohibition, wherever reasonable, of double-track lines on streets less than 60 ft. wide.
3. Routes as far as possible on boulevards for speed and safety.

Mr. Hogg worked out detailed routes to conform to these principles. For handling the extra cars during peak-load hours he suggested fast express service for long-haul passengers. He said that to secure an annual saving of \$500,000 by these means an initial capital expenditure of only \$150,000 would be required.

With efficient routing, it was said, the present equipment is sufficient to furnish a seat for every passenger even in rush hours with a reasonable degree of efficiency. As soon as financial conditions permit, however, 100 new cars of fifty-two-seat capacity should be purchased. These should be equipped for multiple-unit operation.

In regard to the question of con-

## Seek Relief in New York State

### Hearing Before Joint Legislative Committee on Bill Designed to Permit Commission to Pass on Cases on Their Merits

The joint hearing of the Senate and Assembly judiciary committee of the Legislature of New York on the Carson-Martin bill, took place in the Assembly Chamber at Albany, March 12, starting at 2.30 p.m., and continued to 6.30 p.m. The Carson-Martin bill is designed to amend the Public Service Commission law by extending the jurisdiction of the Public Service Commissions over the rates, fares and charges of electric railways fixed by agreement with local authorities, notwithstanding limitations in their franchises.

#### OPPOSITION HEARD FIRST

The opposition to the bill was heard first. It was led by Corporation Counsel Burr of New York City. Mr. Burr also represented and spoke on behalf of the Mayors' Conference Committee. He read a long letter, practically a legal opinion which he had sent to Mr. Martin, chairman of the Assembly judiciary committee. In this letter Mr. Burr dealt principally with the Quinby, or so-called Rochester, case against the Public Service Commission, 223 N. Y. 244, placing his own interpretation on the opinion of Justice Crane, saying that the majority of the court had not sustained Judge Crane's deduction.

Mr. Burr contended that the present bill was extremely objectionable, not only in that it sought to deprive the Board of Estimate & Apportionment of New York City or other municipal authority of a voice in deciding whether the fare provisions should be increased, but furthermore in that it delegated to the commission alone the function of passing upon applications to increase fares merely upon the basis of determining whether the private companies are engaged in operating at a loss under the present value of their property.

#### CITY OFFICERS APPEAR

Former City Comptroller Metz and former Congressman of Greater New York also spoke against the bill, stating that the Chamber of Commerce of Brooklyn was opposed to the giving of the power provided in the bill to the Public Service Commission. He made it plain, however, that the Brooklyn body did not oppose any proposed increase of rates if better service were to be given by the operating companies than was being rendered at the present time. Other civic bodies of the city had also gone on record along this line. Stewart Brown, representing some 10,000 or more real estate owners of Greater New York, also spoke in opposition to the bill, mainly on the ground that the condition of affairs in which the railways now found themselves was largely brought about in the city of New York by the railways themselves through overcapitalization.

Other speakers appeared representing many of the upstate cities, princi-

pally those connected with the Mayors' Conference Committee. They alleged overcapitalization and watering of stock, high rentals and excessive salaries.

Those in favor of the bill were led by A. W. Loasby, president of the First Trust & Deposit Company, Syracuse, Ex-Supreme Court Justice and Governor Charles Evans Hughes, representing the Equitable Life Assurance Society, New York Life Insurance Company and the Metropolitan Life Insurance Company, which hold and represent more than \$43,000,000 of the securities of the railway companies; Mr. Cobb, Boston, representing more than 5000 stockholders of the local railway in New York City, and A. E. Kalbach, receiver of the Second Avenue Railway, New York City.

Mr. Hughes said that the bill did not increase or reduce rates or fares. It fixed no definite rate nor did it change the basis now established by the statute upon which reasonable rates were to be determined. It was proposed by the pending bill to amend the Public Service Commission's law so as to confer upon the commissions the power in a proper case to fix a rate of fare to be charged by a railroad corporation or a street railroad corporation, "notwithstanding a definite rate, fare or change prescribed by any franchise or contract of the local authorities of any city or other political subdivision of this State," etc.

According to Mr. Hughes the pending bill if enacted into law would confer upon the commissions in clear and definite language the power to change rates in such cases as that in Rochester, so that the rates to be charged should be just and reasonable. He said that until the Court of Appeals decision in the so-called Rochester case it was supposed that the commissions had plenary power over rates and that the power of the commissions affected every electric railway in the State, whether this rate was fixed by general or special statute or by franchise or by contract with a municipality.

The Quinby, or Rochester decision, however, seemed to lay down the rule that, although the Legislature had definitely delegated to the public service commissions the power to change rates of fare and raise or lower them so that they should be just and reasonable, there was no distinct statement of legislative intent to give the commissions power to change rates which had been fixed by agreement with municipalities.

Mr. Hughes contended that the matter of rates was within the control of the State in its exercise of the police power and that agreements with local authorities did not deprive the State of its authority to supervise rates and to determine the just and reasonable rates to be charged. He said that in the Quinby case the power of the Legis-

lature had not been denied and that the clear expression of opinion in the so-called South Glens Falls case established the power of the Legislature beyond any reasonable question.

Mr. Hughes said there was no basis for the contention that the provision of the Constitution as to local consents has in any way ousted the Legislature of its police power or of its normal governmental supervision of charges. The constitutional provision as to consents contained no language permitting such a conclusion. Such an ousting of the Legislature of its appropriate powers of protection could not be implied. Municipal contracts, including franchise agreements, were at all times presumed to be subject to the police power of the State acting through the Legislature or through a duly authorized agency.

Under the Public Service Commission's law, the railroad law and the laws of the State of New York as they now stood, electric railways throughout the State were facing bankruptcy. The magnitude of the disaster which would follow wholesale receivership was apparent only when one considered that the securities issued by these companies were not held by a few persons or corporations, but were held by a large number of persons in small amounts. Mr. Hughes said that the enactment of the pending bill would go a long way toward correcting the enormous shrinkage and loss of credit of the companies and also a long way toward restoring public confidence.

Mr. Kalbach stated that the Second Avenue Railroad had been in the hands of a receiver since 1908. Due to the stress of the present time the company would probably be unable even to pay the interest on the certificates which had been issued by the receiver.

Ex-Judge Nathan L. Miller of the Court of Appeals, of Syracuse, representing financial institutions of the city of Syracuse, appeared in favor of the bill. He reiterated and sustained many of the points made in the argument of Judge Hughes. Mr. Miller said that the Legislature has the power to grant to the commission the relief sought in the bill.

A feature of the hearing was the appearance of representatives of the employees seeking the passage of the bill.

Letters from financial institutions and banks were read, and speakers and representatives in person appeared in favor of the bill from every corner of the State.

A. W. Loasby stated that the principal interest of the bankers centered in the fact that they and individuals in the State hold more than \$1,500,000,000 of securities of the electric railways as investments and that under the present conditions the value of these securities was seriously jeopardized owing to the inadequate earnings made by the companies.

In addition to those already mentioned there were present one or more officers of nearly every electric railway in the State.



