

# Electric Railway Journal

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## PROPERTY PROTECTION IN WAR TIME

Although there is some division of opinion as to the need for special means to safeguard public utility property against damage by cranks or German fanatics, now that a state of war with Germany has been recognized, we feel that such provisions should be made by the electric railway industry. The probability of attacks will, no doubt, be remote unless the German government sees fit to make some dramatic display of strength on either side of the ocean. But if this kind of encouragement is lent, the appeal to unbalanced minds may be enough to start upon public utility property generally a series of minor outrages wherein the electric railways may suffer if they are not prepared. The cost of precautions similar to those taken by a number of companies, as outlined on another page, is not heavy, and the consensus of belief is that, after the lapse of one or two months, most of the danger will automatically cease, thus limiting the time during which this special protection must be maintained. In any event, no electric railway should fail to get in touch at once, through its local municipal police, with the federal secret service. Cooperation of this kind has already worked out very satisfactorily in several instances, and it is obvious that by the interchange of information, rather than by independent action, a much closer surveillance may be accorded to misguided employees and others who might be tempted to commit acts of violence because of the international situation.

## PROPOSED CINCINNATI ORDINANCE

The long contemplated plan of modern electric railway development for Cincinnati has at last reached its final stage for, as we are describing elsewhere this week, only one more step is required, the favorable vote of the general electorate on April 17. As the period for the revision of the city franchise occurred last year, the opportunity was taken to deal with the entire transportation situation as a whole. Hence the proposed ordinance provides for a rapid-transit line and the interurban entrance so sorely needed in Cincinnati, and it also constitutes a revision of the existing surface franchise. The result is a possibility of unified operation on a scale that would place Cincinnati among those far-sighted American cities which have realized the close connection between transit development and municipal prosperity and growth. In agreeing to the proposed terms of the franchise revision, the company has been very liberal, especially in regard to surrendering control and in retaining a 5-cent fare for the next fifteen years, when many other companies are talking of

a 6-cent rate. In view of the fare fixed, the city could not in justice have refused to agree to a preferential for the company to protect its present investment, but the city transit officials are to be commended for the unusual emphasis with which they have supported this feature. We hope that the ordinance will be passed, not simply because an unfavorable vote would destroy absolutely the work of years, but more because it would prevent the city from adopting a program that meets a present need in a constructive and equitable way.

## SUPERIOR RIGHTS OF CARS ON STREETS

Although the tremendous increase in the number of automobiles during the last few years has greatly increased street congestion there are some ameliorating conditions, one of which is the growing better recognition of the superior rights on the streets possessed by electric cars. Of course, there is every reason why the cars should have superior rights. Principal among them are the facts that they are bound down to a definite route, that they carry a larger number of persons per square foot of street occupied than any other kind of vehicle, and that they are a public means of transportation. Sight has often been lost of these fundamentals, however, in both municipal ordinances governing street traffic and in judicial decisions. Evidences of the better understanding are given by the general rule that automobiles shall not pass a standing car discharging passengers unless they provide a clearance of 6 or 8 ft., and by the restrictions in many cities on parking automobiles in streets occupied by tracks, especially near corners. One of the latest evidences of the improved condition of affairs is shown in the recently issued traffic regulations of Oakland, Cal., which definitely say that street cars have the right of way over other vehicles at all intersecting highways not controlled by traffic officers, and that in all places drivers shall not "unnecessarily hinder or delay" their operation. Another section of the ordinance prohibits "jay walking," or the cutting of corners by pedestrians. These provisions are logical in view of the constantly growing pressure on our streets and might well serve as a model in other cities.

## AN OPPORTUNITY FOR THE PURCHASING AGENT

Never in the history of electric railroading has there been a time when it was more desirable for purchasing agents to get together for conference than it is this year. With the increases in costs of supplies and prices for scrap, the office of the purchasing agent becomes most important. That a number of purchasing agents recognize this situation is shown by the inter-

views this week in our department, "Manufactures and Markets." If a large enough number of others feel the same way the time is ripe for the culmination of the plan which already has the sanction of the executive committee of the Engineering Association, for the appointment of a committee of and for the purchasing agents of the association membership. Such a committee could do much in the way of arranging for conferences at the annual convention, of studying and formulating the problems of the purchasing department, including the handling of stores, and of interesting the association membership generally in the work of this important department. It is essential that the electric railway purchasing agents' work be related closely to the electric railway industry and in no way can this be done more effectively than through the association. We have heard some suggestions to the effect that an affiliated association of electric railway purchasing agents might be desirable. This may come in time as a natural outgrowth of the successful work of a special committee, but it seems to us that, for the present at least, as good results can be obtained with much less organization machinery through a vigorous and competent committee. There is no doubt that a committee will be appointed by the association if there is a real demand for it. Let every purchasing agent who wants such a committee appointed write to Secretary Burrill to that effect without delay.

#### COUNTING THE COST

The "high cost of living" scourge has not been at all selective in the matter of victims, and the railroads of the country have suffered quite as seriously as anyone else. Labor and materials both have been scarce and costly. Because of these conditions power tools and other time-saving and economy-promoting devices have gained rapidly in popularity. While in most instances there can be no question as to the saving in operating expenses affected by the use of such tools or devices, in the past there has been a tendency on the part of some to overlook the matter of fixed charges. These charges accumulate whether work is being done or not, and where the tool is used but seldom, they may amount to a surprisingly high hourly charge. For example, let it be assumed that the initial cost of a tool is \$1,200 and that the fixed charges, interest, taxes, insurance, if any, and depreciation total 15 per cent of the first-cost. On this basis the annual charge would be \$180. If the tool were used but ten hours per year the hourly charge would be \$18 and important indeed would have to be the job to justify such an expense in addition to the cost of operation. On the other hand, if the tool were used ten hours per day for 300 days of the year, the fixed charges would amount to only 6 cents per hour, a charge that in all probability would be insignificant when compared with the savings affected by the use of the tool. And the economics of the situation are the same whether the tool in question is a derrick or railbonder for the way department, a wheel press for

the motive power department or a computing machine for the auditing department. It is with a great deal of satisfaction, therefore, that we note the tendency, as evidenced in several articles written by operating men and published in recent issues of this paper, to put increased emphasis on the matters of correct cost accounting and true economics in connection with the purchase and operation of machine tools and other labor saving devices.

#### TIME FOR ACTION

The hour has struck, and whatever the next few weeks may bring in heavy weight of military preparations, they are beginning now, and now is the time for the electric railway men to make good on their splendidly patriotic offers of assistance and to help in carrying out the program for aid in mobilization for which the first call was sounded in these columns more than a year ago. As the issue stands to-day the main work in which the electric roads can be of special help is not the immediate moving of large bodies of men, but the quick transportation of small forces and ample material. In the long stretch of broken coast from Eastport to Galveston, there is the utmost need of being able to land rapid-fire guns and their crews promptly, not to repel invasion, but to form a defense against the sneaking U-boats that are about the only immediate source of anxiety on this continent. There is many a quiet cove or estuary along the coast where a hostile craft lying low in the water might lurk, or where a horde of spies could anchor stores of gasoline and provisions to replenish the marauders' supplies. It is of no little importance to be able to place a platoon or so with a rapid-fire gun almost anywhere along the coast to cut off the retreat of men or boat and co-operate with the patrol boats of the navy.

In such skirmishing work as this the electric roads which reach down seaward and run along the coast can be, if properly equipped, of the utmost service, and we hope that this branch of their usefulness will be followed up. For quick getting about the ever-ready motor truck is invaluable, yet an electric car capable of carrying a field piece and its crew can relieve the motors of a heavy task of patrol duty wherever the tracks run. Already there are well-defined rumors of traitorous activities at various points along the shore and of U-boats hanging around under shelter waiting for the time to strike. Many of these rumors are probably baseless, but the chances are that some have a foundation in fact. To the electric railway the need of careful compilations of their resources in cars, power and connections, as planned by the association's committee on national defense, is most important. Long stretches of shore could be well patrolled in this way, leaving to the permanent posts and motor trucks the remainder of the shore local defense. There are many points which must be protected outside the fortified ports, for a good deal of damage can be done to industries within range of the water even by so small a raiding force as

a U-boat with a 3-in. or 4-in. gun, and the European experience has shown that the commanders of the aforesaid expeditions are by no means squeamish about their methods of warfare and may be reasonably expected to indulge in wanton destruction of life and property for sheer terrorism. It is up to the railway men to be prepared for this patrol work as well as for the heavier tasks of carrying if necessary large bodies of troops. This means thorough preparation in the way of material for carrying light artillery and its equipment and clearing the way on lines leading to and along the shore, so that on extremely short notice ordinary traffic can be sidetracked and patrol cars started out, a problem somewhat different from the general one of mobilization and consequently requiring study right now.

#### A CONVENTION OF PUBLICITY MEN

The plan to assemble the publicity men of electric railways at the forthcoming St. Louis convention of the Advertising Clubs of the World is worthy of all support. The art of publicity as yet has few traditions. It is all so new that many people don't know what it really is. Gerald Stanley Lee in his book "We" described it as "helping millionaires to think." Its real purpose is to interpret the corporation to public opinion and to interpret enlightened public opinion to the corporation.

The St. Louis convention will give the men a fine chance to study public opinion, the effective approaches to the popular mind and what the experience of different companies has shown as to the best methods of doing these things. There is such a real community of interest between electric railway companies in all these matters that a frank interchange of experiences should be widely useful.

But the publicity men should go further. They need to know the electric railway business as well as the public. They should, therefore, plan to meet not only at St. Louis but with the executives of the electric railway companies themselves at the annual convention in October. A day or at least a session of that convention should be set apart to discuss publicity and public relations; the speakers should be the publicity men and the executives. That was a most helpful and suggestive discussion which followed Ivy L. Lee's address at the convention last year. There should be a more detailed consideration of this vital problem.

In addition, there might well be an exhibit of publicity material which has been issued by the different companies. Indeed, if a prize could be offered to that company making the best exhibit and report upon its publicity activities, it would probably stimulate a rivalry which would prove both healthy and helpful.

The electric railway public relations problem is so vital and pressing as to demand the earnest and immediate study of every man having the welfare of this industry at heart. Unless the public can see the problems of the industry as they are and meet those problems fairly and constructively, one must take a despair-

ing view of the future. That we do not do. We believe the public is fair; we believe that proper publicity will cure some of the most serious evils now confronting this industry; we intend to support every expedient which will promote that end. Here is an expedient which every company should support. These conventions of publicity men, therefore, will receive all the co-operation which the columns of the *ELECTRIC RAILWAY JOURNAL* can extend.

#### THE APPEAL BY THE INTERBOROUGH FOR "HELP"

Some people said it wasn't dignified for the Interborough to request complaints from the public. Others said it was a mistake to suggest that complaints be made, for that would only stir up criticism. Yet others said the appeal for "help" constituted a confession on the part of the company of its inability to do its job.

Just how superficial any such points of view are is indicated by the results of this remarkable bid for popular co-operation, as told on another page. Nothing the company had previously done "caught on" more quickly. Right away, the step disarmed public criticism. It challenged the good-will of everybody. For it was all so human. If a man or an institution maintains an attitude of superiority and aloofness, he won't get much public sympathy. But antagonism melts the moment a man says, "I'm doing all I can, but I know I'm not perfect; tell me of your criticism, and I'll do my best to profit by it." After that it is purely a question of good faith, for the human relationship has been established.

The New York subway and elevated are among the wonders of the modern world—as transportation machines. They carry so many millions of people and carry them so safely and quickly, that the public little realizes the part played by the man behind the machine. Yet that man is just as human, just as real as the man who enjoys the service. The vital need is to get their points of view together, to establish a point of contact, to make them realize their human relationship.

This act of the Interborough was conceived in a fine spirit. Its plan and purpose are well worth the study of other companies, for in them are embodied certain essential features of any effort to cultivate better public relations. The beginning and the end of any campaign for the approval and support of public opinion must be sincerity. And here right at the outset of Interborough's new publicity policy was an act of such obvious candor and sincerity that immediately it won the applause of New York.

A great deal has been said of publicity and the best methods of publicity, but, when all is said and done, what really counts is the spirit of the management. There are many ways of communicating that spirit to the public, but even through very awkward and faulty methods of publicity a spirit of real and earnest desire to serve the public to the best of one's ability is sure to be understood. Once that is understood, the way to public confidence is paved.

# Publicity on the Small Road

A Story of Earnest Endeavor Toward Cementing Good Public Relations and the Satisfactory Results Which Followed

By W. H. BOYCE

Superintendent Beaver Valley Traction Company, New Brighton, Pa.

**T**HE good-will of the public is invaluable, and we as street railway operating officials must ever cultivate it. The question naturally arises by what means can we secure and retain the confidence of the public and what methods must we employ to impress upon its mind the honesty and sincerity of our purposes?

## PUBLICITY IS THE ANSWER

In effecting publicity we have learned that there are many ways other than the printed page to acquaint the public with the guiding purposes and ideals of the officers of this company and the esteem in which its good-will and understanding is held by them. It is not with egotism nor even with a pardonable pride that the writer records his experiences but rather in the hope that his ventures of proved worth may at some future date be

plaints climb and go over your head? There must be ground, either fancied or real, for each complaint made, and unless each and every complainant is at least partly satisfied, he is constantly out with his tools connecting more load, possibly only a few watts here or there, which are not in themselves a menace to any particular circuit, but which will, when thrown on simultaneously, show that you are carrying several amperes over your capacity.

## HANDLING COMPLAINTS

When complaints against our trainmen are made by phone or in person we use a special form for recording the information. The face of this blank contains the complaint and the reverse side the result of the dispatcher's investigation and his opinion, formed from the



## TRACTION CO. MEN, SALVATION ARMY WORK TOGETHER

*Street Car Company and Employees Donate Services and Cars to Make Collections of Clothing Next Week*

## ARMY TO MAKE DISTRIBUTION

Newspapers of the Beaver valley, the Beaver Valley Traction Company, its employees and the Salvation Army have, through a well devised plan of co-operation completed arrangements for a campaign to aid the worthy poor of Beaver county during the Christmas season and make possible for them a Christmas that will be full of cheer and plenty. It is believed the campaign will result in those homes, where circumstances this year will not allow old Santa to enter, becoming centers of Yale cheer and bring gladness to the hearts of little ones, who otherwise might be passed up when jolly St. Nick makes his calls.

Employees of the Beaver Valley Traction Company will solicit donations and make the collections, and everything will be turned over to the Sal-

PUBLICITY ON SMALL ROAD—CAR USED AT CHRISTMAS TIME TO COLLECT GIFTS FOR DISTRIBUTION BY SALVATION ARMY, WITH CLIPPING FROM LOCAL PAPER DESCRIBING THE SERVICE

the means of smoothing over some of the rough places for other operating officials.

We do not agree with those who contend that publicity work should only be handled by a specialist in that line, for of what profit would it be to a company to employ a publicity agent to maintain one attitude toward the public while its operating officials maintained another? On the other hand, an operating official who does conscientiously have the proper attitude toward the public can and must remove all doubt and suspicion and arrive at some common ground on which he and the people can get together and come to an understanding. This may be through the medium of the press, car cards or tracts, business calls, dinners, theater parties, voluntary visits to borough councils, and other ways. The operating man who has been years on the ground and has not improved and traveled these open avenues has not been true to his superior officers, directors, stockholders, his fellow-townsmen or himself and has only himself to blame for being the non-shock absorbing buffer that he is. A buffer between the public and his company such an official necessarily is, but why not be of the "anti-climb" variety? As complaints, whether verbal, written or printed, must and will have the attention of some responsible official, why have com-

facts gained by his inquiries made of the crew or any person having knowledge of the alleged occurrence. If the complaint is the result of an altercation, the conductor's witnesses are interviewed or written to, provided in our opinion the case warrants such action.

On complaints of inadequate service, the traffic conditions are noted between the points stated in the complaint, not so much to acquaint ourselves with the conditions existing between these particular points, for we aim to keep well informed on such conditions at all points, so as to have the latest data on which to reply to the complainant.

In one instance we had been troubled by a factory employee, who had circulated a petition for better service, on which he had numerous signers, a very easy thing to accomplish under any conditions. More cars were requested from his district at shop closing time. He had a long list of register statements, showing the number of passengers in that fare section for that particular trip for many evenings past. In this particular case the reason for the high register readings was that the cars were picking up a shop load 3 miles beyond the point at which complaint was made, but the greater number of passengers were discharged before reaching the factory in question. But all manner of reasoning

WE ARE GUARDING AGAINST  
125 DIFFERENT KINDS OF ACCIDENT  
HOW MANY CAN YOU NAME?

IN THE FACE OF RISING  
COSTS, WE GIVE YOU ALL WE  
POSSIBLY CAN FOR 5¢.

PUBLICITY ON SMALL ROAD—TYPICAL CAR CARDS USED BY BEAVER VALLEY TRACTION COMPANY

could not convince this individual that his register statement traffic check was incorrect, until, finally, we offered to pay him for his time for two or three evenings to accompany a traffic checker to the point complained of and told him that the cars would be stopped and the number of passengers on them counted. One evening was enough for him. He hasn't been around for his pay.

#### A REPUTATION FOR FAIR DEALING

Perhaps the most valuable asset an operating official can have is a reputation for squareness. The late J. H. Van Dorn, founder of the great Van Dorn Iron Works, when asked to what he attributed his success, replied, "I play fair and do as I agree." Could anything be plainer? There was never a truer axiom than: "Common sense draws men together. Square dealing holds them together." Generally speaking, one is not in the habit of "warming up to" or placing confidence in those whom he even vaguely feels distrust him. So, in this line of work, we cannot afford to fail to improve every opportunity to better the relations with each patron with whom we come in contact.

We have found that a good place to start fair dealing is with the employees, though not at a sacrifice of discipline. This, above all, is our stock in trade, for if an official is a poor disciplinarian, no matter what his other qualifications; he is lost. It is a good rule to deal with each employee charged with an infraction of a rule regardless of political, social, religious or fraternal relations, but ever to keep in mind the premises in the particular case. If one gives proper consideration to the employee's past record, he will arrive at a fair and just conclusion. Employees know whether the management plays favorites. Regardless of rules, they hold conversations with your patrons daily. They readily recognize, appreciate and advertise absolutely fair treatment. On the other hand, if the treatment is not absolutely fair, a "bond of sympathy" is naturally set up between employees, who have had to face a stormy individual at hearing time, which makes all of the "gang outside" want to know what transpired "on the carpet." And you can imagine the "justice" which the choleric executive gets at this public "hearing." We need not dwell

on the effect this has on the force. You can surmise the version to their friends and acquaintances, which they have in all walks of life, as some of us who began our careers upon the platform know.

The disciplinarian, who does not lose his temper at a hearing nor attempt to prove his point or coerce by brusqueness or boisterousness, but weighs the facts in calmness, will command respect from all his employees, notwithstanding the disposition which he makes of the case.

#### CONDUCT OF PUBLICITY

We have not employed a publicity man. The revenue of this company will not permit it. Yet, during the past four years we have changed our advertisements twice each week in each of the three daily papers. We are using regularly a 5 in. double or 10 in. single column space, and, as occasion has demanded, a greater amount. The writing of advertisement, like any other literary work, we find to be dependent upon the mood. If one does not have copy prepared in advance, possibly when the day comes around that the copy in the hands of the printer is exhausted, then the advertisement that is written in haste will prove even to the writer to be very poor in print.

We have prepared and have on hand more than five hundred advertisements, dealing with safety and such general operating conditions and difficulties as do or will from time to time arise on this or any electric railway property. They are classified and deal with the professional politician, the jitney, every-day operating problems and costs, the operating rules, investment, taxes, the fact that electric railways must for the sake of the community and their own existence be dividend payers, and in fact almost every condition except that existing where a franchise is wanted or to offset a 3-cent fare cry.

In our advertising to promote better public relations, we have used copy of the nature of that accompanying this article in the newspapers, on car cards, blotters, thermometers and posters. The newspaper men all understand that at any time they phone this office they can get full and correct information about any accident

THE COST OF MATERIALS  
WE USE  
IS UP ON AN AVERAGE OF 4½<sup>7</sup>/<sub>2</sub>

ALL THINGS CONSIDERED,  
DO WE MERIT YOUR  
GOOD WILL? BE FAIR

WHAT CAN YOU BUY  
FOR A NICKEL?

WE DO CARE WHAT  
YOU THINK AND SAY  
ABOUT THIS SERVICE.

PUBLICITY ON SMALL ROAD—TYPICAL CAR CARDS USED BY BEAVER VALLEY TRACTION COMPANY

STEAM RAILROAD FARES HAVE BEEN INCREASED TWICE DURING THE PAST FIVE YEARS IN THIS LOCALITY.

COMPARE OUR FIVE CENT FARE TO THE PASSENGER RATE CHARGED ON PARALLEL STEAM LINES.

WITH BUT HOURLY SERVICE INTERURBAN CAR LINE FARES THROUGHOUT THE COUNTY ARE FROM TWO TO FOUR TIMES THOSE CHARGED ON OUR LINES.

WE ARE DOING EVERYTHING IN OUR POWER TO PROPERLY SERVE THE TRAVELING PUBLIC AT A COST TO US OF FROM 20 TO 100 PER CENT MORE THAN EVER BEFORE, YET YOUR FARES HAVE NOT BEEN INCREASED UP TO THIS TIME.

COULD YOU—WOULD YOU, UNDER LIKE CONDITIONS, FOLLOW A METHOD OF THIS KIND IN THE MANAGEMENT OF YOUR OWN BUSINESS AFFAIRS?

*The Beaver Valley Traction Company*

## For Better Service

If you are an officer in a lodge, school, basketball association, or alumni association or have anything to do with the arrangements for banquets, lectures, or any unusual gatherings, you will confer a favor upon us and those attending your amusements or social functions if you will notify us as to your exact closing hour before 3 P. M. on the day of such gathering, and tell us approximately the number of people that you expect, so that we may have extra cars, if necessary, or that we may hold the regular cars a few minutes at the time your people are ready to be transported home.

**Beaver Valley Traction Co.**

## CAR LIGHTING

We adopted as a standard the Mazda lamp, which on account of its construction, is necessarily much more fragile than the carbon type of lamp, especially when subjected to the comparatively rough treatment they receive in car service.

Our consumption during the past year was 4397 incandescent lamps. This refinement is for your comfort and convenience, which we have constantly in mind.

**The Beaver Valley Traction Co.**

PUBLICITY ON SMALL ROAD—TYPICAL NEWSPAPER ADS USED BY BEAVER VALLEY TRACTION COMPANY

that has happened on our lines, any new equipment that we intend to purchase or other contemplated improvements. If we are not ready to have this information made public, we give them an adequate explanation, and we have yet to experience the disappointment of having our confidence violated by any newspaper man in this community.

We are also not unmindful of the facts, that, warm cars in winter, clean, properly disinfected cars, properly maintained rolling stock and roadbed, and adequate service—all make for favorable verbal publicity.

### THE RESULTS

During the past four years there have been twelve cases against this company in court. Ten of them were either non-suited or a verdict was rendered for the defendant. Even with publicity this would not be possible except that the cases were properly prepared by

our investigation bureau and properly presented and tried by our legal department.

On Sept. 1, 1916, after four months of logically cumulative advertising, we were able to put into effect without any apparent objection, or without any appeal to the Public Service Commission, a new tariff, which abolished books of 100 tickets sold for \$4.50, labor tickets which sold at 2½ cents and school tickets which sold at 3¼ cents each, substituting therefore twenty-one tickets for \$1.

Decency, accompanied by unbiased consideration of all the rights of others—and advertising *does* pay.

During the year 1916 the Illinois Traction System Hospital Association paid out for hospital and medical services for its members the sum of \$26,785. Dues from members during this period amounted to \$18,555. The deficit of \$8,229 was made good by the company.

## A Row With Friend Wife

Ever have a row with "Friend Wife?" Did you continue when you realized you were wrong? Why?

Will you admit that you were not blameless if she admits that she too was at fault?

Now, while you're in that mood—should all blame be placed upon the service or its own portion upon the constantly shrinking nickel?

**BE CAREFUL. BE FAIR**

**The Beaver Valley Traction Co.**

## WE SAVE YOU TIME

Why Not Assume the Same Attitude Toward Us as to the Trades or Professional Man?

At the popular restaurant you'll wait an hour for a table and think nothing of it. Even then you will tip the head waiter a dollar for keeping you waiting.

IF YOU HAVE TO WAIT A FEW MINUTES ON A STREET CAR YOUR TEMPER IS IMMEDIATELY RUFFLED, THE SYSTEM IS ROTTEN, AND TO YOUR VIEW, THE WORLD IS COMING TO AN END. YOU PAY US A NICKEL—AND ASK FOR A TRANSFER. WE GET NO TIP, WE GET KICKED AND YET GIVE PROMPT AND COMPLETE SERVICE.

THE DOCTOR KEEPS YOU WAITING. OFFER HIM A NICKEL AND SEE WHAT YOU GET—NIX VOMICA WE BET.

THE MANICURIST KEEPS YOU WAITING, SO DOES THE HAIR DRESSER.

THE LAWYER KEEPS YOU WAITING.

THE BARBER KEEPS YOU WAITING.

Everywhere you wait and consider the time well spent and will pay large sums for the privilege of waiting.

WE DON'T WANT YOU TO WAIT ON CARS; WE WOULD LIKE TO HAVE A CAR AT YOUR ELBOW THE INSTANT YOU DECIDE TO RIDE, AND THUS DEMONSTRATE TO YOU THAT SERVICE IS WHAT WE AIM TO GIVE. JUST HOW MUCH SERVICE YOUR NICKEL WILL BUY IS IN DIRECT PROPORTION TO WHAT STATE OF MIND YOU ARE IN AND HOW YOU VIEW OUR EFFORTS.

Sounds Reasonable? Read It Over, Think It Over

**The Beaver Valley Traction Co.**

## IS YOUR HOUSE IN ORDER?

Does the maid always do as she is told?  
Does the wife always "obey?"  
Do the children ever get tantrums?  
Does the furnace ever smoke?  
Do the spigots leak?  
Does the landlord always promptly make the requested repairs?  
Does the newsboy ever fail to leave your paper?  
Does the dinner always suit you?  
Does every little thing always go just so at your house?  
Our system is just a great big wonderful house, wonderful in that so many things go right.

**The Beaver Valley Traction Company**

## Storeroom

Our storeroom records as of Oct. 31, 1916 show that we had in stock car, track and overhead line repair parts in the amount of

**\$22,687.60**

We should be glad to explain to any of our patrons who might call, our method of handling our storeroom supplies, which method might prove helpful to other storekeepers in this territory

**THE BEAVER VALLEY TRACTION CO.**

PUBLICITY ON SMALL ROAD—TYPICAL NEWSPAPER ADS USED BY BEAVER VALLEY TRACTION COMPANY

# Cincinnati's Rapid-Transit Ordinance

Approval of General Electorate Last Step Needed to Accomplish Surface Franchise Revision, Rapid Transit Development and Interurban Entrance—Liberal Concessions Made by Cincinnati Traction Company in Interest of Civic Development

**A**FTER years of talking, surveying and planning, the citizens of Cincinnati will on April 17 have the opportunity to place their stamp of final approval upon a progressive plan for unified electric railway operation. By one act they can assure the amicable settlement of a franchise revision for the surface system, and open the way for the rapid-transit development and interurban entrance which the city needs. How all these problems can be solved at one time, and how their solution is largely made possible as a result of the very liberal concessions of the surface lines in the franchise revision, will be explained in the following paragraphs.

### WHY THE FRANCHISE REQUIRES REVISION

In order to understand how it has been possible to arrange such a combined transportation program, it is necessary to recall what has led up to the present situation in each case. To take up the franchise question first, it appears that in 1896 the General Assembly of Ohio passed the Rogers law, authorizing cities to grant extensions of existing franchises for fifty years to street railways that would consolidate under the act. At that time there were several lines in Cincinnati, with no transfers, and all of these, with the exception of lines running over the Ohio River into Kentucky, were consolidated as the Cincinnati Street Railway and received a fifty-year extension upon terms then fixed, including a 5-cent fare, certain specified transfers and some rerouting and extensions.

The State law, however, provided that the terms should be subject to revision by the City Council at the end of twenty years and each fifteen years thereafter, the company at each time having the right of appeal to a court decision based on the cost of transportation then existing. Thus the company was in the peculiar position of having a naked franchise for the limited period of fifty years, but with the terms open to revision at stated intervals. The first or twenty-year period expired on April 22, 1916, since which time the question of revising the terms of the franchise has been under consideration.

Before discussing the rapid-transit situation, it should be explained that in 1901 the owning company, the Cincinnati Street Railway, leased the system to the Cincinnati Traction Company, the present operator, for an annual rental now equal to dividends at 6 per cent upon the lessor's common stock. This lease is for the full term of the existing franchise and all renewals and extensions.

The financing of the lessee company is handled

by the Ohio Traction Company, which owns all but a few qualifying shares of the \$2,000,000 of Cincinnati Traction Company stock. The lessee company has outstanding \$609,000 of equipment notes, but otherwise its financing is represented by the following securities of the Ohio Traction Company: First mortgage bonds, \$2,500,000; notes, \$1,500,000; 5 per cent cumulative preferred stock, \$8,500,000, and common stock, \$8,655,000.

### WHAT THE ORDINANCE PROPOSES

- New rapid transit line costing \$6,000,000.
- Interurban entrance under city approval.
- Unified operation of all traction lines.
- A 5-cent fare and universal transfers.
- City control over service and extensions.
- Protection of existing surface investment.
- Exchange by city of first money for control.
- Surplus earnings divisible between city and company.
- Possible acquisition of surface system at agreed price or by condemnation.
- Revision of all terms in 1931.

### INTERURBAN ENTRANCE AND RAPID TRANSIT

Although the territory around Cincinnati is well covered by existing and proposed interurban electric railways, the city has not benefited from interurban traffic so much as have cities like Indianapolis, Cleveland, Toledo, etc., because the interurban entrance into Cincinnati has been restricted, owing to the wide gage of the city lines and the long haul over city tracks for interurbans of the same gage, and because adequate terminal facilities have been lacking. The map on page 634 shows the locations and approximate termini of the various lines. They are listed in the table below.

These ten lines are in operation in Ohio with the exception of the Indianapolis & Cincinnati Traction Company, which

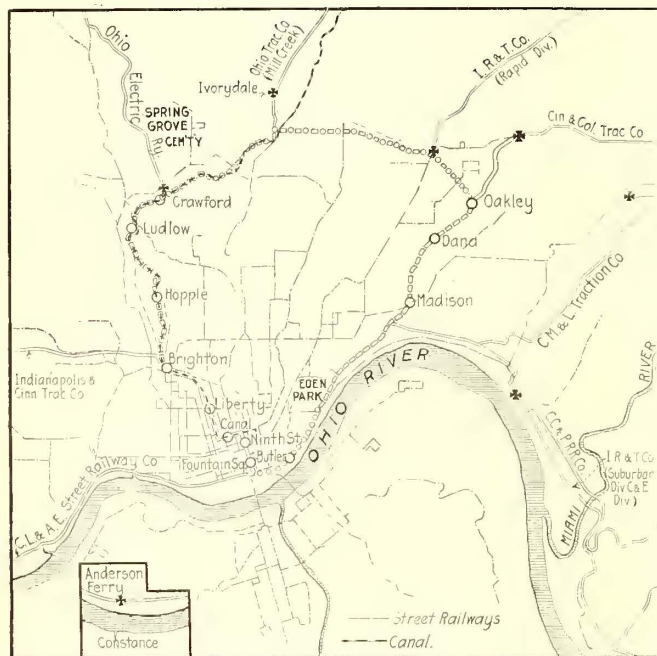
has been awaiting a settlement of the question of interurban entrance before building past the Indiana line. All of the remaining nine interurban lines connect with the surface system of the Cincinnati Traction Company, but owing to the fact that the city company has a broad gage, only five lines enter over its tracks, namely: the Cincinnati, Milford & Loveland Traction Company, the three divisions of the Interurban Railway & Terminal Company and the Cincinnati & Hamilton Traction Company. The interurban cars on even these lines, however, are delayed in following the local company's cars.

For years the problem of bringing the interurban railways into the city has been discussed. Prior to 1911 four solutions were advanced, but none of them provided for all the interurbans. About this time the question of rapid transit in Cincinnati became linked

INTERURBAN LINES AROUND CINCINNATI	
Line	Gage
Cincinnati, Laurenceburg & Aurora Electric Street R. R.	4 ft. 8 1/2 in.
Indianapolis & Cincinnati Traction Company	4 ft. 8 1/2 in.
Ohio Electric Railway	4 ft. 8 1/2 in.
Cincinnati & Hamilton Traction Company (Millcreek Valley Lines)	5 ft. 2 1/2 in.
Interurban Railway & Terminal Company—Rapid Div.	5 ft. 2 1/2 in.
Cincinnati & Columbus Traction Company	4 ft. 8 1/2 in.
Cincinnati, Milford & Loveland Traction Company	5 ft. 2 1/2 in.
Cincinnati, Georgetown & Portsmouth Railroad	4 ft. 8 1/2 in.
Interurban Railway & Terminal Company:	
Suburban Division	5 ft. 2 1/2 in.
Cincinnati & Eastern Division	5 ft. 2 1/2 in.

with that of interurban entrance. The topography of the city is peculiar in that there are few arteries of travel, many steep grades, and narrow streets in the business district, all of which have tended to create congestion and reduce the speed of operation. With the urban population rapidly increasing, the transportation problems have taken on an increasingly serious aspect.

A convenient basis for part of a rapid transit system that would ameliorate traffic conditions and permit interurban entrance was found in 1911 in the form of the section of the unused Miami-Erie canal through the city. It had long been contemplated that this might be used as a boulevard, but when in the year cited the section was leased from the State for \$32,000 a year, it was provided that the property might also be utilized for a subway rapid-transit line. Shortly afterward two successive Mayors, Messrs. Hunt and Spiegel, appointed unofficial commissions to investigate the feasibility of



MAP SHOWING PROPOSED RAPID-TRANSIT LINE AND INTERURBAN ENTRANCE FOR CINCINNATI

using the subway rights in the canal. After the recommendation by the first commission of a rapid-transit system estimated to cost \$5,717,849—which with slight modifications has been reaffirmed by subsequent commissions—the State Legislature in 1915 passed a bill authorizing the city, upon a favorable vote of the electors, to create a rapid transit commission of five members to be appointed by the Mayor. This body was empowered to issue bonds up to \$6,000,000 with the approval of the city for the construction of a rapid-transit line and to operate the line or lease it upon the approval of the electors. The new commission completed the work of the former bodies, and in April, 1916, the electors by a six-to-one vote approved a \$6,000,000 bond issue after the commission had promised that no money would be spent until a plan had been worked out for leasing the new line to an operating company.

