

# Electric Railway Journal

Consolidation of STREET RAILWAY JOURNAL and ELECTRIC RAILWAY REVIEW

Volume 51

New York, Saturday, March 9, 1918

Number 10

## National and Sectional Associations in War Time

SINCE the publication of the editorial two weeks ago on the holding of conventions in war time we have had the opportunity to observe the Central Electric Railway Association in action, with the result that the opinions expressed in the editorial have been substantially confirmed. The success of the annual meeting has led the association to decide that it should hold some kind of a summer meeting, even if this be of the nature only of a get-together affair.

As one reads of the proceedings of the Dayton meeting of this association, which can be done in this and the previous issue of the ELECTRIC RAILWAY JOURNAL, he is impressed by the fact that those in attendance at such a meeting could not but go home with a stronger patriotism and with a desire to place their properties more completely at the disposal of the government for the winning of the war. When electric railways were more prosperous they could get along fairly well without much co-operation, but as their difficulties have multiplied the need for coherence has become more pressing. Now, under the stress of war conditions, united action is necessary if the railways are to withstand the storm and at the same time lend a hand in the solution of war problems.

For this reason we repeat what was said before, namely, that national and sectional organizations should resume in a modified degree the co-operative activities which they maintained before the war.

## Increased Passenger Rates for Steam Railroads Will Help the Electric Railways

A RESOLUTION introduced by Arthur W. Brady at the Dayton meeting of the Central Electric Railway Association contained a plea for higher passenger rates for the steam railroads. While the electric railways have enough troubles of their own without trying to get increased income for the steam roads, this is a case in which both suffer when the steam road rates are too low. It helps an electric railway very little if it secures the right to increase its rate of fare when a competing steam road is held to a rate lower than that which is profitable for the electric railway.

The rate of 2 cents per mile imposed upon steam roads in some places may have been all right when first established, but it is obviously too low now. In the early days the interurban electric railway could compete with its steam rival, even at this rate, but the time when it can do so successfully has gone by. The steam railroad does not depend largely upon passenger business for its profit, so that if money is be-

ing made on the freight traffic it may seem possible for a time to conduct passenger business at a loss. On the electric railways, however, the situation is exactly reversed.

Hence, while the steam roads are concentrating attention to a considerable extent on securing increases in freight rates, it is not illogical for the electric railways to help themselves, and incidentally the steam roads, by urging the reduction of restrictions upon the latter. It is to be hoped, therefore, that the resolution introduced by Mr. Brady will be used as effective ammunition in the campaign for higher interurban fares.

## An Inconspicuous Piece of Electrical Apparatus That Demands Respect

THE power plant circuit breaker is a more important element of plant equipment than the space available for the subject in the issue of this paper for Feb. 23 would seem to indicate. In the power plant the circuit breakers are usually inconspicuous, being placed in isolated rooms from considerations of safety, and they are housed in compartments that look more like clothes lockers than anything else. Yet the successful operation of the plant depends largely on these simple switches inclosed in steel cylinders filled with oil and operated by solenoid or motor mechanisms placed overhead.

An engineer stated recently that a single breaker has opened a circuit carrying 500,000 kw.—enough power to operate 25,000 ordinary city cars. Such a statement, however, doesn't mean much even to one accustomed to electrical phraseology, but it is worth visualizing as far as possible. There is no analogy between opening an electric circuit and stopping a heavy train in full motion, as has sometimes been suggested. It is more like the breaking of a belt, or a train of gearing connecting a prime mover and its load. That the amount of energy ordinarily concentrated at the contacts in the circuit breaker is not very great is indicated by the fact that the oil absorbs this energy without excessive rise of temperature. The contacts separate so quickly and the oil flows in between them so promptly that there is little opportunity for heat to develop. Under very heavy short-circuits, however, the oil may be expelled from the cylinders violently and the contacts may be burned. Usually, however, the breaker is ready to be closed as soon as it has functioned, safeguarding the apparatus which it has been set to protect.

When one considers the possible extent to which power can be concentrated in a short circuit in a modern power system he realizes how important is the function of the device which has the duty of relieving the system of load under these circumstances. It is "up to"

the watchdog of the power plant or substation, the circuit breaker, to be on the job. Thanks to the high degree of engineering skill lavished upon its design, it has kept up with the requirements in a wonderful manner.

---

### Restoring Power Service After an Interruption

THE problem of providing continuous power service has been for some time one of paramount importance. Several articles appearing in recent issues of the ELECTRIC RAILWAY JOURNAL have indicated a number of ways in which interruptions of service are being prevented. Without in any way desiring to detract from the credit due to managers and engineers for the ingenuity and resourcefulness manifested by the application of these expedients, it may be worth while to refer to another phase of the same general subject. A survey of the technical literature dealing with the problem of preventing service interruptions seems to indicate that, in an effort to solve the problem of eliminating all interruptions, too little attention has been given to methods of restoring service once an interruption has occurred. In other words, we have been concentrating on preventive medicine and paying too little attention to remedial medicine. We are told, quite logically, that preventive methods are the best kind to use, but they are not the only ones needed. Think, plan, and insure as we will, we are not yet able to control the elements of nature, and so long as this remains true we shall have service interruptions. However, we can do much in the way of shortening the periods of unavoidable interruptions by foreseeing and planning for possible emergencies. The keeping and analyzing of records of service interruptions constitute an extremely good start in forming a basis for such planning.

---

### The Montreal Tramways Seem Assured of an Adequate Power Supply

VERY few electric railway systems are situated as fortunately as is that at Montreal, Quebec, with respect to power supply. Its neighborhood abounds in water powers, many of which are highly developed. There is possibly 500,000 hp. of supply available now, which is a large quantity compared with the ultimate requirements of the Tramways. The general aspects of the Tramways' power situation were explained recently in an article in this paper, and this week we give some of the details of substation and conduit lines. These articles show that the company is endeavoring effectively to use all possible sources of power, so to insure continuity of service and reasonable cost. When the general rehabilitation of the power system is completed, and it is now approaching completion, the company will have an unusually homogeneous transforming and distribution equipment.

Some engineers will be inclined to criticise the Tramways company for the use of motor-generator sets. In the articles we have endeavored to set forth as clearly as possible the reasons for the use of this type of equipment rather than rotary converters. We assume that if the whole distribution plant were to be renewed, rotary converters might be used. The old motor-generator sets were so satisfactory, however, that it was perfectly natural that they should be continued in use

until it has been clearly demonstrated that they must be "scrapped" in the interests of economy. We like to consider a power system, like anything else, as having a kind of personality, its present character reflecting its environment and other causes contributing to its development. For this reason, and in order that JOURNAL readers may examine the present power situation at Montreal intelligently, we have gone more than usually into the story of its growth.

---

### Commissions Should Face Squarely the Question of a Fair Return

TOO frequently in recent fare cases the commission has seemed desirous not of granting the increase needed to bring the rate of return up to a fair average but merely of giving the petitioning company a little more revenue than it had been getting. In other words, a pittance of relief rather than exact justice has been awarded.

Commissions have usually held that low rates of return in some years are balanced by high rates of return in other years and that the utilities are entitled to only a fair average rate of return. They have tended to disregard the fact, however, that there must be a slight margin in the prosperous years if these are to counterbalance bad years. Hence their policy, interesting in theory, has not amounted to much in practice.

The situation has become worse than ever during these war days. Capital is harder to get now than in normal times, and it is a very important question as to what increase should be made in the old restricted rate of return in order properly to reward capital for engaging in the electric railway business. Some commissioners feel that while the rates should not be made so low as practically to be confiscatory, yet the maximum rate of return should not be expected. Bankers and utility operators feel, however, that under present conditions a return of from 10 to 12 per cent is needed to accomplish the results which were formerly secured by a 6 per cent return.

Investors want to know what rate of return can be expected in abnormal times. When regulation began they assumed that the rates of return mentioned by commissions would be assured in bad as well as in good years, or that a fair average would be maintained. But the commissions have not squarely faced the question of a fair average. Forgetful of increasing costs of operation, they have hoped too much that net income would be restored at some time in the future without their aid. As a result the average rate of return on more than one property has seriously declined, rendering the company's investment values unstable.

The investors have learned a lesson. Until the commissions announce frankly and explicitly a liberal rule for calculating the future rate of return, capital is likely to glance askance at electric railway investments. Will the commissions henceforth protect a fair average rate of return by allowing the companies to charge fares high enough to accumulate some reserve for surplus and contingencies? This question is not simply of academic interest. The investor must be made to feel secure. Speculative profit has been removed from utility securities, and commissions should hesitate no longer to assure safety of principal and income in its place.

## Why Not Use Automobiles Less and Trolley Cars More?

A COPY of the 1917 Proceedings of the Southwestern Electrical & Gas Association just received, shows that one of the speakers brought up the increasing tendency of heads of railway departments, in their trips around the systems, to travel in company automobiles rather than on the cars. The claim was not made that automobile transportation should be entirely given up. The time saved by this means of transit, is important, and on many kinds of trips its use may be warranted. Nevertheless, we think that the critic of this practice at the Southwestern meeting was right when he said that when a manager or the head of a department uses an automobile habitually for getting around his work instead of the cars, he misses seeing a great many things about car operation which he would see if on the car. In fact, one case was reported of a city in which, during an investigation being made of traffic conditions, it developed that the officials of the company knew very little about the traffic conditions of their cars because they never rode on them.

The question of example set to others is one which might also be considered in this connection, especially in the smaller cities where the officers of the company who have to travel about are well known by sight to most of the citizens. In such cases it would be rather difficult for a manager to find fault with others for riding in jitneys or their own automobiles, when he depended habitually upon an automobile himself for getting about.

## All Unnecessary Construction Should Cease to Conserve Funds and Labor

GOVERNMENT plans to restrict heavy financing for private enterprises or for purely local improvements having nothing to do with war activities may have the effect of checking the extension of railway lines in cities where such work has been done every year by ordinance requirement. Aside from the patriotic motive which would direct the use of a large proportion of available capital for war purposes, there will be the additional advantage of conserving the already restricted supply of labor for other work. Suggestions from various state councils of defense that public improvement work on streets, bridges, etc., be postponed wherever possible during the coming year have aroused opposition in certain political circles, owing to the prospective loss of this class of "patronage jobs." However, such considerations are not likely to prevail if the higher needs of the nation call for a diversion of labor to other fields.