## Wants Local Line Segregated

Bridgeport Committee Recommends Relief for Connecticut Company, Hoping for a Return to the Five-Cent Fare

After months of investigation the traffic commission of Bridgeport, Conn., in its report submitted to the Common Council recommended the return of the 5-cent fare on the lines of the Connecticut Company in Bridgeport with a five-minute service on all lines. The 6-cent fare, under the present service conditions, is characterized as "useless," to meet the company's financial burden. The report has been referred to the miscellaneous committee for consideration. The commission's report embodies a number of important recommendations, including the following:

1. Separation of the local electric railway lines from the Connecticut company to permit a trial period within which the local trolley properties may be operated independent of the Connecticut Company's properties as a whole.
2. Regulation of jitney buses, including provision for the filing of an adequate surety bond to protect passengers in case of accident.
3. Radical changes in the regulation of vehicular and pedestrian traffic, suggesting ordinances similar to those in force in other metropolitan cities.
4. Installation of at least fifty Birney one-man cars with a view to operating suburban and interurban cars within the limits of the skip-stop system, leaving the local and short haul business to the one-man cars.
5. Appointment of a committee to include the trustees of the Connecticut Company to devise means to finance and carry out the recommendation that the local lines be operated as a separate unit.

In considering the Connecticut Company's properties as a whole the committee calls attention among other things to the following facts:

Although the cost of labor, materials, supplies and equipment has increased in some instances more than 200 per cent, the income of the Connecticut Company has decreased to such a point that expenses are greater than revenue.

The company now carries a passenger from Ash Creek to Devon, about 11 miles, for one fare, 6 cents. The same distance on the steam railroad costs 33 cents.

The point is that the railway is giving its patrons service at less than cost. This, of course, cannot continue indefinitely without a complete and utter collapse of the railway enterprise.

Entering into the cost of this service is the requirement made by cities that the railway pay for paving between its rails and 2 ft. on either side. This has cost the Connecticut Company an average of \$310,000 a year on its system since 1912, which must be added approximately \$200,000 of expense incurred in replacing of rails and ties incidental to how the paving of the streets prevent the \$200,000 expenditure could have been delayed a few years were it not for the requirements of the cities that new pavement be placed.

Summed up, payments to the State and communities amount to more than \$1,150,000 a year, more than 10 per cent of the company's gross income.

These taxes and assessments represent a cost of \$2.10 for every car operated by the company, while the jitneys pay an average of less than \$21, and operate over paying paid for largely by the trolley riders. In other words, the tax paid by the railway, per car, is 100 times the amount paid by the jitney owner. Everybody knows how dirty and narrow the streets prevent the people from getting aboard railway cars and in general endanger the public, without being responsible for accident to their patrons.

If the electric railways were in the same position that their public utility companies are, they would be required merely to replace pavement in as good condition as they found it when making changes, yet they are required to pay for new pavements to the extent of more than \$300,000 a year.

The policy of the State has not permitted such an unfair competition with its water, gas, electric light and telephone companies, and it should regulate the jitneys as to routes and hours of service and require a surety to guard against loss of life or injury by accident.

Your commission is presenting these facts as they must be taken into account in considering the problem of securing adequate trolley service at a minimum fare.

The committee points out that the Connecticut Company has suitable equipment to cover suburban and interurban service, and with the installation of a liberal number of safety cars, it is the opinion of the commission that if the local system were operated as a unit under the recommendations summarized previously in this article, it would be possible to secure financial relief and the hearty support of the riding public, with a resulting return to the 5-cent fare for a reasonable haul.

The committee recommends in consideration of its general findings that the necessary action be taken to empower the city attorney to appeal to the United States District Court for a modification of the decree under which the trustees of the Connecticut Company operate, to permit a trial period within which the local railway properties may be operated independent of the Connecticut Company's properties as a whole.

## Pacific Electric Wants General Increase

Following its action of a few days ago, in which it asked the Railroad Commission to increase its fares in Los Angeles by constricting the 5-cent zone and providing a blanket fare of 8 cents, the Pacific Electric Railway on March 3 filed an application with the commission for authority to make a general increase in its passenger rates. It asks that in all points outside of the city of Los Angeles it be permitted to establish a cash 7-cent fare where the same is now 5 cents; also a coupon book of twenty tickets to be sold for \$1, the tickets to be used within ten days and at the rate of not more than two a day, the idea of the book being to maintain the 5-cent fare for the daily rider. This latest proceeding affects fares within the cities of Glendale, Long Beach, Pasadena, Pomona, Redlands, Redondo Beach, Riverside, San Bernardino, San Pedro, Wilmington, Santa Ana, Santa Monica, South Pasadena, Venice and Santa Monica-Ocean Park-Venice-Playa del Rey.

In these communities the Pacific Electric Railway would charge the 7-cent fare and sell the coupon books. The company also asks for authority to have its minimum charge for interurban fares increased from 5 to 7 cents, and that the 10-cent round-trip fare be made 14 cents. The interurban fares will affect Claremont, Colton, Lankershim, Ontario, Fullerton, Glendale and practically all the small towns and cities on the 600 miles of track operated by the Pacific Electric Railway.

The company also wants permission to charge \$1.40 for forty-ride school tickets that now sell for \$1.

## Metal Tokens at Boston

Public Appreciates Them as Far Superior to the Pasteboard Tickets Which They Replace

Metal tokens replaced paper tickets on the entire system of the Boston (Mass.) Elevated Railway beginning Feb. 22. Each token is good for one fare, the present unit being 8 cents. The tokens are slightly larger than a 5-cent piece. They are sold by all conductors, at prepayment stations and in various designated stores in different parts of the metropolitan district.

### WOODEN TICKET BOXES REPLACED

The wooden ticket boxes used on all cars were removed mainly during the night before the metal tokens became valid for transportation, and fare boxes were substituted for them. This was a simple matter as fare boxes were used previously to the paper tickets and practically all cars were already equipped with fare box standards, the fare boxes and registers being stored for use with the metal tokens.

Each token bears on one side the inscription "Good for One Fare" and on the reverse side the signature of H. L. Wilson, treasurer of the company. When the metal tokens were adopted the company issued a regulation rendering all paper tickets invalid for transportation. These paper tickets were redeemed either at the company's offices or were exchanged for metal tokens in the conductors' hands.

Passengers are required to deposit their tokens personally in the fare boxes. It is expected that the use of the tokens and recording fare boxes will decrease losses in revenue accruing from misuse and theft of paper tickets. In case a two-zone fare system goes into effect in April, as planned, the tokens can be used in place of nickels, if desired.

The tokens used at Boston were purchased from the Waterbury Button Company, Waterbury, Conn. The order was for 3,000,000 of the disks. The tokens are of so-called "high brass" and weigh about 10 per cent less than a 5-cent piece, being of the same diameter and thickness. They are now made in a single stamping operation, a pressure of about 16 tons being applied in "minting" each token. No changes were required in the fare boxes. The public appears to appreciate the tokens as far superior in convenience to the pasteboard tickets which they replace. From 600,000 to 700,000 tokens are used daily on the system.

### STORY OF COUNTERFEITS DENIED

Erroneous press accounts have recently appeared at Boston and elsewhere to the effect that the company was being flooded with counterfeit tokens, metal slugs, buttons, etc. Inquiry at the office of H. L. Wilson, treasurer of the company, by the representative of the ELECTRIC RAILWAY JOURNAL at Boston, disclosed the fact that only two counterfeit tokens have so far been received, and one of these was taken

from a transfer box. Both were wretched imitations of the genuine tokens, one being lead-colored and the other roughly stamped and entirely devoid of the clear-cut characteristics of the tokens themselves.