#### JOINING THE QUESTIONS

During 1916, therefore, the city of Cincinnati fortunately reached the point where the questions of franchise revision, interurban entrance and rapid transit all came up for final discussion. The thought immediately arose that it would be much better from the point of view of economy and service if the proposed rapid-transit line could be operated in connection with the

surface lines. Both before the Rapid Transit Commission and the committee on street railways of the Council expressions were unanimously in favor of a unified transportation system. A joint conference committee representing both bodies was appointed, therefore, and after months of hearings and negotiations a unifying ordinance was drafted by the city authorities.

It was at first intended to provide for the operation of the new line, the Cincinnati Rapid Transit & Interurban Railway, by the Cincinnati Traction Company and for the revision of the terms of the present franchise of the latter company by having it surrender the fifty-year franchise and accept an entirely new franchise. It was proposed that this new franchise should be worked out on the basis of an indeterminate permit, and that the purchase price fixed in the franchise should also be made the basis for a definite return to the company. The company expressed its willingness to make such a franchise exchange, but the attorneys for all the parties interested were of the opinion that the Ohio law would not permit such a move. Companies that consolidated under the Rogers law were empowered to accept indeterminate franchises, but inasmuch as the Cincinnati Traction Company was the only consolidation, it was believed that the indeterminate franchise provision would be unconstitutional under Ohio statutes because of specific application.

For this reason it was found necessary to act under the existing franchise of the Cincinnati Traction Company. The result is an ordinance revising the terms of the present franchise to include the operation of the rapid-transit line. This was passed by the Council on March 14 and approved by the Mayor, and, except as noted hereafter, it will stand as the revised franchise until the next revision in 1931, when both the surface and the rapid-transit terms may be changed. In its other character, that of a lease of the new line to the operating company for the remaining period of the franchise, the ordinance has been signed by the Rapid Transit Commission and company officials but must be approved by vote of the general electorate on April 17. If the vote is favorable, unified operation becomes possible immediately; but if it is unfavorable, the Rapid Transit Commission will automatically be succeeded by a new board, and the whole question of franchise revision must be entirely reopened.

If the proposed ordinance is finally adopted, the Cincinnati Traction Company will still have a term franchise, subject to one more revision, with the expiration date of the franchise itself and of the included rapid-transit lease both in 1946. In every possible respect, however, the ordinance has been drafted along the line of an indeterminate permit, and it is hoped that such a franchise may be ultimately secured under new legislation, if the property is not purchased by the city.

#### THE NEW RAPID TRANSIT ROUTE

To take up now the various important points of the proposed unifying ordinance, it may be said that the accompanying map shows the general character of the rapid transit line or "loop" to be built. The basic plan provides for a 15.56 mile double-track system, standard gage, with a rapid-transit "U" with no grade crossings from Oakley station to Crawford station by way of the downtown district, and a high-speed surface line on the north side to connect the two ends. On the west side of the "U" there will be a subway from near Fountain Square up Walnut Street to meet the old canal, which will be followed in the form of a covered subway to Brighton station and an open subway to Crawford station. On the east side, connecting with the subway at Fountain Square, there will be a steel elevated up to the



Eden Park Reservoir, a concrete trestle along the Ohio River bluff and an open cut and fill to Oakley station. More than a third of the northern line connecting the top of the "U" will, at the western end, lie in the canal bed. The whole north-side section will for a time be operated as a surface line but will become a rapid-transit line eventually.

The ordinance provides that the city is to construct the loop but the company is to provide cars and power, the latter either through its own facilities or by purchase. The company is obligated to begin operation of part or all of the new line as soon as in the opinion of the Rapid Transit Commission it can be done, and it must maintain the line, together with any extensions or additions that the board may make.

#### HOW INTERURBANS MAY ENTER

The ordinance provides that the Cincinnati Traction Company shall grant interurban railways the right to use the rapid-transit route and also such parts of the company's own tracks as it may be necessary for the interurban companies to use, if possible, to reach the rapid-transit line, all upon terms, conditions and compensation proportionate and equitable. Contracts made between the interurban and the operating companies shall be subject to the approval of the Rapid Transit Commission. In case any interurban line and the operating company cannot agree upon terms for such a contract, the board shall prescribe the terms and the operating company shall accept them unless it can be shown on appeal that the terms are not equal and equitable, this appeal being possible for either the operating or the interurban company.

The foregoing map shows the approximate termini of the existing interurban lines and the contemplated connections with the rapid-transit loop, over which their cars would be operated into the proposed interurban freight terminal in the business district. The present financial plans for loop construction do not cover the cost of the physical connections with the interurban lines, and the question of city aid in this matter is for future settlement. The necessary new construction in most cases, however, is small, and it is hoped that the interurban lines will perform this work without delay. Of the two western and most distant lines, the Indianapolis & Cincinnati Traction Company, as before stated, stands ready to extend its lines over the Indiana border when entrance is assured, and the Cincinnati, Laurenceburg & Aurora Electric Street Railroad in April, 1916, secured a franchise for an allied line from its terminus at Anderson's Ferry into the business district.

#### SERVICE CONTROL, FARES AND TRANSFERS

The foregoing two sections have dealt with the two fundamental lease characteristics of the ordinance—*i. e.*, rapid transit and interurban entrance. Arising partly in connection with the lease arrangement, but more as concessions in the franchise revision, are other points deserving of special mention. For example, the ordinance reserves to the city the control of service on the surface and rapid-transit routes, including the right to fix schedules, types of cars and other operating details; and it specifically gives to the city the right to approve additions, authorize securities, change routes and order extensions thereof. The company may resist any service or extension order on one ground only, that compliance would mean the impairment of the minimum return to the company and the percentage tax to the city that are set in the ordinance. The control of the surface routes is placed in the hands of the Mayor, and that of the rapid-transit route in the Rapid Transit

Commission. The Mayor, with the approval of the board, shall appoint a city street railroad commissioner to keep in direct touch with the operation of the surface lines and the rapid-transit line and act as technical advisor to the Council, the Mayor and the board.

If in the future legislation is enacted by the General Assembly of Ohio or provision is made by city charter for other officials or boards to have the control that is vested by the ordinance in the Mayor, the Council, the Rapid Transit Commission, the city street railroad commissioner or other individual or board, the new body created is to have all such authority vested in it. This is provided for because it is held by the attorneys to be impossible at the present time to give any individual or board complete control over both the surface system and the rapid-transit line, although it is desired to merge this control as soon as possible into some single official or body.

The ordinance sets until 1931 a fare of 5 cents upon the lines of the Cincinnati Traction Company and the rapid-transit route, with 3 cents for children. This 5-cent rate is also to cover the Millcreek Valley lines within the city limits. These lines (the Cincinnati & Hamilton Traction Company) are operated under lease by the Ohio Traction Company, but by covenant under the ordinance they are to be operated, as far as they lie south of the present north city line, the same as any route of the Cincinnati Traction Company. Moreover, the receipts of the entire Millcreek Valley lines are to be included in the gross receipts of the combined system, and rentals therefor included in the rental to be paid.

Under the proposed arrangement the city will have a universal transfer between all cars of the combined system—that is, a transfer by which passengers may be able to travel over various routes so as to reach their destination by direct route or routes for one fare, providing only that transfers shall not be issued which will permit a return to the point of boarding the car. This will allow a transfer from a surface line to the rapid-transit loop, and *vice versa*. The transfer regulations are to be filed with the Mayor and subject to his change, and his decisions in regard thereto will be final.

#### HOW GROSS RECEIPTS WILL BE DISTRIBUTED

Beginning with Jan. 1, 1917, it is proposed that the annual gross receipts of the surface system, the Millcreek Valley lines and the rapid-transit line shall be used for certain purposes in a designated order. They may be included under four groups, as follows:

1. Operating expenses of the entire system, including injury and damage payments made after Jan. 1, 1917; taxes, except the city's gross earnings tax; depreciation charges, and the annual payment of principal on \$609,000 of outstanding equipment notes of the Cincinnati Traction Company and any similar notes hereafter approved. Depreciation charges are to be made as at present for five years after Jan. 1, 1917, unless otherwise ordered by the State Public Utilities Commission, and then this body is to fix charges for setting up depreciation funds on the surface system, the Millcreek Valley lines, the rapid-transit line and the equipment of the rapid-transit line owned by the traction company. The funds are to be invested and used for renewals and replacements.

2. The next group of charges includes first the rentals of the Cincinnati Traction Company, amounting to \$1,134,337, and of the Cincinnati & Hamilton Traction Company, amounting to \$100,600. The next deductions are \$215,000 for interest and \$82,445 for sinking funds on \$4,000,000 of capital expenditures (Ohio Traction bonds, \$2,500,000, and notes, \$1,500,000) up to Dec. 31,

1916; the annual interest on the unpaid balance of the \$609,000 of equipment notes, and all fixed charges on new capital expenditures approved by the city. The last deduction in this group is \$416,000, which represents approximately 6 per cent on the money invested in the property since the lease from the Cincinnati Street Railway, less the \$4,609,000 of reducible debt to be retired.

This figure of \$416,000 was the result of a discussion of a number of methods of figuring the proper return to the company upon its investment. For instance, through its financing company the Cincinnati Traction Company has expended on its leased property \$10,290,000, which with the Millcreek Valley investment of the Ohio Traction Company, together with certain other allowances, gives a total investment of \$11,525,000. Deducting the \$4,609,000 of reducible debt, leaves \$6,916,000, upon which 6 per cent is \$414,960. To use another method, it was pointed out by the Cincinnati Traction Company that its financing organization had furnished money to it without banking charges, and that, with an addition of 10 per cent of the investment to cover these, the return of 6 per cent upon the non-reducible debt would be \$434,680.

The operating company asserted its right to a 5 per cent return on the outstanding \$8,500,000 of preferred stock of the Ohio Traction Company, or \$425,000, but the city insisted upon deducting the \$9,000 by which the Millcreek Valley lines failed to meet rentals last year. The sum of \$416,000 was finally chosen as the permissible return. This does not quite meet the full dividend on the Ohio Traction preferred stock, and leaves the almost equal amount of common stock of this company dependent upon the earnings from the Traction Building and its investment in the Cincinnati Car Company.

3. The next group includes a payment of \$325,000 a year to the city in lieu of the 6 per cent tax heretofore paid on the gross receipts of the surface lines. This simply liquidates this tax at its present figure in order not to necessitate a separate accounting for surface and rapid-transit receipts. The group includes, as rapid-transit rental, the interest and sinking fund payments on bonds issued to build the new line or any extensions, and also the payment of \$120,000 a year into an amortization fund. When the fund in twenty-five years reaches \$5,000,000, and if it is not used as part payment for a city purchase of the surface system, it is to be paid to the company to reduce its outstanding stock and also reduce the return of the company from \$416,000 to \$116,000.

All of the foregoing payments are cumulative in the order named. In other words, if in any year the amount necessary to make any one of these payments is not earned, the deficit by which it is not earned shall be taken out of the next year's earnings before any subsequent payment is made.

4. The last group provides for the distribution of all earnings in excess of the amounts referred to above between the city and the company on the basis of 55 per cent to the city and 45 per cent to the company.

The fixing of Jan. 1, 1917, as the start of the accounting period for the new arrangement is of advantage to the city. Under this plan the city will have the full year's surplus earnings of the company to draw from. As the company has heretofore earned in excess of the amount of its agreed minimum earnings and the city's \$325,000, these excess earnings will go to the city for the full year to be used in paying the interest and sinking fund on such of the rapid-transit bonds as may be issued during the year.

Owing to the slowness of the three-year work of company, city and State in valuing the property, a purchase-

price agreement, based on the investment, has been made to facilitate matters. Under the proposed ordinance the city will have the right to purchase the property of the company in either of two ways. (1) By the payment of \$26,238,950, plus the amount of the reducible debt that may then be outstanding and any additional securities that may have been issued with the approval of the city, and less the amount in the amortization fund at the time of purchase. (2) By condemnation or other proceedings allowed by law. The purchase price includes the entire property of the Cincinnati Street Railway and the Cincinnati Traction Company in any way connected with the local transportation system, and includes also all franchises that the company may have from any other municipalities such as Norwood, St. Bernard and Cheviot. It includes practically everything that the Ohio Traction Company owns as well, except the Traction Building and such securities as it may own, including the stock of the Cincinnati Car Company.

#### OBJECTIONS TO THE ORDINANCE

Since the presentation of the ordinance, organized opposition has been confined to a citizens' committee, which has made a few objections to the plan—backed by the local Democratic organization, which has developed a tendency to make political capital out of it. It is said that divided control over the combined system is not desirable, but no better arrangement is possible under existing laws. Some desire specific provisions in the ordinance for bringing in the interurban lines, but legal authorities all agree that this matter would better be left to adjustment under a general clause. The interurban lines themselves at first wanted specific contracts, but they have examined the ordinance and have approved it in its present form. Some of them will have to change their gage to use the rapid-transit line, but this, it is believed, they are willing to do.

The basic objection to the ordinance, however, seems to be that the company receives a return on its investment before the payment of the city tax. In regard to this the Rapid Transit Commission has issued to Cincinnati voters the following significant statement:

"During the progress of negotiations with the company, one feature of an indeterminate permit, that is, the automatic readjustment of rates of fare, was discussed. It was felt, however, by those handling the matter for the city that, owing to the present high costs of all material, there was no possibility of a reduction in the rate of fare, at least not before the city is in a position to exercise its next right of revision in 1931. Therefore, the power to adjust fares was not provided for, and the withholding from the company of this protection, which is one of the elements of an indeterminate permit, together with the complete right of control given to the city by the ordinance, made it necessary to provide some other form of protecting the company in its minimum return. The form decided upon was to allow the company to receive its minimum return before the payments to the city are made. The committee would have placed the interest and sinking fund on rapid-transit bonds ahead of the city's gross earnings tax in the order of payment were it not for the fact that it has always been anticipated that the interest and sinking fund on the rapid-transit bonds would be paid for a number of years from taxes, and the city's financial requirements are such that it must secure the gross earnings tax. It is necessary to understand, however, that there is absolutely no guarantee to the company that it will receive its minimum return. In a number of other cities where a minimum return to the company has been recognized, there has been a guarantee

that the company shall receive the minimum return through fare adjustments, if necessary, but the protection allowed the company in this instance is the provision that its return shall be so placed that the action of the city in ordering extensions and service will not impair it."

An allied objection is that there is no guaranteed rental for the rapid-transit line. In the opinion of the Rapid Transit Commission, however, the first years of operation of the rapid-transit line will probably be at a loss, and the company could not be expected to carry this burden. In return for the city sustaining these losses, however, the company is limited to the return now being paid out, plus interest and sinking fund on future approved capital investment, and the excess thereafter from the operation of the larger system will be applied first to the city's requirements, with a division between city and company of any remaining profit.

#### WHAT THE COMMISSION AND THE COMPANY THINK

According to E. W. Edwards, chairman of the Rapid Transit Commission, the joint committee has contended that it should get every right and advantage for the city that would still leave the company unhampered and solvent—further than that it should not go and less than that it has not gone.

The Cincinnati Traction Company, it is said, has indeed yielded every point possible, because it believes that the city needs the rapid-transit line and the company will eventually share in the city development; because it realizes that a traction war about franchise revision terms would be harmful to all parties concerned, and because under the existing conditions it has been unable to do new financing. The ordinance is unique in that the company on a mere revision of franchise terms agrees to limit its fixed return so as to contribute a large portion of the earnings to help support the city system—and that, too, with city control and no guarantee of the minimum return. The ordinance primarily is the work of the city authorities, but in the interest of harmony and civic improvement the company is willing to accept its more restrictive provisions.

A very strong organization to get back of the rapid-transit proposition has been launched under the name of the Citizens' Rapid Transit Committee, with headquarters in the Union Central Life Insurance Building. The committee includes some of the most prominent business men of the city, particularly the heads of the largest department stores, theaters and factories.

### Poster Warns Against Trespassing

The Pennsylvania Railroad is posting a conspicuous notice warning of the danger of trespassing. The poster bears a fac-simile of the standard warning signal adopted by American railroads for the use of watchman, and illustrated on page 270 of the issue of this paper for Aug. 12, 1916. It consists of a white disk with the word "Stop" in large black letters. The fac-simile of the signal is brought out in striking prominence by an orange background. The poster bears these words:

"Do not risk your life by trespassing on the railroad. More than 5000 men, women and children are killed every year in this country while taking 'short cuts' over the tracks or otherwise trespassing on railroad property. Don't take this chance."

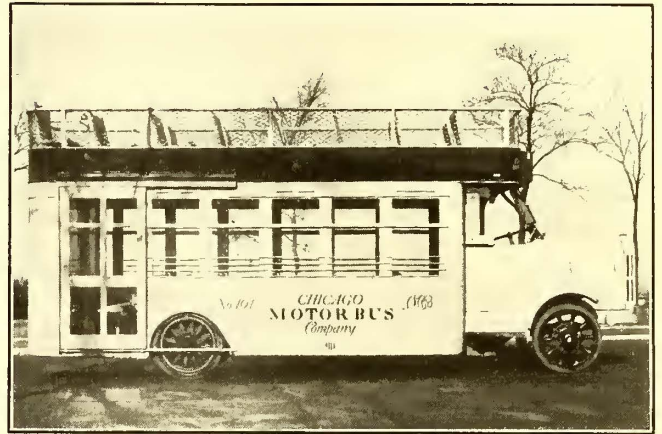
The new "Stop" poster is being displayed at places where the general public is accustomed to take short cuts across the tracks or to use the railroad right-of-way as a highway. It will also be placed on all bulletin boards in stations east and west of Pittsburgh.

## Chicago Motor Bus Line Begins Operation

Two to Three-Minute Service to Chicago's North Side Now Possible—Similar Service to South Side to Begin in Summer

A FURTHER addition to Chicago's transportation systems began its initial operation on March 25. This comprises a regular bus line service from the loop district north, through Lincoln Park and continuing out the Lake Shore Drive and Sheridan Road to Devon Avenue, a one-way distance of approximately 9 miles. The first fifty buses are being received rapidly, and when these are in service the company expects to be able to give a two-minute or three-minute service from the loop district during the rush hours to points along the north shore. During these rush hours, the buses will give express service from the loop to different main points on the North Side and operate local service beyond these. A 10-cent fare will be charged.

The buses are a marked improvement over those hitherto used in Chicago. The bodies were built by the St.



NEW BUS RECENTLY PUT IN REGULAR SERVICE BY THE CHICAGO MOTOR BUS LINE

Louis Car Company and are constructed of steel with the rear stairway to the upper deck inclosed and a sliding door closing off the vestibule. Passengers only up to the seating capacity of the bus will be carried, which means twenty-nine on the upper deck and twenty-two below. The side posts are equipped with push-button signals. Electric lights are mounted in the headlining and supplied with refractors. Operation has been begun as an experiment on the pay-as-you-enter system, using Rooke automatic registers.

The tractors were built by the Moline-Knight Company and are rated at 50 hp. The entire power plant and driving mechanism is mounted on the front axle so that the power unit may be detached from the body and another put in its place in thirty minutes, thus making it possible to keep the body in practically constant service. It is expected that the buses will be able to make 25 m.p.h., but the schedule speeds have not as yet been determined. The buses complete weigh approximately 10,000 lb.

A franchise was very recently granted to the same company for a similar line of buses through the South Side parks, and an order for fifty more buses has been placed. Operation is expected to begin on the South Side during the latter part of the summer. George B. Crowley is general manager of the Chicago Motor Bus Company, and W. J. Sherwood, formerly superintendent of the Mobile Light & Railroad Company, is superintendent of transportation.

# Interborough Solicits Complaints

The Recent Campaign Brought Out More Than Seven Thousand Letters, Mostly Appreciative of the Company's Efforts—Each Was Answered Individually—Typical Suggestions and Replies Are Published

By IVY L. LEE

WHATEVER else has been said, no one has ever questioned the fact that the managers of the Interborough Rapid Transit Company, which operates the New York subway and elevated, were doing their job and doing it marvelously well.

President Shonts, Vice-President Hedley and those around them are running what some have called the "eighth wonder of the world." Certainly it is the wonder of the world as a city transportation machine. There has been nothing like it in history.

But that company has made up its mind not only to do its job but to get the co-operation of the public, to make the public know the company's problems and work with the company in solving them.

Late in January, therefore, the company posted on the windows of every car in the subway and on the elevated placards entitled, "We Ask Your Help." It was a frank appeal for public assistance, the beginning of a definite campaign to enlist the good-will of the people of New York on behalf of the Interborough company.

During the last two or three years the Interborough has had to face traffic conditions, on both the subway and elevated, unparalleled, perhaps, on any other railroad in the world. The original subway lines, approximately 96 miles in length, had been built by the city to care for a daily capacity of approximately 400,000 passengers. Yet within five years these lines were carrying 1,000,000 each day. Frequently during the past year the 1,500,000 mark has been touched.

To relieve this congestion as well as to extend the rapid-transit system to all parts of the city New York is now building nearly 300 miles of additional underground routes. Until these are ready for operation, however, existing lines must continue to carry their present burden. Here was a situation which was difficult for the company as well as the public. It was important that the public should understand the nature of the problems which had to be solved.

In the subway and elevated car cards, the Interborough frankly stated the facts. The company declared that it was running "every rush-hour train the tracks would hold"; that congestion was "bound to be abnormal until new subway lines were opened," and it asked the public for helpful suggestions to meet the situation.

## HOW THE REQUEST WAS RECEIVED

The public's response exceeded all expectations, both in the number of replies and in the generally appreciative attitude toward the company's efforts. More than 7000 letters were received by President Shonts in February and March, and they are still coming in. In addition, scores of people called in person at the Interborough offices with suggestions. Others were invited to call and explain more fully ideas outlined in letters.

Every section of New York's varied social and business life was represented among President Shonts' correspondents. Lawyers, architects, merchants, civil, electrical and mining engineers, policemen, former Interborough employees, railroad men, stenographers, clerks, telephone operators, advertising men—all outlined various ways for dealing with congestion, or made suggestions for improving many minor points of service as

they related to the particular line or station they used most frequently.

One business man wrote no less than thirty letters with suggestions to President Shonts. Business organizations and the New York Chamber of Commerce also accepted the invitation and made studies of the subway's operation.

## HOW THE SUGGESTIONS WERE ANSWERED

The frankness of the company in thus dealing with the public—the only permanent foundation for public good-will—was further emphasized in the answers made by President Shonts to every suggestion received. Each letter of the entire 7000 received personal attention in the president's office. Not a single form letter was used, but every question was answered fully. To suggestions that on their face were impracticable reasons were given why they could not be adopted. Here was a real campaign of education. President Shonts determined to avail himself of this opportunity to make the people understand the problems he and his associates were trying so hard to solve.

Suggestions that seemed practicable were referred to a special committee from the operating department. On this committee President Shonts placed men who were experts in transportation problems, men who had studied the subway lines of London and Paris, who represented the best railroad brains in America, and who had spent years in making New York's subway one of the safest and most efficient railroads in the world.

This committee is still at work on the suggestions received. Often it has been necessary to make extended studies of proposed changes. Traffic counts have frequently been made to determine whether existing service did not need revision in order to serve the greatest number. The principle on which the company's service is founded is the greatest good for the greatest number.

Many of these traffic counts are still going on, and if results justify the proposed changes, their adoption will be announced later. Likewise, the reasons why they are not adopted, should that be the case, will be made public.

## OUTSTANDING FACTORS IN THE CAMPAIGN

In these letters from the public several factors stand out as suggestive to every public service corporation. All of them are convincing proof of the soundness of the proposition that the public, when it is fully informed as to the facts, can be trusted to judge fairly.

The Interborough, by the broadness of its invitation for suggestions or criticism, opened wide the door for the public to air its grievances. The opportunity was given to every disgruntled person, to every knocker, to "take it out" on the company. Yet few took advantage of it.

The predominant tone of all the letters was fairness. Nine out of every ten who wrote to President Shonts were earnest and sincere in their desire to help the company in its efforts to render service that, first of all, was absolutely safe, then comfortable and efficient. The amount of study and concentration displayed by the public on the subway and elevated problems was ex-

traordinary. Frequently maps and diagrams with complicated solutions were handed in.

A summary of the public's suggestions appears in the issue for April 6 of *Rapid Transit*, the company's bulletin, together with reprints of many of the letters. These will cover the main suggestions made by the public. Following each one President Shonts' reply is printed setting forth the reasons why the company operates as it does.

SOME OF THE SUGGESTIONS REPRODUCED

Some of the suggestions reprinted in this bulletin are the following:

1. "The use of end doors on subway cars for exit, with entrance through the center doors, or vice versa, with exit at the center doors and entrance at the ends.

2. "To use both express tracks during the rush hours in the same direction. In other words, to run trains downtown in the morning over three tracks, with up-town service only over the one local track. In the evening this arrangement would be reversed.

3. "To operate both express and local trains, eliminating or 'skipping' certain stations. Thus it was proposed to operate certain rush - hour trains in the morning past Ninety - sixth Street without stopping or past Brooklyn Bridge at night."

Other leading suggestions were: To start fresh trains from Fourteenth Street or Forty-second Street in the evening without operating them over the entire line, thus affording additional facilities for these congested points. To reserve the last two or three cars on a train for women, etc.

From among the large number of letters sent by President Shonts to those who responded to the company's request for help, these quotations are suggestive:

"We are doing everything in our power to instill in the minds of trainmen and platform guards in the subway the necessity of doing everything within reason to reduce the length of station stops."

"We are endeavoring to insure prompt closing of the car doors on crowded platforms by having extra men at leading congestion points."

"Our trainmen are thoroughly instructed in the importance of announcing the names of stations clearly

and audibly. Instructions provide that on approaching a station they shall announce clearly and distinctly not only the name of that station, but also the name of the next stop. Then when the train leaves a station they are to again announce the name of the next station. Instructions in proper enunciation is given in the company's school car."

"There is no other feature of the duty of the platform man and guard on which more emphasis is placed than courtesy toward the public. Inspectors constantly ride over the lines checking up behavior. Letters of complaint bring prompt discipline and letters of praise are placed to the credit of the employee's record."

"Often passengers can make it much easier for the guards to be courteous by being themselves more considerate."

The care with which all suggestions were answered by President Shonts will be indicated by his response to a proposition to use subway end doors for entrance and side doors for exit. On that point, Mr. Shonts said:

"First. Each car has three openings. During the rush-hour period, northbound for instance, all stations south of Brooklyn Bridge are 100 per cent loading stations, while Brooklyn Bridge and Fourteenth Street are upwards of 90 per cent loading and less than 10 per cent unloading stations.

"To adopt your scheme, therefore, would be equivalent to reducing the loading capacity of the cars at these stations by 33 1/3 per cent, thus increasing the station stop accordingly.

"At stations north of Grand Central Station the situation is reversed, those stations being essentially unloading stations during the evening rush hours.

"At these points, therefore, the operation of your plan would have a tendency of reducing the unloading capacity of cars by 66 2/3 per cent, with a corresponding increased length of station stop.

"Second. Owing to the congestion at present prevailing during the rush hours, it would be a physical impossibility for short-haul riders, for instance, passengers embarking at Brooklyn Bridge or Fourteenth Street, destined to Grand Central Station, to work their way through the cars by the time the train had reached their destination, thus adding greatly to the general

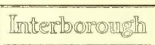
## We Ask Your Help

**Until new subway lines are opened rush-hour congestion is bound to be abnormal.**

The Interborough Rapid Transit Company is trying hard to meet the emergency. We are running every rush-hour train the tracks will hold.

**We ask helpful suggestions or criticism.**

Write us at 165 Broadway All letters will receive careful consideration.



*Theodore P Shonts*  
PRESIDENT  
 INTERBOROUGH RAPID TRANSIT CO.

## Danger Warnings

**Every day our guards warn you more than 150,000 times to "watch your step."**

**They speak for your safety.**

**Won't you listen?**




*Theodore P Shonts*  
PRESIDENT  
 INTERBOROUGH RAPID TRANSIT CO.

## Don't Block a Closing Door

**More than 2,800 persons were injured last year trying to squeeze through closing doors.**

**Why take the risk to save a few minutes?**



*Theodore P Shonts*  
PRESIDENT  
 INTERBOROUGH RAPID TRANSIT CO.

TYPICAL CAR POSTERS, INTERBOROUGH RAPID TRANSIT COMPANY

confusion and to the length of the station stop incident thereto.

"You will, of course, appreciate that the principle holds good whether the end doors be used for exit and the middle doors for embarking purposes, or *vice versa*."

With reference to its policy of courtesy, Mr. Shonts said to one of his correspondents:

"Upon entering the service of this company all applicants must pass a thorough examination on all matters pertaining to train operation before they are assigned to regular positions, and, subsequently, must report back to the school car for re-examination and general review work.

"In this course of instruction there is no one feature upon which so much emphasis is laid in the education of the employees as the value and necessity for courtesy in their dealings with the public, under any and all circumstances.

"We also have quite an elaborate system for checking up the conduct of train employees, and every case of dis-

courtesy thus revealed is made the subject of immediate investigation and discipline.

"Repeatedly we have invited the public to co-operate with us by reporting to us all cases of discourtesy on the part of our employees, and these cases are also made the subject of immediate investigation and discipline."

#### THE SPIRIT UNDERLYING THE COMPANY'S ATTITUDE

The general spirit underlying the Interborough attitude toward the public was set forth by Mr. Shonts in the concluding passage of the published bulletin, as follows:

We are not satisfied. We are trying every day to improve our methods, and we want the people of New York to realize deep down in their hearts that that is the spirit in which we are operating these lines.

*Theodore P. Shonts*

## Changing the Fare Collection System Complete Over Night

Paper Tickets Displaced by Metal Tokens—New Fare Boxes Installed on All Cars and P-A-Y-E System, Previously in Use on Only Thirteen Cars, Installed on All Forty-four Cars in Service in Evansville, Ind.

A COMPLETE over-night change of fare collection methods involving objections from both public and employees, as well as operating difficulties, both of which were unearthed and carefully ironed out in advance, is the accomplishment of the Public Utilities Company, Evansville, Ind., of which B. E. Parker is general superintendent, railway department. So radical a change, including as it did the adoption of metal tickets to displace the six for 25 cents paper tickets, and the complete installation of the pay-as-you-enter system with new fare boxes—changes new to both public and trainmen—might easily have been accompanied by a bungling of the whole scheme and an avalanche of criticism from the public press and the street car patrons. But instead, the change was made with apparent ease and the first day wore away with little confusion. Even the newspaper which is usually the strongest in its criticism of the company had nothing but words of praise to say for the new scheme. The men were pleased because it made less work for them, and the public liked the ease with which fares could be thrown into the hopper as compared with inserting a ticket in a narrow slot. The success was simply the result of a carefully planned preliminary educational campaign conducted among employees and patrons as well.

#### THE NEW COLLECTION SYSTEM

Previously the company had had only thirteen cars operating on the pay-as-you-enter plan—thirteen out of forty-four cars in service. These thirteen cars were equipped with the Johnson fare box of the coin-counting and ticket-canceling type, where the cancellation was done by perforating the ticket as it passed through the box. These fare boxes were being beaten, and the company was aware of a loss of revenue from this and other sources. Two motor-driven ticket-counting and ink-cancelling machines, supplied with energy first from a

storage battery and then from the trolley circuit, were tried out, but these were considered too slow and mechanically unsatisfactory. Other systems were studied, but none seemed to combine all the requisites demanded by the company. Then after many months of experimentation and co-operation with the manufacturer, the system of metal tickets used in conjunction with a fare box registering nickels, dimes and tickets and a clock register giving an audible registration of every class of fare paid was brought out. This system was described in detail in *ELECTRIC RAILWAY JOURNAL* for Nov. 25, 1916, page 1120. As applied to the Evansville cars, it includes the German silver alloy tickets, slightly smaller than a dime, and a Johnson fare box registering tickets on one cyclometer and cash fares on another. Accompanying these were Sterling or International clock registers recording cash and ticket fares on one side and transfers on the other, thus giving a bell registration for every passenger boarding the car and a double check on the revenue fares paid. The sum of the ticket and cash-fare readings on the fare box should equal at all times the reading on the revenue side of the clock register, and the reading on the non-revenue side of the clock register should check the number of transfers and employees' and charity pass paper tickets held by the conductor, the latter being rung up as non-revenue fares the same as transfers. This equipment with the pay-as-you-enter system installed on all cars constituted the complete change that was to be made. Then to get ready.

#### GETTING READY FOR RADICAL CHANGE

Of first importance was the preparation of the men. To this end one of the new fare boxes was installed in the trainmen's room, and a generous supply of coins and metal tickets provided. Here the men had ample time during the several weeks previous to the installation

of the new system to test the box and thoroughly familiarize themselves with its operation. They got the spirit of the preliminary preparation and would take turns playing conductor and passenger and try to get each other "balled" up. They had time to worry out the details, and one of the things which they soon discovered was the difficulty of making out the trip sheets, which involved computations with the 4 1/6-cent ticket as the base and totals which came out in odd cents and fractions of a cent. This had been anticipated and when the men discovered the trouble they were equipped with the folder, illustrated, in which the computations were all made for them in even money, so that all they had to do was take the figures out of the folder. This contained the values of from twenty-five up to 600 tickets and told them just how much cash and how many tickets over they should turn in to equal the fares registered and called for on the day's trip sheet. A sample conductor's report is also shown with the turn-in receipt attached at the bottom, which avoids later disputes. In this report the total in the "cash box statement" plus

for they could be carried in their trousers' pockets with their money, whereas paper tickets carried there were often ruined from sweat and could not be used, yet it was dangerous to leave them in their coats because of theft. Each citizen with whom the system was discussed in advance of its installation became an advertiser for the scheme among those with whom he came in contact, and the result was that the company received numerous calls asking when it proposed starting the new system, the public apparently becoming anxious. Then it was announced in the newspapers with advertisements, with articles in all the papers and with notices like the advertisements placed conspicuously in all the cars, that on Nov. 1, 1916, the metal tickets would go on sale. They did.