Meanwhile it should not be out of order to suggest a slacking up in "forced" extensions so as to give electric railways a chance to "recover their breath"—financially—while studying ways to make ends meet. Necessary track repairs for the purpose of keeping roadways up to a proper standard of maintenance should go on as usual, but the prevailing policy in some cities of compelling the local companies to build so many miles of track each year regardless of actual needs would appear out of place, when there are better uses for such funds. Study of cost and earnings will show

in many cases that compulsory extensions are not remunerative to the investors and of no actual need to the occasional patrons of the new lines. Doubtless they help certain real estate promoters to dispose of property, but the drain on other remunerative lines is likely to be such that the people as a whole suffer where they might have been aided had such expenditures been made for well-considered traffic betterments.

## Some Things the War Is Doing To and For Electric Railways

AS THE FIRST anniversary of the entry of the United States into the world war approaches, it is worth while to attempt to size up the situation so as to utilize the experience so far gained in preparing for the tug-of-war which undoubtedly is to come. The collapse of Russia probably means a considerable prolongation of the war, and if it is to last for several years more, each successive year is going to present greater operating difficulties for the electric railways. There will be a real test of the mettle of the industry here, as there already has been one abroad. In the railway business, as in the country's military, naval and aerial preparations, we must get ready for a long continuation of hostilities.

It would seem as if any business could not be harder hit than was ours during the past year. The war has brought sky-rocket prices of materials, shortage of labor, money and materials, unusual transportation burdens, etc., and it will bring more of these. It's a mighty uncomfortable time for the responsible manager or the responsive employee, but it's a time when there is much of promise visible to those who look on the business as a means of service rather than merely a means of livelihood. The times are separating the sheep from the goats.

The great lesson that the war is teaching is that operating conditions and public standards of service have undergone tremendously rapid changes in but a few years, making it very difficult to meet the requirements with existing equipment. Unfortunately, there is scarcity of money with which to buy new equipment, but such money as is available is being spent more intelligently than ever before. To this end electric railway operation is being analyzed as never before also, and promising economies are constantly being discovered.

Moreover, the public, through its representatives, is permitting the introduction of economies that would have been turned down in peace times. If a public body or official can be shown that a proposed practice will directly or indirectly contribute to the conservation of our war resources, the chances are that this practice will be approved and even encouraged. It is reasonable to assume that privileges granted under stress of war will not be withdrawn afterward if they are proved not to conflict with public interest.

We realize that it is an immense subject that has been touched upon in this and preceding editorials on the war situation. The conditions pictured in outline are very difficult, but they need not be discouraging. The present, however, is no time for either timidity or discouragement on the one hand, or, on the other, for complacency or indifference to the seriousness of the situation which confronts us.

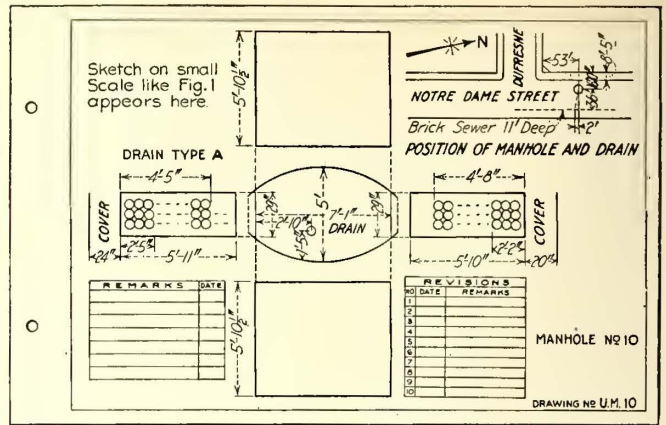
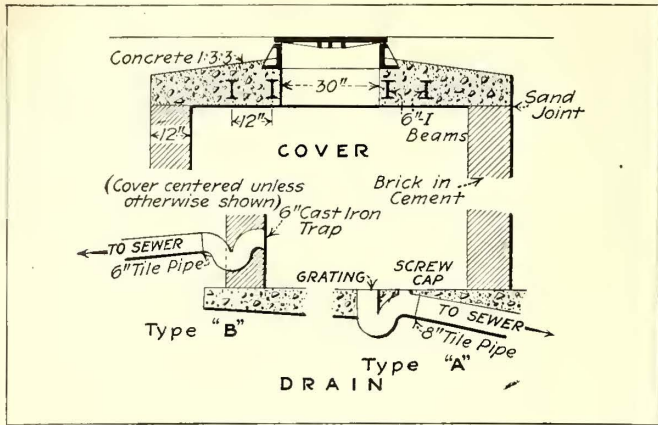


FIG. 1—CROSS SECTION OF STANDARD MANHOLE SHOWING TWO TYPES OF DRAINAGE

FIG. 2—SAMPLE 6 1/2 X 8 1/2 IN. LEAF FROM FIELD NOTEBOOK, SHOWING MANHOLE LAYOUT AND DRAINAGE SCHEME

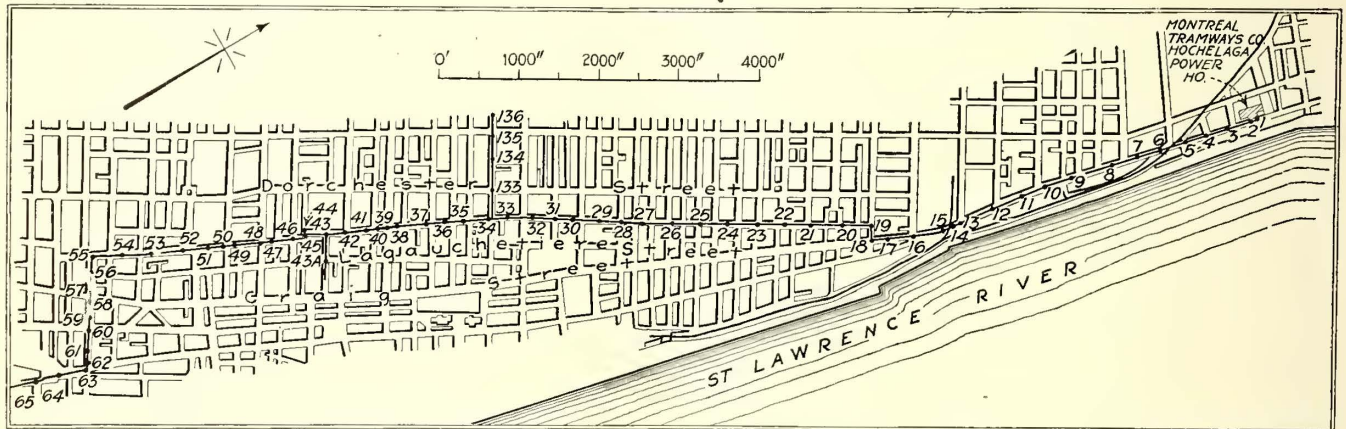


FIG. 3—SAMPLE PLAN USED BY MONTREAL TRAMWAYS FOR IDENTIFYING MANHOLE LOCATIONS. ACTUAL SCALE USED 500 FT. TO THE INCH

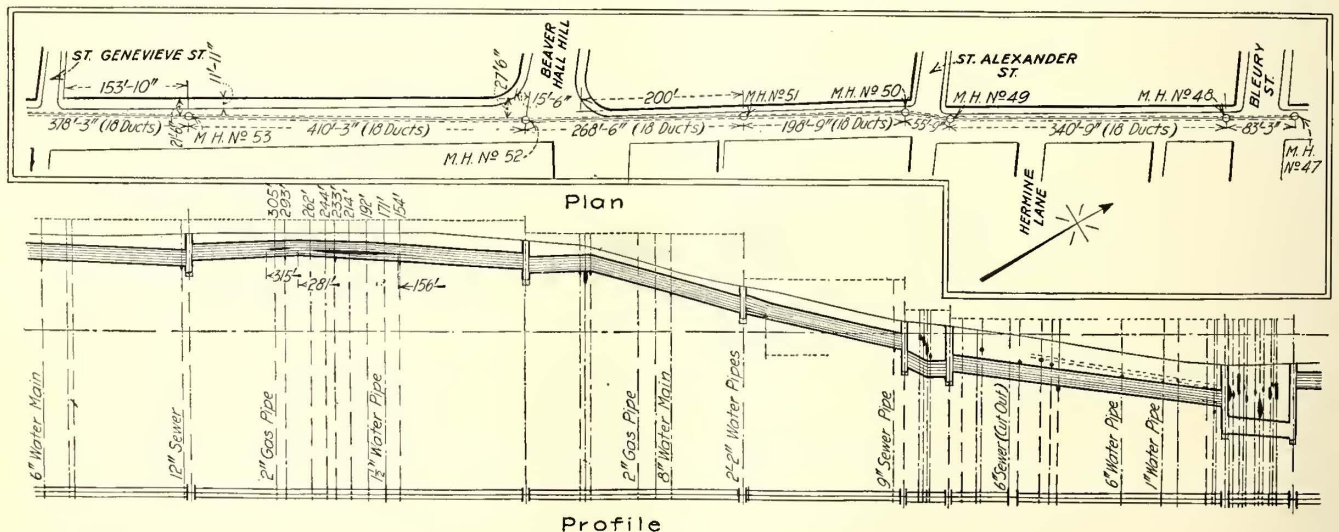
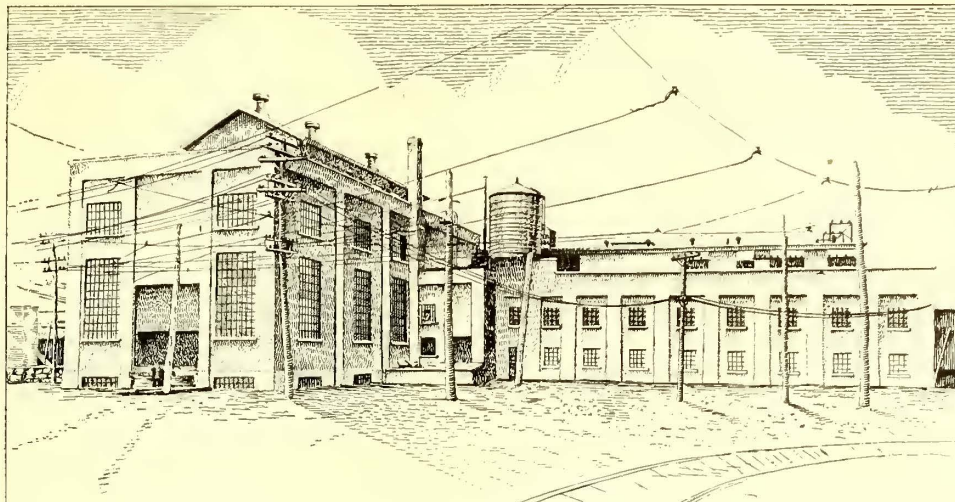


FIG. 4—SAMPLE DUCT LAYOUT AS USED BY MONTREAL TRAMWAYS. ACTUAL SCALE, VERTICAL, ONE-EIGHTH INCH TO THE FOOT; HORIZONTAL, ONE INCH TO FIFTY FEET

Typical Diagrams of Conduit Work of the Montreal (Quebec) Tramways. The Drawings Selected Show Not Only the Technical Features of the Design but Also, and Particularly, the Method Used for Recording the Details of Manholes, Conduits, Obstructions, etc.