A few tokens have been used by excited or careless patrons of the local telephone company in place of nickels, possibly a dozen a day. Mr. Wilson said he could not imagine where the story originated that the company was being inundated with spurious coins and tokens. He stated that on the average the company receives only \$2.50 to \$5.50 in counterfeited money for every \$500,000 taken in. The fare boxes are constructed so that the conductors can see what every passenger drops in, and at all the subway entrances electric lights are installed above the boxes so that the collectors can detect a fraud immediately.

### Suburban Increase Denied at Ottawa

The Railway Commission of Ontario, has disallowed the proposed new tariff of fares on the Ottawa Electric Railway. The application was filed some months ago. It provided for a zone system with heavily increased rates between the city limits and points outside on the eastern and western extensions of the system.

The application for disallowance was made by the village of Westboro and the township of Nepean, supported by the city of Ottawa. The tariff was suspended by the commission when the application was made to the Railway Commission.

The board found that, after maintaining a 15 per cent dividend and paying interest on its funded debt, the company's returns showed it to be almost \$500,000 better off than it was before the war. Under the circumstances the board did not think the company justified in increasing its rates to suburban points.

The recent substantial wage increases were given consideration by the Railway Commission, but against this extra expense there was the additional revenue accruing to the railway from the abolition of the six-for-a-quarter tickets.

The increases sought under the proposed tariff, while not affecting journeys from point to point within the city limits, represented advances of from 100 to 200 per cent in journeys between the city and outside points on the line. The Britannia line, standing alone, the Railway Commission found not remunerative, but said that the line must be considered as a part of the general system.

Paralysis of the port of New York by the strike of harbor workers threatens a coal famine which may restrict, if not stop, operation of subway, elevated and surface car lines unless there is prompt relief.

## Transportation News Notes

**Safety Cars for Pacific Electric Railway.**—Twenty one-man safety cars have been delivered to the Pacific Electric Railway, Los Angeles, Cal. The cars will be used on unimportant runs in Pomona, San Bernardino, Riverside, Pasadena and Santa Monica. None of the cars will be used on the Los Angeles city lines or in the interurban service.

**A Bold Bid for Business.**—The Chicago, Ottawa & Peoria Railway, Joliet, Ill., effective on April 1, will handle all kinds of express on all of its passenger cars at rates 25 per cent lower than charged by other lines, without pick-up or delivery service. There will be a minimum charge of 20 cents except on empty carriers, on which the charge varies.

**Jitneys Must Run Always.**—The City Commission of Atlantic City, N. J., has decided that jitney owners must operate their cars during the winter as well as in the summer or their licenses will be revoked. All licensed jitneys must operate the full twelve months of the year for which they are licensed. The City Commission licenses only a limited number of such vehicles.

**Liberty but Not License in Kentucky.**—The Louisville (Ky.) Police Department in handling Mardi Gras celebrations this season, permitted masqueraders on electric cars on their way to parties, but placed a ban on masqueraders on the down-town streets. In past seasons masked persons have been banned from cars, due to several fights, in which it was difficult to apprehend those guilty.

**Railway Considers Service Order Unreasonable.**—The Chicago, South Bend & Northern Indiana Railway, South Bend, Ind., has petitioned the Public Service Commission of Indiana for relief from an ordinance passed by the Council of South Bend on Feb. 10, requiring the company to operate cars on all of the city tracks every fifteen minutes. The company complains that public convenience does not require such service; that it would be impossible to comply with the ordinance for various reasons, and that the ordinance generally is unreasonable.

**No One-Man Cars at Present.**—T. J. Minary, president of the Louisville (Ky.) Railway, has branded as premature the reports relative to the company adopting the one-man car system on several lines upon which single-truck cars are operated. He said: "No action whatever has been taken in Louisville, to that end. Of course we are considering various methods of increasing earnings, and meeting the increased wage as authorized by the War Labor Board, but it is too early yet to talk

about one-man cars. We don't know yet what the city is going to do."

**Would Legislate Against Fares.**—An act to abolish the 5-cent fare zones at present in effect on the lines operated by the Rhode Island Company, Providence, R. I., has been introduced in the House of Representatives by Representative John A. Hamilton, Cranston. The act would restore the old zone limits and permit a charge within those limits of more than 5 cents, the Public Utilities Commission being empowered to fix the rate, although a maximum of 8 cents is stated. The act provides further for the issuance of special commutation and excursion tickets on lines which the commission judges requires such action. The measure was referred to the judiciary committee.

**Six-Cent Fare Possible in San Francisco.**—At a recent meeting of the public utilities committee of the Board of Supervisors of San Francisco, Cal., Fred Boeken, superintendent of the Municipal Railway, replied to demands for extensions which he felt sure would not be self-supporting, by the statement that the policy of making unprofitable extensions, if continued, will force the city to a 6-cent fare or some other means of making up the deficit that would be bound to result. The Parkside district beyond the tunnel was the particular territory under discussion, but unprofitable extensions in other parts of the city would be in the same classification. Mr. Boeken asserted that the city is losing money on the E, H and K lines; just paying expenses on the F and J lines; making a little more than expenses on the D line, while A, B and C lines are profitable.

**Interference with Service Cut Prevented.**—Judge Martin J. Wade of the Federal Court has issued an order restraining Judge Hubert Utterback of the Polk County district court from in any way interfering with the Des Moines City Railway case. Earlier in the week Judge Utterback had refused to dissolve a temporary restraining order preventing the reduction in service proposed by the Des Moines City Railway as a result of the recent decision in the fare case. City attorneys brought the injunction proceedings to forestall the service cut and the hearing on the permanent injunction had been set for trial by Judge Utterback. Judge Wade's order prevents any further consideration in the district court. Judge Wade ordered a further hearing on the restraining order for March 11 at Ottumwa, Iowa. Officials of the Des Moines City Railway have announced that pending Judge Wade's decision they will make no attempt to cut the service.

**Wants Fare Order Set Aside.**—The city of Cranston, through its solicitor, Frank H. Wildes, has filed in the Supreme Court of Rhode Island an appeal from the order of the Public Utilities Commission issued on Feb. 26 voluntarily extending for two months the experimental period for the operation of

the increased fares on the lines of the Rhode Island Company, as permitted originally on Oct. 23, 1918. The petition states that the residents of Cranston are affected by the order of Feb. 26 in that the changes made in the original order, that is, 2-cent zones to be 5 cents, the additional zone on the Oaklawn line and the dividing of the crosstown line into two zones are to remain in effect until May 1, whereas when the increase was granted originally, the time limit was set at March 1. The petition sets forth many alleged inequalities and unjust charges and asks the court to review and grant relief wherever the rates under the new order are deemed to be unfair, unjust and discriminatory.

**Closed Vestibules and Folding Steps Ordered.**—To reduce the number of boarding and alighting accidents in connection with electric railway operation the Public Service Commission for the First District, on motion of Acting Chairman Travis H. Whitney has directed the several electric railways in New York to install closed vestibules and folding steps upon the major part of their rolling stock. The reasons for the direction of the commission were set forth in an opinion by Acting Chairman Whitney which has been approved by the commission. As the result of extensive investigations the commission is convinced that a major portion of the casualties which occur on street railroad lines in New York City are the result of boarding and alighting accidents. Several years ago the Third Avenue Railway System equipped practically all of its closed cars with closed vestibules and folding steps and with a device—which the commission believes should also be generally installed—to prevent vestibules being opened while the car is in motion. As a result of this installation the number of accidents upon this system has been greatly reduced.