**THE CHANGE WELCOMED**

The system went into use with practically no confusion and was received as a novel innovation—something new and convenient. The public bought the new German silver tokens in generous numbers the first day,

<b>PUBLIC UTILITIES COMPANY</b> CONDUCTOR'S DAY SLIP 1917 PHONE 4500 IN CASE OF TROUBLE, transfer with Power, Traction or Fire Department, call Waterbury Station 2				Line _____ Conductor's No. _____			
<b>CASH BOX STATEMENT</b> Car No.    Register Receipt    No. Fares    Car No.    Register Receipt    No. Fares				<b>TICKET BOX STATEMENT</b> Car No.    Register Receipt    No. Fares    Car No.    Register Receipt    No. Fares			
<b>CASH REGISTER</b> Car No.    Register Receipt    No. Fares    Car No.    Register Receipt    No. Fares				<b>TRANSFER REGISTER</b> Car No.    Register Receipt    No. Fares    Car No.    Register Receipt    No. Fares			
Report of Cash and Checks Collected CASH BOX No. _____ Cash Paid Collected ..... \$50 Checks Collected ..... No. _____ Checks Turned In ..... No. _____ Checks in Account For ..... No. _____ TOTAL CASH ..... 6014				<b>MILEAGE PROOF</b> <input type="checkbox"/> West Street to 2nd and Main ..... 32 <input type="checkbox"/> 2nd and Main to West Street ..... 32 <input type="checkbox"/> 2nd and Main to Water Street ..... 43 <input type="checkbox"/> 2nd and Main to Cook's Park ..... 18 <input type="checkbox"/> Cook's Park to 2nd and Main Street ..... 18 <input type="checkbox"/> 2nd and Main to Cook's Park ..... 18			
Conductor _____ Badge No. _____ Received of Conductor _____ Badge No. _____ Tickets Turned In _____ Cash Turned In _____ 19779				<b>TOTAL</b> 50 Total Cash ..... 50 <small>NOTE—Conductors will use the amount given in amount on this Day Slip and in taking to the amount to be reported to the Office.</small>			

**PUBLIC UTILITIES CO'S**

# METAL TICKETS

**WILL GO ON SALE**

## NOVEMBER 1, 1916

See cut of New Fare Box and New Metal Tickets below.  
Note the difference in the top of box.

Commencing  
November 1, 1916,  
pay as you enter  
on all cars.



The slowness of placing one ticket in box at a time has been eliminated, as you can pay as many fares as you desire at one time, thereby saving time.



Please  
**Have Fare Ready**  
when boarding  
car.

**Drop all Nickels, Dimes and Metal Tickets in the Fare Box.**

Please hand your pennies to the Conductor in exchange for Nickel to be put in Fare Box.

Hand all Paper Tickets and Transfers to the Conductor.  
**TAKE THIS HOME AND SHOW THE FAMILY.**

CONDUCTOR'S REPORT SHEET, FRONT AND BACK, AND ADVERTISEMENT ANNOUNCING CHANGE

the total in the "ticket box statement" should equal the total in the "cash register statement." The reverse side of the conductor's report is formed up for the detailed trip report. Other details and causes for grievance were worked out in the same manner, with the result that the men were ready for the change and knew what they were about. They had come to like the system before it was installed on the cars.

**PREPARING THE PUBLIC**

The pre-education of the public was also carefully planned and executed. Samples of the metal tokens were shown to the newspaper men and the advantages of the new system explained to them, so that they were solid on the idea before it was made public. Company officials called on the merchants and bankers and told them the story and pointed out the advantages. Some did not like the idea at first, the principal objection alleged being on the size of the ticket, which is slightly smaller than a dime but thicker. Laboring men readily appreciated the advantages of the metal tickets to them,

and hundreds of them were sent away to friends as souvenirs. A loss to the company? Yes—of tickets, but not money, for on every ticket which is lost or destroyed or taken out of town the company makes a profit of approximately 50 per cent. The money received from the sale of tickets is not counted as income until it comes in by way of the fare box, so for every one lost the company has the money in the treasury to put one and one-half tickets in its place. The company is not concerned with what becomes of the tickets if the supply must be replenished from time to time, as they represent no economic loss. A paper ticket lost, of course, represents very nearly the price of a ride profit to the company, but this is not a matter of moment. The metal ticket is sufficiently high in value, however, that it would not make a profitable counterfeiting enterprise, which is not true of the paper ticket.

At the start the Evansville Company ordered 70,000 tickets and then shortly 10,000 more to take care of a population of 100,000. Each conductor received \$5 worth and a special ticket change carrier equipped with

a lever throwing out six tickets at a time—the usual purchase. From then on the dealing in tickets has been the conductor's own transaction. He buys from the company and sells to the riders. He marks down his own money in the morning and at the end of his run deducts this from what he has, and the remainder should approximately balance with the amount called for by the register, the variation being accounted for by the slightly greater number of tickets sold than received, or vice versa, but averaging up from day to day to approximately the registration. His supply of tickets and change is constantly replenished by the tickets and coins paid in, to which he has access after they are ground through the fare box.

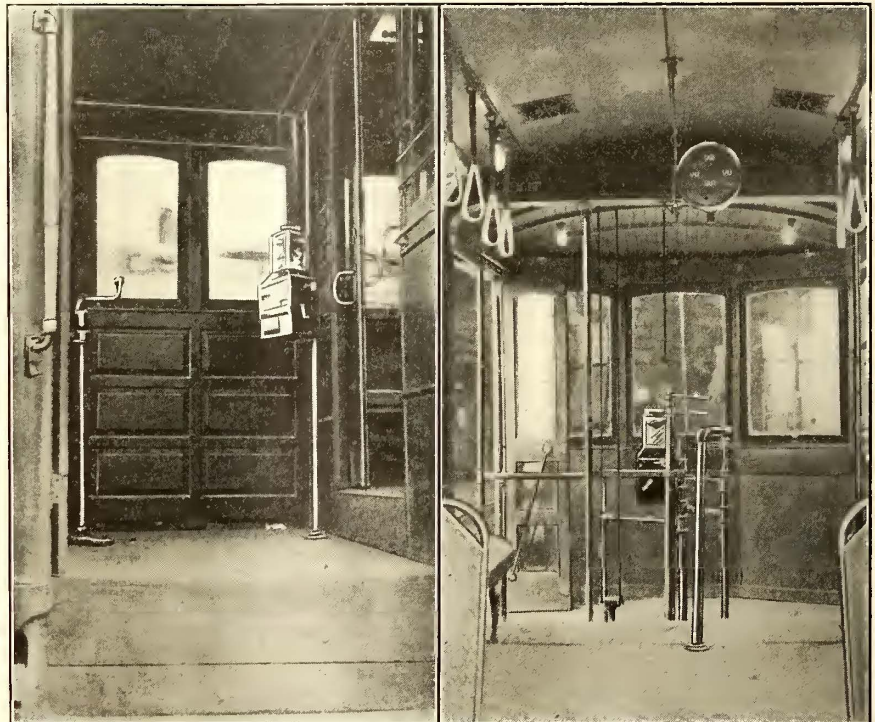
Pennies are exchanged by the conductor for a nickel which the passenger drops into the fare box. Should the passenger drop five pennies in the box before the conductor stops him, or if he had no other coin, the conductor can see on the inspection plate if five of them were deposited and can accept them as a fare, making note of it on his report sheet. Pennies thus deposited

the revenue it earned, and the following figures tell the story:

	1916-1917 Increase Over 1915-1916	1915-1916 Increase Over 1914-1915
November .....	15.90 per cent	5.72 per cent
December .....	16.24 per cent	3.05 per cent
January .....	13.70 per cent	8.97 per cent
February .....	12.33 (28 days 1917) (29 days 1916)	16.49 (29 days 1916) (28 days 1915)

The good showing is due in part to the more efficient pay-as-you-enter system, in part to the efficiency of the fare box, in part to the extra safeguards made possible by the metal ticket, and perhaps in small part to the normal growth of the city. In addition to the monetary results the rate of loading has been noticeably speeded up. The conductors, a number of whom were questioned by the writer as a stranger and in a way that would give them every opportunity to comment adversely, are all enthusiastically for the new scheme. Their only difficulty in starting it off was in making out reports, but this was mastered after two conductors' meetings at which the general superintendent explained away the troubles.

FROM 201 TO 250			FROM 251 TO 300		
Checks	Value	Over	Checks	Value	Over
201	\$8.25	3	261	\$10.25	6
202	8.25	4	262	10.50	0
203	8.25	6	263	10.50	1
204	8.50	0	264	10.50	2
205	8.50	1	265	10.50	3
206	8.50	2	266	10.50	4
207	8.50	3	267	10.50	5
208	8.50	4	268	10.75	0
209	8.50	5	269	10.75	1
210	8.75	0	270	10.75	2
211	8.75	1	271	10.75	3
212	8.75	2	272	10.75	4
213	8.75	3	273	10.75	5
214	8.75	4	274	11.00	0
215	8.75	5	275	11.00	1
216	9.00	0	276	11.00	2
217	9.00	1	277	11.00	3
218	9.00	2	278	11.00	4
219	9.00	3	279	11.00	5
220	9.00	4	280	11.25	0
221	9.25	0	281	11.25	1
222	9.25	1	282	11.25	2
223	9.25	2	283	11.25	3
224	9.25	3	284	11.25	4
225	9.25	4	285	11.25	5
226	9.25	5	286	11.50	0
227	9.25	6	287	11.50	1
228	9.50	0	288	11.50	2
229	9.50	1	289	11.50	3
230	9.50	2	290	11.50	4
231	9.50	3	291	11.50	5
232	9.50	4	292	11.75	0
233	9.50	5	293	11.75	1
234	9.75	0	294	11.75	2
235	9.75	1	295	11.75	3
236	9.75	2	296	11.75	4
237	9.75	3	297	11.75	5
238	9.75	4	298	12.00	0
239	9.75	5	299	12.00	1
240	10.00	0	300	12.00	2
241	10.00	1	291	12.00	3
242	10.00	2	292	12.00	4
243	10.00	3	293	12.00	5
244	10.00	4	294	12.25	0
245	10.00	5	295	12.25	1
246	10.25	0	296	12.25	2
247	10.25	1	297	12.25	3
248	10.25	2	298	12.25	4
249	10.25	3	299	12.25	5
250	10.25	4	300	12.50	0



SECTION OF FOLDER FOR AIDING CONDUCTORS IN MAKING OUT REPORTS, AND VIEWS OF FARE BOX ON REGULAR P-A-Y-E CAR

are not registered but are shuttled into a locked compartment to which the cashier only has access. If anyone drops one penny in the box and tries to "get by," he loses the penny and pays a nickel as well, or otherwise the conductor will have one more fare registered on the clock register than in the fare box. This possibility keeps the conductors alert to the use of the inspection plate. However, very little trouble from the copper coin has been experienced, as is evidenced by the fact that in four months' operation there have been only 66 pennies a day in forty-four boxes on the average.

During a few weeks after the change the conductors, of course, had to accept paper tickets previously sold, and these were taken by the conductor and rung up on the clock register as revenue fares. This introduced a possibility of loss, but it was only a temporary though unavoidable condition to the change.

The proof of the system is in the receipts. The company installed the system in order that it might get all

## Output of Large Generating Systems

The *Electrical World* for this week is publishing its annual statistics of large generating stations. Approximately two-thirds of the central station energy of the country is generated by forty-one companies, chiefly in hydroelectric stations. During the past year there has been an increase of more than 2,000,000,000-kw.-hr. The following figures are for the ten largest companies, measured on a yearly output basis.

System	Peak Load (Kw.)	Date of Peak Load	Yearly Output (Kw.-Hr.)
Commonwealth Edison Company	3,699,740	Dec. 19	1,341,964,000
Niagara Falls Power Company	1,433,360	Nov. 24	1,015,525,680
Ontario Power Company of Niagara Falls	1,239,900	Oct. 12	942,221,900
New York Edison Company & United Electric Light & Power Company	254,824	Dec. 20	856,385,319
Montana Power Company	149,740	Dec. 19	867,940,326
Pacific Gas & Electric Company	141,008	Dec. 19	768,304,907
Hydraulic Power Company	89,275	Dec. 26	717,079,320
Toronto Power Company	129,000	Dec. 20	660,873,579
Public Service Electric Co. of N. J.	174,000	Dec. 14	608,018,729



# Analyses of P. R. T. Proposal

Director Twining Criticises Philadelphia Company's Plan for Leasing New City-Built High-Speed Lines—Ford, Bacon & Davis Suggest Means of Meeting Estimated Deficit—Recourse to a 6-Cent Fare May Be Necessary

ON March 29, as mentioned in the news columns last week, William S. Twining, director Department of City Transit, Philadelphia, Pa., sent to Councils a report criticising the proposal submitted to the city on Dec. 20, 1916, by the Philadelphia Rapid Transit Company for the lease and operation of the new city-built high-speed lines. In Mr. Twining's opinion the proposal aims not to lease the city's property to the company, but to lease the company's property to the city at a fixed rental of \$1,500,000, the company remaining in charge of operation without a proper degree of responsibility. Mr. Twining outlined what he considers the essentials of a fair contract between the company and the city, and then recommended that the city change its construction program so as to bring the estimated deficits within reasonable limits, as set forth in an appended report from Ford, Bacon & Davis, New York, N. Y., the consulting engineers for the city.

## WHAT THE P. R. T. PROPOSED

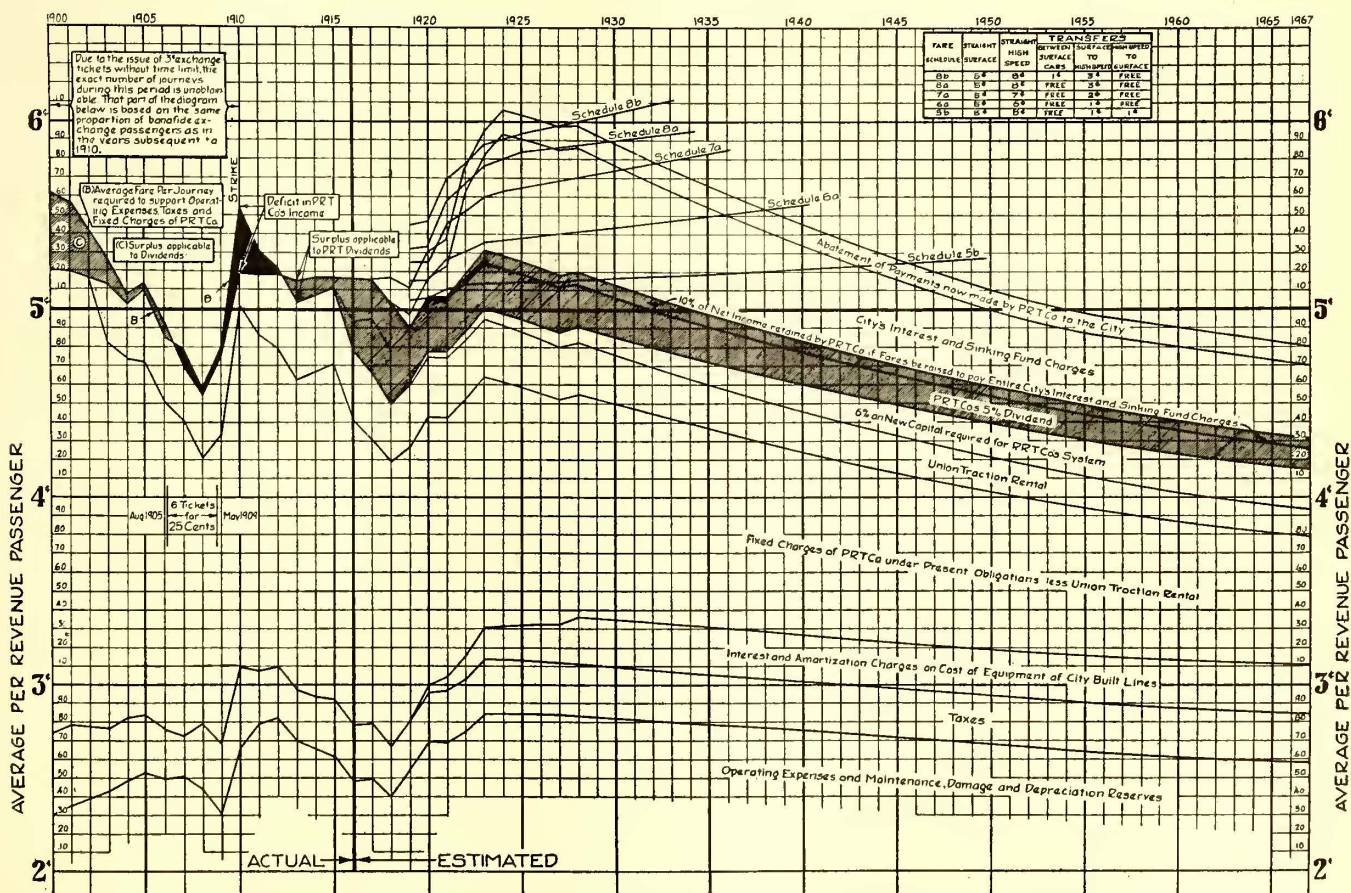
The proposal made by the company was based upon a financial as well as a physical unification of the old and new systems. The gross receipts were to be applied to the payment of (1) the actual cost of operation of the

combined systems; (2) the fixed charges of the company; (3) a cumulative dividend of 5 per cent upon the paid-in capital stock, and (4) a division of the remaining net surplus, 10 per cent to the company and 90 per cent to the city, for the city-built lines.

Under this plan the system would be operated with a 5-cent fare, and universal transfers except in the delivery district, but provision would be made for such readjustments of fare at any time during the term of the contract as might be necessary to protect and secure the return to the company as specified above and necessary and advisable in the interests of the city for any unforeseen reason or contingency. The 5-cent fare base could be changed only by order of the Public Service Commission, but after any semi-annual statement a charge for transfers could be instituted by the company without such an order.

## PREFERENTIAL PAYMENT IS CRITICISED

According to Mr. Twining, the company's proposal is in reality the reverse of what it appears on the surface. It is in the form of a lease, but instead of the city's lines being rented to the company at a real cash rental, the city is placed in the position of another "holding



COST OF SERVICE AND PASSENGER REVENUE AT VARIOUS FARE SCHEDULES PER REVENUE PASSENGER BASED ON ESTIMATED PROBABLE FINANCIAL RESULTS OF THE PHILADELPHIA UNIFIED SYSTEM, AS COMPILED BY FORD, BACON & DAVIS

company," leasing the existing system of the Philadelphia Rapid Transit Company, guaranteeing a certain definite cash rental to its present owners, and taking for its share of the earnings and the return on its investment only what is left after all payments are made for the use of the company's property. Thus the real consideration runs from the city and not to the city.

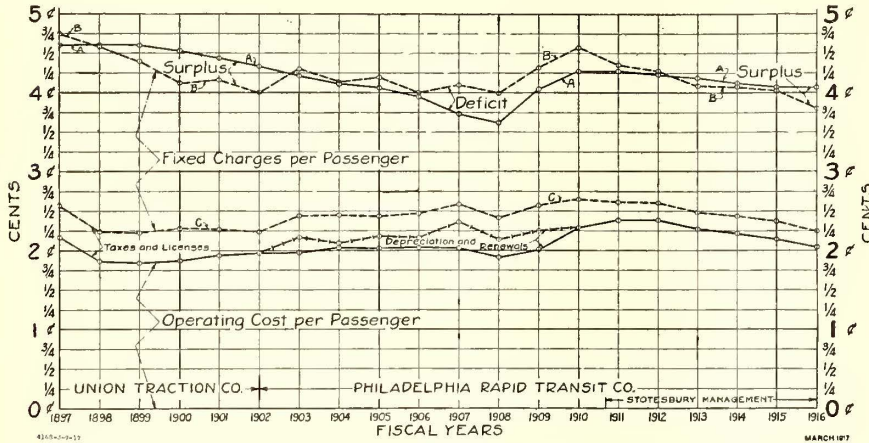
The preferential payment asked by the company, it is said, is based in the main upon an entirely different principle from that of the New York preferentials.

In Mr. Twining's opinion there is no established principle warranting the compensation of a street railway for diverted business or loss in income caused by competing lines.

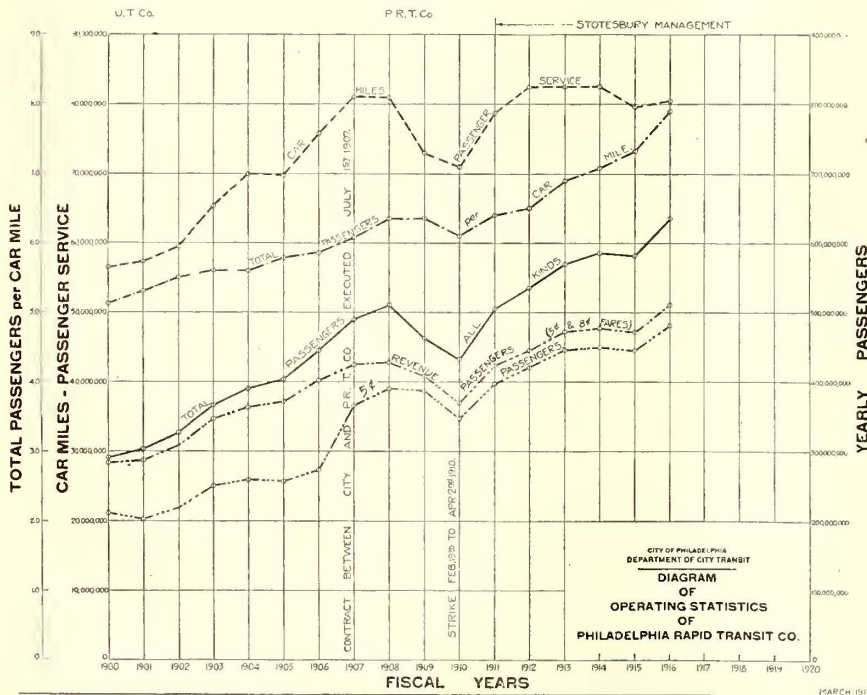
WHAT HAS CAUSED INCREASE IN COMPANY'S SURPLUS

The principal concession of the company is that it is accepting a fixed rental of \$1,500,000 per year, whereas in the current fiscal year its earnings are estimated to be more than \$2,500,000. In Mr. Twining's opinion, however, the city should not treat this as a concession until it has confirmed the company's statement of earnings by accepted standards of service and maintenance. Moreover, caution should be exercised in basing a rental on results of this year of unexampled activity in all lines.

According to the company's reports, there has actually been earned available for stock distribution during the fourteen years ended July 1, 1916, a net cumulative surplus of only \$1,180,000. From 1902 to 1911 a total of 186 miles of operated track was added to the system, but since 1911 only 17 miles of surface track have been added. The company's present earnings, Mr. Twining asserts, apparently show a profit, but this is the result largely of (a) abnormally heavy riding due to general prosperity; (b) service below standard requirements, and (c) an almost complete cessation of expansion of the system. The diagram opposite shows that the car mileage operated in 1915 and 1916 was lower than at any time since 1911, while the number of passengers per car-mile was the highest in the company's history.



(a) Total revenue per passenger. (b) Total cost of transportation per passenger. (c) Total operating expenses and taxes per passenger.



DIAGRAMS SHOWING OPERATING STATISTICS OF PHILADELPHIA RAPID TRANSIT COMPANY

The proposed Philadelphia preferential is mainly for the purpose of protecting the company against loss in net income. The New York preferentials were devised to make the pooling of revenue practicable and to establish the company's credit so that about 50 per cent of the new capital could be obtained through the companies. The companies are protected in very little degree against loss by reason of traffic diverted, although the bulk of the loss will fall on the contracting parties through subsidiaries. In Philadelphia, however, although the city would be supplying 78 per cent of the capital required, extraordinary protection and preference are demanded for that part supplied by the com-

pany. In Mr. Twining's opinion there is no established principle warranting the compensation of a street railway for diverted business or loss in income caused by competing lines.

MISCELLANEOUS CRITICISMS

If the city should be in the position of residuary payee, Mr. Twining believes that it should have the right to approve or disapprove the company's method of raising new capital. Furthermore, definite provision should be made for the amortization of new capital invested in the company's system.

THE QUESTION OF FARE

On this point Mr. Twining objects that although the city is expected to provide the larger part of the needed capital the company does not guarantee or even hold out bright prospects of a 5-cent fare with universal transfers, which the citizens were led to expect. Mr. Twining admits that the established rate of fare will not meet the demands of the present system, as now constituted, and carry the city program as well, but the city is not willing to agree to such a fare increase as would benefit the company, for the present fare

Under the company's plan, Mr. Twining says, satisfactory control of service is not provided. Although the lease provides for a unified system, practically all references to control apply either directly or indirectly to the high-speed lines only. It is felt that the city should have a potent voice in the operation of the company's system as well as of the city's system, and in the expenditure of money therefor. An effective method of control by the city of operation, fare, service and facilities should be provided in the contract.

The term of the lease contemplated in all negotiations and proposals has been fifty years, that being the specified term of the 1907 contract. It is proposed to extend the 1907 contract by the period that has already expired, namely, ten years, making this co-terminous with the lease of the new lines. Mr. Twining feels it exceedingly doubtful, however, that the time limit should be absolutely fixed, and makes a recommendation that an indeterminate provision be incorporated in any contract for Philadelphia.

DIFFICULTY OF FIXED CHARGES

Mr. Twining avers that one of the chief difficulties confronting the city in dealing with the company is the comparatively high fixed charges of the company. The company does not tend to readjust the present transit situation and simplify or remedy the financial mistakes of the past generation. These originated in the methods used to bring all the original fifty or more separate companies under one management and control by successive leases, each lessee agreeing to pay larger rentals until the amount now aggregates \$7,300,000 annually, or more than 28 per cent of the gross revenue. Now, it is said, the company desires to add another lease to the present complex tangle and makes no suggestion as to any reorganization or plan of readjustment.

The diagram opposite gives the income distribution for the Philadelphia and the Boston systems in 1916. According to Mr. Twining, the Boston system has been conservatively financed, and the capital charges of the Boston surface system represent approximately only one-half the burden being carried by the Philadelphia surface system, being 1 cent in Boston, as compared with over 2 cents per revenue passenger in Philadelphia. This difference of 1 cent per passenger in fixed charges would have amounted to \$4,810,000 in 1916, or enough to carry practically all the cost of the city's program.

SUGGESTIONS FOR A PROPER CONTRACT

After stating his objections to the Philadelphia Rapid Transit Company proposal, Mr. Twining mentioned the following as some of the essential features of a fair contract between the city and the company:

1. The company shall, if possible, adopt a program which will ultimately effect a readjustment of its finances by re-funding or other approved means, and the city shall readjust its program of construction so as to bring the estimated deficit within reasonable limits as recommended by the report of Ford, Bacon & Davis.
2. The city shall not guarantee the company's system as to capitalization, management or operating results in any way, either directly or indirectly.
3. As the gross and net earnings of both the city's and the company's systems fluctuate from year to year and depend upon factors beyond the city's control, any payment to the company for its co-operation should not be based on gross, net or diverted earnings of either system, but should be, if at all, a payment based on the extent to which the company really co-operates in the city's program. In determining its amount the city shall recognize the company's obligation to be responsible for the result of capital investment in the rapid transit facilities at a normal rate.
4. The payment or fee to the company for acting as manager or operator of the city's system shall not exceed the

amount which would be paid for the same service under independent operation, and preferably graded and proportional to the relative gross earnings of the two systems.

5. The city's system shall be operated for the city's benefit. Physically the company's and the city's systems may be operated as a unit, but financially they must be kept separate, each system to count as its earnings whatever cash it receives on its lines—it may be assumed that the transfers will balance each other.

6. The city may equip as well as build its own high-speed lines, thus owning outright its own system complete. This provision is not a necessity if the company will furnish the equipment on fair terms, but it will obviate any necessity for the company to make use of the city's guarantee on its operating results in order to finance the equipment of the city's lines. It also makes it possible for the city to take over a completely equipped system if it should decide to recapture its own system at any time.

7. The company's system of surface lines shall be financed by the company and the company must not be permitted to use the city's credit either directly or indirectly, but must stand on its own feet, and stand or fall as a result of its own management and acts.

8. The city must be left free to regulate the company's service under the Public Service Commission.

9. Change of fare or charge for transfers, etc., to be left to the Public Service Commission, but no increase is to be

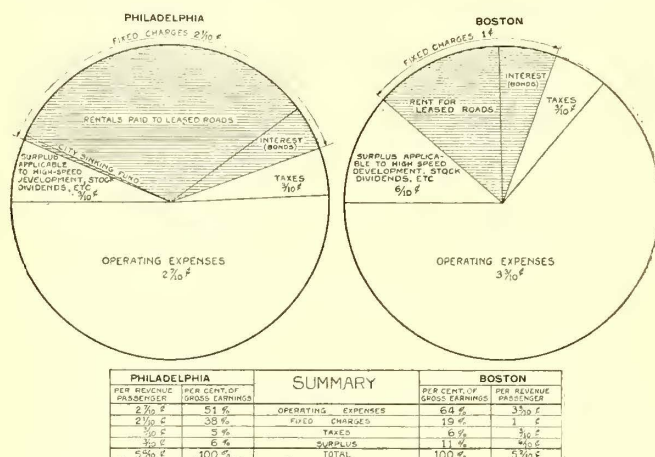


DIAGRAM OF DISTRIBUTION OF INCOME ON PHILADELPHIA AND BOSTON SYSTEMS

for the company's benefit until the city's capital is treated as well as the company's.

10. The contract of 1907 to be modified as little as may be necessary to correspond with conditions of this contract. Payments now due the city thereunder not to be abated or modified. The company to cancel all claims on unearned and unpaid dividends cumulative since 1907, and change the date so that 6 per cent dividends may be cumulative from date of the contract.

11. The term of the contract shall be fifty years or preferably of indeterminate length, with provision that the city may recapture either its own system, or both systems, at any time, after due notice, upon stated terms.

In conclusion, Mr. Twining said:

"These suggestions aim to prevent the company from placing on either the taxes or the fare any burden not due directly to the city's program, and to prevent the company using the city's credit for its private advantage. Instead of guaranteeing the results of the company's co-operation and participation in the city's program to an uncertain extent, as the company's plan proposes, this plan proposes no guarantee of any kind to the company. Instead, it places a certain definite and fixed limit on the burden to be placed on the company by the city, this burden representing the company's obligation to the city in return for its position as a monopoly. The present draft as submitted by the company

does not fully meet any of these essential features, and in underlying principles which govern and determine the terms and form of the contract it is radically different."

#### ENGINEERS PREDICT DEFICIT

The previously mentioned report of Ford, Bacon & Davis indicates that operation of the system under the transit company's proposal would mean a large annual deficit. The report asserts that under the company's offer an investment by the city of \$87,300,000, with a 5-cent fare and free transfers, would after 1921 and for the first fifteen years of complete operation result in an average deficit of between \$4,000,000 and \$5,000,000. This large operating deficit is caused principally by the following: (1) The proposed outlay for transportation facilities is to be made within a period shorter than that necessary for a proportionate growth of population and traffic. (2) In the early years of operation the new high-speed lines will largely duplicate the service of present surface lines. (3) The present revenue from exchange tickets is abolished.

Under the terms of this proposal and with a 5-cent rate of fare, and with financial results an average between the maximum and minimum estimated limits, the city will not begin to receive net income to apply to the payment of interest and sinking fund charges upon city bonds issued for transit development until about ten years after the commencement of operation in 1921 of the transit lines. The city will receive the full amount of its interest and sinking fund charges in about twenty-five years after the commencement of operation in 1921. The cost of service and the revenue per passenger at various fare schedules, as estimated by the engineers, are shown in the diagram on page 643.

#### METHODS OF PROVIDING FOR DEFICIT

Ford, Bacon & Davis state that the entire amount of the deficits can probably be provided for directly in only one of two ways: (1) An increase in the tax rate amounting, as a maximum in 1926, to about 25 cents per \$100, and gradually disappearing thereafter. (2) A charge in 1922 of a 6-cent fare on both high-speed and surface lines, with free transfers, or an alternate charge of 8-cent fare on high-speed lines and 5-cent fare on surface lines, with universal free transfers.

Of these two methods of providing for the deficit, that of raising the rate of fare to equal the cost of service, it is said, would seem to be fairer to the public and better economically. It places the cost of a car ride directly upon the passenger rather than upon the owner or renter of real estate. From an economic standpoint, the fixing of rates of fare that will pay the interest and sinking fund charges on the city's bonds is desirable, as it will make these bonds self-supporting and thus exempt them from the debt limit. The city, in such event, would have the ability to issue \$87,300,000 of additional bonds for further subway construction, port development or other purposes.

#### HOW PREFERENTIAL SHOULD BE HANDLED

With reference to the propriety of the city granting the company a preferential payment to represent its existing net income before the payment to the city of any of its fixed charges, the engineers state:

"We believe that the history of rapid transit development in large American cities, especially New York, shows the desirability of some such provision where extensive developments are undertaken. This preferential, virtually guaranteed by an automatic increase in rate of fare by a charge for transfers, is more favorable to the company than the fixed preferential depending upon a fixed rate of fare provided for in the New York contracts. If an automatic increase in fare be permitted in the agreement, we believe that the city's

investment should fairly rank on a parity with the company's stock, instead of the dividends on this stock being paid before any payments are made to the city. If this automatic increase in fare be eliminated from the agreement, we believe that the company is fairly entitled to include in the preferential a dividend on its stock. Without a study of the service of the company, and until an opportunity is had of analyzing the audit now being made, we cannot advise whether such dividend should begin at as large a rate as 5 per cent on \$30,000,000."

The sinking fund charges on city bonds, it is added, or the portion of such charges equivalent to a proper depreciation reserve, should be deducted from net earnings before the company's dividend is deducted.