VIEW IN THE ANGLE OF THE ST. DENIS SUBSTATION, MONTREAL TRAMWAYS

# Power Distribution for the Montreal Tramways

**Standardization Combined with Flexibility and the Effective Utilization of Existing Equipment Were Primary Design Considerations in the Rehabilitation of the Power System of This Company**

**I**N PLANNING the comprehensive remodeling of its power generation and distributing system, as outlined in the issue of the *ELECTRIC RAILWAY JOURNAL* for Jan. 12, 1918, the Montreal Tramways had in view the ultimate standardization of equipment, duct lines, etc., so that the power facilities could be kept more intimately related to the extension of the tramway service than it had in the past. As Montreal is located in a district rich in water power, steam will be used only as reserve power, and the substations will be more and more the important elements in the power layout.

At present there are two steam stations in operation and nine substations, including the two steam plants which also act in this capacity. These are indicated on the map in the Jan. 12 issue. In the city proper the substations will be connected by means of a high-tension underground system, and in addition the Tramways Company will utilize, for low-tension distribution, the municipal ducts which the city has installed in the downtown business and residence districts for the use of the power and tramway companies but not for high-tension lines.

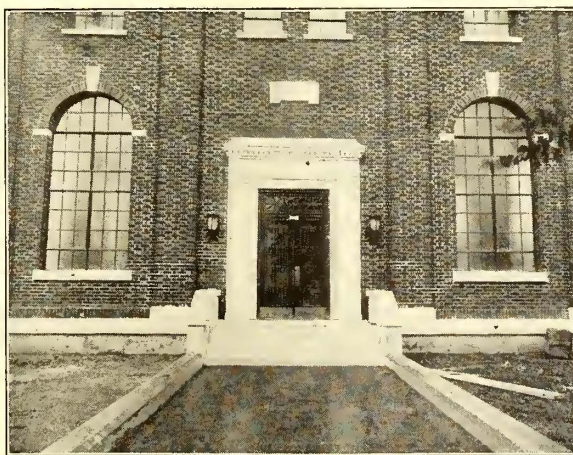
The company has standardized on the use of motor-generator sets, the tendency being toward a unit of 1500-kw. capacity. In general these will be synchronous motor sets, which experience has shown to be easy to operate, both with respect to starting and stopping, and to load distribution.

Connecting its power plant with most of the substa-

tions, the company uses duct lines of No. 0000 three-conductor, round-conductor cable, paper insulated. The insulation around individual conductors is  $\frac{1}{4}$  in. thick and there is a  $\frac{1}{4}$ -in. jacket around the three. The working voltage is 13,200, so that this insulation gives a very large factor of safety. One of these cables is considered to be good for the maximum output of two substation units, that is, 4000 kva. The cables were fabricated by the Northern Electric Company, and potheads of the Standard Underground Cable Company's manufacture were used.

Where cables pass under railroad tracks or are located on hills they are sheathed with lead containing

1 per cent of tin for the purpose of toughening the sheath and increasing its tensile strength. Elsewhere the lead is pure. On the hills anchoring devices are used to prevent creeping. The ducts in the high-tension system are of 4 in. nominal diameter, the conduit being laid up of single duct. While this diameter is larger than is necessary for the cables at present in use, it was selected to provide for a possibility of using larger cables later, to render installation and removal of cables easy and to furnish liberal air space for ventilation. The



THIS IS AN ENTRANCE INTO A SUBSTATION, NOT A CARNEGIE LIBRARY

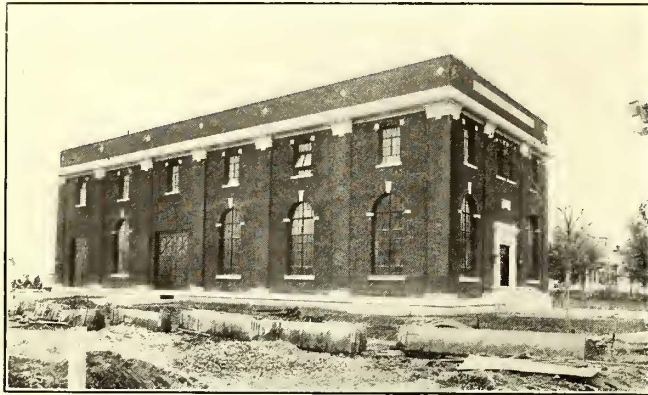
duct diameter is larger than is used in the municipal conduits, where the standard is  $3\frac{1}{2}$  in. nominal. Ventilation is also assisted by the use of perforated covers for the manholes.

In the manholes the cables are wrapped with compo-

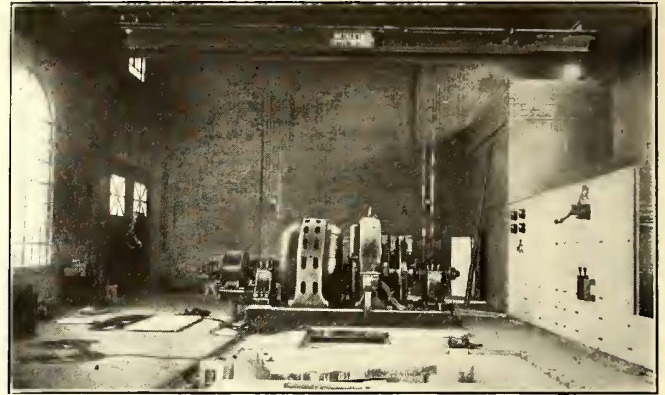
sition metal lath laid over oiled paper to protect the lead from the action of the cement with which the lath is plastered. At every manhole the cables are bonded together and grounded to a ground cone located in the bottom of the manhole. The cone is made of No. 25 gage sheet copper, 24 in. long, 6 in. in diameter at

engineers' notebooks. These sheets also contain information regarding drainage and grounding, which has been removed in the illustration to simplify the reproduction.

The whole conduit system is also charted on a large scale in plan and profile, as shown in Fig. 4, with par-



LATEST SUBSTATION OF MONTREAL TRAMWAYS, AT POINTE AUX TREMBLES, SHOWING ARCHITECTURAL TREATMENT



FIRST MOTOR-GENERATOR SET INSTALLED IN POINTE AUX TREMBLES SUBSTATION, MONTREAL TRAMWAYS

the open bottom and tapering to about one-half this diameter at the top. It is filled and surrounded with coke and is connected by No. 0000 copper cable 4 ft. long to the cable bond.

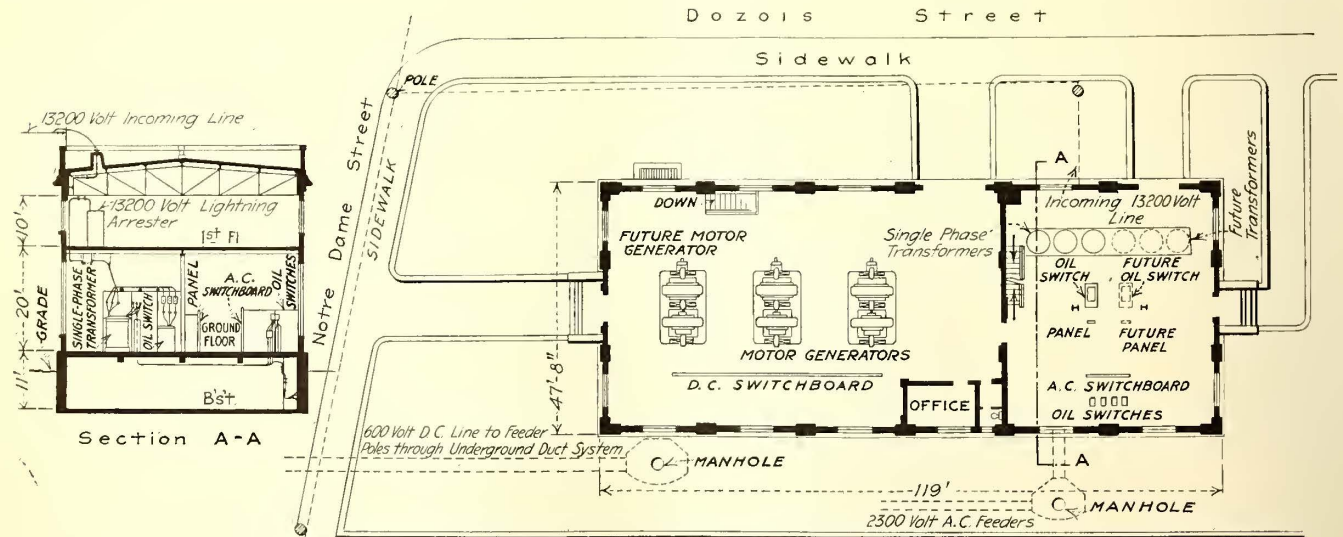
In the 9½ miles of conduit there are 184 manholes located so that the maximum length of cable does not exceed 350 ft. These manholes are of standard form, oval in plan. They are 8 ft. long, 6 ft. wide and 6 ft. deep, and have cast-iron covers 30 in. in diameter. The general dimensions and method of drainage are indicated in Fig. 1.