**Results with Fare Boxes in Washington.**—The Capital Traction Company Washington, D. C., has equipped all the cars of its Georgetown division with fare boxes, sixty-five of the boxes being in use at this time. Fare boxes will be installed in cars of other lines as rapidly as possible. Equipment of all cars on its Columbia division with fare boxes is announced by the Washington Railway & Electric Company. Just what lines will be the first to be equipped with the new boxes has not yet been decided. If the shipment contains a sufficient number to equip all cars of the Georgetown line, that line will be the next to get the devices. If the number is not sufficient to equip all cars on the Georgetown line, some other division with a smaller number of cars will get the boxes. Both companies report that the number of fares turned in from cars equipped with the new fare boxes remains practically as high as during the first week after installation of the boxes. The first fare boxes were installed on cars in Washington on Jan. 26. Both companies advertised the change extensively.

## Legal Notes

**NEW YORK.—Duty to Public Must Be Discharged, Even if Property Is Operated at Loss. Corporation on Same Footing As Individual.**

That a railway company cannot operate its railway at a certain rate of fare without loss does not constitute an excuse for failing to discharge its duty to the public, arising on contract voluntarily assumed.

In regard to the modification or abrogation of contract obligations voluntarily assumed, public service corporations stand on the same footing as individuals.

That the employees of a public service corporation demand wages which the corporation regards as excessive does not relieve it from its contract obligations to the public. (Public Service Commission, Second District, vs. International Ry., 172 New York Sup., 551.)

**NEW YORK.—Mandamus Should Not Issue Where There Is Impossibility of Performance.**

In a proceeding for mandamus by the Public Service Commission, requiring a street railway company to operate cars within two days, it was error to grant the writ, where the company is thereby required to take striking employees back, which it cannot do because they demand a retroactive scale of wages, payment of which was impossible on account of lack of funds. (Public Service Commission, Second District, vs. International Ry., 120 Northeastern Rep., 727.)

**NORTH CAROLINA.—Carrier Responsible for Acts of Strangers Only When They Can Be Anticipated.**

A carrier is liable for injuries to passengers caused by wrongful acts of strangers, if they could be reasonably anticipated, but is not liable for injuries caused by the premature starting of a car due to the pulling of the bell rope by an intoxicated passenger, where the conductor had no knowledge of the intoxication and such third person had been orderly up to that time. (Pride et al. vs. Piedmont & Northern Ry., 97 Southeastern Rep., 418.)

**DELAWARE.—Public Utilities Commission Has Power to Regulate Fares.**

An order of the board of public utility commissioners, created by legislative act and given supervision over public utilities, fixing rates to be charged by traction companies, was not void as an exercise of delegated legislative power. (Robertson et al vs. Wilmington & Philadelphia Traction Co., 104 Atlantic Rep., 839.)

**FEDERAL COURTS.—Public Utilities Commission Has Power to Regulate Fares in Colorado.**

Though a town ordinance, granting, under a law of Colorado, a street railway franchise, allowed certain fares on condition that transfers were given to the line of another company, held, the State, without impairing the obligation of contract, could empower the Public Utilities Commission to regulate the matter of fares. (City of Englewood vs. Denver & South Platte Ry., 39 Supreme Court Rep., 100.)

**MASSACHUSETTS.—Maintenance of Bridge Required under Agreement "to Hold City Harmless from Operation."**

The covenant of an electric railway company to save the city harmless from all loss, cost, or damage from construction and operation of extensions of road, held comprehensive enough to include an obligation to save the city harmless from one-quarter of the expense of maintaining bridges on the railroad's locations as extended, apart from any obligation imposed by law before the enactment of the statute. (City of Northampton vs. Northampton Street Ry., 121 Northeastern Rep., 495.)

**NEW YORK.—Rights of Public to Good Service Paramount.**

In proceedings to compel public service companies to comply with an order of Public Service Commissioners to procure and place in operation additional cars, the court should give little heed to nice considerations of equity; the rights of the public being paramount, and the maxims, "He who seeks equity must do equity," and "He who comes into equity must come with clean hands," being pertinent. (Public Service Commission, First District, vs. Brooklyn Heights R.R., 172 New York Sup., 790.)

## New Publications

### Employment Management

Handbook on Employment Management in the Shipyard. Bulletin II, the Employment Building. United States Shipping Board Emergency Fleet Corporation, Philadelphia, Pa.

Employment departments of electric railways may find suggestions of value to them in this illustrated booklet on employment work in a different field.

### Statistics of Railways in the United States for the Year Ended

Dec. 31, 1916

Thirtieth Annual Report of Interstate Commerce Commission, Government Printing Office, Washington, D. C., Paper, 20 cents.

This pamphlet gives the latest official statistics of earnings, capitalization

and the like for the steam railroads of the country.

#### Boiler and Furnace Testing

By Rufus T. Strohm, associate editor Power. Engineering Bulletin No. 1 of the Bureau of Conservation, United States Fuel Administration, Washington, D. C. Copies can be obtained free from the administrative engineer of any state or from the Bureau of Conservation.

This little pamphlet is a practical treatise on the subject covered by its title and is intended to enable power plant operators to secure the best possible results from their equipment. It would seem to be the duty of everyone who is responsible for the consumption of power plant coal to secure a copy of this little pamphlet and read it.

#### Comparison of Workmen's Compensation Laws of the United States Up to Dec. 31, 1917

By Carl Hookstadt. Bulletin No. 240, Bureau of Labor Statistics, Superintendent of Documents, Government Printing Office, Washington, D. C. 106 pages. Paper: 15 cents.

This bulletin summarizes and compares the principal features of the workmen's compensation laws of the several states and territories. It is a revision of a study made in 1916. Since the former report twenty-seven states have amended or supplemented their compensation laws, and five new states have been added, making a total of forty states, territories and possessions.

#### Books About World Trade, Ships and the Ocean, Foreign Countries, and Foreign Languages

Compiled for the United States Shipping Board by the Free Public Library of Newark, N. J.—Miss, M. L. Prevost, compiler under direction of John Cotton Dana, Librarian.

The new merchant marine of the United States stimulates interest in ships and world trade, as well as other countries, the chief foreign languages used in commerce, methods of conducting world trade, etc. With a view to guiding business men, as well as general readers, the United States Shipping Board has had compact lists of good books compiled by the staff of the Free Public Library, Newark, N. J., an institution with a national reputation for its business reading service.

#### Fuel Economy in Boiler Room

By A. R. Maujer and Charles H. Bromley. 208 pages. Cloth, \$2.50 net. McGraw-Hill Book Company, Inc., 239 West Thirty-ninth Street, New York City.

This is a book for the practical man who wishes to apply in the boiler room the methods which will conduce to efficient operation. It is an extension of the book entitled "Fuel Economy and CO<sub>2</sub> Recorders" by the same authors published in 1914. The new material includes fuels, firing methods, combustion of coal from the practical standpoint, fuel-oil burning, stoker operation, boiler settings, burning low-grade fuels and waste gases, ready means of checking boilers and furnace efficiency, etc. The method of presentation is direct and simple, and the book can be used with profit by the fireman and the water tender on one hand and the manager on the other.

## Personal Mention

Lorne C. Webster has been elected president of the Quebec Railway, Light, Heat & Power Company, Quebec, Que., to succeed the late Sir Rudolph Forget.

L. R. Schenck, formerly treasurer of the Toledo & Indiana Railroad, Toledo, Ohio, has been elected president of the company to succeed D. D. Schenck, deceased.

W. Grissel has been appointed chief engineer of power station of the Cincinnati, Georgetown & Portsmouth Railroad, Cincinnati, Ohio, to succeed C. H. Erion.