#### INCREASE IN THE PROPOSED DEVELOPMENT

An interesting statement of the progressive enlargement of the rapid transit program with increase of cost and anticipated deficit to the city is shown in the following table of the engineers:

Year	Estimated Cost of Construction	Estimated Maximum Deficit of City at 5-Cent Fare	First Year Showing All City Charges Earned
1913	\$51,916,000	\$1,280,000	1927
1914	54,002,000	1,866,000	1935
1915	67,088,000	2,655,000	1941
1915 (revised)	64,420,000	2,181,000	1939
1917	\$7,300,000	*3,157,000	1955
		*4,488,000	1941

\*Maximum and minimum limits.

This table, it is stated, shows clearly the increasing liability to the city which has been involved in the progressive development of the rapid transit program. If the city desires to keep within its immediate resources for rapid transit, it can, without relinquishment of its ultimate purpose, defer about \$22,000,000 of construction work until more practicable financially, under which condition the remaining cost of construction, about \$65,000,000, would be provided for by the funds already voted for transit development.

#### HOW TO SOLVE THE PROBLEM

In the opinion of Ford, Bacon & Davis, a business-like method of handling the problem now presented to the city is comprised in the following plan:

1. Cut the program of immediate construction of rapid transit lines as nearly as practicable to the amount of the appropriation.

2. Defer for a period of lower prices such portions of the construction as will not interfere with the value of the rapid transit system to the public.

3. Devote to the payment of fixed charges on the city's investment in rapid transit such part as practicable of the abnormal increase of taxes on real estate caused by rapid transit development.

4. If there should still remain a deficit in the payment of the city's interest and sinking fund charges on cost of construction, increase the fare in order to make the undertaking self-supporting; first, by a charge for transfers between high-speed and surface lines; or, second, if this be not sufficient, by charging 6 cents on high-speed lines with a 5-cent fare on surface lines; or, third, by charging a uniform 6-cent fare on both high-speed and surface lines.

5. Formulate a working contract embodying the foregoing changes and guarding the city's interests in the particulars mentioned.

The New York Railways have with the approval of the City Health Department given up the use of patented disinfectants in their cars. Instead the cars are dusted every day and the floors thoroughly scrubbed. The woodwork, ceiling, windows, seats, etc., are washed once in two weeks.

# American Association News

Committee on National Defense Perfects Plans for Mapping the Electric Railway Lines to Assist National Government in Military Operations—Biographical Sketches of Denver Tramway Section Officials—General Activity in the Company Sections

## National Defense Committee Meets

Frank R. Ford, L. S. Storrs and C. Loomis Allen of the committee on national defense of the American Electric Railway Association held a meeting on Wednesday, April 4, at which time the general plans as agreed upon at previous meetings were perfected in regard to the preparation of sample maps and data blanks for listing electric railway physical property. It is expected that these sample maps and the data sheets that will accompany them will be sent to the vice-chairmen of the committee for distribution among the electric railway companies in the various districts into which the country has been sectionalized.

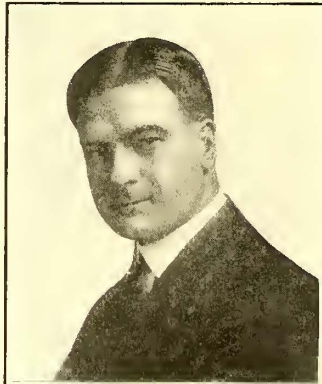
## Denver Tramway Section

The accompanying half-tones are portraits of the president and the secretary of the Denver Tramway Company section, respectively W. H. McAloney, superintendent of rolling stock, and H. G. Mundhenk, chief clerk of the transportation department.

Mr. McAloney has seen twenty-six years of cable and electric railway service, starting in the work as a conductor in the days when the motive power was



W. H. MCALONEY  
President Denver Tramway  
Company Section



H. G. MUNDHENK  
Secretary Denver Tramway  
Company Section

transmitted by cable in Denver. From the platform of a car he was transferred to the then small stores department and master mechanic's office. At that time E. W. Olds, later of Milwaukee, had charge of the shops, and Mr. McAloney resided with Mr. Olds. Later he put in about a year and a half as assistant division superintendent, but in 1896 returned to the present Broadway shop, where he worked continuously. He was appointed to his present position in 1902. Under Mr. McAloney's care the company's equipment is noted for its good condition and uniform appearance, and Denver is said to have fewer types of apparatus than many other cities. Under his direction the local company section is enjoying meetings with record-breaking attendances.

Mr. Mundhenk is now serving his fifth term as secretary-treasurer of the section. He is also serving his fifth term as secretary of the Central Tramway Club,

an organization with a membership of some 300 employees. His standing among his fellow employees has been securely cemented through his interest in their welfare, while his own rise from stenographer to chief clerk in the transportation department bespeaks his standing with the company in whose employ he has been since 1906.

Mr. Mundhenk is a graduate of the Denver high schools, a member of the class of 1908, Colorado State Agricultural College, and a student of the same year in Wisconsin State University. He has worked hard for the success of the section since shortly after its organization in 1912.

## Original Musical Comedy Produced at Milwaukee

An audience estimated at 800 gathered on March 17 to witness the presentation of an original one-act musical comedy entitled "Garden of Romance" by employees of The Milwaukee Electric Railway & Light Company. The talent was well distributed among all departments. After opening remarks by A. E. Wallace, president of company section No. 1, some moving picture films on steam road electrification were shown by A. B. Cole, general manager of railway publicity Westinghouse Electric & Manufacturing Company. The presentation of the play was followed by dancing.

## Connecticut Company Section

At the fourteenth meeting of section No. 7, held on March 14, William Arthur of the staff of McHenry & Murray described his power-saving recorder which is being installed on the cars of The Connecticut Company. He explained the working of power-saving devices in general and offered some interesting data on what other companies have saved through the use of such devices.

Lesley Spraggon, inspector of equipment for The Connecticut Company, spoke on "Economies in Railway Operation as Effected by Improvements in the Design of Equipment." He compared present types of car equipment, including those used by the local company, with earlier types, illustrating the progress that had been made in design.

The secretary's report showed that the section now has a membership of 254. The attendance at the March meeting was 101.

## Section No. 2 Meets in Camden

A total of 240 men attended the meeting of the Public Service company section held in Camden, N. J., on March 22. The meeting was held there rather than in Newark for the convenience of the men of the Southern Division. R. E. Danforth, general manager, gave a comparison of the operating expenses of the company for the years 1915 and 1916. He illustrated the present high costs of labor and materials, urging upon all the practice of economy. As examples of the possibilities in this line he said that much could be done in reducing accidents, and if every motorman would do his

best to operate his car properly, using as much coasting as possible, the sum of \$150,000 could be saved.

J. E. Babcock, division claim agent, supplemented Mr. Danforth's remarks on accidents by calling attention to the increasing number of "unreported" accidents which are very troublesome to the claim department when the time for settlement arrives. W. B. Graham, division superintendent, drove home the thought of economy, important in private life and in the interest of the company.

### Aeronautics Discussed at Chicago

The speaker at the regular monthly meeting of the Chicago Elevated Railroad Company Section, held on March 27, was Capt. Horace B. Wild of the United States Aeronautical Reserves. The captain first gave a history of aviation and then transported his hearers to the European war zone for the purpose of illustrating the practical uses that have been made of the several styles of air craft. The attendance at the meeting was 110.

### Toledo Section Inaugurates Educational Work

The joint company section of four national societies recently formed in Toledo has now been established in permanent quarters, consisting of six rooms in a centrally located building. Within the past few days class work has been begun in elementary electricity, arithmetic, drawing, algebra, accounting, and gas. The group work committee announces that classes will be formed to study any desired subject, and that visitors are always welcome at class meetings.

At the meeting held on March 23 there were a number of entertainment features provided by local talent, and Henry L. Doherty and Chairman T. J. Nolan addressed the section.

### Manila Section Assigns Topics

At the meeting of joint company section No. 5 held in Manila on Feb. 13, a paper by F. P. Santiago, on "Prevention of Accidents" was read. An abstract of this paper and the discussion will appear in a later issue. A comprehensive schedule of future papers was also presented by the program committee.

The schedule of papers comprised a list of names of speakers with dates on which papers are to be completed, as well as assignments for papers to be completed by May 2. The latter list is as follows: "All About Meter Reading; Beating and Its Detection," by Francisco Santiago; "How to Meet a Customer," by W. A. Seten; "Rates and Rate Making," by J. C. Rockwell; "Management," by C. N. Duffy; "System," by J. W. Earle; "Relation Between the Auditing and Other Departments," by D. M. Shaw; "Menace of the Transfer," by I. G. Obligation; "Coasting Habit," by F. Pilapil; "Trainmen as Witnesses," by M. Fariflas; "Electrical Energy Derived from a Pound of Coal" (illustrated), by B. H. Blaisdell; "Medical Department," by the company physician.

The Central Electric Railway Accountants' Association has issued its 1917 Red Book, containing the lists of officers and members, an index of accounting forms on file in the secretary's office, a synopsis of decisions and recommendations in regard to interline accounting, an index of papers and committee reports previously published, the full text of papers before the Toledo meeting in June, 1916, and the president's address in Cincinnati in December, 1916.

## COMMUNICATIONS

### Setting Trolley Poles with a Rake

THE AURORA ELGIN & CHICAGO RAILROAD COMPANY  
AURORA, ILL., March 16, 1917.

To the Editors:

The writer read with much interest the article by J. G. Koppel which appeared in the *ELECTRIC RAILWAY JOURNAL* of Feb. 17, 1917, on setting trolley poles with a rake. Mr. Koppel has opened up a subject that should bring out considerable argument.

"From time immemorial" trolley supporting poles that have been subject to any side strain have been set with a rake, and the engineer who launched the idea probably had a very good reason or it would have perished long before this.

On almost every property one finds poles set with a rake of from 4 in. to 4 ft. A line gang will invariably rake a pole and will sometimes overstep the specification in this respect. It is a custom handed down to each man as he takes up that particular trade. Most work on the pole is done on the side away from the rake and it is easier to work on a raked pole than it is on a vertical one.

One hears the question time after time "Why the rake?" and each person asked has a different reason. To my mind there is nothing finer in appearance than a pole line carrying wires set plumb and in a true line. It manifests an interest by the erector in symmetry and order and good workmanship. But take this same line of poles and attach span wires to them and one immediately changes their appearance. They appear to lean toward the street although still perfectly plumb. If the span wires were level I doubt if they would give this appearance to the poles, but they slope down at an angle of about one in ten and this, I believe, is what gives the illusion of the poles leaning toward the street. A pole for supporting the span wire only, set vertical, has the same appearance as one forming part of a pole line, but a slight rake changes the whole appearance and to my mind improves it.

The writer recently set a line of 30-ft. poles on one side of a street for trolley span construction and joined a telephone company in the erection of the line of poles on the opposite side of the street. The 30-ft. poles were set with a rake of 6 in. and the joint poles were set vertical as the telephone company's engineer objected to the rake in poles. These joint poles to-day have the appearance of leaning to the street, whereas the poles set with the rake present a more pleasing appearance.

It is true that some engineers go to the extreme in raking poles and this I believe gives a bad appearance to a line. The *Engineering Manual* specifies the degree of rake that, to my mind, gives the best appearance to a line.

From the above one might assume that poles are raked for appearance only, but there is another reason that affects the operating costs. As far as supporting the trolley wire at the proper height is concerned it matters not which way a pole leans, provided it supports the wire. But in setting poles along streets one is at least morally bound to install them so that they will be a credit to the city, and the company, and also will require the least expense to maintain them in that condition. Poles set with a rake do not require attention nearly as soon as those set vertical, as the raked pole has farther to go before it presents the appearance of leaning toward the street.

Guyed poles are raked only to line them up with poles not guyed. A guyed vertical pole has practically the same strength as a guyed raked pole unless the rake is carried to a great degree. Steel poles, including those carrying ornamental lamps, should be set to have a rake of 3 in. to 4 in. when the side strain is on them.

Finally, raking a pole gives it the appearance of life, as if it were actually performing a duty, whereas a vertical pole suggests no action.

SAMUEL E. JOHNSON,  
Superintendent of Substations and Lines.

## Conference of Publicity Agents

DETROIT UNITED RAILWAY  
DETROIT, MICH., April 2, 1917.

To the Editors:

As a publicity agent I am naturally interested in the proposed roundtable at St. Louis during the annual conference of the Associated Advertising Clubs of the World and hope to attend if the date does not conflict with that of the June meeting of the Central Electric Railway Association. It does not appeal to me, however, that any steps should be taken now or at that time that would tend to divert our particular field of endeavor from the various electric railway associations with which our companies are affiliated.

In ordinary commercial life publicity consists of pretty booklets, paid newspaper space and the like. To a marked degree the advertising man secures in return some complimentary notices the frequency and length of which depends to a very large extent upon the size of the contract.

Here, then, we have the advertising selling the article with the advertising managers of the press helping out and obtaining for their respective organs *quid pro quo*.

Selling car rides through the force of advertising is very important, but the natural monopoly of the transportation industry does not call for the expenditure of money and organization as in ordinary commercial life. Ours is a greater and more complex work than that. It is a work of public relations. It is the task of letting the public know the "how" and "why" as against the misinformation of the vicious and the ignorant.

While many street railway companies have not yet seen the full light of day concerning not only the advisability but also the necessity of publicity in its larger sense, yet every year the list is growing. The phase of the transportation business to which we are attached is becoming more and more important. By its very nature these publicity departments are related to the officers, to the master mechanics, to the track men, to the electrical department and to the operating department. This must be the case in order that we may talk or write promptly and intelligently.

Holding these views it appears to me most necessary that we become more and more concerned in the meetings of the regular electric railway associations, national and sectional. While we have distinctive work to do it is no more distinctive than other branches of the service.

I think it is generally known that I have long argued for more recognition of our work in our conventions, and I have urged on every occasion that at the national conventions distinctive sessions be held in which to discuss our distinctive work. This ought to be done and, of course, will be done just as soon as the managements of the properties make known their views to the national officers.

A. D. B. VAN ZANDT,  
Publicity Agent.

## "Safety Cars" in Canada

THE THREE RIVERS TRACTION COMPANY  
MONTREAL, March 30, 1917.

To the Editors:

We have read with interest the article on "One-Man Operation" on page 492 of the current issue of the JOURNAL. The author of the article speaks of the desirability of referring to what are now commonly known as one-man cars by a different designation, his idea being that the public is apt to get a wrong impression from the words "One-Man Car."

Our company has used this type of car since the road was built and has found the cars admirably suited for the business which is done in a town and district of about 25,000 inhabitants. The term "safety car," which has been suggested as a name for them, describes their performance on our lines, and we believe that such a name could well be generally adopted to designate this type of car. W. S. HART, Secretary-Treasurer.

## "Get Acquainted with the Street Car Service"

Under the above caption the City Light & Traction Company of Sedalia, Mo., recently ran a series of large advertisements in the local newspapers and afterward reprinted these in a paper-covered booklet 10 in. x 12 in. in size. The booklets were distributed throughout the city, one to each house, and since this was done, a few weeks ago, there has been evidenced a considerable increase in good-will toward the company and more electric railway business. The company plans to repeat this procedure in connection with an ice campaign by the ice department preparatory to the hot weather trade in that commodity.

The topics of the advertisements were: An introductory statement explaining the plan; a statement regarding the car equipment and the cost of operating cars, the latter being \$22.50 per day; a discussion of accident prevention; a brief description of the power plant; a picture of the office with a brief statement of its plan; some facts about the personnel of the transportation department; technical information regarding the track and track maintenance; an explanation of where the cars are kept at night and what is done to them then; a query as to the economy of using automobiles in traveling to and from work; a statement on safeguarding grade crossings; some information regarding overhead construction, and a general concluding statement as to the policy of the company. All but the opening and concluding advertisements were illustrated with halftones. This campaign was under the direction of A. B. Ireland, manager.

## Boston Elevated Patriotic Meeting

At a meeting of several thousand car service employees of the Boston Elevated Railway, held in Tremont Temple on Thursday evening, April 5, under the auspices of the local division of the Amalgated Association, addresses were given by representative men from several fields of activity. In his address President M. C. Brush said, among other things:

"We can be of service to our country in our daily contact with the public. You men who are serving on the cars and carrying men to the Watertown arsenal are as essential as the men at the machines in the arsenal itself. There is going to be confusion at the beginning, but if the spirit is right the mistakes will be those of judgment and not of heart. No man who leaves the service of the company to enter the service of the government will suffer in any way because of his absence."

## Practical and Economical Solutions of Problems in EQUIPMENT AND ITS MAINTENANCE

Every live shop, track, line and power plant man is doing something that others would like to know about. Such men have a splendid opportunity to assist the industry by notifying the editors of this paper of new things that have been done. Information may be sent in the form of rough notes or short articles, and special rates will be paid for all accepted material.

### Chicago-Milwaukee Line Begins Dining Car Service

Combination Parlor and Dining Cars Installed as  
Part of Limited Service Equipment  
Between the Two Cities

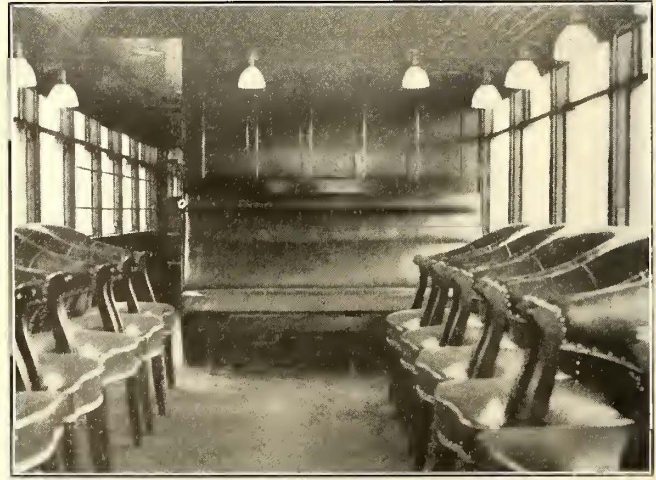
The Chicago, North Shore & Milwaukee Railroad, operating thirty high-speed limited trains each day between Milwaukee and Chicago, has begun the operation of a special de luxe train called the Gold Coast Limited, which leaves Evanston, Ill., at 12.15 o'clock daily and includes as part of its equipment a thoroughly complete dining car service. The initial run of this train was made on March 31. The dining car service was begun without advertising in order that it might be

lines. The diner will take care of twenty-four people at one sitting.

When operated as a parlor car a charge of 25 cents a seat regardless of the distance traveled will be made. This favors the through traffic, which is the class of business for which the company is now making a special bid in connection with its one hour and fifty-six-minute limited service between Evanston and Milwaukee. No fare register is provided in the combination diner and parlor cars. The train conductor is held responsible for the collection of fares on the car, while the parlor car conductor takes the seat fares. When the car operates as a diner this conductor serves as steward of the dining car and is responsible for the dining service and the reports of all articles and meals sold. He is also a regular conductor in the company's service, and



INTERIOR OF CAR ARRANGED FOR DINING SERVICE



INTERIOR OF CAR ARRANGED FOR PARLOR CAR SERVICE

gradually brought into use and any difficulties worked out before the service was announced widely.

To obtain the greatest utility from the car, it was designed to serve as both a dining car and parlor car. By this means it is possible for the car to make a trip as a diner, leaving on the 12.15 run from Evanston, and return as a parlor car and be ready to leave Evanston again serving as a diner for the dinner-hour run. This change from dining car to parlor car is made simply by taking out the tables and storing them in a cabinet provided for the purpose and rearranging the chairs. The plan of the car both as a diner and as a parlor car was shown in *ELECTRIC RAILWAY JOURNAL* for Jan. 13, 1917, page 84.

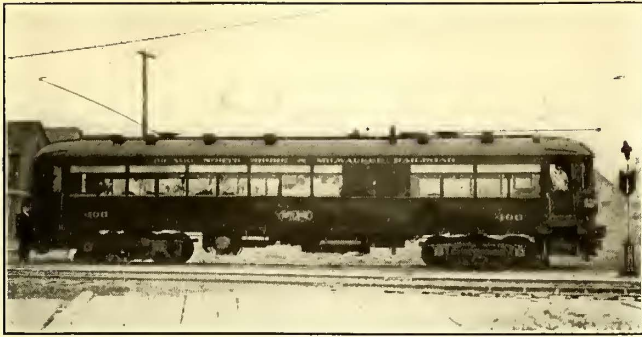
A former chef from the Santa Fé de luxe train and experienced dining-car waiters have been employed. The kitchen is equipped with a coal range, charcoal broiler, 250-lb. capacity ice box, a provision cabinet sufficient for sixty persons, dishes for thirty persons at one sitting, pastry board, 3-gal. coffee urn, a combination sink with hot and cold water, etc. Thus the road is prepared to give a dining car service which will compare favorably with that offered on competing steam

hence is familiar with all operating details. This arrangement was adopted since it costs only a few cents an hour more to have a regular conductor than to provide simply a trainman on the parlor or dining car in accordance with the Interstate Commerce Commission's requirements.

With the exception of the interior arrangement the design and equipment of the three new dining cars is practically identical with the standard steel cars previously in use by this company. These three diners are part of an order for fifteen cars of the same general design, which includes five passenger cars with a smoking compartment and seven combination baggage and passenger cars, all built by the Jewett Car Company.

The dining cars are 56 ft. long over all and 8 ft. 8 in. wide. This comparatively narrow design was made necessary in order that the cars might ultimately be operated over the elevated structure into Chicago. For the same reason the platform was narrowed off considerably and the truck mounted fenders were cut away at the sides in order to clear the third-rail as shown in one of the accompanying photographs. The cars are constructed practically entirely of steel except for the





CHICAGO-MILWAUKEE COMBINATION DINING AND PARLOR CAR

interior, which is finished in mahogany. The headlining is of steel and is painted with a buff-colored vitrolite enamel thoroughly rubbed to remove the polish and eliminate the glare from the artificial lighting.

One of the principal features of the dining car interior is the special lighting arrangement. This includes ten lamps through the center of the car and lamps on the side posts, one over each table. The lamps are of 23-watts with heavy density opal reflectors and are mounted in specially designed fixtures furnished by the Chicago Safety Car Heating & Lighting Company.

The tables and chairs are of solid mahogany to harmonize with the interior car finish, the latter being upholstered and covered with Fabrikoid. The floor is covered with battleship linoleum, over which is a green carpet. Suitable ventilation is provided by five intake and seven exhaust ventilators of the Railway Utility Company manufacture. These intake ventilators are so arranged that the opening into the car directs the incoming air across the headlining and thus prevents any draft from striking passengers. These openings are also located so as not to be opposite the exhaust ventilators in order to avoid a direct current of air into and out of the car. The ventilation in the kitchen is provided by a motor-driven exhaust fan and special ventilators.

The dining cars are equipped with motors and multiple-unit control so that they may be operated as one unit of a train in the regular service, or used for special parties desiring to charter a car with the dining-car privileges. The equipment includes four Westinghouse 557 A-5 motors mounted inside hung on Baldwin trucks with 84-in. wheelbase, and with Westinghouse HL control arranged for double-end operation. The brake equipment is the General Electric combined straight and automatic air with Westinghouse Type M triple valves. The cars weigh approximately 90,000 lb.



GOLD COAST LIMITED TRAIN WITH DINING CAR ON REAR

## Coil-Winding Machine Made from Old Turret Lathe

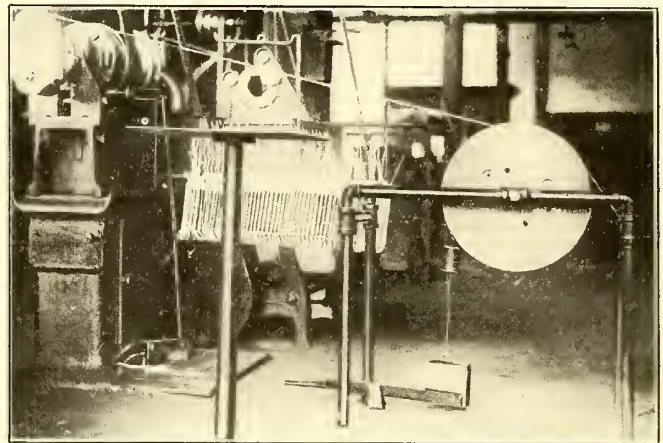
Home-Made Outfit Reduces Expense of Winding Coils, and the Buying of New Apparatus Is Avoided

BY J. S. MILLS

Foreman Electrical Department, Morris Park Shops, Long Island Railroad

This company manufactures all the small armature coils which it uses, and about a year ago it became necessary to rewind a great many old compressor armatures. This meant obtaining a coil-winding machine or using more help to wind the coils by hand. Instead of purchasing new apparatus, an old Jones & Lamson, 2-in.-bar friction-head drive, turret lathe which was too badly worn to be used in the machine shop was fixed up and used successfully as a coil-winding machine.

The lathe bed was cut off flush with the pulley-cone bearing so that any form on which a coil is to be wound can be fastened to the face of the spindle and driven without striking any part of the lathe. The three-cone pulley and the friction drive in the lathe head provide a range of six speeds. To provide a means of starting and stopping the machine by a foot control so that the operator can use both hands for guiding the wire, etc., the



HOME-MADE COIL WINDING OUTFIT

original operating handle of the friction drive was removed, and in its place a connecting rod, lever and foot pedal are arranged as shown in the illustration, so that when the operator's foot is removed from the pedal a spring instantly brings the lever to the off position, thus stopping the spindle.

To assist the operator to feed the wire, the reel is mounted on a stand made of 1-in. iron pipe. This is equipped with a tension device consisting of a piece of band wire fastened to the back cross pipe of the stand and passing along a groove in the circumference of the end of the reel. Two weights are attached to the wire as shown. The large weight is fastened to a lever so that the pressure of the operator's foot releases the tension in the band wire which in turn releases the tension on the wire which is being unreel. The smaller weight, which is 4 lb., is used to keep the band wire from coming out of the groove in the edge of the reel when the large weight is raised. The feature of this tension device is the fact that friction is applied to the circumference of the reel and not to the cotton-covered wire itself, and thus injury to the insulation is avoided. At the same time the tension is easily controlled by a movement of the foot.

Short pieces of cotton sleeving are used for additional

insulation on the free ends of the coil. It is necessary to slip these sleeves over the wire before winding the coil as they have to be glued under the fish paper which holds the coil in shape after being taken off the form. One of these sleeves is used when the coil is started while the other is slid along the wire to the other end. Considerable time was consumed in threading the ends of the wire into the sleeves as the insulation backed away from the ends and became jammed in the sleeving. This is remedied by dipping the end of the wire in melted paraffin and pulling the insulation past the end of the conductor and twisting it. This made it easy to slip on the cotton sleeves.

This coil-winding machine with the simple reeling device and the use of paraffin in putting on the cotton sleeves has cut the expense of winding coils in our shops in half.

## Galvanizing Plant as Railway Shop Auxiliary

BY D. C. HINSTORFF

The Milwaukee Electric Railway & Light Company,  
Milwaukee, Wis.

A small room in the shops of The Milwaukee Electric Railway & Light Company has been equipped with apparatus for doing miscellaneous galvanizing work. It has been used principally for galvanizing cross-arm braces, V-braces and other overhead fittings by means of the hot galvanizing process. This is a new venture for the Milwaukee company, but has been found, in the few months since it was started, to introduce a significant saving in the cost of these iron and steel galvanized fittings.

The apparatus required for this work and installed in this room includes a wooden sulphuric acid tank, a muriatic acid tank and a hot water tank. There is also an open tank, 6 ft. long, 2 ft. wide and 3 ft. deep, constructed of 1/2-in. boiler plate and mounted on a brick

water to stop the action of the acid and then into the muriatic acid tank which contains a solution of three parts of water and one part of muriatic acid. This serves as a flux, causing the zinc to adhere to the metal. From this tank the material is put into the zinc tank while still wet, in order not to lose the effect of the muriatic acid as a flux.

The submerging of anything wet or cold in a hot zinc bath will cause an explosion, and in order to overcome this condition a small sheet-iron box having the bottom slightly submerged in the hot zinc and filled with crude salammoniac is placed in a corner of the zinc tank. Subjected to the intense heat over the liquid zinc the salammoniac forms a semi-liquid. The work is put down through this mixture into the zinc and is pulled out through the clear zinc. The fused salammoniac serves to prevent explosions and to preheat the iron pieces. From the zinc tank the galvanized material goes to a rack, where it is hung on hooks to drip. The zinc solution is mixed with aluminum and other alloys known as "silver metal" which thins the zinc so that it will drip off and leave a thin coat on the work.

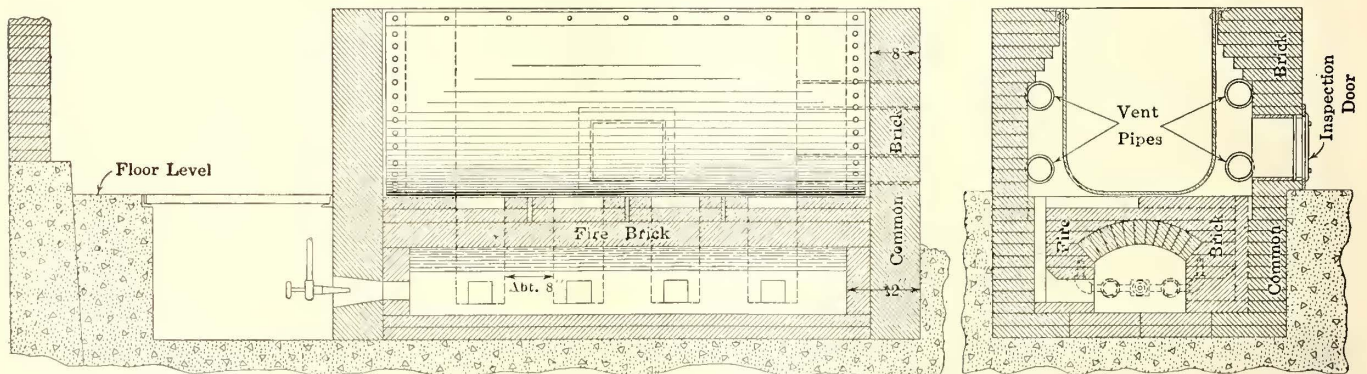
## Getting Rid of Dead Stock in the Storeroom

The Author Explains How 12 Per Cent of Store Stock on Northern Electric Railway Was Found to Be Obsolete

BY W. H. EVANS

Electrical Engineer Northern Electric Railway, Sacramento, Cal.

Recently in going over the inventory of materials and supplies on hand at the end of the fiscal year on this property, and comparing it with the list of the year previous, we discovered that we had a large amount of material in which there had been no movement during the entire year. There were also numerous other items in which the movement was small compared with the



OIL BLAST FURNACE AND GALVANIZING TANK USED IN HOT DIP PROCESS

furnace setting in which the galvanizing alloy is melted. The oil furnace used is located in a pit 2 ft. deep, 2 ft. wide and 8 ft. long beneath this zinc tank. It is lined with firebrick. The oil is atomized by compressed air from the high-pressure shop main and will maintain the galvanizing alloy in a molten state at a temperature of about 950 deg. Fahr. The tank holds about 7000 lb. of zinc.

The material to be galvanized is first submerged in the sulphuric acid tank which contains a solution of five parts of water to one part of commercial sulphuric acid. This solution is heated by means of steam coils and is maintained at a temperature of about 140 deg. Fahr. Dipping the iron into this solution removes all rust and dirt, cleaning the metal ready to receive the zinc coating. The material is next dipped into boiling

stock on hand. These facts indicated the presence of a large amount of obsolete material, for which we evidently had no further use, and a surplus of standard supplies compared with the ordinary yearly requirements.

Conference with the several departments concerned in the use of this material disclosed the fact that this obsolete and surplus stock amounted to about 12 per cent in value of the total stored stock. In other words, 12 per cent of the material was occupying space on the shelves, and represented just that much investment tied up and earning no return.

In what I term obsolete material not only that which has been superseded in the yard by improved material is included, but also supplies which might be usable by other companies but which under local conditions and

requirements will no longer be needed. For example, we found such items as journal brasses for small-capacity flat cars now destroyed and written off our books; signal material ordered years before for contemplated installations afterward found unnecessary; bonds and bonding material far exceeding the requirements for years to come, apparently purchased for new lines that were never built; interurban car castings and parts evidently purchased with a view to building a large number of cars not actually built; third-rail underground crossing material which had been rendered obsolete by changes in the type of construction, and trolley pipe arm brackets in large numbers removed from branches having originally overhead construction but later changed to third-rail.

Each item on the obsolete list was examined to see if it could not still be used by the company; if not by the department originally ordering it, then in some changed form or condition by some other department. There proved to be a number of instances where material could be used by slight changes in design, thus utilizing stock which otherwise would have been discarded for sale as second-hand or scrap material. Where no further use could be found for material on the local property, it was listed as obsolete for possible sale to other users, or as a last resort it was rated as scrap and sold as such.

Surplus stocks of standard material were also listed for sale, after consultation with the several departments interested as to their annual requirements. In some cases we retained more than our estimated annual needs, having in mind the rapid fluctuations in cost of material. Evidently nothing would be gained by selling surplus material this year and having to pay greatly increased prices for the same material next year.

After we had completed the obsolete and surplus material lists, these were mimeographed and sent out to a number of companies in the West, in some cases to the purchasing agents and in others direct to the engineers, master mechanics, electricians and others directly interested. The stock lists were divided into a number of sections such as overhead trolley supplies, electric car equipment supplies, signal material, miscellaneous pipe fittings, bolts, washers, etc., so that only the items which would be likely to interest certain officials would be sent to them. These men were thus saved the necessity for having to go through long lists of items in which they were not interested.

The results which we are obtaining from the distribution of the material lists are very gratifying, as we have already disposed of a considerable amount of the material. We have hopes finally of getting rid of most of it second-hand, and the remainder will then be sold as scrap in the case of the obsolete material, while the surplus of standard material will be retained for future use.