Fig. 2 is reproduced from a standard manhole record sheet to show the method used for keeping track of the cables in each manhole and the method of draining it. On the same sheet is a plan locating the manhole with

SUBSTATIONS OF MONTREAL TRAMWAYS COMPANY

| Name of Substation           | No. and Size of Motor-Generating Units   | No. and Size of Transformers   |
|------------------------------|--|--------------------------------|
| Pointe aux Trembles          | One 1000 kw. synchronous.<br>One 500 kw. induction                                       | Three 800 kw.                  |
| St. Henry                    | Two 500 kw. induction<br>One 1500 kw. synchronous  | Three 500 kw.                  |
| St. Denis                    | Three 500 kw. induction<br>Two 1500 kw. synchronous                                      | Three 500 kw.<br>Two 3000 kva. |
| Youville                     | One 500 induction  | Three 200 kva.                 |
| Shawinigan                   | Three 1000 kw. (rotary)  | *                              |
| Cote des Neiges              | One 1000 kw. synchronous   |                                |
| Cote St. Paul                | One 1200 kw. synchronous   |                                |
| Cote St. (proposed)          |  | Not decided.                   |
| Hochelega (in power plant)   | One 2000 kw. (rotary)  | One 3000 kva.                  |
| William St. (in power plant) | Six 500 induction motors.<br>One 500 synchronous motor.<br>Three 1500 synchronous motors | One 3000 kva.                  |

\*Transformers are property of Shawinigan Water & Power Company.



FIGS. 5 AND 6—SECTION THROUGH TRANSFORMER AND SWITCH ROOM OF POINTE AUX TREMBLES SUBSTATION, MONTREAL TRAMWAYS, AND GENERAL PLAN OF SUBSTATION

respect to the nearest street intersection permitting a prompt identification of the manhole when ground is covered with snow by reference to the general conduit plans, one of which is reproduced in Fig. 3. Data sheets like that shown in Fig. 2 are reduced to pocket size, 6½ in. x 8½ in., for insertion in the field

ticular reference to other underground pipes and conduits.

The details of power transforming units in the substations are given in the table above.

As there is much similarity in detail in all the substations and as the Pointe aux Trembles and St. Denis

substations are typical of the company's developing standards of construction, these two only will be examined in some detail. The Côte Street substation will be the next one constructed. This will conform in general style to that at Pointe aux Trembles, and will contain about six 1500-kw. synchronous units.

not in any way clash with the style of the adjacent buildings; in fact, the hope has been that it will set a mark architecturally for the neighborhood.

Figs. 5 and 6 are respectively a vertical section of the transformer room and a plan of the Pointe aux Trembles substation. The drawing shows the high-tension

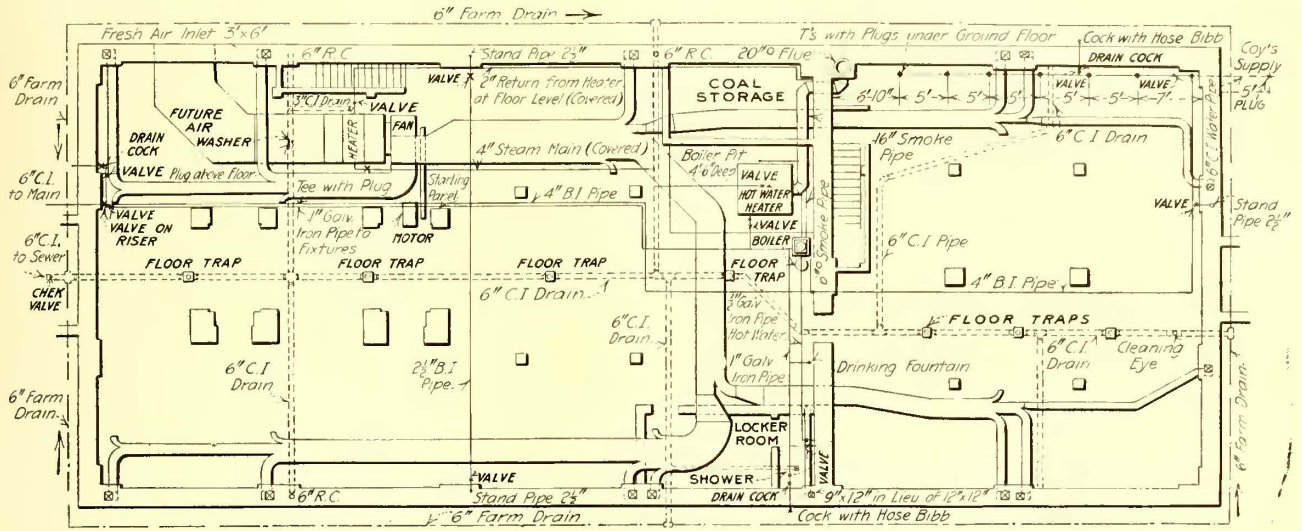
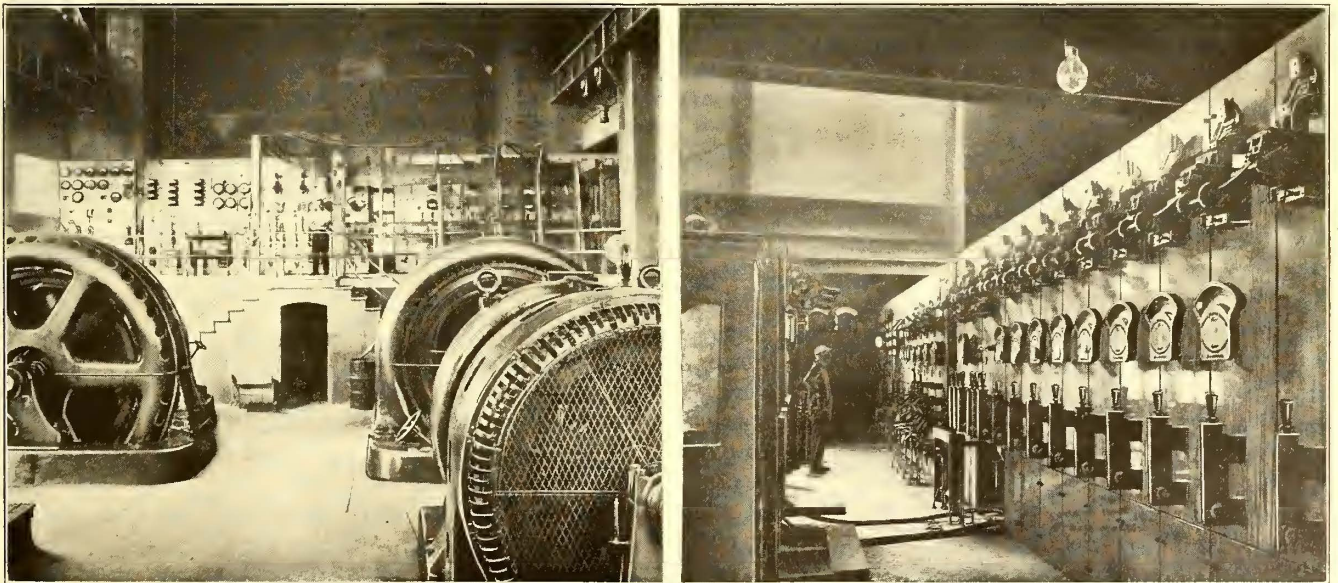


FIG. 7—BASEMENT PLAN OF POINTE AUX TREMBLES SUBSTATION, MONTREAL TRAMWAYS, SHOWING DRAINAGE, VENTILATION AND WATER SUPPLY

In studying this substation work, particularly the reconstruction, it must be remembered that the development has been along lines which might not have been followed if the whole layout of substations had been new. At the same time there has been a definite goal in view, namely, to standardize on a design of which the Pointe aux Trembles substation is typical, in which the apparatus is arranged for convenience of operation and at the same time the buildings are bright, well venti-

line entering through the roof. Power is supplied to this substation over a pole line rather than a conduit line on account of its remoteness from the power station. The substation supplants an old steam plant which is just now being shut down. The high-tension circuit passes with as few bends as possible through the lightning arrester room and through the bank of transformers below, thence to the motor-generator room at 2300 volts. The plan shows also the outlet to a



SWITCHBOARD IN MOTOR-GENERATOR ROOM, ST. DENIS SUBSTATION, MONTREAL TRAMWAYS

lated and architecturally attractive. It has been found possible at no increase in cost to incorporate simple architectural features along esthetic lines. As the Pointe aux Trembles substation is located in a residence municipality adjacent to Montreal, a special effort has been made here so to design the building that it will

2300-volt distribution system which is utilized for local lighting and power purposes. A 600-volt outlet leads underground to the neighboring direct-current feeder poles.

The simplicity of this layout is particularly conspicuous in the plan and in the photograph of the unfinished

motor-generator room. The visitor is impressed by the quiet dignity of the installation.

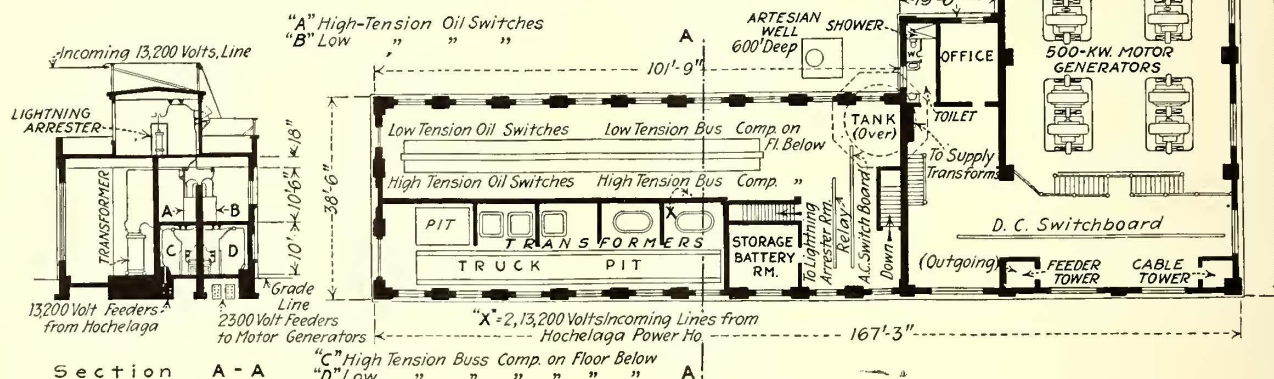
The basement plan of the Pointe aux Trembles substation (see Fig. 7) shows two divisions corresponding to the rooms above. The three features of the basement are the ventilating apparatus, the provision for drainage and the water supply. Fresh air is drawn in from out of doors through a 3-ft. x 6-ft. inlet, and through a washing chamber and heater to the motor-driven fan by means of which it is uniformly distributed over the entire building. For drainage the floor slopes both ways toward a row of floor drains opening into a 6-in. cast-iron drain pipe. This drain pipe also receives the roof water through a number of 6-in. conductors.