Haven C. Kelly has been appointed superintendent of track and roadway

Cities Company, with headquarters at New Orleans, La., to succeed Charles B. Murphy.

W. K. Dunbar, assistant secretary of the American Water Works & Electric Company, New York, N. Y., has also been appointed assistant treasurer of the company.

William F. Brown has been appointed secretary and treasurer of the New York & Long Island Traction Company, Hempstead, L. I., to succeed Frank E. Hafl.

H. W. Potter has been appointed treasurer of the Toledo & Indiana Railroad, Toledo, Ohio, to succeed L. R. Schenck, who has been elected president of the company.

F. L. Winters, division superintendent of the New Orleans Railway & Light Company, New Orleans, La., with jurisdiction over the railway lines operating below Canal Street, has resigned.

Nelson R. Troutman has been appointed roadmaster for the Trenton & Mercer County Traction Corporation, Trenton, N. J. He was formerly employed by the United Traction Company, Albany, N. Y.

J. M. Johnson has been appointed superintendent of the Ithaca (N. Y.) Traction Company to succeed Howard Morgan. Mr. Johnson has also been appointed purchasing agent of the company to succeed T. P. Clancy.

Charles Page, president of the Sand Springs Railway, Tulsa, Okla., has also been appointed treasurer of the company to succeed E. M. Monsell. Mr. Page was treasurer of the company previous to the appointment of Mr. Monsell to that position.

William F. Gorenflo has resigned as manager of the Gulfport & Mississippi Coast Traction Company, Gulfport, Miss., but he will not sever his connection with the company before June 1 next. Mr. Gorenflo has been manager for the company for several years.

S. S. Crane has been appointed general manager of the Johnstown (Pa.) Traction Company in connection with his position as general manager of the Altoona & Logan Valley Electric Railway, Altoona, Pa. His time will be divided between the two properties.

L. A. Williams has been appointed assistant superintendent of transportation of the Boston Creek-Camp Custer and Battle Creek City divisions of the Michigan Railway, Battle Creek, Mich. Mr. Williams was formerly trainmaster of the Camp Custer division.

James H. Wilkerson, Chicago, Ill., has been appointed a member of the Public Utilities Commission of Illinois to succeed Fred E. Sterling, who resigned to become State Treasurer of



H. C. KELLY

of the Chicago (Ill.) Surface Lines, assuming this new position on Feb. 16. Mr. Kelly entered the service of the Chicago City Railway in 1910, as engineer of construction, filling that position until 1913, when the unification of the various lines was perfected. He was then made a divisional superintendent, occupying that position until the present appointment. Mr. Kelly was born in Parkersburg, W. Va., in 1880. Immediately after leaving school he entered the service of the Baltimore & Ohio Railroad, at Parkersburg, in the engineering department. In 1904 he became connected with the Missouri Pacific Railway at St. Louis as district engineer in charge of construction work, remaining there six years, when he entered the service of the Chicago City Railway as engineer of construction, and has been continuously in their employ since that time.

Charles E. Serviss has been appointed general manager and purchasing agent of the Springfield & Xenia Railway, Springfield, Ohio, to succeed J. F. Egolf.

W. E. Schuppert has been appointed assistant secretary of the American

Illinois. Mr. Wilkerson was formerly First Assistant Attorney General of Illinois.

**Herman Berg**, formerly chief clerk to C. E. Bode, general freight agent for the Illinois Traction System, Springfield, Ill., has accepted a position as chief of the tariff bureau for the Chicago, Indianapolis & Louisville Railroad Company (Monon Route), with headquarters in Chicago.

**Harry Darby**, foreman of the Poland carhouse of the New Orleans Railway & Light Company, New Orleans, La., has been appointed division superintendent of the company with jurisdiction over the railway lines operating below Canal Street. He succeeds F. L. Winters, resigned.

**J. M. Joel**, formerly auditor of the Syracuse and Utica lines of the New York State Railways, and since April, 1918, auditor of the Rochester lines also, was made general auditor of the

ceded M. F. Flatley, who, as noted in the *ELECTRIC RAILWAY JOURNAL* for July 27, 1918, resigned to become master mechanic of the Lackawanna & Wyoming Valley Railroad, Scranton, Pa.

**J. R. Ong** has been appointed transportation engineer of the Winnipeg (Man.) Electric Railway, having resigned from a similar position with the Board of Control of the Kansas City (Mo.) Railways. Mr. Ong was formerly connected with the staff of the Wisconsin Railroad Commission.

**J. S. Coleman** has been appointed general manager of the Asheville and East Tennessee Railroad, Asheville, N. C., to succeed Stanley Howland, who still retains his position as vice-president of the company. Mr. Coleman has also been appointed treasurer of the company to succeed Reginald Howland.

**Capt. F. R. Glover**, general executive assistant of the British Columbia Electric Railway, Vancouver, B. C., is back again on the company's management staff, after being on military duties more than three years. He returned from Europe a year ago and since then has been superintendent for the Dominion police, with headquarters at Victoria. The duties of this force were recently taken over by the Royal North West Mounted Police. This made it possible for Captain Glover to resume his duties as general executive assistant.

**C. Walter Gifford**, an employee of the Bay State Street Railway, Boston, Mass., since 1910 and lately working under Transportation Manager Hiram Sparks as efficiency and service man, has been appointed general manager of the Brockton & Plymouth Street Railway, Plymouth, Mass., to succeed J. L. Smith, who has been transferred to another position. Mr. Gifford entered the employ of the Bay State Street Railway as conductor in 1910, was made night foreman at the Torrey Street carhouse in 1912, dispatcher in 1914, and day foreman at the carhouse in 1917. Last April he became traveling inspector and in July was appointed to the position from which he has now resigned.

**B. C. Edgar** on March 1 succeeded F. W. Hoover, vice-president, in active charge of the affairs of the Tennessee Power Company and the Chattanooga Railway & Light Company, Chattanooga, Tenn. Mr. Hoover retains his position as vice-president and remains as a member of the board of directors. Mr. Edgar will retain the position which he has held previously as general superintendent of the Nashville Railway & Light Company. He will divide his time between Nashville and Chattanooga. Mr. Hoover has become vice-president and director of sales of the Lucey Company. Later it is expected that he will become president of the company, to succeed Captain Lucey, who will become chairman of the board. Both the Chattanooga and the Nashville properties are controlled by Clark interests.

**Charles S. Banghart** has been appointed general manager of the Augusta-Aiken Railway & Electric Corporation, Augusta, Ga., by the J. G. White Management Corporation, New York, N. Y., the operating managers. He succeeds W. C. Callaghan, who has resigned. Previous to accepting his present position, Mr. Banghart was vice-president and general manager of the Binghamton (N. Y.) Railway, with which he was associated since 1914. Mr. Banghart attended Lehigh University, South Bethlehem, Pa. After leaving school, he was employed respectively on the electrifications of the Allentown & Bethlehem Rapid Transit Company, Allentown, Pa., and the Union Railway, New York City. In 1894 he became superintendent of the Flushing & College Point Lighting, Power & Railway Company, Flushing, N. Y. From 1895 to 1903 Mr. Banghart was associated with the Interstate Railway, Reading, Pa. He was employed by the New York &



J. M. JOEL

company at the last meeting of the board of directors. Since April, 1918, his headquarters have been at Rochester. Mr. Joel has worked his way up consistently with the local properties during the last twenty-eight years. He filled the posts of general clerk, voucher clerk, bookkeeper, chief clerk and auditor of the Syracuse Consolidated Street Railway and its successor, the Syracuse Rapid Transit Railway. One after another of the auditorships have since been added to his jurisdiction, leading up to the general auditorship of the State Railways. Mr. Joel has taken an active interest in the affairs of the American Electric Railway Accountants' Association, serving for a time on the joint committee of engineering accounting.