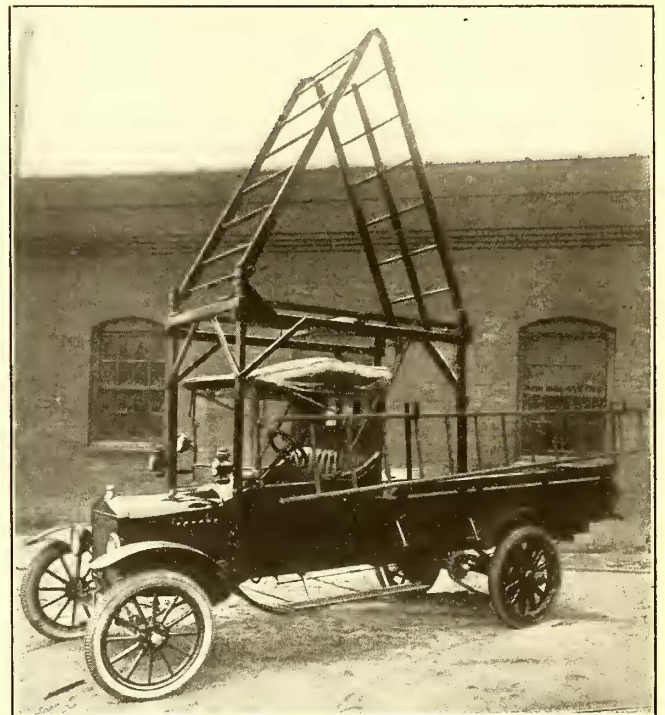
It is probable that many companies could do something in the line of house-cleaning work like this. There is a tendency for men to "hang on" to material year after year, hoping or expecting some day to find a use for it. This is creditable, in a way, but the policy can be carried too far. While good judgment on the part of the men who originally order material and competent storekeeping may keep down obsolete and surplus stock, there is still a tendency for this to accumulate. It certainly pays to remove all this dead material from the storeroom shelves and to convert it into cash. It should be remembered that in selling dead material the money realized therefrom is practically all available as net, there being no operating ratio to be applied to the receipts. In other words, the department that "digs up" \$5,000 worth of saleable

and non-usable material has actually done as much as if the traffic department had provided twice this amount of new business, assuming an operating ratio of 50 per cent.

## Handy Emergency Truck for Small Properties

The Paducah (Ky.) Traction Company has equipped a Smith Form-a-Truck of 2-ton capacity with a special body and tower arrangement for handling its emergency overhead work. The tower members are 2-in. x 3½-in. hickory pieces and the ladder-tower can be raised to a maximum height of 15 ft. The A-ladder folds together to lie flat on the platform above the Ford top. The piece through the center of the back ladder was put in to prevent a lineman from losing his balance in case his foot started to slide across the rung.

The construction of the tower over the automobile top



PADUCAH TRACTION COMPANY EMERGENCY TRUCK

leaves the box on the rear of the truck free for other purposes. The light construction also makes it possible to use the truck for many different purposes. Thus, while the tower construction was built by J. E. Lawless, master mechanic Paducah Traction Company, the truck is used and maintained by the Paducah Light & Power Company, and all trolley maintenance work is handled by the latter company. This relieves the Paducah Traction Company of the upkeep on the truck, and the arrangement has proved to serve both companies satisfactorily.

## Report on Stresses in Railroad Track

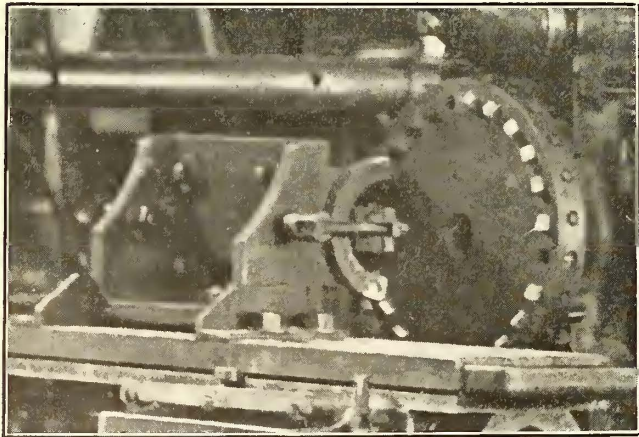
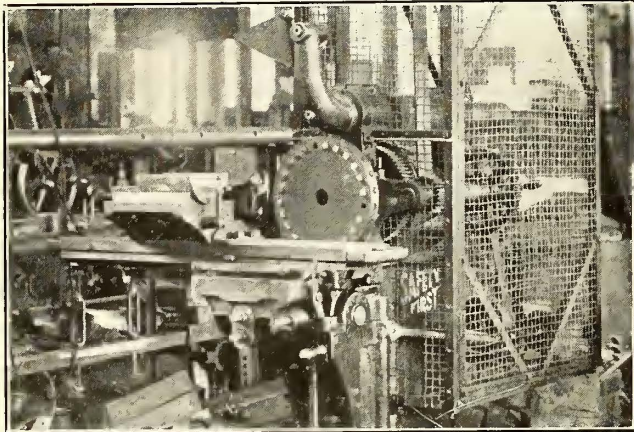
A very important viewpoint in the computation of stresses in rail was expressed in the presentation of the report at the recent convention of the special committee of the American Railway Engineering Association on stresses in railroad track. The report emphasized the need to consider the rail as a bridge between drivers rather than as a bridge between ties, in figuring the internal stresses. From such a viewpoint the number of ties between driver centers is of little consequence,

as long as it is more than two or three. In other words, the bending moment in the rail will be practically the same whether there are three or four ties, or five, under this section of rail between drivers, since the rail is bent concave downward between drivers, thus bringing the principal bearing on the two outside ties of the span between drivers, regardless of the number of ties under the span.

### Machine for Facing Bearings Rapidly

For facing bearings quickly and accurately the International Railway, Buffalo, N. Y., employs a milling machine in combination with a special cutting tool and a jig for holding the bearings. This machine can face an axle bearing in three minutes, taking a 1/16-in. cut.

In the cutting tool there are twenty-four cutters mounted in a holder, 14 in. in diameter. The tools are made of Boehler's high-speed steel and are ground to



VIEW OF MACHINE FOR RAPID FACING OF BEARINGS, AND CLOSER VIEW OF CUTTER AND JIG

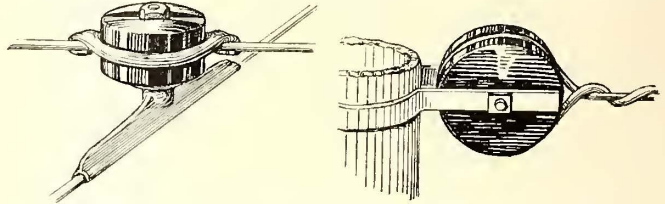
a V-point at the cutting edge. They are held in place by set-screws. The cutting speed found best for the operation is 150 ft. per minute.

The jig is made with a heavy back-plate which is bolted to the sliding bed of the machine. To the back-plate is bolted a concave-faced block which fits the outside of the bearing. There are several of these blocks having faces of different curvatures to fit the different bearings. The bearing is clamped against the face of the block by a steel bar placed inside and bolted at its ends to the back-plate.

Incidentally it will be noted that the gears and other dangerous parts of the machine are surrounded by a wire cage, a commendable feature from the safety-first standpoint.

### Combination Trolley Hanger and Strain Insulator

A simple device for supporting both span and trolley wires has been patented and is being put on the market by B. C. Moss of Kansas City, Mo. It consists of a cylindrical porcelain body, a wrought-iron clip and a bolt with nut and lock washer. When it is used as a hanger the clip fits in a groove around the porcelain body to hold the span wire, and a bolt, passing through



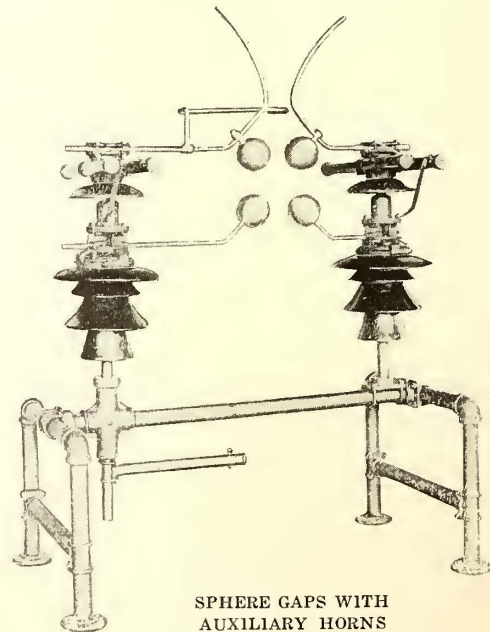
HANGER IN USE AS TROLLEY SUPPORT AND AS STRAIN INSULATOR FOR SPAN WIRE

the axis of the insulator, is screwed into the ear of the contact wire. By simply removing this bolt the ear can be changed while the span wire is left undisturbed. When used as a strain insulator at a pole, the span wire fits in the groove in place of the clip, and the bolt clamps the two ends of the pole collar which fit in slots provided in the ends of the insulator.

Hangers of this type are now installed on several Western lines. During the two years they have been in use on the Kansas City Railways it is said that no failures have been reported, although they have been subjected to very severe tests.

### Sphere Gaps Provide Additional Protection for High-Voltage Lightning Arresters

The use of sphere gaps is one of the latest developments in the design of aluminum electrolytic lightning arresters for voltages above 7250. For lower voltages the diameter of the copper rod used to make the horn



SPHERE GAPS WITH AUXILIARY HORNS

gap is so large in proportion to the gap that the effect is the same. The illustration shows a sphere gap designed by the General Electric Company, Schenectady, N. Y., for 70,000-volt lightning arresters. The upper



## London Letter

### London Tram Sections to Be Merged—Glasgow System Free from Debt—London Omnibus Conditions Trying (From Our Regular Correspondent)

A scheme for the reorganization of the London tramway system has been adopted by the London County Council. It is proposed that the existing ten sections shall be merged into five departments—traffic, electrical, rolling stock, permanent way, and general—and that there shall be devolution by the chief officer of duties and responsibilities to higher subordinate officers. It is recommended that, among other officials, under A. L. C. Fell, the chief officer, a traffic manager shall be appointed at a salary of £1,200, an electrical engineer at the same salary, and a rolling stock engineer at £1,000. For the first-mentioned post, the selection of J. K. Bruce, the deputy chief officer, is suggested. It is proposed that the traffic branch shall include a publicity section, the highways committee being of the opinion that more newspaper advertising and publicity work generally would be advantageous.

At a recent meeting of the tramway committee of the Glasgow Corporation, the Convener stated that the system was now free from debt, all the capital expenditure of £3,835,156 having been repaid. The total of the sinking fund applied in the reduction of debt has been £1,506,267, and the amount of the department's investments not only equals the balance, but there is a balance of £119,055 at the credit of the depreciation and permanent way renewals fund. It is recommended that £73,522 be set apart in future each year from revenue to meet expenditure in renewals. In a memorandum, Mr. Dalrymple, the general manager, gave the following particulars of this sum to be set aside for renewals: Permanent way, £39,600 (£200 per mile of single track); power station and substations plant, £13,827 (3 per cent); cars and electrical equipment of cars, £16,755 (3 per cent); other rolling stock, £2,790 (15 per cent); and Clydebank bridges, £550 (5 per cent), a total of £73,522. The amount proposed to be set aside for the renewal of permanent way was practically the average sum which had been spent annually during the last ten years. In the case of the electrical equipment of the line, it was quite possible to keep up the equipment from year to year directly out of revenue. The management had hitherto set aside 2½ per cent on the cost of the buildings and fittings. As it was unlikely that any of the buildings would require to be renewed for many years to come, it was not proposed to set aside any additional sum for depreciation. The tramway was taken over by the corporation in 1894. It was then operated by horses. That system was superseded in 1901 by electric traction. Thus all the capital expenditure which that change involved, as well as the cost of the developments which have taken place in the intervening period, has been wiped out within sixteen years.

In Birmingham the public works committee of the Corporation has been considering an important scheme for linking up the tramways in the center of the city in conjunction with street widenings and improvements. The provision of a subway has been suggested, and A. Baker, the manager of the tramways, has been requested to prepare a definite scheme. A difficulty is the existence of the London & North Western Railway at a considerable depth below the surface in the center of the city. Trail cars are to be tried on one route as an experiment.

Mr. Spencer, the general manager of the Bradford tramways, has been invited to take up important government work, and the corporation has decided that in his absence Mr. Stirr, the traffic superintendent, be appointed to take charge of and be held responsible for the proper working of the traffic side of the department. J. W. Dawson, engineering assistant, will be similarly appointed as regards the engineering side.

Owing to the reduced returns accruing from its holding of the London General Omnibus and Associated Equipment companies' capital, the total income of the Underground Electric Railways from its investments was £27,400 less in 1916 than in the previous year. This fact and an increase of £56,800 in respect of loss of exchange and income tax were the chief reasons why the payment on the 6 per cent

income bonds had to be reduced from 6 to 5 per cent and the carry-forward from £38,600 to £30,600. A saving of £13,500 under the Central London guarantee was a compensating factor.

The Mayor of Brighton announced to a meeting of the Brighton, Hove & Worthing Season Ticketholders' Association that, after the war, the London, Brighton & South Coast Railway had decided to install four tracks from Brighton to London, two to be used for express service. It is also intended to electrify the line.

The tramways committee of the Dundee Town Council has been considering the question of the utilization of the tramways for the transport of jute. Mr. Fisher, the general manager, stated that he had given considerable attention to the matter, and at the meeting of the Municipal Tramways Association he dwelt upon the importance of tramway people directing their attention not only to carrying passengers, but to the transportation of goods. He expressed the hope that when the national interests were at stake there would be no difficulty in the matter. In December he received a letter from the munitions transport officer asking, among other things, if he could use the tramways in Dundee to convey munitions. Mr. Fisher replied that the government could use the lines for the whole period between 12 o'clock midnight and about 5 a. m., exclusively for the purpose, and, possibly, to a lesser extent in other hours.

Owners of tramway undertakings in England are experiencing great difficulty in getting materials for maintenance and renewals. A letter has been sent from the Ministry of Munitions to the tramway associations stating that numerous applications are being received from tramway undertakings for priority certificates for the manufacture of tramcars and of materials required for tramway maintenance. The Ministry considers that before issuing certificates every effort should be made to supply the applicants with materials and vehicles which other tramway undertakings may have at their disposal. The associations are accordingly requested to obtain from their constituent undertakings details of materials and vehicles which they can dispose of. The proposal virtually amounts to a pooling of resources in regard to the articles in question, though no doubt due payments will be made.

At the annual meeting of the London General Omnibus Company the chairman stated that the conditions under which the company was operating were by no means easy, and that a further reduction of profit was probable before the return of normal conditions. The cost of all supplies required for the operation and maintenance of the fleet of omnibuses had increased beyond bounds considered possible two years ago, and many of the supplies were practically impossible to obtain at any price. The supply of petrol was being restricted, so that further reductions of services had been necessary. The problem of securing adequate labor was also great. With the continued call of men to the colors it had been found necessary to engage women in increasing numbers. More than 2000 women were now engaged as conductors, while some of the women had been promoted with satisfactory results to positions as training instructresses, timekeepers, depot cashiers, etc. On the engineering side, too, the services of women were being utilized. Nearly 550 women were doing satisfactory work in the garages as washers and cleaners of omnibuses.

Every endeavor is being made to commence through service of trains on the Bakerloo Railway between the Elephant & Castle and Watford on April 1. Although no official statement has been made, it is understood that there has been difficulty in procuring rolling stock necessary for a fifteen-minute service. This has now been overcome by the Central London and the Piccadilly tube companies lending available cars. As soon as the new electric service is inaugurated, the London & North-Western local steam trains, which have already been withdrawn as between Euston and Willesden, owing to the closing of the stations en route, except Queen's Park (Bakerloo) and Kensal Green, will also be withdrawn between Willesden Junction and Watford, only the Broad Street (City) expresses and other main line services making the non-stop run between Willesden and Watford. Stonebridge Park station, which was recently destroyed by fire, is not likely to be rebuilt until after the war. Otherwise all the stations on the new line have been constructed.

A. C. S.

# News of Electric Railways

Traffic and Transportation

Financial and Corporate

Personal Mention

Construction News

## War Protective Measures

### Statement of What Has Been Done in Ten Cities from Coast to Coast to Protect Railway and Lighting Plants

The first concern of the electric railways subsequent to the war message of President Wilson has been to insure uninterrupted service to the communities which they serve. A canvass of some of the principal electric railways and combined railway and lighting properties by members of the staff of the *ELECTRIC RAILWAY JOURNAL* and by its correspondents in the principal cities shows that the extent of the precautionary measures taken by the companies to guard their properties has depended very largely on the degree of their vulnerability to injury by the enemy or their agents.

#### SHARP-SHOOTERS AND BARBED WIRE

In one city national guard sharpshooters have been stationed at the electric generating and distributing stations, and 6-ft. barbed wire entanglements have been constructed around the powerhouses. All carhouses of this company and of an interurban line running out of the city are under special police protection, but no application has been made by the street railway officials for authority for military protection. Along the local and interurban lines, the high-power transmission systems are being guarded by deputy sheriffs in the localities through which the transmission lines pass.

Somewhat similar measures to those have been adopted by a company on the Pacific Coast. This company for the last month has had thirty-six employees formerly in the army or the national guard clothed with deputy sheriff authority to guard the hydroelectric plant and important substations day and night. These guards were supplanted on April 4 by federal soldiers. Some time ago elaborate flood-lighting systems were installed at all the hydroelectric plants to protect the pen stocks and the plants themselves. No unusual precautions have been taken to guard the transmission lines, the track, bridges or carhouses, aside from the regular employees whose duties cover the company's property.

#### ONE HUNDRED ARMED MEN ON GUARD

In a city of the Middle West 100 armed men of a company of the state national guard under War Department orders patrol the river fronts day and night, guarding the central and other power stations of the railway. Men of this detachment also guard the bridges, track and transmission lines. Extra militiamen have been placed on the bridges used by one of the interurban lines entering the city. When the militia is called upon to leave, guards will probably be employed under department orders. The powerhouses are kept lighted. No other protective measures have been taken by the companies except the use of the usual section gangs and watchmen. The company of the militia which is doing this patrol duty is composed almost wholly of employees of the local city railway.

#### SPECIAL OFFICERS IN USE

In one city in the Southwest armed guards with commissions of special officers are being used to protect the power stations of the city railway by day and by night. The plants of one of the interurban railways there and the plant of the local light and power company are also being guarded. Tracks are not being patrolled except by track gangs, but these men have instructions to exercise extra precaution. Still another company operating in the city is also guarding its power plant by day and by night, but the tracks are not patrolled except by regular track workers.

The interurban railways in one of the lake cities have strengthened the service of their watchmen and put guards on some of the bridges. The power houses of these companies are operated in the usual way and are not flood-lighted. The staff of watchmen at the power houses of the city railway there has been strengthened, but no legal guards or others have as yet been employed. Care is being exercised in the issuance of passes to inspect the power plants. The power station of the local electric light company, however, is flood-lighted.

In another city in the same geographical group of States as one of the other companies mentioned the city railway has adopted no extra precautions with respect to the bulk of its property. The transmission lines coming from another State are being protected by militia day and night, but the tracks are not being patrolled. The carhouses of this company are protected even in normal times, and no extra guards have been employed and no arms or legal authority have been vested in the employees.

At an important interurban center in the Middle West it had not been deemed necessary up to the time of writing to adopt any precautionary measures other than those used regularly to safeguard the properties and protect them against any interruptions to service.

#### COMPANIES ADDRESS THE CITY

Some time ago the railway corporations in a Southwestern city addressed a communication to the City Council outlining the arrangements made by them to share in the national defense plans. They announced then that the transportation facilities of both railways would be placed at the disposal of Government agents and further said that all employees had been instructed in the part which they would be required to perform if the Government called upon them for service.

At New York City two notices, approved by T. P. Shonts, president, were issued a few days ago by Frank Hedley, vice-president and general manager of the Interborough Rapid Transit Company, bearing upon the present national crisis. They are of the same tenor and urge caution against possible plots to upset transit. One of the notices said:

"The gravity of the national crisis is such as to require that every employee, whether on the elevated structure, in the subway, the shops, the power houses, or the offices, should maintain a constant vigilance in the discharge of his duties, to detect irregularities of any kind whatsoever, and promptly report the facts in person or by telephone to the head of his department."

#### WHOLE SYSTEM TO BE PROTECTED

Another system in the East is now organizing a force of guards and installing protective equipment to cover the whole system. In general, guards are to be placed at strategic points such as the portals of tunnels and at power houses. Full police powers have been requested for them and if these are granted the guards will be classed as special policemen entitled to carry arms and to make arrests. Exterior lighting at night will be provided for power stations and guards will be stationed at points where the lighting is ineffective. Substations will be guarded by the attendants. For the carhouses, the fire system watchmen normally employed together with the regular exterior police protection are deemed sufficient. No special patrolling of track or transmission lines, aside from that regularly employed, is to be inaugurated, except that, as before mentioned, guards will be stationed at such places as are considered danger points.

## Market Street Rights Offer

President Lilienthal of the United Railroads, San Francisco, Suggests Joint Use of Market Street Tracks and a Joint Transfer Plan

City officials in San Francisco, Cal., have recently been active in planning for the construction of municipal railway tracks on outer Market Street, paralleling those of the United Railroads. At the same time negotiations were being carried on with the United Railroads looking to the joint use of outer Market Street tracks owned by the company. If the city could arrange for joint use of these tracks, considerable outlay in construction work could be saved.

### MR. LILIENTHAL'S LETTER

Under date of March 29, Jesse W. Lilienthal, president of the United Railroads, has addressed a proposal to the Mayor and the Supervisors which reads as follows:

"I had occasion in a recent communication to say to you that, notwithstanding the official position which I occupy with the United Railroads, you knew that I was always ready to place the public welfare above private interests, and in that spirit I take the liberty to urge upon you not to carry out the proposed plan for the paralleling of the tracks on Market Street.

### SOME CARS TO FERRY

"The company is willing that the city should operate its Church Street line from Sixteenth Street on Church Street and on Market Street from Church Street to Van Ness Avenue on the tracks of the United Railroads on a mileage basis. The company is further willing that a limited number of Church Street cars be operated over the tracks of the United Railroads to the ferry, upon a similar mileage basis; and to make a transfer agreement on a 50-50 basis, providing for exchange between the Church Street line and our Market Street lines. With this disposition on the part of the company, I permit myself to say that there does not appear to be any warrant for the proposed expenditure of city moneys, because the desired transportation facilities would be provided for without further expenditure.

### URGES NEW CITY LINES

"In view of the crying need of many districts in the city for transportation facilities, which the company under existing charter conditions is not able to provide, it would seem that any city moneys that may be available should be applied to providing such transportation facilities rather than to duplicating existing ones, with the attendant economic waste.

"I am making a proposal, at great financial sacrifice to the company, which should in my opinion be acceptable to you in the interest of all the people, but if any modification of same is desired by you I shall be glad to receive your further suggestions."

In commenting on Mr. Lilienthal's proposal, Mr. O'Shaughnessy took a favorable view of the prospect for adjusting the differences between the city and the company in the near future. He said:

"This at last appears to be a step in the right direction for settling the difficulty, and I think through the offer something definite can be accomplished."

## Washington Strike Waning

Efforts on the part of the Washington Railway & Electric Company, Washington, D. C., in connection with the strike of its employees have been devoted during the last week largely to the work of perfecting its car personnel and to running down the men who were involved in the wrecking of a car of the company, referred to in the ELECTRIC RAILWAY JOURNAL of March 31. In connection with the first of these problems a great deal of progress has been made, while in the second the police have made a number of arrests of suspects. So far as its service is concerned, the company regards the strike as a closed incident. The men formerly in the employ of the company are now seeking to enlist the help of the American Federation of Labor in their cause.

## Violation of Agreement Charged

Employees of the United Traction Company, Albany, N. Y., voted almost unanimously at recent meetings not to operate tripper cars during the rush hour at night unless the company paid them time and one-half for making the extra runs. They contend that they are justified by their working agreement with the company in making such demands. The decision became effective on March 31. The meeting of the men was thrown open to the public, and it was announced that every act of the union with respect to its agreements with the company would receive the fullest publicity.

The statement issued after the meeting was to the effect that the United Traction Company entered into an agreement with the men on July 1, 1916, for three years, under the terms of which it was to pay the men time and one-half if they should be called upon to do any extra work after their regular day's work, the time and a half to begin from the time the men finished their day's work and to continue until they completed the extra work. The representatives of the men contended that the company refused to carry out that portion of the agreement and objected to letting regular men off, although extra men working part time wanted the opportunity to work a full day.

## Changes in Public Service Personnel

New Directors and Officers Elected for Public Service Corporation of New Jersey

A number of changes in the organization of the Public Service Corporation of New Jersey and its subsidiary companies were approved by the boards of directors of the companies on April 2. George J. Roberts, first vice-president of the several companies, retired because of the condition of his health. Mr. Roberts, who had been vice-president for nearly ten years, underwent a serious operation last November and he has never fully recovered his strength. His withdrawal from the company's activities was of his own volition.

The retirement of Mr. Roberts and of P. Farmer Wanser, who is also in poor health, as directors, together with the deaths of John J. Burleigh, Edgar B. Ward and Ferdinand W. Roebing, left five vacancies on the board of directors. Instead of filling all five places the membership of the board was reduced from twenty-one to eighteen, and Percy S. Young and former Senator Edmund W. Wakelee were elected directors and also appointed members of the executive committee of the corporation and the operating companies.

The annual meetings of the stockholders of the several companies were held in the morning. The directors' meetings were held in the afternoon to perfect their organizations. Thomas N. McCarter was re-elected president of all the companies. The numerical designation of the vice-presidents of the corporation was eliminated and Randal Morgan and Anthony R. Kuser, together with Messrs. Young and Wakelee were elected to those positions. The complete list of changes effected, not including the officials re-elected or reappointed, follows:

George J. Roberts, retired from the position of first vice-president and as a director. Gen. Edwin W. Hine received leave of absence for one year. Edmund W. Wakelee and Percy S. Young were elected vice-presidents and directors. Dudley Farrand and John L. O'Toole were appointed assistants to the president. T. Wilson van Middlesworth was elected to succeed Percy S. Young as treasurer. William S. Barker, former assistant treasurer, was appointed comptroller, which office was revived. F. A. Neis was elected assistant treasurer. William H. Feller was elected assistant secretary to succeed Harry C. Stevenson, who was appointed assistant to the vice-president in charge of public relations. Farley Osgood was elected vice-president and general manager of the Public Service Electric Company to succeed Dudley Farrand. Messrs. Young and Wakelee were elected vice-presidents of the railway as well as of the Public Service Corporation and the other subsidiary companies of the corporation. Martin Schreiber, who has been engineer of maintenance of way for the Public Service Railway, received the title of chief engineer.



## Dallas Franchises Approved

Grants Under Which Properties Will Pass to Local Interests Approved at the Polls

The electric railway and lighting franchises sought by J. F. Strickland and C. W. Hobson, and submitted to a vote of the people of Dallas, Tex., were approved at the election on Tuesday, April 3, by a vote of two to one, or by a majority of about 3600. Despite the vote on the franchise in their favor, Messrs. Strickland and Hobson will not begin reorganizing the systems until the contest of the city election on the charter amendment of last April is decided. The old charter prohibited the granting of new franchises until the old franchises expired. The charter amendment was designed to repeal this provision. Mr. Strickland said:

"The franchises adopted in Tuesday's election are absolutely dependent on the charter amendment adopted last spring. The question of the validity of this election is now in the courts, and if the case is decided adversely, the franchises will be void. We will await the court's decision. If the decision is in our favor the consolidation plans will be carried out immediately."

The old city charter prohibited the granting of franchises unless they contained a 4 per cent gross production tax. That measure also prohibited the indeterminate franchise. These two provisions were repealed in the city charter election which is now being contested in the courts.

Mr. Hobson, in his comment on the election, was quoted in part as follows:

"We will do nothing toward carrying out our agreement in reorganizing the traction lines, including the taking over of the Oak Cliff lines, until the contest on the charter election is decided in our favor."

A period of ninety days is provided in the new franchises from the time of the election in which the traction and lighting consolidations shall be carried out. A decision in the contest over the city charter election is expected before that time expires.

The new Dallas franchises were passed in connection with the plan under which control of the present local railway and light properties there will pass from Eastern to Dallas interests under terms reviewed previously in the ELECTRIC RAILWAY JOURNAL.

## Other Atlanta Convictions

Striker Sentenced to Serve Six Years for Perjury—Several Other Indictments Returned

William Pollard, professional agitator, who went to Atlanta, Ga., last summer as the accredited representative of the electrical workers' or linemen's union, was convicted in the Criminal Court of Fulton County on March 30 on the charge of having procured false testimony in the trial of L. E. Dodgen, convicted of dynamiting cars of the Georgia Railway & Power Company.

Pollard was sentenced by Judge Ben Hill to serve six years in the Georgia penitentiary. In sentencing him Judge Hill said the coming of this man to Atlanta was unfortunate for the city, for the company, for a number of employees who theretofore had been satisfied with their work and wages, and for Pollard himself. Judge Hill commented upon the reign of attempted lawlessness and violence which followed Pollard's efforts in behalf of the company's striking linemen and later in behalf of those of its trainmen whom he induced to abandon their cars and desert their posts, to dominate the company with the will of the linemen's union on the one hand and the determination to organize a street and electric railway union on the other. Judge Hill said that while Pollard could not be held responsible for the numerous acts of violence that occurred, "it taxes credulity to assume that those men of their own initiative asserted their conditions through rioting and dynamiting." Judge Hill said further that all who heard the evidence of Pollard's trial were not surprised by the jury's verdict of guilty without recommendation of mercy. Pollard's lawyers gave notice of appeal for a new trial, and he was allowed to go on bond of

\$3,500. In convicting Pollard, the State established its charge that he headed a conspiracy of union labor devotees to prove by perjury a false alibi in behalf of Dodgen.

J. W. Foster, a lineman of a local telephone company, indicted on March 15, arrested on March 16, and placed on trial in Judge Hill's court on March 24 under a count charging that he committed perjury in the Dodgen trial, was convicted on March 22, and was sentenced on March 23 to serve four years in the Georgia penitentiary.

Several other indictments charging perjury in the Dodgen trial have been returned by the Fulton County Grand Jury and are yet to be tried.

The jury that convicted Pollard was drawn from the Fulton County Grand Jury panel and returned its verdict after forty-five minutes' deliberation.

Pollard is yet to be tried again under the indictment returned last fall, charging him with inciting to riot. The first presentation of this charge, last November, resulted in a mistrial.

## P. S. C.'s War Policy

Thomas N. McCarter, president of the Public Service Corporation of New Jersey, has issued a statement in part as follows:

"The directors of the Public Service gas, electric and railway companies at their monthly meeting considered the effect a call to arms in defense of the nation would have upon the company by virtue of the probability of a large number of its 13,000 employees offering themselves for war service. Because of the activities of the New Jersey National Guard, the board voted a leave of absence for one year, with full pay, to Brig.-Gen. Edwin W. Hine, assistant to the president, so that he will be in readiness, on notice, to assume whatever obligations his position in the guard might bring to him in the development of the present crisis.

"Last summer when the National Guard was sent to the Mexican border about 100 Public Service men responded, and the operating companies by which they were employed carried these men on their payrolls during the period of their federal service and reserved their jobs for them during their absence. This action was taken because it was felt that the period of service would not be greatly extended, and because the corporation was in a position, financially, to bear the burden thus imposed, as a voluntary contribution to assist the Government in the work it had undertaken.

"Since last summer conditions have been materially changed. Not only have operating costs been greatly increased, due to higher prices for materials and labor, but the corporation's contribution to the expenses of the Government has been substantially enhanced through the operation of the federal corporation tax laws, so that the amount it now pays through this channel is largely in excess of the sum it expended last year for the wages of its soldier employees.

"Public Service will bear its share of whatever burdens war may bring. That a number of its employees will enlist for service with the colors is a foregone conclusion, and in case any of these men leave actual dependents behind them, the directors have voted that all such cases shall be referred to the corporation's welfare department, each to be treated fairly and generously as the circumstances may require, and no man who enlists will lose his position or standing in the company by which he is employed."

## Labor Arbitration in Detroit

The questions of wages and working hours in dispute between the Detroit (Mich.) United Railway and its employees who are members of the Amalgamated Association will be submitted to arbitration on demand of the men. The company has appointed John A. Russell, vice-president of the Board of Commerce and president of the Manufacturer Publishing Company as its arbitrator. The men have selected Judge E. J. Jeffries of the Recorder's Court as their arbitrator. These two gentlemen under agreement are to select the third arbitrator. The strike meeting which had been arranged was called off when the company promptly agreed to submit matters to arbitration.

## Pittsfield-Albany Line Planned

### Proposed Road Would Provide Connecting Link in Line Between Boston and Buffalo

Plans are under way in Massachusetts for the construction by the Schott-Gillett interests of Pittsfield of a connecting link between the Berkshire Street Railway and the United Traction Company, Albany, N. Y. At an organization dinner on March 28 it was announced that the franchises for the road have been secured in New York State and in Massachusetts with the exception of Pittsfield and Hancock. The distance from Pittsfield to Albany by the proposed route is 37.5 miles compared with 50 miles via the Boston & Albany Railroad. The running time is to be ninety minutes compared with eighty minutes via the Twentieth Century Limited train on the steam road. The schedule will call for ten passenger trains daily in each direction during the five winter months and sixteen trains daily each way in summer, with one winter freight train each way daily and two summer freights.

The line will cross only two highways in Massachusetts and will complete electric railway trackage from Boston, Mass., to Buffalo, N. Y. The estimated cost of construction is \$1,650,000, and if capital is subscribed promptly work will be started by July 1. It is hoped to have the road in operation by July 1, 1918. Among those at the organization dinner were C. C. Chesney, general manager of the Pittsfield works of the General Electric Company, and Clinton Q. Richmond, general manager of the Berkshire Street Railway. Improved freight service between Pittsfield and New York City via the Hudson River is a feature of the plan, the promoters having negotiations under way for the use of dock facilities at Albany.