Particular attention was given to the matter of heating apparatus, the boiler being centrally located in a small pit and connected through a 16-in. pipe to a 20-in. vertical flue built into the wall. The steam piping is, of course, very simple, consisting merely of a large main to the heater chamber already referred to and a return drip therefrom. To provide hot water for toilet purposes a heater is shunted from the main smoke pipe,

cooled transformers, there being at present two three-phase transformers and a bank of three single-phase transformers. The transformers can be rolled out of their compartments onto a truck running on rails in a pit about 20 in. below the floor level.

The switch gallery is on the second floor and it is divided into two longitudinal sections by a partition, one section being for the high-tension switches and the other for the low-tension switches. Immediately below are the respective bus compartments, with the feeder con-

FIGS. 8 AND 9—PLAN OF ST. DENIS SUBSTATION, MONTREAL TRAMWAYS, WITH SECTION THROUGH TRANSFORMER AND ALTERNATING-CURRENT SWITCHING WING



the hot water being stored in a small circulating boiler. The convenience and comfort of the station operators are further provided for in a roomy locker compartment, a shower bath, a toilet room, an office, etc., all calculated to make the place a pleasant one to work in.

THE ST. DENIS SUBSTATION REMODELING

While the same general fundamental principles were in mind in the enlargement and rehabilitation of the old St. Denis substation, the characteristics of the site, the nature of the existing apparatus to be housed, etc., dictated a construction radically different from the standard typified in Pointe aux Trembles substation just described. The building is in the form of an L, in two sections, one for the six motor-generators, the other for the high-tension apparatus. As there was not a necessity for especially attractive appearance, the building was made of reinforced concrete in the simplest possible style.

In the motor-generator room the original layout was retained as far as possible, the building being extended to accommodate the larger units which were added. The alternating-current wing is new and was laid out in accordance with the scheme indicated in the cross-section AA, Figs. 8 and 9. A longitudinal partition divides the building into a transformer section and the bus and switch galleries, while in the roof monitor is the lightning arrester room. In the transformer room a number of wing walls provide compartments for the water-

ducts set into the foundation immediately underneath. This arrangement works out very well, and while the space allowance seems liberal for the equipment accommodated, the lack of crowding undoubtedly conduces to efficient operation.

To provide a supply of cooling water an artesian well 600 ft. deep was sunk on the site and a motor-driven air pump is used to store water in a large tank located on top of the wall in the angle of the building.

The very extensive improvements at Pointe aux Trembles and St. Denis form part of a general shifting of the transforming equipment possessed by the company, affecting most of the substations. When completely standardized the whole distribution system will be extremely flexible, for uniformity in size and style of motor-generator sets particularly will conduce to the shifting of machines to the points where they are most needed.

In a small Western plant recently it was necessary to operate two 400-hp. chain-grate stokers which had been taken out of service owing to holes in the grate as large as a man's hand. Under these conditions wooden barrel staves were placed over the holes as they appeared in front of the hopper. The staves prevented the coal from sifting through the grates until it had coked enough to support itself, and served as efficient substitutes until the company was able to secure the necessary repair parts.



# C. E. R. A. Urges Immediate Need for Higher Interurban Fares

At Dayton Meeting of Feb. 28 and March 1 Speakers Showed Keen Appreciation of the Acuteness of the Present Situation Confronting Urban and Interurban Electric Railway Lines—Summer Meeting Favored

ON Feb. 28 and March 1 the Central Electric Railway Association held at Dayton, Ohio, what was considered by those in attendance to be a most successful practical war-time meeting. With the exception of President C. N. Wilcoxon's address, received too late for the purpose, the Feb. 28 session was reported in last week's issue of the JOURNAL. The presidential address is given in extended abstract this week. At the March 1 session A. Swartz, Toledo, Ohio, read a paper prepared by A. C. Van Driesen, Toledo Railway & Light Company, on the work of the Central Electric Railway Accountants' Association. This was abstracted in last week's issue.

The remainder of the meeting was taken up with a number of business matters, interspersed with music by a male quartet organized by J. F. Starkey, Lake Shore Electric Railway, Sandusky, Ohio. Besides Mr. Starkey this quartet was composed of three brothers, Earl Bragdon, E. W. Clark & Company, Columbus, Ohio; Irving Bragdon, Toledo & Ohio Central Railroad, Columbus, and Roy F. Bragdon, Lake Shore Electric Railway, Sandusky. They were accompanied by Charles Buck, a business man of Sandusky.

C. L. Henry reported regarding correspondence between the officers of the association and the Electric Railway War Board as to sectional representation at Washington. The association had offered to co-operate with the War Board in a practical way and had suggested the appointment of a sectional representative. Mr. Henry expressed the opinion that the whole matter for the future should be left entirely with the executive committee of the association, and this suggestion was adopted by the meeting.

A. L. Neereamer then read his report as secretary-treasurer, an abstract of which appeared last week. He stated that the data presented showed the association to be in a very flourishing condition, and that the executive committee will invest \$500 of the money surplus in a bond in the Third Liberty Loan campaign.

## HIGHER FARES FOR STEAM AND ELECTRIC ROADS

A. W. Brady, Anderson, Ind., outlined the situation regarding higher fares for interurban electric railways, with particular reference to the difficulty of raising rates when competing steam lines are limited to rates lower than those which are profitable to electric railways. He believed that the present is an opportune time for bringing the situation forcibly to the attention of governing bodies, and proposed the following resolutions, which were adopted:

*Whereas:* Since the entry of the United States into the war, the operating expenses of the interurban lines within the territory of the Central Electric Railway Association, comprising Ohio and Indiana and parts of Michigan, Kentucky and Pennsylvania, have increased at such an alarm-

ing rate as to threaten the continued financial stability of the interurban companies and seriously to impair the ability of those companies to furnish to the public adequate and proper service, and

*Whereas,* it is imperative to the warding off of impending disaster that the interurban properties promptly secure substantial additions to their revenues, and

*Whereas,* the chief obstacle to a readjustment of the rates of the interurban companies, so as to meet the rapidly increasing costs of operation and maintenance, is found in the 2-cent fare laws of the various states, which laws, either directly by their inclusion of interurban lines within their scope or indirectly by their control of the passenger rates of the competing steam railroads, render it impossible for the interurban companies to secure sufficient increases in their revenues by advancing their passenger rates, and

*Whereas,* there is a material discrepancy between the intrastate rates of the steam railroads, amounting to 2 cents per mile under the 2-cent fare laws, and the interstate rates of 2½ cents per mile of the same carriers, which interstate rates were approved by the Interstate Commerce Commission as fair and reasonable at a time when operating costs were materially less than now, and

*Whereas,* whatever the fact may have been when the 2-cent fare laws were originally enacted, a fare of 2 cents per mile is manifestly insufficient to meet the cost of the service under present conditions, therefore be it

*Resolved,* That the attention of the various federal and state authorities having to do with the regulation of railroad rates be called to the facts stated and to the critical character of the situation thereby created, and that those authorities be urgently requested to take, as rapidly as possible, whatever steps may be necessary to fix new rates for the railroads, both steam and electric, on a basis fairly compensatory to them and at the same time reasonable and just to the public. Be it further

*Resolved,* That the president of this association be empowered and instructed to arrange for a proper presentation of the action hereby taken to the federal authorities at Washington and to the authorities of the various states.

## JOINT STATE COMMITTEES OF PUBLIC UTILITIES

Mr. Brady also digested the reports of the work of a joint public utilities committee,\* consisting of P. H. Gadsden, H. H. Crowell and E. K. Hall. This committee has been influential in collecting public utility data and presenting them convincingly and fruitfully to the federal administration. The joint committee has recommended the appointment of state committees to maintain touch with public utility commissions and other state officials to keep these authorities fully informed on utility matters.

Mr. Brady moved that, in conformity with this recommendation, the president of the association appoint an electric railway representative in each of the states in C. E. R. A. territory, this representative to serve with similar representatives of the electric, gas and other utility interests. The motion was unanimously passed and announcement of the names of the appointees will follow in a few weeks.

In bringing up the question of the next meeting Mr. Henry moved that a summer meeting or outing be defi-

\*See ELECTRIC RAILWAY JOURNAL, March 2, 1918, page 427.

nately arranged for by the executive committee, and this motion was passed. In its support he said that, while it had seemed necessary to abandon the lake trip last summer, and while it is still necessary to retrench expenditures during these busy and sorrowful days, yet such retrenchment must not be carried too far. It is not possible to work continuously for several months without some such recreation as the association activities afford.

A resolution was also passed, to be wired to E. B. Peck, who was kept from the meeting by illness, expressing sympathy and appreciation of the preparation by his committee of a most successful program for the Dayton meeting.

#### ELECTION OF OFFICERS

The last business of the meeting was the election of the men recommended by the nominating committee, as follows: President, F. W. Coen, vice-president Lake Shore Electric Railway, Sandusky, Ohio; first vice-president, J. F. Collins, vice-president Michigan Railway, Jackson, Mich.; second vice-president, R. I. Todd, president Indianapolis Traction & Terminal Company,

Indianapolis, Ind.; secretary-treasurer, A. L. Neereamer, Traction & Terminal Building, Indianapolis, Ind.; executive committee—F. D. Carpenter, president Western Ohio Railway; H. A. Nicholl, general manager Union Traction Company of Indiana; L. G. Parker, general sales manager Cleveland Frog & Crossing Company; W. D. Hamer, representative Electric Service Supplies Company; C. N. Wilcoxon, president Chicago, Lake Shore & South Bend Railway; S. W. Greenland, general manager Fort Wayne & Northern Indiana Traction Company; F. J. Haas, general manager Public Utilities Company; R. A. Crume, general manager Dayton & Troy Electric Railway; F. R. Coates, president Toledo Railways & Light Company; E. J. Burdick, assistant general manager Detroit United Railway; E. B. Peck, vice-president Terre Haute, Indianapolis & Eastern Traction Company, and A. C. Van Driesen, president Central Electric Railway Accountants' Association.