**J. C. Nelson**, vice-president and general manager of the Empire United Railways, Inc., Syracuse, N. Y., has been elected vice-president of the Ithaca (N. Y.) Traction Company, to succeed Charles E. Hotchkiss. Mr. Nelson has also been appointed general manager of the company.

**Henry Lee** has been appointed master mechanic of the Dayton & Troy Electric Railway, Dayton, Ohio, to suc-



C. S. BANGHART

Queens County Railway, Long Island City, N. Y., from 1903 to 1914, serving six years as general superintendent. In 1914 Mr. Banghart took up his duties as vice-president and general manager of the Binghamton Railway.

## Obituary

**E. P. Gerry**, superintendent of the railway lines in Elgin, Ill., before their absorption by the Aurora, Elgin & Chicago Railroad, died on March 4 at the age of seventy-five years.

**William B. Craig**, traffic manager for the Oklahoma Union Railway, Tulsa, Okla., died on Feb. 21 from an attack of apoplexy. Mr. Craig was a well known railroad man of Oklahoma, although his connection with the Oklahoma Union had covered a comparatively short period. All his earlier experience had been with steam lines, but he was regarded as one of the best informed traffic men in the State of Oklahoma.

# Manufactures and the Markets

DISCUSSIONS OF MARKET AND TRADE CONDITIONS FOR THE MANUFACTURER,

SALESMAN AND PURCHASING AGENT

ROLLING STOCK PURCHASES

BUSINESS ANNOUNCEMENTS

## Construction Field Shows Some Bright Spots

**Plans for Extension of Lines and Addition of Rolling Stock and Buildings Make Fair Showing for First Two Months**

Recent inquiries among manufacturers and manufacturers' agents have in general failed to bring forth replies of a very optimistic nature in regard to definite orders expected in the near future. Optimism is generally running high that business, when it does return, will surpass pre-war levels, but it is purely a matter of conjecture as to when this will occur. Many inquiries on price and deliveries of electric railway equipment of all kinds have been and are still being received, but producers think these are sent out more for the purpose of feeling out the market than in a serious buying mood.

During the first two months of this year several orders have been given and many plans filed showing the serious intentions of traction companies to do some work on the extension of their tracks and transmission lines, replacement of worn-out materials, in construction of power houses, shops, terminals and other buildings and in the purchase of new or the remodeling of rolling stock. Reports of such activities have come from practically every state and territory of the Union and the items enumerated herein refer only to work in the United States. Canada, however, has ordered and laid plans for a by no means inconsiderable amount of electric railway material.

Below is given a résumé of the construction reports that have appeared in the **ELECTRIC RAILWAY JOURNAL** during January and February.

Up to March 1, the reports show orders placed for 102 new cars. Reports have been received that about thirty electric railways expect to order more than seventy-one safety cars this year, seventy-seven large type and suburban cars, three passenger and more than ten freight trail cars, and expect to remodel more than fifteen cars besides those already in their shops. One company has authorized \$125,000 for rolling stock.

For track extensions certain figures have been given, but much more is contemplated which has been reported merely as extensions and repairs to lines and track, and extensions from one town to another. In addition, eight roads have been reported as expecting to spend more than \$1,250,000 in extensions, while six others expect to construct 27 miles of new track and four roads expect to reconstruct 8½ miles. In Texas there are three propositions under consideration for the con-

struction of lines for distances of 185 miles, 180 miles and 65 miles, while in Tennessee there is one considered for 50 miles in length. One traction company expects to replace trolley wire on 36 miles of its line or install steel auxiliary wire under its present trolley wire. Also, 10,000 ties are to be replaced by this company. Another company is reported as expecting to purchase 40,300 ft. of feeder cable in three different sizes. A third company reports it will purchase 2 miles of No. 00 wire and still another company is in the market for 6000 ft. of 250,000 circ.mil cable.

More than \$3,600,000 worth of buildings are planned for this year by twelve companies. These include power houses, shops, terminal stations and other buildings. For some of these projects contracts have been let, for others bonds have been authorized by municipalities. Outside of this figure many other plans have been authorized and considered for the same type of buildings, substations, automatic substations, transformers, motor-generator sets, boilers and generators up to 20,000 hp. size.

Taken all in all, the year to date has begun to show signs of some awakening, and it seems reasonable to believe that the energy of manufacturers and manufacturers' agents will turn the plans into orders.

## New Heating Combination

A combination has just been made between Holden & White, Inc., of Chicago, and Walter E. Hinman and Osborne E. Quinton, of Detroit, by which they become associated and Holden & White, Inc., will market a complete line of hot-air and hot-water stoves and auxiliary apparatus for electric cars and thermostatic control for electric heaters.

The stoves are being made by the Detroit Stove Works, one of the largest manufacturers of stoves in the world. They will be known as the Jewell electric railway stoves, and will embody several novel features, including the hot-blast principle of the Detroit Stove Works, by which the thermal efficiency of these stoves per unit of fuel is increased. They are arranged to burn almost any fuel, such as hard or soft coal, lump coal, coke or wood. The hot-air stove will have its motor at the bottom of the stove so that it will not be subjected to the heat and thus

the maintenance should be low. A number of the new Jewell heating systems have been installed on electric railways and the results are reported as satisfactory. The Jewell hot-water stoves will use the coil principle for heating the circulating water.

## Better Tone in Transformer Market

**Prices on Large Equipment Expected to Remain Firm for Remainder of Year**

Although the demand for transformers is far below normal, a better tone is apparent in the market. Two or three weeks ago buying reached perhaps the lowest point since the armistice began. Price reductions of the order of 10 per cent on larger transformers were quoted about that time, and a logical reaction can be seen in the increased number of inquiries now coming in. Business is still dull in comparison with the outputs and sales of a few months ago, but the outlook cannot be called discouraging, to say the least.

As soon as central station development becomes freer the transformer market will respond quickly to the stimulus. The high cost of financing extensions of plant in respect to both money rates and the abnormal cost of apparatus has held back the growth of systems normally to be counted upon. Some signs of improvement are now noted by the transformer manufacturers. Raw material and labor are plentiful; factory stocks are in excellent shape for exceedingly prompt delivery of sizes ordinarily specified for distribution work, and in the larger units, say from 200 kv.-a. upward, deliveries can be made in about one-fourth the time required last summer on orders carrying anything less than very high priority ratings. Virtually any commercial requirement in large units can now be met in from sixty to ninety days.

The price situation is of interest. The point is emphasized that electrical equipment of the transformer class was advanced only about 60 per cent in price during the war, compared with advances of from 100 to 300 per cent in many other manufactured products. The price of labor appears likely to continue high; much material purchased at high prices is at hand to be worked up before lower cost material will be available, and with the exception of copper very little reduction has taken place in the cost of supplies entering into

transformer construction. The high-grade steel and insulation needed show little or no tendency to weaken in cost.

It is well to remember that transformer prices per kilowatt of capacity have long compared very favorably indeed with other equipment built to deliver energy efficiently in bulk. It is to be doubted whether transformer prices will go back to a point 30 or 40 per cent above pre-war levels in any future which can be apprehended now.