## Rhode Island Affairs Before State

### Bill for Complete Investigation of Problems of the Rhode Island Company in the Legislature

The affairs of the Rhode Island Company operating in Providence and other places in Rhode Island were laid before the General Assembly of Rhode Island on April 5 by the federal trustees in charge of the railway, in an appeal for legislative action to relieve the company of some of its financial burdens. The company asks the Legislature to direct the Public Utilities Commission to conduct an investigation of its finances and affairs. On the same day the Public Utilities Commission, in a special report to the Legislature, recommended just such an investigation, and at a public hearing on the matter that afternoon Chairman Bliss of the commission declared positively that the railway problem in the State would never be settled until such an investigation was made.

At the public hearing before the House judiciary committee, Rathbone Gardner, chairman of the federal trustees, Theodore Francis Green and John O. Ames asked for the passage of the investigation measure. This bill includes the following provisions:

"The public utilities commission is hereby directed to make an investigation of the finances, management, property and mode of operation of the Rhode Island Company, and to determine whether said company is furnishing to the people of this State a reasonably proper transportation service, and whether the net income of said company is a fair and equitable return upon the property owned and controlled by it and devoted to the public service.

"The Public Utilities Commission is authorized hereby, upon the completion of the investigation provided for in Sec. 1 hereof, to order any modification of the rates of fare charged by the Rhode Island Company, or of its transfer system, and such other modifications in its system of fares and transfers as said commission shall find to be just and equitable. Such modification shall be subject to change from time to time in the discretion of said commission, whenever in its opinion the public interest shall so demand and the affairs of the Rhode Island Company shall warrant.

"The Public Utilities Commission is hereby authorized to suspend or lessen any payments to be made by said the Rhode Island Company either to the State of Rhode Island or to any city or town, such suspension or variation to be for such term as said commission shall deem to be for the public interest, and any contract or agreement with the State

of Rhode Island or with any city or town is hereby modified to the extent of any suspension or variation which shall be ordered by said commission under the provisions of this act."

Mr. Gardner in addressing the committee said in part:

"The company must be relieved or go under. We have borrowed every cent possible, and see nothing ahead without relief such as this bill gives. Either you must make it possible for this railroad to make a fair return on its investment, or you must run it yourself. The people must be served with transportation, and they will demand it one way or the other. We men are trustees only, and our sole interest is to run this road honorably and serve the people as well as we can. You must help us or there is but one thing in store.

"In the opinion of the directors of the Rhode Island Company there is involved in the present condition of street railway transportation something more fundamental than the mere question of the transfer system. The revenue of the Rhode Island Company is now insufficient to meet its reasonable requirements. It has been difficult for it to meet the just demands of its workers for wages."

**Carhouse and Cars Destroyed.**—The Carbon Transit Company's carhouse, together with its contents, in Upper Mauch Chunk, Pa., was recently destroyed by fire of unknown origin. Five summer cars were burned.

**Strike on Pennsylvania Line.**—Because of the refusal of their demands for an increase in wages of 4 cents an hour, the motormen and conductors on the West Chester, Kennett & Wilmington Electric Railway, Kennett Square, Pa., went out on a strike, completely tying up the system. The men are now receiving 21 and 22 cents an hour.

**Increase in Wages in Toledo.**—Effective on April 1, the motormen and conductors of the Toledo Railways & Light Company, Toledo, Ohio, received an increase of 1 cent an hour in their wages. Employees of the electric light and power department received an advance of 25 cents a day. This is in accordance with the agreement entered into between the men and the company a year ago.

**Grievances Adjusted at Conference.**—As a result of a conference between officers of the Burlington County Transit Company, Hainesport, N. J., and a committee of the employees the men have agreed not to press the demand which they made some time ago for an increase in wages. The company has agreed to modify the system of fare collection now in use and to make other changes in the interest of the comfort of the men.

**\$8,800 Contributed to Professional Classes War Relief Council.**—Up to April 1, 872 subscriptions, aggregating \$8,833.75, had been received for the Professional Classes War Relief Council in Great Britain. This council was organized to assist the families of professional men that are in distress on account of the war. Contributions may be forwarded to Lewis B. Stillwell, treasurer, care Farmers' Loan & Trust Company, 475 Fifth Avenue, New York.

**Public Utility Review.**—The New York *Evening Post* published on March 30, 1917, its fourth annual public utilities review. It contained forty pages. Among the contributors well known in the electric railway field were Travis H. Whitney, William M. Wherry, Jr., C. H. Beck and Arthur Williams. A particularly timely article was the review of the negotiations for a traction settlement now under way in Chicago. The general subject "The Street Railway Transportation Problem" was contributed by C. H. Beck of the Westinghouse Air Brake Company, St. Louis, Mo.

**Paving Question Settled.**—A contract covering the street paving question at Toledo, Ohio, as prepared by Henry L. Doherty, was approved on March 29 by the street railway committee of the City Council. This covers only certain streets, and the company is to make the payments for the paving between the tracks in ten annual installments of 10 per cent each. If the city orders the tracks off any of the streets, the payments are to cease. Mr. Doherty insisted that he would accept no contract that would allow the city to remove tracks from streets where the company was paying for a portion of the pavement. A resolution ordering tracks removed from Huron Street, passed two years ago, is to be repealed before the Council takes action on this contract.

**Appointments Made to Detroit Commission.**—Mayor Marx of Detroit, Mich., has appointed Francis C. McMath, president of the Canadian Bridge Company, Ltd., and Julius H. Haass, president of the Wayne County & Home Savings Bank, to the Street Railway Commission of that city. They succeed James Wilkie, who resigned recently on account of ill health, and James Couzens, who resigned some time ago to become commissioner of police of Detroit. Neither Mr. McMath nor Mr. Haass has held public office previously. Brief reviews of the careers of both of these gentlemen appear elsewhere in this issue. The commission is composed of three members. The other member is John F. Dodge of Dodge Brothers, automobile manufacturers. The members of the commission expect to confer soon with the members of the Council committee on public utilities to consider the matter of subway construction.

**Electrification of Evergreen Line Proposed.**—The Long Island Railroad has informed the Public Service Commission for the First District of New York that it is its intention to electrify its Evergreen branch in Brooklyn and Queens as soon as possible. This electrification is desired by the commission in view of the fact that the city through the commission proposes to take an easement over the Evergreen right-of-way for the erection of a portion of the elevated section of the Fourteenth Street-Eastern District line. The railroad, however, has requested the commission that the proposed easement deed between the commission and the company provide that the use of electricity by the company shall not be required until two years after the completion of the rapid transit line.

**Other Toledo Franchise Provisions Considered.**—On March 26 Henry L. Doherty, of H. L. Doherty & Company, who operate the Toledo Railways & Light Company under contract, met Johnson Thurston and Judge Ralph Emery. Mr. Doherty objected to a requirement that practically every act of the company be approved by some representative of the city. He said that the company should be allowed to go about its business without undue interference, but that the city should receive every facility for learning about the company's affairs. Mr. Doherty met Messrs. Thurston and Emery again on March 27. About forty conditions of the proposed franchise remain to be agreed upon. It was expected that they would be brought before the full street railway commission some time during the week commencing April 1.

**\$1,000,000 Decrease in Valuation Sought in Tax Case.**—Demanding a decrease of \$1,029,032 on the valuation of its property for the year 1916, the Trenton & Mercer County Traction Corporation, Trenton, N. J., has appealed to the State Board of Taxes & Assessment from the findings of the county board. The corporation's suit to have the 1915 levy lessened by \$1,000,000 is pending before the Supreme Court. The State board fixed upon April 2 and 3 for the hearing, but planned to continue the matter on April 10 and 11 if necessary. Some time ago the company appealed to the State Board of Utility Commissioners, complaining that it was not getting a proper return from its investment. The taxing districts then moved to assess the property at a figure nearer that which the company itself fixed in its appeal to the Public Utility Commission. Protests were voiced by the company, which contends that the value given for rate-making purposes has no bearing on that submitted for tax assessments.

**Commission Objects to Inclusion of Fine in Expenses.**—The Public Service Commission for the First District of New York has notified the New York Consolidated Railroad and the New York Municipal Railway Corporation, Brooklyn, formed in the interest of the Brooklyn Rapid Transit Company to operated the rapid transit lines assigned to it under the dual rapid transit plan, that it objects to the inclusion as a part of operating expenses by the companies of the \$500 fine imposed by Judge Roy in the Kings County Court on John J. Dempsey, superintendent of transportation of the Consolidated company. The fine was imposed following Mr. Dempsey's conviction for violation of an order issued by the commission. A letter has been sent to the two companies to the effect that the commission objects to the inclusion of the amount in question in operating expenses, and to the inclusion under such expenses of any

other expenditure made or to be made in connection with Mr. Dempsey's conviction. The commission describes such inclusion as unreasonable and improper.

**Proposal for Operation of Municipal Extension Rejected.**—Mayor Fawcett and the City Commissioners of Tacoma, Wash., at a recent meeting refused a proposal of Louis Bean, manager of the Tacoma Railway & Power Company, which provided that the city enter into a contract with the Tacoma Railway & Power Company for the extension of the present municipal railway to the plant of the Todd Shipbuilding & Repair Company. The company had stipulated that it be permitted to operate the line "at a fare which will return a sufficient revenue to warrant it in entering into the contract." The communication is the first official answer made to the city's resolution, in which the Council pledged itself to build the extension to the Todd plant, under the terms of the existing contract between the city and the company for the present municipal tide-flats line, provided sufficient funds could be obtained to finance the extension. Mayor Fawcett stated that he would never sign a contract that called for an increase in the fare to the tideflats. The City Commissioners concur in this decision. Mr. Bean, in his communication to the Council, expressed himself as agreeable to the terms of the existing contract, provided the plans of the city for the construction of the proposed extension contemplated a reasonable return on its investment.

## Program of Association Meeting

### Southwestern Electrical & Gas Association

The thirteenth annual convention of the Southwestern Electrical & Gas Association will be held in the Adolphus Hotel, Dallas, Tex., on April 26, 27 and 28.

The morning of the first day of the convention, April 26, will be devoted to the opening session, which includes the address of welcome and the response to it, the president's address, the election of new members, the appointment of the convention committee and other preliminary business. The street and interurban sessions will be held on the afternoon of that same day and the morning of the next day, Friday. The gas sessions will be held at the same time as those of the street and interurban railway sessions on Thursday and Friday, but these will be held in separate rooms. The electric light and power sessions will be held on the afternoon of April 27 and the morning of April 28. The general session will be held early in the afternoon of April 28. At this session will be discussed matters of interest and value to all the members of the association. The business session will follow the general session. At this session the reports of the treasurer and all committees will be presented, and officers and standing committees will be elected for the ensuing year.

The papers and addresses have been selected by the several section committees of gas, electric light and power, and street and interurban railways, with special reference to the present needs of the members of their respective sections. It has been deemed best by all three of these committees to devote one of the two sessions of each to practical operating subjects and the other session to executive, administrative and public policy matters. A list of the papers and addresses will be sent at an early date and the papers will be distributed to all interested some time before the convention.

Applications for hotel reservations should be made direct to the hotel at which it is desired to stop, or to the secretary of the association.

The members of "Class B" are to be the principal hosts of the convention this year, and have laid out a liberal plan of entertainment for the attending "Class A" members, visitors and guests—with special attention to the ladies who will attend the convention. The Dallas Electric Club has also arranged to entertain the visiting ladies. The rejuvenation of the Jovians will occur on the evening of April 27 and a special entertainment for the ladies and those men who are not Jovians has been arranged for that evening.

# Financial and Corporate

## Annual Report

### Union Traction Company of Indiana

The comparative income statement of the Union Traction Company of Indiana, Anderson, Ind., for the years ended Dec. 31, 1915 and 1916, follows:

	—1916—		—1915—	
	Amount	Per Cent	Amount	Per Cent
Revenue from transportation:				
Passenger .....	\$2,332,219	83.62	\$2,071,832	83.33
Baggage .....	9,475	0.34	10,539	0.42
Parlor, chair and special car .....	11,225	0.40	9,059	0.37
Mail .....	1,821	0.06	1,070	0.04
Express .....	91,844	3.29	81,867	3.30
Milk .....	24,882	0.89	24,724	0.99
Freight .....	250,560	8.99	223,751	9.00
Total .....	\$2,722,026	97.59	\$2,422,842	97.45
Revenue from operation other than transportation:				
Station and car privileges .....	\$10,337	0.38	\$9,208	0.36
Parcel rooms and storage .....	998	0.04	1,149	0.05
Rent of tracks and facilities .....	7,558	0.27	10,692	0.43
Rent of equipment .....	4,246	0.15	4,577	0.18
Rent of buildings and other property .....	8,412	0.30	7,682	0.31
Power .....	35,196	1.25	29,161	1.18
Miscellaneous .....	567	0.02	935	0.04
Total .....	\$67,314	2.41	\$63,404	2.55
Operating revenues .....	\$2,789,342	100.00	\$2,486,246	100.00
Operating expenses:				
Way and structures .....	\$310,067	11.10	\$261,192	10.50
Equipment .....	172,406	6.15	160,992	6.48
Power .....	279,578	10.02	229,344	9.22
Conducting transportation .....	476,084	17.06	456,637	18.38
Traffic .....	11,689	0.49	23,478	0.94
General and miscellaneous .....	349,422	12.52	318,407	12.80
Extraordinary flood expense charged in 1916 .....	16,726	0.59	21,500	0.86
Total .....	\$1,615,972	57.93	\$1,471,550	59.18
Net operating revenue .....	\$1,173,370	42.07	\$1,014,696	40.82
Taxes .....	136,460	4.89	118,020	4.75
Operating income .....	\$1,036,910	37.18	\$896,676	36.07
Other income .....	16,983	0.61	17,895	0.72
Gross income .....	\$1,053,893	37.79	\$914,571	36.79
Deductions .....	865,148	31.02	857,238	34.48
Net income .....	\$188,745	6.77	\$57,333	2.31

The operating revenues for 1916 showed an increase of \$303,096, or 12.2 per cent, as compared to those of 1915. Part of this gain, however, arose from the inclusion in 1916 of revenue from the Muncie-Portland line amounting to \$63,320. This line, 32 miles long, was leased by the Union Traction Company in June, 1916. The remainder of the gain in operating revenues resulted mostly from increases of \$260,387 or 12.5 per cent in passenger revenue, \$26,809 or 11.9 per cent in freight revenue, \$9,977 or 12.2 per cent in express and \$6,035 or 20.6 per cent in power revenue.

The operating expenses as a whole rose \$144,422 or 9.8 per cent, increases being shown in all the regular groups with the exception of traffic. As a result the gain in net operating revenues was \$158,674 or 15.6 per cent. This was cut by a rise of \$18,440 or 15.6 per cent in taxes, a falling off in other income and an increase of a few thousands in income deductions. The net income of the year at \$188,745, however, showed a gain of \$131,412 and was more than three times that of 1915. The balance in 1916, after deducting sinking-fund payments, was \$132,227 as compared to \$3,886 the year before, an increase of \$128,341. The Oct. 1, 1914, first preferred dividend was passed and no dividend on this stock has since been paid. No dividends have been declared on the second preferred stock.

The total sum charged for maintenance during 1916, including the \$16,726 for part of the 1913 flood expense, was \$499,198. This equals 17.84 per cent of the gross earnings for the year and is equivalent to \$1,225 per mile of single track operated, exclusive of city tracks of other companies at Indianapolis, Logansport and Wabash. The net amount charged for additions and betterments for the year was \$146,160. Of this sum \$97,163 was expended on way and

structures. The principal item of this work was the alignment and double-tracking of about 1½ miles of the Anderson-Indianapolis line at the outskirts of Indianapolis, at a cost of \$36,059.

Miscellaneous statistics for 1915 and 1916 are as follows:

	1916	1915
Passengers carried, interurban lines .....	9,992,101	9,037,691
Passengers carried, city lines .....	8,497,814	7,441,844
Total passengers carried .....	18,489,915	16,479,535
Freight handled (tons) .....	90,300	83,841
Express handled, exclusive of Wells, Fargo & Co. express (tons) .....	7,689	6,786
Mileage of cars, interurban lines .....	6,558,913	6,384,751
Mileage of cars, city lines .....	1,722,141	1,656,015
Total mileage of cars .....	8,281,054	8,040,766
Coal consumed at all plants (tons) .....	96,850	84,236
Power generated (a. c.) at all plants (kw.-hr.) .....	47,652,790	43,975,980
Power generated (d. c.) at all plants (kw.-hr.) .....	28,191,304	27,043,667

## Bill Too Far Reaching

On This Account the Governor of New Jersey Has Vetoed the Bill to Reduce the Utility Board's Power

Governor Edge of New Jersey on March 29 disapproved of the McCran bill that public utilities should not be required to submit stock issues to the Public Utility Commission except for completion, acquisition or construction of property. The Governor said:

"This is a very important act, and while I am entirely in sympathy with the apparent desire that the jurisdiction of the Board of Public Utility Commissioners over the issuance of stock, bonds and other securities of public utility corporations should be limited to property within this State, at the same time it is my judgment that it is impracticable. Permission to issue securities of a corporation doing interstate business must frequently be requested for extensions going beyond the borders of the State, and it is questionable, if such an issue were contemplated and Senate bill 170 were to become a law, whether the Board of Public Utility Commissioners would have power to withhold its approval, which would defeat one of its principal protective responsibilities.

"In the explanation of the bill it is stated that a corporation operating within the State and outside would only be a public utility so far as operations within the State are concerned and hence the board would have no general supervision, regulation, jurisdiction or control over the activities of such corporation beyond the State limits.

"This is not borne out by any deduction from the decisions of our courts. It seems very difficult to make a division of inter and intra state on the question of issuing securities. If this could be done practically, I would be glad to approve the bill, but I am afraid this measure might prove too far-reaching in its effect."

## For Joint Operation of E. U. R. Lines

A proposal to operate all the lines of the Empire United Railways, Inc., Syracuse, N. Y., of which the Rochester, Syracuse & Eastern Railway is a part, as one property was presented at a special meeting of the bondholders held in Syracuse. The proposal was made by Ford, Bacon & Davis, New York. According to a statement made by a representative of that company, the net earnings of the combined divisions of the company for the calendar year of 1916, as applicable to interest and dividends, were \$427,548. It is stated that the net earnings of the Rochester, Syracuse & Eastern division, if operated independently, would not have exceeded \$179,740. The report says in part:

"It is our judgment that the operation of all the divisions as one property would result in many economies, increase the net earnings, and bring a considerably higher market value for the securities hereinafter proposed to be issued to the Rochester, Syracuse & Eastern bondholders.

"The plan when approved and effective would include an option to sell for cash, on or before the reorganization, any or all of the bonds of the Rochester, Syracuse & Eastern Railroad, with November, 1915, and all subsequent coupons attached, at a price of \$666.67 per \$1,000 bond."

## Traffic Increases in New York

165,778,235 Passengers in New York in January—  
Operating Income Decreases 4.17 Per Cent

The Public Service Commission for the First District of New York in its summary of street railway operations in the city of New York for January, 1917, reports a total of 167,798,694 passengers carried, compared with 158,778,235 in January, 1916, an increase of 9,020,459 or 5.56 per cent. Underground or elevated roads carried 75,804,467 passengers; Brooklyn Rapid Transit, 48,228,096; Manhattan surface roads, 30,582,651; Bronx surface roads, 7,800,129; Queens roads, 3,934,605, and other companies, 1,448,746. The total operating revenue amounted to \$8,771,625, compared with \$8,271,120 in January, 1916, an increase of \$500,505 or 6.05 per cent. Maintenance totaled \$5,008,870, an increase of \$607,869 compared with January a year ago, or 13.81 per cent. Operating income amounted to \$3,207,801, compared with \$3,347,529 in January, 1916, a decrease of \$139,728 or 4.17 per cent.

## No-Par-Value Measure Vetoed

Governor Edge of the State of New Jersey on March 30 disapproved of a Senate bill to add a new section to the corporation laws authorizing shares of stock without the stated par value. New York is at present among the states that sanction the issuance of shares of stock without par value. One of the chief advantages that attaches to the issuance of such shares is that misconceptions are removed that are based on the idea that par value and actual value in some way correspond.

**Bay State Street Railway, Boston, Mass.**—The \$80,000 of bonds of the Braintree & Weymouth Street Railway were paid at maturity on March 1. They will be replaced by \$80,000 of Old Colony Street Railway 4 per cent bonds of 1904 due on July 1, 1954.

**Boise (Idaho) Railroad, Ltd.**—The federal court has authorized the sale of the Boise Railroad, Ltd., to satisfy an outstanding bond issue of \$373,000. The minimum price that can be accepted as a bid on the road has been fixed at \$182,000. There is also a charge of \$28,000 standing against the company for paving bonds issued by the city, part of which is to be carried by the road for the pavement of its lines within the city.

**Buffalo & Lake Erie Traction Company, Buffalo, N. Y.**—George Bullock, New York, N. Y., receiver for the Buffalo & Lake Erie Traction Company, has filed a petition with the County Court at Erie, Pa., for permission to issue receiver's certificates to the amount of \$944,700 to provide funds for improvements and extensions to its lines between Buffalo and Erie. It is proposed to build a passenger and freight station at Dunkirk, N. Y., to cost \$15,000, and approximately \$20,000 will be spent for a new carhouse at Fredonia, and \$7,500 for a new passenger and freight station at Brockton, N. Y., and an equal amount for like improvements at Westfield. Extensive improvements are also contemplated on the Buffalo & Hamburg and the Buffalo & Lackawanna divisions and on the lines within the city of Erie.

**Cities Service Company, New York, N. Y.**—At the annual meeting of the Cities Service Company held on April 3 the stockholders voted to increase the authorized preferred stock from \$60,000,000 to \$100,000,000 and the authorized common from \$40,000,000 to \$50,000,000. At the same time the action of the directors in providing that no dividends in excess of 6 per cent will be paid on the common stock until certain conditions are complied with was ratified by constitutional amendment. J. C. McDowell, Pittsburgh, and M. R. Bump, New York, were elected new directors of the company. An extra dividend of half of 1 per cent had previously been declared on the common stock of the Cities Service Company, payable in stock, along with the regular monthly half of 1 per cent declaration on both the common and the preferred shares, all payable on May 1 to holders of the company's stock of record of April 15.

**Cleveland, Southwestern & Columbus Railway, Cleveland, Ohio.**—The Cleveland, Southwestern & Columbus Railway has been authorized by the Ohio Public Utilities Commission to issue its first consolidated mortgage twenty-year 5 per cent bonds to the amount of \$201,836 to reimburse the treasury for funds advanced for improvements between Jan. 1, 1915, and Aug. 31, 1916.

**Lewisburg & Ronceverte Electric Railway, Lewisburg, W. Va.**—The Lewisburg & Ronceverte Electric Railway is reported to have been purchased by H. L. Van Sickler and W. S. Coursey. The company operates 6.2 miles of line.

**Long Island Railroad, New York, N. Y.**—A special meeting of the stockholders of the Long Island Railroad was held on March 29 to act upon a resolution of the directors increasing the capital stock from \$12,000,000 to \$40,000,000. There were represented by person and proxy 171,892 shares out of an outstanding issue of 240,000 shares, all of which was voted in favor of the resolution. The directors met and took necessary action on an application to be filed promptly with the up-State Public Service Commission, asking for authority to issue the increased amount of capital stock and also the \$5,202,100 debentures provided for in the plan and which are to be taken by the Pennsylvania Railroad in payment of advances made to the Long Island. As soon as the authority is granted by the commission the actual issuance of the new securities and the exchange of the old ones will take place.

**Louisville (Ky.) Traction Company.**—Plans for the dissolution of the Louisville Traction Company, a New Jersey corporation, and the holding company for the Louisville Railway, are expected to go forward, now that the will of Lady McDonnell has been probated in New York, thus establishing the status of the stock owned by that estate. The purpose of dissolution of the company is to effect an annual saving of between \$35,000 and \$40,000 in federal and state taxes, changed laws and conditions having removed the reasons which made the holding corporation desirable. The dissolution will be effected by giving the holders of stock of the traction company shares in the Louisville Railway. It is stated that holders of preferred stock will exchange on a share for share basis, while holders of Traction common will receive two shares of Railway common for each three shares of Traction common, the capitalization thus being reduced from approximately \$12,000,000 to \$8,000,000. The common stock at the present time pays 4 per cent. On the new basis it would pay 6 per cent. The stock disposed of in the will mentioned was that of the late Alexander Henry Davis. It amounts to more than \$3,000,000, and is left to a son of the testator, daughter of Major Davis. Frederick S. Wicks, Syracuse, N. Y., who is named executor of the estate, is a director of the Louisville Traction Company.

**Montreal Tramways & Power Company, Montreal, Que.**—The Montreal Tramways & Power Company has sold to Potter, Choate & Prentice, New York, N. Y., \$5,350,000 of two-year 6 per cent secured notes, the proceeds of which will be used to retire, on April 1, \$7,000,000 of the company's two-year 6 per cent collateral trust notes, the remainder to be paid in cash by the company. The new issue will be secured by \$6,000,000 of Montreal Tramways 5 per cent debenture stock and 16,000 shares of the common stock carrying the voting control of the Montreal Tramways. The aggregate market value of the collateral to be pledged at current quotations is \$7,600,000, or more than 140 per cent of the notes to be issued. It is understood that holders of the maturing notes will be offered an opportunity to exchange their holdings at par and interest for a like amount of new notes at 98 and interest and that it is proposed to offer the unsold balance in the near future at 98½ and interest.

**Portland Railway, Light & Power Company, Portland, Ore.**—The success is reported of the stock conversion plan of the Portland Railway, Light & Power Company, the terms of which were outlined in the *ELECTRIC RAILWAY JOURNAL* of March 3, page 409. As the result of the success of the plan there will be outstanding \$5,000,000 of 6 per cent cumulative first preferred stock, \$5,000,000 of 6 per cent non-cumulative second preferred stock and \$15,000,000 of common

stock, 75 per cent paid. The time for conversion expired on March 15.

**Scranton (Pa.) Railway.**—The stockholders of the Scranton Railway voted on March 26 to reduce the preferred stock by the entire outstanding amount of \$1,500,000. This will leave outstanding only \$2,060,000 of common stock of a total authorized issue of \$4,500,000. The retirement of the preferred stock is in accordance with the plan of the American Railways, the controlling company, which elected some time ago to purchase the preferred at 102½ and the accrued dividend.

**Southwestern Traction Company, Temple, Tex.**—The suit of the Susquehanna Trust & Safe Deposit Company, Williamsport, Pa., against the Southwestern Traction Company, has been disposed of in the United States District Court for the Western District of Texas sitting at Waco, Tex. The court has entered judgment for the plaintiff to the amount of \$130,000 with interest, and has ordered the sale of the mortgaged property. C. E. Pinckney, Austin, has been appointed commissioner to take further testimony on behalf of any party to the cause, while J. B. Durrett, Belton, has been appointed master to determine priority of liens. W. G. Haag was named receiver for the property some time ago on application of the Susquehanna Trust & Safe Deposit Company.

**Texas Electric Railway, Dallas, Tex.**—Directors of the Texas Electric Railway at a meeting in Dallas on March 21 elected three new members to their board: C. N. Mason, New York; Allen T. West, St. Louis, and W. D. Lacy, Waco. The company is a consolidation of the Southern Traction Company and the Texas Traction Company.

**Trans-St. Mary's Traction Company, Sault Ste. Marie, Mich.**—The Trans-St. Mary's Traction Company defaulted in the payment of the interest due on Jan. 1 on its fifteen-year 5 per cent bonds. The National Trust Company, Ltd., Toronto, Ont., is calling for the deposit of the bonds, with it, preparatory to a meeting of the bondholders.

**Underground Electric Railways, Ltd., London, England.**—The British Treasury has approved the renewal of the £700,000 of three-year 5 per cent notes of the Underground Electric Railways, Ltd., due on April 1, 1917.

**United Gas & Electric Corporation, New York, N. Y.**—The United Gas & Electric Corporation has completed arrangements for the purchase of a half interest in about 514 acres of producing oil and gas properties in the well-known Augusta Pool, Butler County, Kan. The corporation is itself a large user of fuel and oil. The purchase of this new property has been made in part to offset advancing prices and in part to realize a promising business opportunity. To finance the purchase, a new oil company is to be organized to take over the newly acquired half interest. This company will issue \$2,000,000 of five-year first mortgage 7 per cent bonds, and 80,000 shares of capital stock of \$5 par value. The majority of the stock of the oil company will be owned by the United Gas & Electric Corporation. The purchase funds have been obtained through the sale of these bonds and the balance of the stock of the oil company to a banking syndicate consisting of Bertron, Griscom & Company, and associates.

**Washington Water Power Company, Spokane, Wash.**—The merger bill which will permit the consolidation of the local lines of the Washington Water Power Company and the Spokane & Inland Empire Railroad in Spokane, passed both Houses of the Legislature, and has survived the time limit set for the Governor to accept or reject it. The representatives of the companies have been awaiting the outcome of the bill which permits the merger. The move toward the consolidation of the companies came as a result of a recent opinion handed down by the Public Service Commission, forbidding the abandonment of owl cars as a measure of economy and requiring the companies to obtain the consent of the commission to the use of one-man cars. As noted in the ELECTRIC RAILWAY JOURNAL of Jan. 27, page 184, the commission actually suggested the merger plan as a substitute. Attorneys for the companies acted at once upon the suggestion and the bill that has just become a law providing for the lease or consolidation of the properties was introduced in the Legislature.

## Dividends Declared

Boston (Mass.) Suburban Electric Companies, quarterly 50 cents, preferred.

Central Illinois Public Service Company, Mattoon, Ill., quarterly, 1½ per cent, preferred.

Cincinnati & Hamilton Traction Company, Cincinnati, Ohio, quarterly, 1¼ per cent, preferred; quarterly, 1 per cent, common.

Cincinnati, Newport & Covington Light & Traction Company, Covington, Ky., quarterly, 1½ per cent, preferred; quarterly, 1½ per cent, common.

Cincinnati (Ohio) Street Railway, quarterly, 1½ per cent.

Citizens' Traction Company, Oil City, Pa., quarterly, 1½ per cent, preferred.

Cleveland & Eastern Traction Company, Cleveland, Ohio, quarterly, one-half of 1 per cent, preferred.

Columbia Railway, Gas & Electric Company, Columbia, S. C., quarterly, 1½ per cent, preferred.

Harrisburg (Pa.) Railways, 1¼ per cent, preferred.

Honolulu Rapid Transit & Land Company, Honolulu, Hawaii, quarterly, 2 per cent.

Iowa Railway & Light Company, Cedar Rapids, Iowa, quarterly, 1¾ per cent, preferred.

Springfield & Xenia Railway, Xenia, Ohio, quarterly, 1½ per cent, preferred.

Stark Electric Railroad, Alliance, Ohio, quarterly, 1 per cent.

United Railways & Electric Company, Baltimore, Md., quarterly, 50 cents, common.

Virginia Railway & Power Company, Richmond, Va., 1½ per cent, common.

Wisconsin Edison Company, New York, N. Y., quarterly, \$1.

York (Pa.) Railways, quarterly, 62½ cents, preferred.

## Electric Railway Monthly Earnings

### ARKANSAS VALLEY RAILWAY, LIGHT & POWER COMPANY, PUEBLO, COL.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., Feb., '17	\$108,040	\$56,576	\$51,464	.....	.....
1 " " '16	99,028	54,729	44,299	.....	.....
12 " " '17	1,277,947	90,506	1,187,441	.....	.....
12 " " '16	574,683	58,935	515,748	.....	.....

### ATLANTIC SHORE RAILWAY, SANFORD, ME.

1m., Feb., '17	\$22,040	*\$22,048	†\$8	.....	.....
1 " " '16	21,081	*19,004	†2,077	.....	.....

### BERKSHIRE STREET RAILWAY, PITTSFIELD, MASS.

1m., Feb., '17	\$76,080	*\$67,396	\$8,684	\$27,550	†\$18,746
1 " " '16	68,031	*59,957	8,074	22,323	†14,053
8 " " '17	699,785	*567,032	132,753	221,107	†187,032
8 " " '16	638,850	*528,073	110,777	151,516	†139,326

### CONNECTICUT COMPANY, NEW HAVEN, CONN.

1m., Feb., '17	\$720,688	*\$581,155	\$139,533	\$91,022	†\$40,084
1 " " '16	681,372	*477,232	204,140	97,450	†129,352
8 " " '17	6,578,076	*5,131,537	1,446,539	782,173	†845,212
8 " " '16	5,835,300	*3,932,572	1,902,728	788,791	†1,298,580

### FEDERAL LIGHT & TRACTION COMPANY, NEW YORK, N. Y.

1m., Feb., '17	\$229,813	*\$148,246	\$81,567	\$49,210	\$32,357
1 " " '16	216,157	*143,715	72,442	48,637	23,805
2 " " '17	473,691	*298,511	175,180	98,936	76,244
2 " " '16	441,700	*295,219	146,481	97,392	49,089

### NEW YORK, WESTCHESTER & BOSTON RAILWAY, NEW YORK, N. Y.

1m., Feb., '17	\$39,600	*\$44,826	†\$5,226	\$10,024	†\$13,225
1 " " '16	36,414	*\$0,220	†43,806	\$9,624	†\$52,098
8 " " '17	393,827	*380,970	12,857	\$58,386	†\$36,155
8 " " '16	335,319	*378,970	†43,651	\$52,174	†\$28,816

### RHODE ISLAND COMPANY, PROVIDENCE, R. I.

1m., Feb., '17	\$424,512	*\$349,329	\$75,183	\$119,111	†\$43,067
1 " " '16	410,857	*317,425	93,432	118,373	†\$23,742
8 " " '17	3,973,647	*2,942,815	1,032,832	959,851	†\$134,325
8 " " '16	3,595,335	*2,733,646	861,689	924,053	†998

### WESTCHESTER STREET RAILROAD, WHITE PLAINS, N. Y.

1m., Feb., '17	\$16,220	*\$21,288	†\$5,068	\$2,018	†\$7,061
1 " " '16	16,533	*20,302	†3,769	1,725	†\$5,467
8 " " '17	138,762	*156,078	†17,316	15,510	†\$32,615
8 " " '16	168,363	*172,292	†13,929	13,288	†\$16,983

\*Includes taxes. †Deficit. ‡Includes non-operating income. \$Excludes interest on bonds, charged income and paid by the New York, New Haven & Hartford Railroad under guarantee; also interest on notes held by the New York, New Haven & Hartford Railroad, not credited to income of that company.