After the election of officers President-elect Coen took the chair, announced an immediate meeting of the new executive committee and adjourned the convention.

## Radical Readjustment Necessary\*

At Dayton Meeting President of C. E. R. A. Analyzes  
the Electric Railway Situation and Indicates  
How It Will Likely Be Improved

BY C. N. WILCOXON

President Chicago, Lake Shore & South Bend Railway, Michigan City, Ind.

**B**URDENS have been piled upon the electric railway industry until the situation now confronting it will require the most careful thought and the greatest effort of all concerned, if the properties are saved from financial ruin. This is a somewhat radical statement, but it is fully justified by the facts.

The conditions under which the majority of our properties have been operated, for the last twelve or fifteen years, have gradually resulted in a reduction of the margin between income and outgo, until, in many instances, there has been nothing left for the owners. In fact, in some instances the income has been insufficient even to pay taxes and operating expenses. Expansions or extensions have long since been a thing of the past.

#### WAR HAS ADDED TO BURDENS

The worldwide war has caused our burdens to multiply many fold during the last two or three years. Yet our industry has a very important part to play in helping to win the war. I am not referring to the minor task being performed to a limited extent in the movement of men and supplies for the army, or to the possibilities of greater usefulness disclosed by the study of railway conditions. I am rather pointing to the task of properly serving those industries upon which the army, the navy, and, indeed, the whole people are dependent.

The people, if they are properly to solve the problems which must be solved in order that our country shall emerge greater, stronger, abler and better from the

crisis, must face the facts in regard to our industry, as they must face facts relating to other important matters. They must recognize the call of necessity. They can no longer temporize with a situation that has become so acute, or indulge in speculation when prompt action is such a prime requisite for the good of all.

There is but one remedy for the situation, and that is to receive more for the service rendered. In a number of instances the rate of fare has been slightly increased; in many other cases relief has been refused. The few increases that have been allowed are not in any manner in keeping with necessities. The majority of the municipalities, in a short-sighted view of the matter, practically refuse any assistance. Many officials oppose us, not because they believe us not to be entitled to consideration and relief, but because they believe such opposition to be politically expedient. In other words, our industry has been the football of politics for years past. We are saddled with all kinds of assessments for public improvements, many of which are no benefit to our companies.

#### REMEDY MUST BE FOUND

That we must find a remedy for this condition cannot be questioned. This is our big job of the immediate future. An enlightened public opinion, brought about at least in part by honestly and frankly informing the public of the true condition of the average electric railway, must in time manifest itself through the action of the public service commissions, the municipalities and the legislative bodies. If this does not bring us fair treatment and increased revenues, so that we can render good, safe and reliable service to the public, pay fair

\*Abstract of address delivered before annual meeting of Central Electric Railway Association, Dayton, Ohio, on Feb. 28.

wages to our labor and earn a reasonable profit for the owners of our properties, then there is no hope for us.

Organization, team work and publicity, seemingly, are the greatest factors at our disposal in bringing about the needed relief. That a radical readjustment of our industry must be made to save it from bankruptcy requires no argument. The accumulating burdens of legislation and regulation, which in many instances amount to strangulation, added to the enormous increase in operating expenses, have brought our industry to a point where relief must be given. If we are to continue to pay the cost of paving streets, keeping them clean and maintaining them in repair for the benefit of the general public, the public must pay by an increase in the price for their rides.

#### PASSENGER RATE ON MILEAGE BASIS

The best way to accomplish this result must, to a certain extent, be determined by local conditions. As regards the electric interurban railways of the Middle West in which the Central Electric Railway Association is most directly interested, these have apparently developed passenger business to its greatest extent. Any increased revenue from that source in the future must largely be confined to the natural growth of the communities through which the interurban railways operate. This fact seemingly makes an increase in the passenger rates an absolute necessity.

I do not believe it can be questioned that the 5-cent zone system, heretofore largely used as a basis of determining the fares of interurban railways, is in the majority of instances unfair both to the company and to the traveling public. The basic rate should be a certain price for each mile, the so-called "copper zone" system being used with a basic rate sufficient to leave a reasonable profit to the company for each passenger carried.

I am of the opinion that our association could well afford to assume the cost of placing before the public the true condition of the electric railways in its territory, and I recommend that it give the matter careful consideration.

#### FREIGHT BUSINESS SHOULD BE DEVELOPED

One source of revenue is entitled to most careful consideration—and that is the freight business. Unfortunately many of the older interurban railways are handicapped by certain physical conditions which restrict their usefulness and ability as freight carriers. This situation is not, however, insurmountable. In view of the congestion and the inability of the steam railroads to care properly for the public needs at this time, there is a great opportunity for many interurban companies to extend their facilities for the handling of freight, particularly in carload lots. The cost of correcting the physical conditions, which in many cases interfere with the handling of standard equipment, is not prohibitive. The question of equipping lines to handle standard equipment—thus freeing them from the restrictions of the so-called "package freight" business which exist in the case of the large majority of our companies at this time—should receive the most careful thought.

I believe I am safe in predicting that it will only be a question of time until the steam railroads, which in

the past have placed so many obstacles in our way, will be compelled to interchange business with us on a basis fair and just to both parties, to the very great benefit of the general public.

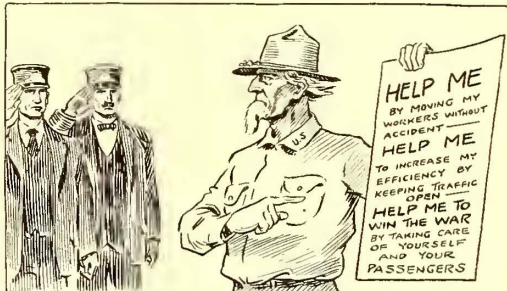
Splendid work has been accomplished by our committee on military efficiency and defense in gathering data relating to our properties and publishing a map showing their location and possible use in national service. I fear, however, that the possibilities have not been made fully known to the government officials. If I am correct, I would most earnestly recommend that the matter receive attention without delay, to the end that everything possible may be accomplished not only for the benefit of our properties but for the greater benefit and duty we owe our country at this time.

#### Patriotic Poster of N. S. C.

The accompanying poster, showing the relation between accident reduction and patriotism, has been issued under the auspices of the electric railway sec-

## UNCLE SAM WANTS YOU

### TO ENLIST IN HIS ARMY OF CONSERVATIONISTS



**ENTRUSTED TO YOUR CARE**

**is this valuable equipment and the lives of thousands of passengers. As you leave on your run, make this resolution for their safety**

**NO ACCIDENTS TODAY!**

**The saving resulting from every accident prevented is needed to bring victory to the cause of liberty, justice and peace.**

A TIMELY AND TELLING N. S. C. POSTER

tion of the National Safety Council. It emphasizes the fact that conservation of life and limb is an important factor in winning the war. The Council has also issued a striking wall calendar for 1918.

#### Employees of Eastern Railroads

The general operating committee of the Eastern railroads states that there are about 564,300 men in the service of the Eastern railroads, of whom about 301,500 have had one year or more experience. To fill the remaining places 1,138,500 new men have been employed during the first nine months of 1917, or more than three men for every job. This has necessitated the employment, training, and subsequent loss of a man on each job every ten weeks. This is about twice the normal turnover.

# Practising the "Public Be Told" Policy

### How Portland (Me.) Railroad Confided in Public Before State Commission Began Hearings on Company's Application for Increased Fares

**D**URING the last few weeks the Portland (Me.) Railroad, which is operated under lease by the Cumberland County Power & Light Company, has been conducting a publicity campaign for higher fares. Owing to the early date set for the first hearing, Feb. 25, the campaign was necessarily highly intensive. It was begun on Feb. 2 with an interview from Albert H. Ford, vice-president and general manager, announcing that the company would, like hundreds of other railroads, be forced by rising costs to file a new rate schedule.

From the very start the company laid all its cards on the table. It stated that it would lay the facts

all the papers in the district affected. As requested, none of the papers took sides, all awaiting the presentation of the company's case.

Two days later pink leaflets, entitled "Hard Facts About the Six-Cent Fare," were hung on strings in all the cars. Attention was called to them by posters placed in the car windows. The heading on these, "Why a 6-Cent Fare?" was printed in type big enough to be seen from the sidewalk.

Heatless Monday limited the supply of leaflets to 3000 the first day, and all were soon gone. The daily supply thereafter ran to more than 5000. The leaflet frankly stated the company's case, told what the commission would demand as proof before the increase could be granted, gave a table of increased costs and asked intelligent consideration by the public.

The second leaflet, in yellow, went up the next week. It was headed, "Come to the Hearing." It advised the various sections to organize, appoint spokesmen and be represented. It also explained the zone system and gave the reasons for the rates determined upon for the various suburban points.

A publicity campaign was started on Feb. 13 in the afternoon paper, the same advertisement being repeated in the two morning papers the next day and in the suburban dailies in the afternoon. The plates were supplied to the suburban papers from the Portland afternoon papers of the previous day. In this way all the advertisements were certain to be without error and of good typographical appearance.

The advertising slogan was: "The Street Car Nickel Will No Longer Provide Good Service." The advertisements ran as open letters to the public. The first two were entitled "What We Must Prove" and "The Value of Service." The third letter, on "Our Winter Service," contained a frank admission of lapses due to the storms, and a reproduction of a newspaper item in regard to service being stopped by storm in other cities.

The fourth letter, entitled "Our Rising Costs," began the story of materials. The next one, on "Taxes and Labor," continued the subject and explained how the paving cost bore unduly on car riders. The sixth letter was an advertisement on the zone system, with a map. This was published in the Sunday papers, which have a large suburban circulation. The seventh letter, entitled "Your Prosperity and Ours," explained how they depended upon each other. The others covered the company's margin of safety and dividend records.

The usual crop of *pro bono publico* writers began to send in letters to the editors, crying about "watered stock," a stock dividend passed seventeen years ago, poor service and the like. But Mr. Ford answered personally or in letters to the editors every real and pertinent point made.

The spirit of the whole campaign was that the public was entitled to know. Constant stress was also laid upon the value of continued service, upon the ability of the company to give only the kind of service the car-riders would pay for, and upon the joint interest of the community and the company.