### Consolidation of English Manufacturers

It is announced that about 90 per cent of the stockholders of Dick, Kerr & Company, Ltd., have accepted the offer made to them by the English Electric Company, Ltd., under which this company will have the predominating control of the Coventry Ordnance Works, Ltd., Dick, Kerr & Company, Ltd., Phoenix Dynamo Manufacturing Company, Ltd., United Electric Car Company, Ltd., and Williams & Robinson, Ltd. The company is registered with a capital of £5,000,000, in £1,500,000 preferred and £3,500,000 ordinary shares. It is the intention to interfere as little as possible with the internal organization of the respective works, but the company will take over the whole of the external business management, and with certain exceptions, such as the civil engineering and contracting department of Dick, Kerr, and certain special parts of the Coventry Works, will conduct all selling and other negotiations with the public.

### Rolling Stock

Kansas City, Lawrence & Topeka Railroad, Kansas City, Mo., is reported in the market for material to repair cars.

Jackson Railway & Light Company, Jackson, Tenn., lost its carhouse, seven cars and two trailers by fire. The loss on the building is reported as \$5,000.

Pacific Electric Railway, Los Angeles, Calif., has received the twenty safety cars which are reported for use on runs in Pomona, San Bernardino, Riverside, Pasadena and Santa Monica, and not on Los Angeles city lines. The order for these cars was noted in these columns on June 15, 1918.

### Track and Roadway

Municipal Railway of San Francisco, San Francisco, Cal.—Plans are being made for the extension of the F route line of the Municipal Railway of San Francisco into the Presidio reservation so that it will end at the proposed new headquarters building and an extension to Fort Scott.

Ocean Shore Railroad, San Francisco, Cal.—It is reported that plans are being made by the Ocean Shore Railroad for building an extension from the present terminal at Tunitas Glen to Pescadero.

City & Suburban Railway, Brunswick, Ga.—It is reported the City & Suburban Railway will extend its line to the Atlantic Refinery Company.

New Orleans, La.—At the convention recently held at Bay St. Louis, Miss., to arrange plans for the construction of a municipally-owned electric interurban railway to connect New Orleans, La., and Mobile, Ala., with all of the Mississippi Coast towns, an executive committee was appointed to work out a plan allotting the cost of construction among the municipalities and to secure estimates from engineering firms. Mayor John J. Kennedy of Biloxi, Miss., was made chairman of the executive committee, with Mayor Frank Suter, Pass Christian, Miss., as secretary. The convention adopted a tentative route for the proposed municipal interurban railway, the line beginning at New Orleans and running via Slidell, Waveland, Bay St. Louis, Pass Christian, Long Beach, Gulfport, Handsboro, Biloxi, Ocean Springs, Pascagoula, Moss Point, Grand Bay and Mobile. [Feb. 1, '19.]

Jackson Light & Traction Company, Jackson, Miss.—Substantial repairs and improvements will be made in the company's property. It is roughly estimated that more than \$100,000 will be expended to put the property in shape.

Public Service Railway, Newark, N. J.—Announcement has been made by the Public Service Railway Company that it will spend about \$100,000 in the reconstruction of its tracks on Federal Street, between the Pennsylvania terminal and Broadway. The work is now under way. Over 7800 ft. of track is to be relaid, 101-lb. rail being used to replace the 90-lb. rail. The heavy construction is made necessary by the increased traffic.

### NEW YORK METAL MARKET PRICES

	Feb. 27	Mar. 13
Copper, ingots, cents per lb.	15.25	15.75
Copper wire base, cents per lb.	18.75 to 19.00	17.25 to 18.00
Lead, cents per lb.	5.25	5.25
Nickel, cents per lb.	40	40.00
Spelter, cents per lb.	6.65	6.50
Tin, cents per lb.	172.50	172.50
Aluminum, 98 to 99 per cent., cents per lb.	31.50	30.00

† Government price in 25-ton lots or more f. o. b. plant.

### OLD METAL PRICES—NEW YORK

	Feb. 27	Mar. 13
Heavy copper, cents per lb.	13.00 to 13.50	12.75 to 13.25
Light copper, cents per lb.	11.00 to 11.25	10.75 to 11.00
Heavy brass, cents per lb.	7.50 to 7.75	7.25 to 7.50
Zinc, cents per lb.	5.25 to 5.50	5.25 to 5.50
Yellow brass, cents per lb.	6.00 to 6.50	6.00 to 6.25
Lead, heavy, cents per lb.	4.75 to 4.87	4.75 to 4.87
Steel car axles, Chicago, per net ton.	\$28.00 to \$30.00	\$28.00 to \$30.00
Old car wheels, Chicago, per gross ton.	\$22.00 to \$23.00	\$22.00 to \$23.00
Steel rails (scrap), Chicago, per gross ton.	\$15.50 to \$16.50	\$16.50 to \$17.00
Steel rails (relaying), Chicago, gross ton.	\$15.50 to \$16.50	\$16.50 to \$17.00
Machine shop turnings, Chicago, net ton.	\$5.50 to \$6.00	\$5.50 to \$6.00

### ELECTRIC RAILWAY MATERIAL PRICES

	Feb. 27	Mar. 13
Rubber-covered wire base, New York, cents per lb.	23	21
Weatherproof wire (100 lb. lots), cents per lb., New York	28.75 to 33.75	25.75 to 33.75
Weatherproof wire (100 lb. lots), cents per lb., Chicago	30.75 to 35.75	30.75 to 37.35
T rails (A. S. C. E. standard), per gross ton.	\$60.00 to \$65.00	\$60.00 to \$65.00
T rails (A. S. C. E. standard), 100 to 500 ton lots, per gross ton.	\$57.00 to \$60.00	\$57.00 to \$60.00
T rails (A. S. C. E. standard), 500 ton lots, per gross ton.	\$55.00 to \$60.00	\$55.00 to \$60.00
T rail, high (Chicago), cents per lb.	3	3
Rails, girder (grooved), cents per lb.	4 1/2	4 1/2
Wire nails, Pittsburgh, cents per lb.	3 1/2	3 1/2
Railroad spikes, drive, Pittsburgh base, cents per lb.	3.90	3.65
Railroad spikes, screw, Pittsburgh base, cents per lb.	8	8
Tie plates (flat type), cents per lb.	3	3
Tie plates (brace type), cents per lb.	3	3
Tie rods, Pittsburgh base, cents per lb.	3	3
Fish plates, cents per lb.	3	3
Angle plates, cents per lb.	3	3
Angle bars, cents per lb.	3	3
Rail bolts and nuts, Pittsburgh base, cents per lb.	4.90	4.90
Steel bars, Pittsburgh, cents per lb.	2.70	2.70
Sheet iron, black (24 gage), Pittsburgh, cents per lb.	4.55	4.55
Sheet iron, galvanized (24 gage), Pittsburgh, cents per lb.	5.60	5.60
Galvanized barbed wire, Pittsburgh, cents per lb.	4.35	4.35

	Feb. 27	Mar. 13
Galvanized wire, ordinary, Pittsburgh, cents per lb.	3.95	3.95
Car window glass (single strength), first three brackets, A quality, New York, discount	77%	77%
Car window glass (single strength), first three brackets, B quality, New York, discount	77%	77%
Car window glass (double strength, all sizes AA quality), New York discount.	79%	79%
Waste, wool (according to grade), cents per lb.	13 to 20	13 to 20
Waste cotton (100 lb. bale) cents per lb.	11 to 13	11 to 13
Asphalt, hot (150 tons minimum) per ton delivered		
Asphalt, cold (150 tons minimum) pgs. weighed in, F. O. B. plant, Maurer, N. J., per ton.	\$43.00	\$30.00
Asphalt filler, per ton.	\$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.	\$1.48	\$1.53
Linseed oil (boiled, 5 bbl. lots) New York, per gal.	\$1.55	\$1.60
White lead (100 lb. keg), New York, cents per lb.	13	13
Turpentine (bbl. lots), New York, cents per gal.	70 to 71	69

† These prices are f. o. b. works, with boxing charges extra.