## Traffic and Transportation

### One-Man Cars Authorized

#### Trial of Cars of This Type Authorized for Two Companies in Massachusetts

Acting on petitions of the Boston Elevated Railway and the Brockton & Plymouth Street Railway, Plymouth, Mass., the Public Service Commission of Massachusetts has issued an order approving the trial use of one-man cars on certain routes as specified in the account of a hearing on this subject published in the *ELECTRIC RAILWAY JOURNAL* for March 31, page 616. Permission to operate one-man cars has been refused in the past by the commission and its predecessor, the Massachusetts Railroad Commission. In 1903 and 1915 it was proposed to employ for one-man operation a car very similar to the ordinary car in charge of two men, but to use only the front door and some form of prepayment device. In the present instance, both companies desire to use a one-man car provided with the most improved safety devices.

The decision points out that since such cars permit more economical operation, they are clearly a public benefit and ultimately contribute to the welfare of the employees, although opposition to the cars was raised by the employees' union at the hearing. The commission reserved its opinion on the fitness of cars of this type to give adequate service on the lines in question.

### Hearing on Connecticut Service

#### Fares, Paving and Scarcity of Cars and Men All Receive Attention Before Connecticut Commission

The hearing before the Public Service Commission of Connecticut with respect to the service furnished by the Connecticut Company in New Haven, Hartford, Bridgeport, Waterbury and the other cities in which the company operates, was continued before the members of the commission at Hartford on March 31. One of the suggestions made to the company was that it endeavor to have the Legislature repeal that part of the law which provides that the company shall pave and keep in repair a certain portion of the streets through which its lines run, so that the money now spent for this paving could be used to buy cars and otherwise improve the service.

#### IMPOSSIBLE TO SECURE CARS

The officials of the company had been instructed to be prepared to answer in detail seventeen questions prepared by the commission. Judge Walter C. Noyes, chairman of the board of trustees, replied for the company and said that the trustees would do everything within their power to meet the orders of the commission. In explaining the condition of the company, Judge Noyes said that an order for 100 cars urgently needed to be delivered last October had not yet been filled, on account of the congestion which has occurred in all lines of industry during the past year. Even now it was not certain when the new cars would be received. Overcrowding was principally during rush hours. The company's records showed that the average number of passengers carried per car-mile operated was 7.7. Judge Noyes said that the company had been very seriously handicapped by the difficulty of securing and retaining men, either in sufficient numbers or of proper grade and experience, to conduct transportation, do shop work, or maintain the way.

#### COMMISSIONER DISCUSSES FARES

Chairman Richard T. Higgins of the commission was quoted as follows:

"There is a great demand for better service, and the only result is that if better service is to be rendered it must be paid for by the people who get that service. If the company can render such improved service with its present rates

that is so much the better. It would be unwise to undertake to charge a higher rate for service so long as the present character of service is being given. If the rates are to be raised they should first be preceded by an improved service that will make such an increase warranted."

### Commission Permits Fare Increase

After a hearing on the complaint against permitting the Geneva, Seneca Falls & Auburn Railroad, Seneca Falls, N. Y., to increase its fares, the Public Service Commission for the Second District of New York decided that the increase was warranted and the case was dismissed. Upon the opinion of Commissioner Irvine, in which he showed that the company was earning only a fraction of the return to which it was entitled upon the property invested, the commission permitted the company to put into effect its proposed new tariff creating a new fare zone between Geneva and Waterloo, with the consequent addition of 5 cents to the fare from Geneva to Waterloo, Seneca Falls and Cayuga Lake Park.

The opinion points out, however, that as commutation tickets at the old rates are retained for persons who reside in Waterloo and work in Geneva and vice versa, the increase will work no great hardship on regular patrons. The commutation books hold twenty tickets and will continue to be sold for \$2, good during morning and evening rush hours. Twenty-ride tickets, good at any time, will be sold for \$2.50. As to the complaints over the rearrangement of zones, Commissioner Irvine said that no zone system could be established without some apparent injustice to those just across zone lines. He said that no injustice had been effected in this case, but he regarded this to be a matter for careful study. He said further that if the hours were not suitable during which the commutation tickets were good this can be made the subject of future action.

While the commission's investigation of the finances of the company revealed that the operating income and expenses had remained almost constant, there had been an increase in taxes, paving charges, and for this year also in wages. Surplus revenues were found to be insignificant, with no special reserve for depreciation, and no dividends had been paid by this company or its predecessor since June, 1909. The commission also found that the company's interest charges were not excessive.

### Higher Fares Upheld

#### Increased Revenue Effected by Various Changes Is Granted by Patrons After Commission Analyzes Financial Situation

Fare increases amounting to a maximum of 3 cents above an existing 7-cent rate have been permitted by the Public Service Commission of Massachusetts in an order relative to the petition of the Ware & Brookfield Street Railway, Ware, Mass., for authority to establish a higher tariff. Various changes in rates were requested by the company, including the shortening of a fare zone between Ware and Gilbertville, the establishment of a 7-cent cash fare for every local ride within the limits of all fare zones except that between New Braintree Road and Gilbertville, the establishment of a regular cash fare of 10 cents instead of 7 cents between Ware and Gilbertville or intermediate points, the increase of workingmen's fares from 5 cents to 7 cents between the last-named points, and the establishment of a 12-cent workingmen's fare from Ware to West Brookfield or intermediate points in place of the former rate of 10 cents.

The commission analyzed the company's financial situation and found that the population of the four towns served by the road increased from 13,414 in 1900 to 14,683 in 1915. The road was originally built by the Hampshire & Worcester Street Railway, which went into the hands of a receiver in 1905 with liabilities of \$355,000. The reduction in liabilities effected through the receivership was about \$120,000. Since the reorganization the company has never earned the interest on its debt and has earned its operating expenses in only two years. On June 20, 1916, the total profit and loss deficit amounted to \$149,441.

The decision points out that the present owners have "at marked personal sacrifice" done a great deal since 1908 to improve the property and that it is on the whole well maintained. The owners stated, however, that if they cannot bring the road up to meet its operating expenses and a very reasonable depreciation it will be necessary to discontinue operation. "The proposed increase in rates," the decision states, "is in the nature of a last resort. Assuming no decrease in traffic it is estimated that it may produce about \$12,000 additional revenue per year, or substantially the amount of operating deficit in 1916. While maintenance expenditures in that year were perhaps above normal, and while the company has recently contracted for a supply of power on terms favorable in comparison to the cost of that generated in its own small power plant, which has now been abandoned, it is also true that the increase in fares is likely to discourage riding, so that net results are still uncertain. There is no reason to believe that the increase will enable the company to earn even the full interest on its funded debt. If it earns operating expenses it will, it seems, be doing very well." The patrons appreciated the company's position and the desired rate changes were granted.

## Cars Have Right of Way

Vehicles Prohibited from Delaying Them in Oakland—Pedestrians Must Cross Streets Only at Corners

A new traffic ordinance which has just been passed in Oakland, Cal., provides in Sec. 10 that "No person shall drive, propel or stop any horse or vehicle on any highway in the city of Oakland over which are operated any street cars or interurban cars in such a manner as to unnecessarily hinder or delay the operating of such cars; and street cars and interurban cars shall have the right of way over vehicles at all intersecting highways not controlled by police traffic officers." Another important provision states that "Pedestrians shall not cross highways where traffic officers are stationed except with the traffic as controlled by traffic officer's signal. Pedestrians shall not cross highways in District No. 1 except at intersecting highway corners, and no pedestrian shall cross any intersecting highway diagonally in District No. 1."

At the back of the pamphlet in which the new traffic ordinance is published in convenient shape for motorists appear nineteen diagrams illustrating various problems involved in city automobile traffic. Of these nineteen diagrams, ten show the location of street car tracks and refer specifically to the relation which traffic movements bear to the operation of street cars.

## Unprofitable Service Discontinued

Bay State Street Railway Announces Abandonment of Service on Line Giving No Promise of Ever Paying

The Bay State Street Railway, Boston, Mass., has announced that on April 8 it will discontinue service between Wilmington Square, in the town of Wilmington, and Billerica Center, in the town of Billerica. P. F. Sullivan, president of the company, issued a statement in which he said:

"Our business is to serve the people in our territory where it can be done at a profit, or nearly so. It is manifestly unfair, however, to the company and to the other communities served by the company, which must necessarily pay their share of the operating costs, to continue to operate lines which not only do not pay a profit, but which actually create losses. If there was any guarantee that the line between Wilmington Square and Billerica Center would ever pay, we might be justified in continuing to operate it, but that territory can give no such guarantee.

"In discontinuing this service we are doing what every wise business man would do if he were permitted to use his best judgment. If the company were prosperous, and the profits made elsewhere justified it, we might have some excuse for giving service to communities which do not even pay operating expenses. The present condition of the company's finances clearly does not justify the management in running cars through territory that yields so little business."

## Jitneys Lose Bond Case

Supreme Court Rules That Liability for Accidents Is Not Limited to the Amount of the Bond  
—Jitneys Face Difficulties

According to a ruling of the Supreme Court in a divided opinion affirming Judge Mitchell of the King County Superior Court, at Seattle, Washington, in the case of Sigrid Salo et al. against the Pacific Coast Casualty Company, appellant, a jitney bus bonding company is liable for the full amount of the bond for each person injured in the jitney bus through negligence of the operator, and the collective liability is not necessarily limited to the amount of the bond. The Salo case arose from a collision of an automobile with a jitney bus, bonded in the sum of \$2,500 as required by the 1915 Legislature. Five passengers were injured and brought suit, Salo recovering \$3,700, while the other four received \$1,500, \$500, \$200 and \$100, respectively. The court granted a new trial in the \$500 case, and appeals were taken in the four other cases. Under the Supreme Court ruling the total liability for the five injured passengers would be \$12,500, while the company contends the collective liability would be \$2,500. Judges Mount, Chadwick, Morris and Fullerton dissented to the ruling of the Supreme Court, laying stress upon the fact that the bonding company is compensated by the jitney operator for a liability of but \$2,500, and to hold that the liability exceeds that amount would place an unjust burden on the company.

### JITNEYS MAY ABANDON SERVICE

Unless a bonding company can be found to furnish the necessary security, 300 jitneys in Seattle will be forced out of business between now and Nov. 1, upon the expiration of their bonds. That the jitney owners themselves doubt their ability to obtain bonds was indicated recently when several plans were proposed with a view of retaining the jitney in the transportation field. One of these plans provided that the City Council pass an ordinance ostensibly regulating the operation of jitneys and in reality providing for a city bond. The Council favored the jitneys, but no one was willing to introduce a measure such as proposed, particularly when it was considered that furnishing a city bond would not relieve jitney operators from furnishing a bond in compliance with the State law. Another plan provided for operation without a license, and demanded jury trials in cases of arrest, with the hope that public opinion would tend to minimize the offense in the event bonds were not available. It was also suggested that jitneys and motor buses cease operating upon the expiration of bonds in the hope that there would be a demand so insistent for motor transportation facilities, particularly in suburban districts, that non-enforcement of the bonding law would be successfully urged by such communities.

**Harrisburg Survey Begun.**—Bion J. Arnold has entered upon his study of traffic conditions in Harrisburg, Pa., for the Harrisburg Railways. The work is in immediate charge of J. R. Bibbins.

**Petition for Sleeper Service.**—The Fort Wayne & Northern Indiana Traction Company, Fort Wayne, Ind., has been petitioned by residents of Fort Wayne to provide sleeper service between Fort Wayne and Indianapolis. There is now no through sleeper service between the cities.

**Jitneys Issue 5000 Transfers Per Month.**—The company which is operating a jitney system at Long Beach, Cal., in its first two months of operation under franchise, has issued 10,000 transfers, according to Ray S. Julian, president of the company. Under the old method of operation no transfers were issued.

**I. T. S. Issues Attractive Time-table.**—The Illinois Traction System, Peoria, Ill., is advertising service on its Chicago, Ottawa & Peoria and its Peoria-Springfield-St. Louis and Danville-Springfield-St. Louis Lines in a folder 3½ in. wide by 6¼ in. high, printed in colors and very well displayed typographically.

**Company Publication Proves Popular.**—*The Pretzel*, a four-page leaflet published by the Reading Traction & Light Company, Reading, Pa., in its issue for March 16,



which marks its entrance upon the second year of its publication, states that an average of 20,000 copies a week were distributed on the cars during the past year to supply the demand.

**Commission Halts Operation of Jitneys.**—The Public Service Commission of Pennsylvania has issued orders directing fifty-two jitney operators in Wilkes-Barre to cease operating. The action followed a complaint filed by the Wilkes-Barre Railway. It does not prevent the operators from filing with the commission applications for certificates of public convenience. These, if filed, will be considered as an entirely new matter.

**Co-operative Safety-First Campaign Successful.**—The International Railway, Buffalo, N. Y., is co-operating with almost a score of large Niagara Falls and Lockport electro-chemical and electric generating industries in one of the most extensive safety-first publicity campaigns ever undertaken by a combination of corporations. Page advertisements are being used in the daily newspapers of Niagara County in an effort to educate employees on the prevention of accidents, and officials of the International Railway are enthusiastic over the results that have already been achieved.

**New Cars for Schenectady Railway.**—The Schenectady (N. Y.) Railway, which is a subsidiary of the New York State Railways, has received sixteen new cars similar to those recently put in service on other lines of this system. The city cars are duplicates of those purchased for the Rochester lines, which were described in the *ELECTRIC RAILWAY JOURNAL* for Dec. 16, 1916, page 1234. The interurban cars have double-end equipment, and are otherwise the same as those in operation on the Utica lines. These were described in the issue of this paper for Feb. 10, page 256.

**Jitney Drivers Would Delay Franchises.**—Four franchises of the Portland (Ore.) Trackless Motor Company, which have been passed recently by the City Council, will be submitted to the voters for their approval at the municipal election on June 4, according to a recent announcement of Commissioner Dieck, of the department of public works. The action is to block the efforts of the Jitney Drivers' Union to have the franchises held in abeyance for two years. It was the plan of the union drivers to invoke the referendum on the franchises after it was too late to submit them to the voters at the coming election, and thus make the franchises inoperative until the next municipal election, two years hence.

**More Railway Property to Be Cultivated.**—L. B. Martin, engineer of maintenance of way of the Illinois Traction System, Peoria, Ill., reports a large number of requests this year for the privilege to cultivate the right-of-way. These requests, most of which are for garden spots, come from employees, city residents and farmers. A lease running from one to five years is being given to these applicants with a sixty-day release clause to provide for any unexpected use the company may have for the ground. The rental charged is at the rate of about 6 per cent on the value of the property. In harmony with this movement to reduce the cost of living by producing more food, L. S. Storrs, president of the Connecticut Company, New Haven, Conn., plans to offer for public gardening all the land owned by this company which is not in use.

**Car Heating Problem in Buffalo.**—The International Railway, Buffalo, N. Y., has awarded a contract to the Peter Smith Heater Company, Detroit, Mich., for 350 stoves to be delivered about Sept. 1 for use on the new center-exit cars and the near-side pay-as-you-enter cars. Announcement of the change in the method of heating its city cars was made to the City Council by Thomas Penney, vice-president and general counsel of the International Railway, at a hearing on the provisions of the new sanitary code which affects the heating, ventilation and overloading of cars. In view of the company's efforts to improve its facilities, the commissioner of health, who is urging the enactment of the code, many of the provisions of which are branded as ludicrous, voluntarily offered to amend the code so that the minimum temperature in cars should be 40 deg. Fahr., instead of 50 deg. Fahr.

**Survey of Buffalo Traffic in Progress.**—Charles R. Barnes, electric railway expert for the Public Service Commission for the Second District of New York, and several assistants are in Buffalo, N. Y., making a survey of traffic conditions on the city lines of the International Railway. Special attention is being paid to rush-hour congestion in the Main Street business district and in several north-end industrial centers. For several months N. H. Brown, general superintendent of transportation, and T. W. Connette, superintendent of the Buffalo city lines, have been making a study of traffic conditions at several industrial centers, and a rerouting plan has been practically agreed upon. The company has expressed its desire to co-operate with the traffic commission appointed by the Mayor to relieve congestion in the downtown district. In his report Mr. Barnes will probably recommend the rerouting of several lines which now use Main Street to reach the business section.

**Crowds Carried Successfully in Buffalo.**—During the eight weeks of the Billy Sunday campaign in Buffalo, N. Y., the International Railway carried approximately 500,000 passengers to and from the tabernacle. N. H. Brown, general superintendent of transportation, who planned the traffic arrangements, estimates that the company carried approximately 50 per cent of the crowds at the afternoon and evening services. In Syracuse the New York State Railways and the interurban lines carried about 66 per cent of the crowds, but the percentage was lower in Buffalo because of the central location of the great gospel shed. Between fifty and seventy cars were used to carry the tabernacle crowds in addition to extra cars on the interurban lines and chartered cars for special delegations. It is estimated that the increased gross earnings of the company during the campaign will exceed \$60,000. On the closing day of the campaign Mr. Sunday paid high tribute to the International Railway for the manner in which its cars were mobilized and the efficient handling of the immense crowds.

**Boston Elevated Orders Drawbridge Stops.**—The Boston (Mass.) Elevated Railway has issued an order requiring all surface cars on the system which traverse one or more highway drawbridges to be brought to a full stop 100 ft. before reaching the draw. The car is allowed to proceed in each case only upon receiving two bells from the conductor after the conductor and the motorman have found the draw to be closed and the way clear. Conductors are required to step off the platform—those on articulated cars to step off the platform from the center compartment—to observe the position of the drawbridge gates, and if the way is clear to board the car and signal the motorman. Sixteen drawbridge crossings are listed in the order. By direction of the Massachusetts Public Service Commission safety stops are to be made at all highway drawbridges, and the foregoing rule is effective until the necessary locations can be obtained and the required drawbridge stop signs installed. The movement of cars over the East Cambridge viaduct is governed by special rules, disappearing track bumpers being in service at that point.

**Attempt to Compel Reduction in Fare.**—An attempt is being made by the patrons of the United Traction Company, Albany, N. Y., to secure a reduction in fares on its Albany-Troy line, according to a bill introduced in the Legislature by Assemblyman John F. Shannon. This measure would prohibit the company from charging more than a 10-cent fare from any point in Albany and Rensselaer to any point in Troy, and compel the issuance of transfers. At a recent hearing on the bill before the Assembly railroad committee, Harry B. Weatherwax, vice-president of the company, offered to give transfers at both ends of the Albany-Troy Line and half-hour service on the Albany-Troy steam belt line in return for a flat 15-cent fare. Officials of the company impressed upon the committee the burdens under which the company now labored, and declared that the enactment of such a law together with the increasing expenses resulting from taxes, claims, wages, and paving work would make the outlook unusually dark. It was also declared that free rides for policemen and firemen, and reduced rates for school children resulted in reducing the average fare to about 4 cents. The increasing use of automobiles was another factor which had affected the company's revenue.

## Personal Mention

**H. J. Jumonville** has resigned as auditor of the American Cities Company at New Orleans, La., to take up local accounting.

**Edmund W. Wakelee** has been elected vice-president and a director of the Public Service Corporation of New Jersey, Newark, N. J.

**George J. Roberts** has retired from the position of first vice-president and as a director of the Public Service Corporation of New Jersey, Newark, N. J.

**Percy S. Young**, formerly treasurer of the Public Service Corporation of New Jersey, Newark, N. J., has been elected a vice-president and a director of the company.

**William S. Barker**, formerly assistant treasurer of the Public Service Corporation of New Jersey, Newark, N. J., has been appointed comptroller, which office was revived.

**John L. O'Toole** has been appointed assistant to the president of the Public Service Corporation, Newark, N. J. Mr. O'Toole was formerly publicity manager of the company.

**Eugene Gorman**, Elmira, N. Y., has been appointed inspector of the Corning & Painted Post Street Railway, Corning, N. Y., to succeed O. T. Riffle, who has been assigned to other duties.

**R. C. Shepard**, formerly assistant treasurer of the Key West (Fla.) Electric Company, has been transferred to the office of the treasurer of the Stone & Webster Management Association, Boston, Mass.

**T. Wilson Van Middlesworth** has been promoted from the position of assistant treasurer of the Public Service Corporation of New Jersey, Newark, N. J., to that of treasurer, succeeding Percy S. Young.

**Harry J. Childs**, formerly engineer of power and lines for the United Traction Company, Albany, N. Y., has accepted a position as electrical engineer with the Chateaugay Ore & Iron Company, Lyon Mountain, N. Y.

**E. L. Patterson**, formerly connected with the Stone & Webster Management Association, in the office of the treasurer, Boston, Mass., has joined the accounting staff of the American International Corporation in the New York office.

**William H. Feller** has been appointed assistant secretary of the Public Service Corporation of New Jersey, Newark, N. J., to succeed Harry C. Stevenson, who was appointed assistant to the vice-president in charge of public relations.

**Dudley Farrand**, formerly vice-president and general manager of the Public Service Electric Company, Newark, N. J., a subsidiary of the Public Service Corporation, that city, has been appointed assistant to the president of the latter company.

**V. A. Miller**, superintendent of the Ontario Light & Traction Company, Canandaigua, N. Y., and the Canandaigua Gas Light Company, has assumed charge of the transportation and coke sales departments of the Rochester Railway & Light Company, Rochester, N. Y., in addition to his present duties. Before Mr. Miller removed to Rochester the business men of Canandaigua tendered him a complimentary dinner.

**Julius H. Haass**, who has been appointed to the Street Railway Commission of Detroit, Mich., by Mayor Marx of that city, is a native of Detroit. He entered the service of the Home Savings Bank at the time of its organization in 1889 as messenger. He became cashier five years later, and president in 1899. With the consolidation of the Home and the Wayne County Savings Banks he was elected president of the combined organization. He is a director of the Detroit Trust Company, and a director and secretary of the George H. Clippert & Brother Brick Company.

**Francis C. McMath**, who has been appointed to the Street Railway Commission of Detroit, Mich., by Mayor Marx of that city, has lived in Detroit thirty years. He entered the employ of the Detroit Bridge & Iron Works in 1887, and

became chief engineer of that concern in 1899. One year later he organized the Canadian Bridge Company, Ltd., of Walkerville. Other business capacities in which his efforts have been engaged include: President of the Trussed Concrete Steel Company, Walkerville; president of the Essex County Realty Company; director of the St. Lawrence Bridge Company, Montreal; director of the Structural Steel Company, Montreal; director of the Union Trust Company; director of the Maritime Bridge Company, New Glasgow, N. S.; director of the Essex Terminal Railway, Walkerville. Mr. McMath is a member of the Detroit Engineering Society and Canadian Society of Civil Engineers. He was one of the engineers selected to supervise the planning of the permanent bridge to Belle Isle, Detroit.

**J. W. Hewitt**, who has been superintendent of transportation of the Reading Transit & Light Company, Reading, Pa., for the last year, has returned to assume his former position of superintendent of the Sumpter Valley Railway, Baker, Ore. Mr. Hewitt entered railway service in 1892 with the New South Wales Railways & Tramways in Australia, where he operated the first electric cars in that country. In 1901 he became connected with the operating department of the Seattle (Wash.) Electric Company, now the Puget Sound Traction, Light & Power Company, and finally had charge of the employment and training of platform employees. From 1908 to 1914 Mr. Hewitt held various positions in the transportation department of the Portland Railway, Light & Power Company, Portland, Ore., and was superintendent of transportation of the interurban lines for the last five years of that period. He was then superintendent of the Sumpter Valley Railway for two years, and in 1916 was employed by the Reading Transit & Light Company, where he remained one year when unfavorable climatic conditions induced him to return to Oregon.

## Obituary

**Calvin T. Biddison**, vice-president and general superintendent of the McGuire-Cummings Manufacturing Company, died at Miami, Fla., on March 26. Mr. Biddison was born in Rock Island, Ill., in 1859. He became connected with the McGuire-Cummings Company in 1890, his first work being that of constructing electric railway trucks. Later he was made foreman of the machine department and then general superintendent. In March, 1914, he was appointed vice-president and general superintendent of the company.

**Henry E. Reynolds**, assistant general manager of the Bay State Street Railway, Boston, Mass., died suddenly from heart failure at his home in Braintree on March 31. The news of his death was a great shock to electric railway men throughout New England, where Mr. Reynolds was held in the highest esteem. He was born at Randolph, Mass., in 1867, and was educated at Randolph and at Farmington, Me. In 1886 he entered the street railway field as a conductor on the Brockton (Mass.) Street Railway, and became bookkeeper, treasurer and director. Upon the consolidation of the company with what is now the Bay State Street Railway, Mr. Reynolds was appointed superintendent of the Brockton, Quincy and Hyde Park divisions. In 1904 he was made purchasing agent of the Bay State system and became assistant general manager in 1905. Mr. Reynolds was a former vice-president of the New England Street Railway Club, a member of the Massachusetts Street Railway Association, the Engineers' Club of Boston, the American Electric Railway Transportation & Traffic Association, which he served on the electric express and freight committee, and other organizations. The electric express business of the Bay State company has been developed under Mr. Reynolds's personal supervision, and he was intimately associated with the management of the passenger department and with labor matters. He also served as a member of the arbitration board in the Bay State and Middlesex & Boston proceedings a few years ago. He was noted for his modesty and quiet efficiency. Subordinate employees, members of labor organizations, newspaper men and many others held Mr. Reynolds in high regard. During the services attending the funeral the cars on the entire Bay State system were stopped for two minutes, except where such cars were on the track of the Boston Elevated Railway.

## Construction News

Construction News Notes are classified under each heading alphabetically by States.

An asterisk (\*) indicates a project not previously reported.

### RECENT INCORPORATIONS

\*Interstate Railway Supply Company, Washington, D. C.—Incorporated to construct and operate railways and to manufacture supplies for same. Capital stock, \$500,000. Incorporators: George C. Havenner, C. L. Bowman, Washington, D. C., and Charles G. Guyer, Wilmington, Del.

### FRANCHISES

\*Globe, Ariz.—E. Sultan has received a franchise from the City Council of Globe to construct a line on Broad Street. Plans are being made to build a line between Globe and Miami.

Fullerton, Cal.—The ordinance mentioned in the issue of this paper for Feb. 10 providing for a franchise for the Pacific Electric Railway is not an indeterminate franchise but a direct grant for fifty years to maintain and operate a railroad to be used for transportation of passengers, freight, United States mail, baggage and express matter. No plan has yet been made to extend the line beyond Fullerton.

New Britain, Conn.—The New Britain, Kensington & Meriden Railway has received a two years' extension of time on its franchise to complete the construction of its line between Meriden and New Britain.

Quincy, Ill.—The Quincy Railway has received permission from the City Council of Quincy to construct loops at the termini of the Depot and the Broadway lines.

Wichita, Kan.—The Arkansas Valley Interurban Railway has asked the City Council of Wichita for a franchise to construct a line on Nineteenth Street.

Hattiesburg, Miss.—The Hattiesburg Traction Company has received a franchise from the City Council for lighting the streets of Hattiesburg.

Elmira, N. Y.—The Elmira Water, Light & Railroad Company has received a franchise from the City Council to construct an extension on West Thurston Street, from College Avenue through to the point where tracks are already in use.

Youngstown, Ohio.—The Mahoning Valley Railway has received a franchise from the City Council to construct an extension of its Mahoning Avenue line to Perkins Corners.

### TRACK AND ROADWAY

Pacific Electric Railway, Los Angeles, Cal.—Work will soon be begun by the Pacific Electric Railway eliminating grade crossings at Rose Hill, within the city limits, on its Pasadena line, which will cost approximately \$300,000, including right-of-way. About 1 mile of its four-track line will be moved up the hill and overhead crossings will be constructed at Mission Road, Turquoise, Topaz, Tourmaline and Herriman streets. The company recently informed the City Council that right-of-way had been secured and that it would soon be ready to proceed under the plan outlined above. The plan for an elevated track by means of a solid fill, proposed last year by the Board of Public Utilities, has been abandoned.

Export Railway, Tampa, Fla.—A contract has been awarded by the Export Railway to E. W. Parker, Tampa, for the construction of 9 miles of line from phosphate mines to Hillsborough Bay, 6 miles south of Tampa, and a 6-mile extension to South Tampa. H. L. Pierce, Tampa, president. [May 27, '16.]

Chicago, North Shore & Milwaukee Electric Railroad, Highwood, Ill.—Officials of the Chicago, North Shore & Milwaukee Electric Railroad have announced that work of building extensions to its lines in Waukegan, and the general improvement of the holdings of the company in that

city would begin as soon as the weather permits. The construction of a line to the tannery via North and Glen Flora Avenues will be the first extension. The company intends to carry out this improvement as soon as the materials can be placed on the ground and the work is under way. The other extensions will follow in the summer, it is stated. The company plans to rehabilitate its present lines by replacing the rails or ties and parts of the overhead system where necessary.

Murphysboro & Southern Illinois Railway, Murphysboro, Ill.—This company's line between Murphysboro and Carbondale will be placed in operation about June 1. [Dec. 30, '16.]

Union Traction Company of Indiana, Anderson, Ind.—This company will install a block signal system between Jonesboro and Summitville.

\*Ashland, Ky.—Citizens of this community have accepted the proposal of J. C. Vaughan of Richmond, Va., to raise \$50,000 against his \$100,000, with which to build an electric railway connecting Ashland and Russell, 5 miles. The plan is to construct the line this summer.

Worcester (Mass.) Consolidated Street Railway.—Work will be begun late this spring or in the early summer by the Worcester Consolidated Street Railway on the reconstruction of its tracks and the installation of new feed wires on Front Street from Main Street to Harding Street, at a cost of about \$30,000.

Kansas City (Mo.) Railways.—Bids are being received by the Kansas City Railways until April 10 for track extensions and connecting links, ten pieces of track to be built, ranging from a few blocks to more than a mile.

Brooklyn (N. Y.) Rapid Transit Company.—The Public Service Commission for the First District of New York has approved an agreement between several of the constituent companies of the Brooklyn Rapid Transit System by which, if the Board of Estimate and Apportionment grants the necessary franchises, a new trolley line will be built through Eighty-sixth Street from Fifth Avenue to Third Avenue, Brooklyn, passing through the Eighty-sixth Street terminal station on the Fourth Avenue subway. Under the terms of the dual system contracts transfers are to be exchanged between the trolley cars operating over these lines and the Fourth Avenue subway.

Elmira Water, Light & Railroad Company, Elmira, N. Y.—This company proposes to construct double tracks on Lake Street from Market Street to Water Street and on Water Street from Lake Street to Main Street. It is expected that the work will cost about \$40,000.

Hudson & Manhattan Railroad, New York, N. Y.—A bill has been signed by the Governor of New Jersey authorizing the city of Newark to grant a franchise to the Hudson & Manhattan Railroad to construct an extension of its line from Military Park to the terminal building of the Public Service Company.

Interborough Rapid Transit Company, New York, N. Y.—The Public Service Commission for the First District of New York has awarded two contracts for portions of special work for use on new rapid-transit lines. Both are contracts for frogs and switches and are for use on the Eastern Parkway subway in Brooklyn. One award was made to the Bethlehem Steel Products Company, New York City, the low bidder, at \$34,136. The second award was made to William Wharton, Jr., & Company, Inc., New York City, whose contract price was \$37,205. The commission also has under consideration another bid for special work for use on the Livonia Avenue line in Brooklyn, the Jerome Avenue line in the Bronx, and the Broadway line in Manhattan. Bids were recently received for this work, the low bidder being the Ramapo Iron Works, New York City, at \$28,170.

New York State Railways, Syracuse, N. Y.—Construction and improvement work and additions to equipment, estimated to cost more than \$500,000, are planned for this year by the New York State Railways on its Syracuse lines. In all, 5070 ft. of additional track will be laid and track replacement work will aggregate nearly 3 miles. A block signal system will be installed on the East Syracuse line at an estimated cost of \$2,270. Extensive improvements to the property in Utica and vicinity during the coming summer is also planned by the company, amounting to about \$150,000.

Cleveland, Ohio.—Arrangements are practically completed for the financing of a new car line which will extend from the West Twenty-fifth Street carhouse along Pearl Road to Ridge Road, about 1¼ miles. An agreement has been made whereby the Cleveland Railway will build the line and the \$24,800 that has been guaranteed by residents in the section to be benefited by the street cars will be turned over to Commissioner Fielder Sanders for operating expenses.

Columbus Railway, Power & Light Company, Columbus, Ohio.—Harold W. Clapp, superintendent of the Columbus Railway, Power & Light Company, has informed the City Council that it now appears impossible to secure rails for rebuilding the track on North High Street before the fall of 1918.

\*Holloway, Ohio.—Plans are being considered for the construction of an electric railway in Harrison County from a point below Holloway to Jockey Hollow field, near Moorefield. J. A. Bell, Oliver Building, Pittsburgh, is reported interested.

Oklahoma & Northern Traction Company, Bartlesville, Okla.—Edmund F. Saxton, consulting engineer, Philadelphia, representing Eastern bankers, was at Miami recently and inspected the proposed line to Columbus, Kan., and Baxter Springs, Kan., with a view of recommending the construction of the road at an early date. [March 31, '17.]

\*Claremore, Okla.—It is reported that the Claremore Commercial Club plans to construct an electric railway from Skiatook to Pryor, via Collinsville and Claremore, about 40 miles.

Oklahoma Union Railway, Tulsa, Okla.—The Interurban Construction Company, Tulsa, has the contract for the construction of this company's proposed line from Tulsa to Sapulpa, 15 miles.

Brantford (Ont.) Municipal Railway.—A report from the Brantford Municipal Railway states that, owing to the impossibility of securing rails and labor, the 2-mile extension proposed will not be built during 1917.

Portland Railway, Light & Power Company, Portland, Ore.—City Attorney La Roche, of Portland, Ore., states that the Portland Railway, Light & Power Company must secure a permit from the Council before it can proceed with the construction of its proposed loop on Yamhill Street, between Second and First Streets. The company took the stand that as it has an old franchise for the loop, it could proceed without any permit. The proposal to route many of the cars crossing the Hawthorne Avenue Bridge over the proposed Yamhill loop, instead of running them over the Alder Street loop, is being fought by many of the patrons of the company, and the property owners on First and Second and intersecting streets north of Morrison.