The Nickel Will No Longer Provide Modern Street Car Service

## WHY A ZONE SYSTEM?

(Open Letter No. 6)

**T**HE foundation of the zone system is Equity. Each rider pays only for what he gets. No residence or business district is favored at the expense of another. The total cost of operating a street railroad has to come out of car fares and if some are paying less than their share, others must pay more than their share.

**Hard Facts about the 6c. Fare**

WE are laying before you a simple business situation and we ask your fair and candid judgment. Our costs of operation have kept rising for years, but our fares have been held down. We cannot keep up the service we are accustomed to without more income. **Keeping up the service is the important thing.** If it has to be reduced it hurts the street car riders and the city's industries in just the proportion that it hurts us. Our interests are one of every sort have kept rising and, since 1915, have simply leaped up. Operating costs are a third more than what it was for the war.

**HERE** are just a few of the costs taken from the pocket of the public. They are kept in a form present open to all.

**Come to the Hearing!**

COME to the hearing on street car rates in the Court House in Portland next Monday. We should like to see every man with a real and helpful idea to offer on this problem there. We do not believe anyone questions the fairness of the "Zone System," but there will doubtless be kinks to iron out. We do not profess to iron everything about the exact and detailed needs of every single block in the district the Portland Railroad Company serves.

**BUT** come to help! Let us reason together in a spirit of co-operation, not of antagonism. If your community feels that the zone proposition, as we

## WHY A 6c. FARE

Inside this car are leaflets giving a few **HARD FACTS**

... ..

**PLEASE TAKE A LEAFLET**

A. H. Ford

POSTER CALLING ATTENTION TO LEAFLETS

SPECIMEN OF NEWSPAPER AD, AND LEAFLETS DISTRIBUTED IN CARS

before the public exactly as they were to be put before the Public Utilities Commission, and that nothing would be presented that could not be sworn to. Furthermore, the company told the public that its books were open to all.

Next a communication was sent on Feb. 8 to the Mayor and city government. This stated that the company wanted the co-operation and advice of the city government and all civic bodies, and it asked that decision be reserved until the evidence was in. The same day the new schedule was filed with the commission, and Mr. Ford made a public statement explaining the entire plan. The plan in brief provides for a 6-cent city zone, with 2-cents-a-mile zones on the interurban lines. The new city zone, however, is slightly smaller than the old 5-cent zone.

The next day, Feb. 9, maps and the complete schedule of zones and fares were furnished to and printed by

# Raising the Fare from Seven to Ten Cents at the Public's Request!

**How the Fair-Minded Communities Served by the Worcester & Warren Street Railway Came to Approve a Higher Rate of Fare, One-Man Cars and Freight-Express Operation—An Example of Better Public Relations Realized**

THE Worcester & Warren Street Railway is one of those half-town, half-country railways built in the halcyon days when the magic of the word "electricity" was expected to cancel such trifling drawbacks as lack of population and passengers to pay for rails, wire, power, cars and crews! For nearly a score of years it struggled manfully against growing odds before the inevitable receivership; but with the jitney and war prices added the problem was reduced to this phase of finality: "To junk or not to junk?"

The temptation to give up the fight when metal could be sold at fabulous prices was strong, but the owners courageously determined to learn if engineering advice and public relief combined would enable the railway to continue the service on which five communities had depended for more than twenty years. To this end E. W. Holst of Boston was engaged as consulting engineer. As will appear in the sequel, his activities were not confined to saying that one man cars, express-freight service and 10-cent fares were necessary, but were expanded to include a successful campaign for the approval of these suggestions by the communities themselves before going to the Public Service Commission of the State!

### ROAD HAS HAD CHECKERED HISTORY

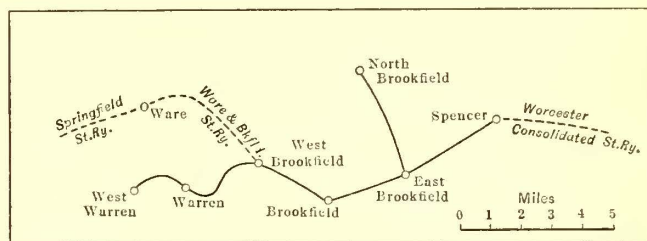
The total length of the road is 19.6 miles. The main line extends from the terminus of the Worcester Consolidated Street Railway in Spencer, through East Brookfield, Brookfield, West Brookfield and Warren to West Warren, a distance of 16.06 miles. A branch line extends from a point just west of East Brookfield to North Brookfield, a distance of 3.54 miles. The lines were built by the Warren, Brookfield & Spencer Street Railway in 1896. This company, after an unsuccessful financial career, went into receivership in 1912 after defaulting its bond interest. Its liabilities were about \$321,000.

(Concluded from page 456)

The effect of this policy was noticeable in many ways. The Chamber of Commerce, the city government and various suburban communities, appointed committees to be present at the fare hearing. The position taken, however, was not one of opposition, but merely of investigation. The strongest objections to the new zone rates arose in certain sections which were hit hardest, because for years they had had the best of it in long rides. There was not much objection to the 6-cent fare itself, though many objected to the reduction of the old 5-cent city zone. More than one hearing will probably be needed, but it is expected that a decision will then be given without undue delay, perhaps in three weeks.

In April, 1915, it was sold at auction to a bondholders' committee and shortly afterward was purchased by the present company, organized for the purpose. The "fair cost of replacing the railway and property so acquired" was found by the engineering department of the Massachusetts Public Service Commission to be about \$160,000, and the property was taken over at this figure. As a result of the reorganization all the capital stock and the floating indebtedness of the original company, amounting to about \$200,000, were wiped out. The total authorized capitalization is at present \$186,000, or \$9,623 per mile of road, an exceedingly low figure.

In the entire history of the property dividends have been paid in only four years—4 per cent having been paid in 1896, 2.5 per cent in both 1899 and 1900, and 2 per cent in 1901. Earnings have been decreasing for some time. Yearly receipts reached their maximum in 1903, when they totaled \$65,415. Since then, and notwithstanding the fact that the fare was increased in



LINES OF WORCESTER & WARREN (MASS.) STREET RAILWAY, SHOWING CONNECTIONS WITH ADJOINING ELECTRIC RAILWAYS

January, 1905, from 5 cents to 6 cents, receipts have been declining. The total in 1916, \$45,952, was the lowest since 1897, with the exception of the year ended June 30, 1917, when the total revenue was \$45,502. This falling off in revenue appears in large part due to the 25 per cent decrease in population in the towns served:

|               | 1895   | 1915   |
|---------------|--------|--------|
| Spencer       | 7,614  | 5,994  |
| Brookfield    | 3,279  | 2,059  |
| W. Brookfield | 1,467  | 1,288  |
| Warren        | 4,430  | 4,268  |
| N. Brookfield | 4,635  | 2,947  |
| Total         | 21,425 | 16,556 |

The normal schedule is maintained by four cars operated on an hourly headway, the running time from Spencer to West Warren being one hour and thirty minutes. Fares were increased from 6 to 7 cents on April 5, 1917, with the approval of the Public Service Commission. This made the total through fare 35 cents, and overlaps applied only to town boundaries.

No transfers are used. Workingmen's tickets are sold at the rate of 6 cents, these being valid between 6 and 8 a. m. and 5 and 7 p. m., according to the Massachusetts law.

The operating results for the year ended June 30, 1917, covering nine months with the 6-cent fare unit and three with the 7-cent unit, were as follows:

|  |                 |
|--|-----------------|
| Income from passenger cash fares.....              | \$42,110        |
| Income from ticket sales.....                      | 3,123           |
| <b>Total income (including miscellaneous).....</b> | <b>\$45,502</b> |
| Transportation and traffic.....                    | \$15,306        |
| Power.....   | 16,566          |
| Maintenance.....                                   | 12,400          |
| Taxes.....   | 1,282           |
| Salaries, office and general expenses.....         | 3,221           |
| <b>Total expense (including all items).....</b>    | <b>\$50,433</b> |
| Interest.....                                      | 3,153           |
| <b>Total.....</b>                                  | <b>\$53,587</b> |
| <b>Deficit.....</b>                                | <b>\$8,084</b>  |

Since its incorporation the company has operated the property at an actual loss, the accumulated deficit from May, 1915, amounting to \$6,846 on Nov. 1, 1917. During this period the income has not been sufficient to enable the company to pay any compensation to its officers or any dividend. The inability to meet operating expenses has been due to the increased cost of labor, fuel and supplies and to the decrease in population. Maintenance cannot be properly cared for with the present revenue, and traffic has undoubtedly been lost through the inability of the company to keep up proper service.

**HOW THE NEW MANAGEMENT ANALYZED CONDITIONS**

When the increased fare was established, the directors realized the necessity of improving the service in order to derive any material benefit from the new rates and secured the services of the consulting engineer mentioned. After going over the property, he prepared a report pointing out that with the institution of various economies, rehabilitation and the use of one-man cars, combined with the establishment of a light freight and express service and the purchase of power, prospects would be favorable for curing the chief evils from which the road was suffering.

Immediate attention, he said, should be given to the track on account of the long-deferred maintenance. The line and bonding should receive attention with the track; the rolling stock should be cared for, and power should be purchased in place of the expensive service of the company's generating plant. The present power plant is operated under the handicap of unsuitable machinery of an out-of-date type, high coal cost and an exceedingly poor load factor. It was believed that purchased power from a company able to supply hydroelectric energy as the service required would certainly save \$3000 a year. In July, 1917, an arrangement for purchasing power was effected with the Central Massachusetts Power Company, but as yet the railway has been unable to take advantage of it owing to lack of funds for conversion apparatus. Operating changes were also recommended, such as through connection over the Ware & Brookfield Street Railway (now also in difficulties) to Ware, thereby encouraging through riding between Spencer and Palmer.