Trenton & Mercer County Traction Corporation, Trenton, N. J.—The Trenton City Commission has asked the Trenton & Mercer County Traction Corporation to lay new track on West State Street, from Willow to Calhoun Streets. The present track has sunk below the surface of the brick pavement.

Brooklyn (N. Y.) Rapid Transit Company.—Announcement has been made by the Brooklyn Rapid Transit Company that the Culver elevated line in Brooklyn will be placed in operation on Mar. 16. For the present the terminus of the line will be at Kings Highway. Within a few weeks it is expected to extend the operation to Avenue U and later to Coney Island, which will be its final terminus.

Columbus Railway, Power & Light Company, Columbus, Ohio.—In connection with street improvements being made by the city, the Columbus Railway, Power & Light Company will construct 6.75 miles of single track.

Oklahoma Union Railway, Tulsa, Okla.—Announcement has been made in Tulsa that the Oklahoma Union Railway has just completed a survey from Keifer to Okmulgee, via Mounds and Beggs and will build the extension to the Okmulgee county metropolis this year. This company also contemplates the construction of a line from Tulsa northward to Nowata, via Collinsville.

Philadelphia, Pa.—Sealed proposals will be received by William S. Twining, Director Department of City Transit, until March 25 for the construction of 68 column foundations of concrete in Front Street from above Arch Street to Callowhill Street, Frankford Elevated Railway, contract No. 500. Plans and specifications may be obtained at the office of the Department, Merston Building, upon deposit of \$10, which will be refunded upon return of the plans.

### Power Houses, Shops and Buildings

Kansas City, Lawrence & Topeka Railroad, Kansas City, Mo.—The carhouse of the Kansas City, Lawrence & Topeka Railroad, which was destroyed by fire, will be rebuilt at a cost of \$3,000.

Ohio Service Company, Coshocton, Ohio.—The Ohio Service Company is installing an additional 4000-kw. at its plant in New Philadelphia and is contemplating the installation of a new switchboard at its Dennison substation, and also the erection of a parallel circuit of 33,000-volt transmission lines from New Philadelphia to Dennison and from Newcomerstown to Cambridge.

Pacific Power & Light Company, Astoria, Ore.—Plans have been made by the Pacific Power & Light Company for the erection of a new power plant on the grounds adjoining its existing plant at Astoria. The capacity of the proposed plant will be 4500 hp.

American Railways, Philadelphia, Pa.—Arrangements have been completed by the American Railways for the installation of new boiler equipment at Keyport.

Jackson Railway & Light Company, Jackson, Tenn.—The carhouse of the Jackson Railway & Light Company, together with seven cars and two trailers, was recently destroyed by fire. Plans are being made for the reconstruction of the building.

### Trade Notes

Standard Underground Cable Company, Pittsburgh, Pa., announces the appointment of Robert T. Lozier as special representative.

Belden Manufacturing Company, Chicago, Ill., manufacturer of wire and cable, it is reported, has increased its capital from \$1,000,000 to \$1,500,000.

Chicago Pneumatic Tool Company announces the removal on March 1 of its Cleveland district office from room 813 to rooms 406-408 Engineers' Building.

Captain Neale, Civil Engineer-in-Chief's Department, Room 1004, Admiralty, London, S. W. I., desires catalogs from manufacturers of electric railway equipment for purpose of reference.

Smith-Ward Brake Company, Brooklyn, N. Y., reports that B. E. Ringo, who was commissioned as ensign in the engineering corps of the Navy at the outbreak of the war, has returned to his former duties with the company. He is now general manager and assistant treasurer of the company.

Edward A. Miller has been appointed assistant superintendent of the Jersey City plant of the Metal & Thermit Corporation, New York, N. Y. Mr. Miller was one of the pioneers in autogenous welding and cutting, having established the first oxyacetylene shop in New York City early in 1908 under the corporate form of the Acetylene Welding Company. Among his notable jobs in the past have been the removal of the abandoned sheet metal piling encountered under the pneumatic foundations of Dry Dock No. 4 in the Brooklyn Navy Yard in 1910 and 1911 and the demolition of the ruins of the old Equitable Building in New York City in 1912.

J. G. Brill Company, according to press reports, is working its factory about 90 per cent capacity. Most of the direct government contracts for work outside of the company's regular line have been completed. But it is still working on a good many orders for cars for concerns such as the Emergency Fleet Corporation and others indirectly connected with government undertakings. There are some inquiries in the market which suggest interest being taken by street railways in the matter of new equipment, but costs have so far not lowered much. The \$3,200,000 business on the books of the Brill company is sufficient to keep it busy for the next six months.

Capt. George Sykes, R. A. F., A. M. I. E. E., who has been in the United States nearly four years, attached to the British War Mission in a commercial capacity, sails for Europe in May. He has joined Messrs. Dutilh-Smith McMillan Company, an international house, as London manager of its engineering and railroad departments. For many years prior to the war Captain Sykes was connected with electrical manufacturers in the sales and engineering departments and with power and traction corporations. He will be glad to hear from firms wishing to introduce electric railway equipment in Europe. His New York address is 50 Broad Street and his London Office is Central Building, Totehill Street, Westminster.

Meachem Gear Corporation, Syracuse, N. Y., with offices at 411 Canal Street, has been incorporated for the purpose of taking over from the New Process Gear Corporation the manufacture of New Process rawhide pinions and for the general manufacture of gears of all kinds. The company is incorporated for \$300,000 and has purchased a three-story building which is to be devoted entirely to the manufacture of gears. The Meachems organizing this company are the same who owned and controlled the New Process Gear Corporation and the New Process Rawhide Company for a period of thirty years, and associated with them are George W. Wood, secretary and superintendent, and H. W. Kiddle, assistant superintendent, who had charge of the manufacture of rawhide and the rawhide pinion department of the old company. The plant purchased is now being remodeled and was to begin operations on March 1, at which time it takes over the rawhide pinion business, the hide plant at 811 Free Street, Syracuse, and all of the raw materials and uncompleted orders pertaining to this branch of the business.

### New Advertising Literature

Strauss Bascule Bridge Company, Inc., Chicago, Ill.: A 70-page illustrated bulletin of trunnion, bascule and direct-life bridges.

Cokal Stoker Manufacturing Company, 48 West Division Street, Chicago, Ill.: Two folders on "Cokal" hand-operated stokers.

Smith-Sewell Company, 90 West Street, New York City: Bulletin No. 26 on the construction, uses and operation of Francke flexible couplings of the heavy pattern type.

Blaw-Knox Company: Small booklet descriptive of the fabricated steel plate work, transmission towers, steel forms for concrete construction and other products of the company.

Cutter Company, Philadelphia, Pa.: A circular noting the growth of the company's circuit-breaker business in twenty years. Illustrations of two styles of this company's apparatus accompany the circular.