Southern Pennsylvania Traction Company, Chester, Pa.—This company will reconstruct its track between Darby and Eddystone, 5½ miles.

Phoenixville, Valley Forge & Strafford Electric Railway, Phoenixville, Pa.—A new bridge will be erected jointly by the county and the Phoenixville, Valley Forge & Strafford Electric Railway over Perkiomen Creek.

Pittsburgh, Harmony, Butler & New Castle Railway, Pittsburgh, Pa.—It is reported that this company may construct an extension from New Castle to Sharon.

Reading Transit & Light Company, Reading, Pa.—This company will spend \$150,000 in track-laying and other improvements during this year. The Womelsdorf line will be reballasted from Wyomissing to Womelsdorf.

Saskatoon (Sask.) Municipal Railway.—The City Council of Saskatoon has authorized the expenditure of \$19,640 for street railway extensions and equipment.

Bristol (Tenn.) Traction Company.—Operation on the Virginia branch of the Bristol Traction Company has been suspended indefinitely. It is stated that insufficient funds to meet running expenses is responsible for the abandonment of the line.

Chattanooga (Tenn.) Traction Company.—Operation has been begun by the Chattanooga Traction Company of its new interurban lines to Red Bank, through Dry Valley.

Jackson Railway & Light Company, Jackson, Tenn.—Work has been begun by the Jackson Railway & Light Company on double-tracking Main Street from Royal to Market Street.

Tacoma Railway & Power Company, Tacoma, Wash.—Commissioner Gronen of the City Council, who is working with City Engineer Nicholson and Superintendent G. W. Rounds of the Tacoma Railway & Power Company on the proposed extension to the present municipal street railway across the tideflats to the Todd shipbuilding plant outside the city limits, states a double-track extension will be needed. It is estimated this will cost \$75,000 more than the preliminary estimate. At this time the city of Tacoma is negotiating with the officials of the Tacoma Railway & Power Company regarding the construction and operation of the line similar to the way the present line, owned by the city, was constructed and is being operated.

Milwaukee Western Railway, Milwaukee, Wis.—Construction will soon be begun by this company on the first section of its proposed line from Milwaukee to Fox Lake. A. B. Keltzsch, Milwaukee, is interested. [Jan. 27, '17.]

## SHOPS AND BUILDINGS

Southern Pacific Company, San Francisco, Cal.—Plans have been completed by the Southern Pacific Company for the construction of carhouse No. 3 at Sacramento, which was damaged by fire last fall.

Fort Wayne & Northern Indiana Traction Company, Fort Wayne, Ind.—It is reported that this company plans to construct a new freight and passenger station at Decatur.

Hagerstown & Frederick Railway, Hagerstown, Md.—This company will erect a fireproof concrete carhouse to replace the structure recently destroyed by fire.

New York Municipal Railway, Brooklyn, N. Y.—The Public Service Commission for the First District of New York is advertising for bids to be received on April 18 for the construction of station finish for the three stations on that portion of the Park Place, William and Clark Street subway in Manhattan. An effort will be made to push both the station finish and track-laying work on this line to early completion in order to make it possible to operate as far as the Wall Street station during the coming autumn. Three stations are involved in the contract, namely, those at Wall and William Streets, Fulton and William Streets, and Park Place and Broadway. The Park Place, William and Clark Street subway will furnish a connection between the west trunk subway in Manhattan, consisting of the Seventh Avenue subway and the upper portion of the first subway, for operation by the Interborough Rapid Transit Company, and the first subway in Brooklyn. This link will connect with the Seventh Avenue subway at Park Place and West Broadway in Manhattan, and with the first subway at Fulton and Joralemon Streets in Brooklyn.

Buffalo & Lake Erie Traction Company, Buffalo, N. Y.—This company plans to construct a new passenger and freight station at Dunkirk to cost \$15,000, a new carhouse at Fredonia to cost approximately \$20,000, a new passenger and freight station at Brockton to cost \$7,500 and a new passenger and freight station at Westfield to cost \$7,500.

## POWER HOUSES AND SUBSTATIONS

Lewiston, Augusta & Waterville Street Railway, Lewiston, Me.—This company plans to expend about \$200,000 this year for additional power facilities.

Eastern Wisconsin Electric Company, Sheboygan, Wis.—Plans will soon be completed by the Eastern Wisconsin Electric Company for the construction of a new power house of 5000 or 6000-kw. capacity at Sheboygan. This plant will be connected with the Fond du Lac and Oshkosh properties of the company by a transmission line.

West Virginia Traction & Electric Company, Morgantown, W. Va.—The Morgantown division of this company will erect a 13,000-volt cross-country transmission line to supply power for coal mining.

Wisconsin Traction, Light, Heat & Power Company, Appleton, Wis.—A contract has been awarded by this company to the Blake Construction Company, Appleton, for the construction of a substation at Neenah.

# Manufactures and Markets

Discussions of Market and Trade Conditions for the Manufacturer, Salesman and Purchasing Agent  
 Rolling Stock Purchases      Market Quotations      Business Announcements

## Shall the Purchasing Agents and Storekeepers Organize?

An Association for Individual and Company Benefit Suggested—Several Purchasing Agents Discuss Need for Co-operation

The possibilities and probable value of an association of electric railway purchasing agents and storekeepers has recently been discussed by representatives of a number of roads. The ELECTRIC RAILWAY JOURNAL was urged by a purchasing agent to raise the question, "Shall the electric railway purchasing agents and storekeepers have an association?"

This purchasing agent who represents a large company in the Mississippi Valley, wrote as follows:

"I have often wondered why the purchasing agents and storekeepers of the electric lines have not an organization with regular meetings, the same as have the operating officials. Or, why can they not have an organization somewhat similar to that of the steam railroad storekeepers? I may be mistaken, but I believe it is just as much an advantage to the purchasing agents to know who has and who sells certain articles as it is to the salesman to know who will buy his products. In other words, I am anxious to buy for my company the right thing at the right price, and I seek the seller of that thing as earnestly as he seeks me. I believe the purchasing agents and storekeepers could profitably organize to discuss problems not only relating to purchasing ideas and methods, but also to such parts of the work as the issuance, care, handling and accounting for materials. I wonder if there are enough others of the same mind to warrant taking definite steps to organize an electric railway purchasing agents' association?"

The ELECTRIC RAILWAY JOURNAL, in its endeavor to serve the industry and in its belief that there was need for a common meeting ground for the discussion of purchasing and manufacturing subjects, a few months ago inaugurated this department "Manufactures and Markets." The reception of the new department has confirmed the thought that there are many subjects of common interest suitable for joint discussion by purchasing agents and purchasing engineers in different parts of the country and on various kinds of electric railways.

### ORGANIZATION EARLIER CONSIDERED

A few years ago several purchasing agents, whose companies were members of the American Electric Railway Association, met and proposed the organization of a purchasing agents' association which would be affiliated with the American Electric Railway Association. Then the officers of the American Association held the opinion that the purchasing agents could properly affiliate with the engineering association. In consequence, a committee of four, directed by the president of the Engineering Association to investigate and report on the best method of handling the membership of purchasing agents and storekeepers in that association, recommended that the activities of the purchasing agents so far as organization was concerned should be confined to committee work in the Engineering Association. With this recommendation the purchasing agents, who had until then promoted the idea, did not entirely agree and nothing has since been done in the way of effecting an association or a committee.

The letter earlier presented and letters from other railway purchasing agents presented herewith indicate the desire of the purchasing agents and storekeepers for a separate organization. The question of whether that organization should be affiliated with the American Electric Railway Association, should be a committee of the American

Electric Railway Engineering Association, or should be an independent association, is not now under discussion. The following views on the general subject will be found of interest as expressing the ideas of representative men.

George G. Kuhn, purchasing agent, the Tri-City Railway Company, Davenport, Iowa, is of the opinion that some effort should be made to form a purchasing agents' association. He writes that the benefits to be derived from such an association would certainly be worth the effort.

R. R. Smith, purchasing agent, Terre Haute, Indianapolis & Eastern Traction Co., Indianapolis, thinks that "an association would undoubtedly do good in the way of standardizing methods of handling materials and accounting for them. An exchange of opinions cannot fail to bring out points of practical value to the companies."

### CO-OPERATION IS A STIMULUS

One of the first buyers in the electric railway industry to advance the idea of purchasing agents and storekeepers forming an association of their own was W. H. Smaw, purchasing agent Georgia Railway & Power Company, Atlanta, Ga. He is very firm in his belief that such an organization would be of great value. In discussing this question he writes: "Co-operation is a stimulus to any business, and I should think that an association of buyers, in which we could get together once in a while and discuss ways and means, would add new life to and perhaps increase the little pleasure that we get out of our occupation. Within the past few years considerable attention has been given to the buyer and to his department. Several books have been published on the subject. There is now published a monthly journal in the interest of purchasing. There is also the National Association of Purchasing Agents, with branches in all large cities, and 'big business' is giving more attention to the purchasing branch of its organizations than ever before, having just begun to realize its great importance. I firmly believe that an organization of purchasing agents in the electrical industry would not only benefit the buyer but the 'boss' as well."

### SHOULD INCLUDE THE STOREKEEPERS

The Transit Supply Company of St. Paul, Minn., handles the purchases and material distribution for the large property in St. Paul and Minneapolis and surrounding territory, known as the Twin City Rapid Transit Company. W. Whitford, purchasing agent, recently expressed the opinion that a purchasing agents' and storekeepers' association in the electric railway industry would be beneficial to every purchasing agent in the country. He said, "these men should know more about the methods of each other. The engineers and other department heads get together and swap ideas which in a great many instances are greatly beneficial not only to the engineers as individuals but to the company by which they are employed. I believe that such an organization if started would be still better if it was a joint purchasing agents' and storekeepers' association. Both of the positions mentioned have a great many things in common and lack of co-operation between the two results in things happening that are not for the best interests of the companies.

"At the present time manufacturers and their sales agents have organizations to assist each other in disposing of their products to the best advantage. Personally, I do not see how a number of men working individually can successfully look after their interests with any great degree of success without their own organization.

"There is a whole lot that could be said in favor of such an association and possibly some things that would not be so favorable, but I think the favorable ones more than offset the others."

In discussing the question of whether or not a purchasing agents' and storekeepers' association could profitably be organized in the electric railway industry, E. E. Kretschmer, purchasing agent, Chicago Elevated Railways, held a view that such an organization would be a good thing if the different members could be brought together, and that, he thought, would be the deciding factor. Mr. Kretschmer pointed out the successes of the purchasing agents' associations in other lines of industry, including the steam railway field. He further said, "I have been a member of the Railway Storekeepers' Association for a number of years, and I believe it one of the best things I ever did when I joined. I have attended their last four or five conventions and have been well repaid each time. In fact, our own storekeeping system has been built up on the general lines recommended by the Storekeepers' Association with certain modifications to suit local conditions. Personally, I believe the electric railways could get more out of an association of purchasing agents and storekeepers if it were affiliated with the American Electric Railway Association, and I believe that there would be more action if it operated independently of the Engineering Association."

The different purchasing agents who have discussed this subject confirm the statement that there is little doubt but if an organization should be effected, its members, as well as the companies they represent, would be greatly benefited.

## Home-Made Special Work on the Increase

### Way Engineer Explains Present Tendency of Railways in This Respect—Arc Welding Equipment Effects Big Saving

According to the way engineer of a large Eastern street railway, the city railway companies have not purchased for renewal purposes during the past four or five years anywhere near as much special track work as they did previous to that time. One reason for this has been the wide-spread use of arc welders by which the necessity for scrapping worn pieces of special work can be postponed for years. More stable crossing foundations also have increased the life of track special work. Still another reason for fewer orders is the present high cost of new special work. Thus the arc welder has been employed extensively, not only for its intrinsic merits but also for the chance it afforded to the electric railway company to become independent of the special work manufacturer.

Of course, special track work cannot be kept in good condition permanently by maintenance only. After a certain period in its life renewal becomes cheaper, although better installation methods, better materials and the use of the arc welder help to postpone that day. There is also no doubt that considerable track special work throughout the country is approaching this time, owing to the small number of renewals made during the past five years on electric railways.

The extraordinary high prices for track special work did not come until 1915, and even with the very high prices of 1916 it is said that twice as much special work was purchased in 1916 as in 1915. The depression in electric railway receipts in 1912, 1913 and 1914 really prohibited the making of the normal purchases during those years. Thus any statement now that the special work orders are numerous must be considered in the light of the abnormally small amounts sold during the jitney period of 1914 to 1915.

On some properties, even including those with dense traffic and heavy cars, there is a growing tendency for the use of home-made bolted crossings on the theory that they are more frequently repaired and replaced than heavy iron-bound manganese steel pieces. A larger number of electric roads also are installing shop facilities for the manufacture of more durable special work. On his own property, for instance, the speaker quoted in the earlier part of this article said that his company was making all of the manganese special work which it could, and as its present shop is too small to meet all demands, he has asked for an enlarged shop which will be able to supply all of the material of this kind which the road may need.

## Standard Sizes for Catalogs

BY W. R. HULBERT

Sales Manager Goldschmidt Thermit Company, New York, N. Y.

I have read with much interest Mr. Chandler's article on page 372 of the Feb. 24 issue on the subject of uniform catalog sizes.

It has been our endeavor to conform to the following standard sizes for catalogs and booklets: Small booklets, 6 in. x 3 in.; larger pamphlets, particularly pamphlets of instruction, 6 in. x 9 in., and for our quarterly publication, *Reactions*, we chose a size of 8½ x 10¾ in., as that was practically the size of our standard letter heads and permitted of filing in vertical files if desired. Furthermore, the paper cuts economically to that size. We have also issued a loose-sheet catalog on price lists of parts for our rail grinder, and are getting out another one of a general price list of our other materials which is 6 in. x 9 in. We certainly believe in standard sizes and adhere strictly to those mentioned above in our own publications.

## United Gas & Electric to Order Cars

The United Gas & Electric Corporation is sending out specifications for sixty-five cars which will be practically duplicates of the fifty cars built by the Southern Car Company two years ago for its New Orleans properties. These cars were fully described in the *ELECTRIC RAILWAY JOURNAL* for Feb. 6, 1915. The new cars will differ chiefly in the use of a folding instead of a sliding door on the motorman's side, and in vertical stanchions instead of horizontal grab handles.

The sixty-five cars will be distributed as follows: Six, Little Rock; twelve, Birmingham; twelve, Knoxville; and thirty-five, New Orleans. It is possible that the number for New Orleans may be increased later. It is worthy of note that the decision to use the same car for these cities, and later for Memphis, was reached after the equipment and transportation superintendents of these properties had spent several days during March in studying the New Orleans car from every angle. This type had proved so satisfactory that all agreed it ought to be made standard for the Southern properties.

## Gear Manufacturers Organize

An organization of gear manufacturers, which will be known as the American Gear Manufacturers' Association and whose purposes are to advance and improve the gear industry by standardization of gear design, manufacture and application, was formed at Lakewood, N. J., March 25 to 27. The executive committee is composed of the following: F. W. Sinram, Van Dorn & Dutton Company, Cleveland, Ohio; H. E. Eberhardt, Newark (N. J.) Gear Cutting Machine Company; F. D. Hamlin, Earle Gear & Machine Company, Philadelphia, Pa.; Frank Horsburgh, Horsburgh & Scott, Cleveland, Ohio; Biddle Arthur, Simonds Manufacturing Company, Pittsburgh, Pa.; George L. Markland, Philadelphia Gear Works, Philadelphia, Pa., and Milton Rupert, R. D. Nuttall Company, Pittsburgh, Pa. The officers elected at the Lakewood meeting are: F. W. Sinram, president; H. E. Eberhardt, vice-president; F. D. Hamlin, secretary, and Frank Horsburgh, treasurer. The next meeting of the association will be held at Pittsburgh, May 14 and 15.

## Reasons for Ordering Cars Now

On being asked why his company was ordering a large number of cars at this time with materials so high, the head of a large syndicate said: "We believe it good business to anticipate our car needs now, despite the high prices of material and labor. We know that the premium on those items cannot be avoided, but we also feel sure that the car builders are so keen for business that they will give us the lowest possible prices and good delivery. Those who hold off ordering cars until next year will find labor and material conditions still worse and crowded car shops to boot."

## Cars Tied Up in Embargoes

Reports just received by the commission on car service of the American Railway Association show that on March 10 (the latest date for which data have been compiled), 16,998 cars loaded with freight were being held at various points in the country because of so-called embargoes. This is a reduction of 50 per cent since Feb. 17, when 33,540 cars were being held for this reason. The largest number of cars, 6037, are being held by the Eastern railroads, while the others are scattered throughout the United States. A very large proportion, however, nearly two-thirds, is east of the Mississippi River.

## Recorders for Kansas City Railways

The Kansas City Railways has purchased 750 Rico coasting recorders, 650 to be delivered by June 1, and the others shortly afterward. All cars are to be equipped. It is said that a saving of about 15 per cent in power consumption is expected from the devices, which will be an important factor in view of the heavy load now on the plants. The Kansas City Light & Power Company, which now gets most of its power from the railways, is adding to its own producing equipment, and will shortly erect a large plant; the 15 per cent saving will, it is reported, materially aid in tiding over the railways company until the light company can take care of itself.

## Scarcity of Shop Labor

Just to show that the question of labor scarcity and high cost is not confined to the manufacturing side of the electric railway industry, the master mechanic of a large road in the North Central States recently pointed out in discussion that on his property during the last year the labor change in the mechanical departments had totaled 300 per cent. About 100 men are employed regularly, and during the year 300 new men were hired in order to keep the staff at its normal size. "We raised the wages several times," he said, "in order to hold the old-time experienced mechanics, but were unsuccessful in many instances."

## CURRENT PRICES FOR MATERIALS

Quoted Apr. 5

Copper (electrolytic) . . . . .	New York, 34 cents per pound
Rubber-covered wire (base) . . . . .	New York, 42 cents per pound
No. 0000 feeder cable (bare) . . . . .	New York, 42 cents per pound
No. 0000 feeder cable (stranded) . . . . .	New York, 39 3/4 cents per pound
No. 6 copper wire (insulated) . . . . .	New York, 37 1/2 cents per pound
No. 6 copper wire (bare) . . . . .	New York, 42 cents per pound
Tin (straits) . . . . .	New York, 5 1/4 cents per pound
Lead . . . . .	New York, 9 3/8 cents per pound
Spelter . . . . .	New York, 10 3/4 cents per pound
Rails, A. S. C. E., O. H. . . . .	Mill, \$40 per gross ton
Rails, A. S. C. E., Bess. . . . .	Mill, \$38 per gross ton
Wire nails . . . . .	Pittsburgh, \$3.20 per 100 pounds
Railroad spikes, 9/16 in. and larger . . . . .	Pittsburgh, 3.65 cents per pound
Steel (bars) . . . . .	Pittsburgh, 3 3/4 cents per pound
Sheet iron (black, 24 gage) . . . . .	Pittsburgh, 5.30 cents per pound
Sheet iron (galv., 24 gage) . . . . .	Pittsburgh, 6.55 cents per pound
I-beams over 15 in. . . . .	Pittsburgh, 10 cents per pound
1/2-in. galv. extra high strength steel wire . . . . .	New York, \$7.04 per 100 ft.
3/8-in. galv. high strength steel wire . . . . .	New York, \$3.52 per 100 ft.
5/16-in. galv. Siemens-Martin wire . . . . .	New York, \$2.60 per 100 ft.
Galvanized barb wire and staples . . . . .	Pittsburgh, 4.05 cents per pound
Galvanized wire (ordinary) . . . . .	Pittsburgh, 3.85 cents per pound
Cement (carload lots) with rebate for sacks . . . . .	New York, \$2.12 per barrel
Cement (carload lots) . . . . .	Chicago, \$2.16 per barrel
Cement (carload lots) . . . . .	Seattle, \$2.60 per barrel
Sand in large lots . . . . .	New York, 50 cents per ton
Waste, No. 1 white . . . . .	New York, 14 cents per pound
Linseed oil (raw, 5-bbl. lots) . . . . .	New York, \$1.05 per gallon
Linseed oil (boiled, 5-bbl. lots) . . . . .	New York, \$1.06 per gallon
White lead (100-lb. keg) . . . . .	New York, 10 1/4 cents per pound
Turpentine (bbbl. lots) . . . . .	New York, 48 cents per gallon

## OLD METAL PRICES

Copper (heavy) . . . . .	New York, 29 cents per pound
Copper (light) . . . . .	New York, 24 3/4 cents per pound
Red brass . . . . .	New York, 20 cents per pound
Yellow brass . . . . .	New York, 19 cents per pound
Lead . . . . .	New York, 8 cents per pound
Zinc . . . . .	8 cents per pound
Steel car axles . . . . .	Chicago, \$38 per net ton
Iron car wheels . . . . .	Chicago, \$22.50 per gross ton
Steel rail (scrap) . . . . .	Chicago, \$28.50 per gross ton
Steel rail (relaying) . . . . .	Chicago, \$34 per gross ton
Machine shop turnings . . . . .	Chicago, \$9.50 per net ton

## ROLLING STOCK

Denver (Col.) Tramways are reported to be considering the purchase of additional equipment.

Cincinnati & Columbus Traction Company, Norwood, Ohio, is in the market for one motor-equipped box car for freight service.

Omaha & Council Bluffs Street Railway, Omaha, Neb., is reported to be building forty new semi-steel cars in its Lake Street car shops. The cars will cost in the neighborhood of \$300,000.

Toledo, Bowling Green & Southern Traction Company, Toledo, Ohio, has ordered four cars from the Cincinnati Car Company.

Nipissing Central Railway, North Cobalt, Ont., Canada, in a recent fire had its carhouse damaged to the extent of about \$40,000. The loss to electrical equipment was about \$30,000 and to cars about \$60,000.

Montreal Tramways, Montreal, Que., Canada, noted in the March 10 issue as being in the market for fifty cars in addition to the fifty previously reported, has placed this order with the J. F. Brill Company. The details of equipment of all the cars ordered are as follows:

Number of cars ordered . . . . .	100	Fare boxes . . . . .	Coleman stationary
Delivery . . . . .	Five to six months	Fenders or wheelguards . . . . .	H. B.
Builder . . . . .	Brill	Gears and pinions . . . . .	Nuttall BP
Type . . . . .	50 Motor, 50 Trail	Hand brakes . . . . .	Brill
Capacity . . . . .	Motor, 42; Trail 45	Heaters . . . . .	Consolidated Car
Weight (total) : . . . . .		Journal boxes . . . . .	Brill
Motor . . . . .	43,800 lb.	Lightning arresters . . . . .	Westinghouse
Trail . . . . .	36,470 lb.	Motors, West 533-T-4, . . . . .	
Bolster centers : . . . . .		4 Motor car	
Motor . . . . .	21 ft. 0 in.	2 Trail car	
Trail . . . . .	21 ft. 0 in.	Motors . . . . .	Outside hung
Length over bumpers : . . . . .		Registers . . . . .	Varnish
Motor . . . . .	45 ft. 3 in.	Sanders . . . . .	None
Trail . . . . .	44 ft. 3 in.	Sash fixtures . . . . .	National
Length over vestibule : . . . . .		Seats, style . . . . .	Brill
Motor . . . . .	44 ft. 3 in.	Seating material . . . . .	Rattan
Trail . . . . .	43 ft. 3 in.	Springs . . . . .	Brill
Width over all . . . . .	8 ft. 5 in.	Step treads . . . . .	Lead & Stanwood
Rail to trolley base . . . . .	11 ft. 4 1/2 in.	Trolley retrievers . . . . .	Keystone
Body . . . . .	Steel—Wood Posts	Trolley base . . . . .	U. S. A. No. 11
Interior trim . . . . .	Cherry	Trolley wheels . . . . .	Ideal
Headlining . . . . .	Agasote	Trucks, type . . . . .	Brill 76-E
Roof . . . . .	Arch	Ventilators . . . . .	Perry
Air brakes . . . . .	Westinghouse	Wheels . . . . .	Ry. standard C.I. 30-in.
Axles . . . . .	Brill	Special devices, etc. : Railway	
Bumpers . . . . .	Brill	Utility Heat Regulators, Door	
Car trimmings . . . . .	Brill	signal interlocked with control	
Control . . . . .	Brill	circuit. 94-watt. lamps with	
West. P.K. Multiple Unit		reflectors and automatic com-	
Couplers . . . . .	Tomlinson	pensating device for burned-	
Curtain fixtures . . . . .	National	out lamps.	
Curtain material . . . . .	Pantasote		
Designation signs . . . . .	Keystone		

San Francisco-Oakland Terminal Railways, Oakland, Cal., noted in the ELECTRIC RAILWAY JOURNAL of Dec. 30, 1916, page 1365, as petitioning the California Railroad Commission for authority to issue \$180,000 of equipment notes, to secure funds to pay in part for thirty-two new cars, has specified the following details for these cars which are being built by the American Car Company, St. Louis, Mo. Twenty of the cars will be used for express service between Oakland and Berkeley, while the twelve remaining cars will be placed in service on the Twelfth Street line. These twelve cars are 51 ft. 4 in. long, 9 ft. 1/2 in. wide and seat 60 passengers. The other details are practically the same as for the twenty cars and are as follows:

Number . . . . .	32	Gears and pinions . . . . .	Gen. Electric
Builder . . . . .	American Car	Hand brakes . . . . .	American Car
Type . . . . .	Center entrance P. A. Y. E.	Headlights . . . . .	Golden Glow and GE.
Seating capacity . . . . .	52	Journal boxes . . . . .	Brill
Bolster centers . . . . .	23 ft. 6 in.	Lightning arresters . . . . .	Gen. Electric
Length over bumpers . . . . .	40 ft. 7 3/4 in.	Motors . . . . .	4 GE. 247-A per car
Length over vestibule . . . . .	39 ft. 7 3/4 in.	and 2 GE. 240 per car	
Width over all . . . . .	8 ft. 3 in.	Paint . . . . .	Sherwin-Williams and
Rail to trolley base . . . . .	11 ft. 2 3/4 in.	St. Louis Surface & Paint	Company, Lowe Bros.
Body . . . . .	Semi-steel	Registers . . . . .	Ohmer
Interior trim . . . . .	Polished bronze	Sanders . . . . .	Nichols-Lintner
Headlining . . . . .	Agasote	Sash fixtures . . . . .	Brill
Roof . . . . .	Monitor	Seats, type . . . . .	Brill reversible
Air brakes . . . . .	G. E. and West.	Seating material . . . . .	Rattan
Axles . . . . .	Brill	Springs . . . . .	Brill
Bumpers . . . . .	American Car	Step treads . . . . .	Feralun
Car trimmings . . . . .	Brill	Trolley base . . . . .	U. S. No. 13-D
Control . . . . .	Type K-35, G2 and M	Trolley wheels or shoes . . . . .	General Electric
Couplers . . . . .	American Car Pull Bar	Trucks, type . . . . .	Brill 77-E-1
and Tomlinson MCB Radial		and St. Louis Car 23-B	
Curtain fixtures . . . . .	Nat'l Lock Washer	Ventilators . . . . .	12 deck sash
Curtain material . . . . .	Pantasote	each side	
Curtain rollers . . . . .	Curtain Supply	Wheels . . . . .	F.C.S. 24 in. and
Designation signs . . . . .	Hunter III.	rolled steel 34 in.	
Fenders . . . . .	Eclipse Type C	Special devices, . . . . .	Brill Resident post casings
and American Car Steel Pilot			

Cleveland (Ohio) Railway is reported to be considering the purchase of 100 motor and 100 trail cars.

Pittsburgh (Pa.) Railways are reported to be asking for bids on 100 trail cars.

### TRADE NOTES

**Bound Brook (N. J.) Oil-Less Bearing Company** announces that Dean C. Jenkins has been made assistant to the production manager. E. L. Evans has been appointed chief inspector to fill the vacancy made by Mr. Jenkins.

**National Railway Appliance Company, New York, N. Y.**, succeeding the U. S. Metal & Manufacturing Company in its railroad department business, announces its removal to 50 East Forty-second Street.

**F. M. Freeburg, Philadelphia, Pa.**, reports that the operation of the Freeburg switch installed by the Philadelphia Rapid Transit Company on Oct. 17, 1916, for test purposes has been satisfactory in every particular according to the report of J. C. Luger, superintendent of the company.

**United States Electric Signal Company, West Newton, Mass.**, has just received an order from the Capital Traction Company for the tower control interlocking equipment for the control of the switches on the new track layout at Fifteenth Street and New York Avenue, Washington, D. C. The standard American type 7 switch-throwing mechanisms are to be used for the control of the switch points.

**Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.**, held its seventh annual dinner on March 24 at the Fort Pitt Hotel. Nearly 500 employees attended the dinner which was given under the auspices of the Westinghouse Club. The principal speakers were H. D. Shute, and E. M. Herr of the Westinghouse Company, and Farley M. Osgood of the Public Service Electric Company, Newark, N. J.

**Bradford-Ackermann Corporation, New York, N. Y.**, recently formed by A. H. Ackerman and C. C. Bradford, with offices in the Forty-second Street Building, announce that they have concluded arrangements with Ashton, Laird & Company for the exclusive selling rights of their Astra high-temperature gas apparatus and oxygen welding appliances. In addition to the above, a new and standardized line of oxy-illuminating gas apparatus exclusively manufactured by this company will be marketed.

**Railway Improvement Company, New York, N. Y.**, announces that it has received orders for anti-climbers to be used on fifteen cars of the Peoria Railway, on fifty cars being built by G. C. Kuhlman for the International Railway, Buffalo, and for twelve cars being built by J. G. Brill for the Easton Transit Company. An order has also been received for 2800 sanitary straps to be used on the fifty cars of the Public Service Railway recently ordered from the Cincinnati Car Company.

**Harrison Brothers & Company, Inc., Philadelphia, Pa.**, at a recent meeting of the stockholders, voted to accept the offer of \$5,700,000 cash made by the DuPont Company of Wilmington, Del., for the business, holdings, etc., of the company. Hereafter the business will be conducted by a new Pennsylvania corporation to be known as Harrisons, Inc., a charter for which has been applied for. The incorporators are Lamont DuPont, Dr. Charles L. Reese and Charles A. Meade of the DuPont Company; A. R. Glancy and William Richter, secretary of the Harrison Company.

### ADVERTISING LITERATURE

**Ohmer Fare Register Company, Dayton, Ohio**, has issued a booklet, "A Pointer on Economy."

**Detroit Stoker Company, Detroit, Mich.**, has issued a catalog on the Detroit V-type side-feed stokers.

**Northern White Cedar Association, Minneapolis, Minn.**, has issued a booklet on "How to Build a Good Fence."

**American Railways Equipment Company, Dayton, Ohio**, has issued a bulletin on the American coin-ticket fare box for safeguarding prepayment fare collections.

**General Electric Company** has issued Bulletin No. 40400A on its form PB belt-driven alternators. They are built in

sizes from 30 kw. to 240 kw. and are designed for both power and lighting service.

**Spray Engineering Company, Boston, Mass.**, is distributing bulletin No. 501, which is a condensed summarization of the principal developments in this company's products.

**Electric Service Supplies Company, Philadelphia, Pa.**, is distributing a supplement showing new and improved devices and revised listings relating to material covered by general catalog No. 4, Vol. 2, on car equipment and supplies.

**National Tube Company, Pittsburgh, Pa.**, is distributing a reprint of a paper on the prevention of corrosion in pipes which was recently presented before the American Society of Heating and Ventilating Engineering by F. N. Speller, metallurgical engineer of the company.

**Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.**, has issued special publication 1572 on protective relays and their use on alternating-current systems. This booklet shows how interruptions to service can be prevented by the use of Westinghouse protective relays for automatically sectionalizing the lines. Methods of sectionalizing systems consisting of radial feeders, loops, parallel feeders and networks are described and illustrated.

### New Publications

**Government Partnership in Railroads.** By Mark Wymond. Wymond & Clark, 909 Rand McNally Building, Chicago, Ill. 192 pages. Buckram, \$1.50.

This book is devoted to a discussion of the transportation problem. It outlines with equal frankness the sins of regulation and the sins of steam railroads, and proposes a constructive policy having as its characteristics such features as one regulatory body with district divisions, governmental guarantee of interest and profit-sharing with the public. Government ownership is discussed as the alternative, although the author does not believe in the probability of the nation arriving at the conclusion that a paternal policy is better than one based on individual initiative. The work on the whole seems an earnest, common-sense attempt at constructive criticism of the existing steam railroad situation.

**Valuation, Depreciation and the Rate Base.** By C. E. Grunsky and C. E. Grunsky, Jr. John Wiley & Sons, Inc., New York, N. Y. 387 pages. Cloth, \$4, net.

The theoretical part of this book is in the main an amplification of the fundamental idea that there would be great advantage in adopting, instead of "present value," a rate basis without deduction of depreciation, which would include but little, if anything, other than "legitimate and properly estimated cost" as the starting point in fixing rates. On the practical side the book discusses such important questions as the effect of non-agreement between actual and probable life upon the determination of depreciation; it is well fortified with formulæ, figures and even accounting entries, and it also contains valuable tables in regard to interest, annuities, amortization and depreciation. Whether or not the engineer or utility official interested in problems of finance and valuation agree with some of the theoretical ideas advanced by the authors, they will probably find the mathematical and tabular information of considerable value.

**Contracts, Specifications and Engineering Relations.** By Daniel W. Mead, Professor of Hydraulic and Sanitary Engineering, University of Wisconsin, Madison, Wis. McGraw-Hill Book Company, Inc., New York, N. Y. 518 pages. Cloth, \$3 net.

This book is intended to familiarize the engineer or architect with some of his relations in practical life. Not only are personal requirements emphasized, which are necessary in the more successful execution of technical duties, but stress is also laid upon the importance of moral and ethical principles. The author believes that "the best and most successful men in every business and profession are those whose character and reputation are regarded as the greatest and most valuable of their possessions." Considerable space is given to discussion on the preparation of specifications, and samples of contracts and specifications are presented for comparison and study. Full-page drawings, illustrating various structures and mechanisms, are furnished to afford a basis for writing specifications on the different subjects.