This analysis, reduced to figures, showed the following:

**ANALYSIS OF BETTERMENT COSTS**

|   |                 |
|---|-----------------|
| <b>Expenditures:</b>                                    |                 |
| Five light-weight prepayment one-man safety cars.....   | \$26,000        |
| Power substation equipment for purchased energy.....    | 8,000           |
| One snowplow.....                                       | 3,000           |
| Two express cars.....                                   | 6,000           |
| Miscellaneous equipment and tools.....                  | 500             |
| Track, line and bonding improvements.....               | 30,000          |
| Heating and building repairs.....                       | 3,500           |
| <b>Total.....</b>                                       | <b>\$77,000</b> |
| Credit: Old power station equipment and rolling stock.. | 8,000           |
| <b>Net betterment costs.....</b>                        | <b>\$69,000</b> |

**OPERATING SAVINGS**

|  |                 |
|--|-----------------|
| <b>Savings per annum:</b>                  |                 |
| Platform labor by use of one-man cars..... | \$4,800         |
| Power.....                                 | 3,000           |
| Maintenance.....                           | 3,000           |
| <b>Total.....</b>                          | <b>\$10,800</b> |

**ESTIMATED INCOME STATEMENT**

|  |                 |
|--|-----------------|
| Operating income (1917 fiscal year).....   | \$45,502        |
| Estimated increased income on account of improved service and increased fares (10 per cent)..... | 4,550           |
| Estimated income from freight and express service (20 per cent).....                             | 9,100           |
| <b>Total income.....</b>   | <b>\$59,152</b> |
| Operating expenses (revised to cover 1917 fiscal year)....                                       | \$53,587        |
| Less savings.....  | 10,800          |
| <b>Expenses.....</b>   | <b>\$42,787</b> |
| Balance.....   | \$16,365        |
| Possible increase in operating expenses.....   | 5,500           |
| <b>Balance.....</b>  | <b>\$10,865</b> |

**IMPROVEMENTS ALREADY BEGUN**

During the last summer track improvements costing \$8,758 were carried out in addition to the regular maintenance outlay. All this work was in the nature of permanent improvements and therefore was charged to capital accounts. In the rehabilitation of track mainly the old rail was used, the rail being bonded with an oxy-acetylene equipment. This equipment was used in cutting off rails too much worn at the ends, new holes being drilled and new tie plates being attached. It is expected that the life of the old rails will be considerably increased by the use of one-man cars.

**RECEIPTS ABOUT SAME UNDER 7-CENT FARE**

The increase in fare to 7 cents has been offset by decreased riding, so that the net receipts are about the same as before. This is shown by the following table:

|                   |   |              |         |         |         |         |         |
|-------------------|---|--------------|---------|---------|---------|---------|---------|
|                   |   | April        | May     | June    | July    | Au-     | Sep-    |
| Cash passengers.  | { | 1917 42,017  | 51,661  | 53,923  | 69,897  | 70,537  | 60,894  |
|                   |   | 1916 47,014  | 63,979  | 59,198  | 74,462  | 76,998  | 70,163  |
| Ticket passengers | { | 1917 2,068   | 7,058   | 5,712   | 1,657   | 1,567   | 3,377   |
|                   |   | 1916 4,859   | 8,522   | 7,748   | 3,826   | 3,856   | 7,527   |
| Total passengers. | { | 1917 44,085  | 58,719  | 59,635  | 71,554  | 72,104  | 64,271  |
|                   |   | 1916 51,873  | 72,501  | 66,946  | 78,288  | 80,854  | 77,690  |
| Revenue.....      | { | 1917 \$3,149 | \$3,762 | \$4,089 | \$4,964 | \$5,015 | \$4,494 |
|                   |   | 1916 \$3,083 | \$4,104 | \$3,864 | \$4,662 | \$4,804 | \$4,619 |

In the foregoing table the revenue from cash passengers was based upon a 7-cent fare unit, taking effect April 5, 1917. In any of the months following the fare increase the revenue from 7-cent fares can easily be obtained, therefore, by multiplying the total cash passengers by 7 cents. The total passengers carried in the fiscal year 1917 was 370,368, as compared with 428,152 in 1916, a decrease of 57,784.

The traffic distribution is shown by the following typical passenger counts, taken during three months in 1917 from 4 P. M. to 5 P. M.:

|                                       |  |       |       |       |
|---------------------------------------|--|-------|-------|-------|
|                                       |  | April | May   | June  |
| Spencer—East Brookfield.....          |  | 1,009 | 1,051 | 1,258 |
| East Brookfield—Brookfield.....       |  | 600   | 815   | 773   |
| Brookfield—West Brookfield.....       |  | 431   | 562   | 613   |
| West Brookfield—Warren.....           |  | 282   | 457   | 393   |
| Warren—West Warren.....               |  | 298   | 360   | 321   |
| East Brookfield—North Brookfield..... |  | 454   | 614   | 693   |

These figures indicate that the traffic density increases as one travels eastward, attaining a maximum in the Spencer-East Brookfield and North Brookfield district. It is hoped to increase the density of traffic on the central and western sections by improving the connections with the Ware & Brookfield line and hence to the Springfield Street Railway at Palmer. A connection with the tracks of the Worcester Consolidated Street Railway in the town of Spencer was also considered desirable. This has since been obtained, as hereinafter noted.

#### LABOR COST WILL BE HIGHER

From Oct. 25 to Nov. 3 the union men on the road went on strike, following demands for an increase of 2½ cents per hour. The schedule of wages for motormen and conductors prior to the strike was as follows: First year, 22.5 cents; second year, 23½ cents; third year and thereafter, 25 cents. The management took the position that it could not grant the men an increase until the revenue was greater, and after a conference it was agreed that the company would pay the men 2 cents more per hour thirty days after the beginning of electric express service. It is estimated that the promised wage increase will add approximately \$2,000 per year to operating expenses.

#### GOING STRAIGHT TO THE PUBLIC WITH A STRAIGHT STORY

In the foregoing paragraphs the history of the Worcester & Warren Street Railway has been presented in detail. But this is not the main point of the story, for electric railway men are only too familiar with this sort of thing. What is important and encouraging is the way the public has shown its confidence in the good faith of electric railway operators.

No sooner had the report on "Analysis of Betterment Costs," "Operating Savings" and "Estimated Income Statement" been presented by the consulting engineer than copies thereof were given to an official representative of each town, so that the people would have the opportunity to study all of the facts for themselves. The report was then followed up by personal discussion on the need for the express-freight franchise and connection, one-man car operation and a 10-cent fare. As to the last, it was pointed out that since a 7-cent fare had failed to produce more revenue, it was useless to ask for a 10-cent fare unless the public thought the electric railway service was necessary enough for the majority of people to have them pay that figure willingly.

This straightforward line of argument met with immediate favor.

On Nov. 14, 1917, a conference of leading citizens was held before the commission, at its suggestion, to discuss the financial condition of the road. At the close of the conference the attendants arranged to call a public meeting at Brookfield of all the towns. At the latter each of the five communities elected two men to serve on a committee of ten. By Nov. 22 this committee had drawn up, and on Nov. 24 submitted to the officials of the railway at a formal hearing at Brookfield, the document reproduced herewith, probably the first of its kind in America or anywhere else.

Of the nine out of ten members (one Brookfield representative being absent) who signed this memorable statement, Mr. Kane is an attorney and counsel for the

town of Spencer; Mr. Young, president of the Spencer National Bank and a representative in the State Legislature; Mr. Fullam, president of the National Bank of North Brookfield; Mr. Beebe, treasurer of the North Brookfield Shoe Company; Mr. Butterworth, attorney and counselor for the town of Brookfield; Mr. Richard-

### An Unique Document in Better Public Relations

BROOKFIELD, MASS., Nov. 22, 1917.

TO THE DIRECTORS OF THE WORCESTER & WARREN STREET RAILWAY.

Gentlemen:

*At a meeting of a committee representing the towns of Spencer, The Brookfields and Warren, held on Thursday, Nov. 22, 1917, at the Selectmen's Room, Brookfield, Mass., the following recommendations were made.*

*That we suggest to your board that it would be advisable to advance the regular passenger fare to 10 cents, the workmen's ticket remaining at the present price.*

*That the car service be curtailed by stopping the regular cars at 10 p. m. to lessen running expenses, and that, when necessary, special cars could be run to accommodate the demands of special occasions;*

*That the Selectmen of the towns mentioned above be urged to grant the freight franchise to your company at once;*

*That we are ready to go before the Public Service Commission, if necessary, to assist you in carrying out these plans.*

Signed:

Spencer—JERE R. KANE  
M. A. YOUNG

West Brookfield—C. D. RICHARDSON  
ALBERT L. HAUCK

North Brookfield—WILLIAM F. FULLAM  
CHARLES A. BEEBE

Warren—EDWARD D. SULLIVAN  
W. D. HOSLEY

Brookfield—A. F. BUTTERWORTH

son, chairman of the Board of Selectmen of West Brookfield; Mr. Hauck, retired civil engineer and gentleman farmer; Mr. Sullivan, chairman of Board of Selectmen, Warren, and Mr. Hosley, secretary Warren Board of Trade. The positions which these men hold in their communities is pretty clear proof that the railway's troubles had been put before men who needed the electric railway much less than the working people, whose favored rate they did not suggest raising.

#### THE FARE INCREASE EFFECTED

Acting upon the good feeling and recommendations expressed by the citizens' committee, the railway on Dec. 3, 1917, filed a new tariff increasing the 7-cent fare to 10 cents. Ordinarily thirty days' notice is required before a fare increase can go into effect, but upon the representations of the company the commission allowed the new fare to go into effect after ten days, or on Dec. 13.

Thus through the cordial co-operation of the communities, no protracted arguments and hearings were necessary.

On Jan. 24, 1918, in accord with a petition filed on

Oct. 30, 1917, the town of Spencer granted the Worcester & Warren Street Railway the right to make track connection at Spencer for the handling of freight. In the meantime the right to carry newspapers, packages, express matter and freight had been granted by Spencer on Dec. 13, 1917; the Brookfields and Warren, on Dec. 10, 1917, and by the Public Service Commission itself after due hearing on Feb. 6, 1918. At the State hearing no one appeared against the track connection permit. On the contrary, Mr. Richardson, chairman of the committee of ten, appeared for it!

The same frankness and direct dealing that characterized the arguments for the need of more revenue and express-freight were applied to the question of the one-man car. Instead of leaving the public in the dark, a safety car was leased for demonstrations to the committee of ten. They were so well pleased that when formal application was made before the Public Service Commission for the general use of one-man cars there was no opposition whatever.

#### THE PRESENT SITUATION

At this time the company needs about \$70,000 for new equipment and about \$30,000 to pay off a floating debt of \$30,000. It is hoped that with further cooperation by the communities and with such legislative relief as is now pending, this property will not only be able to survive but to give ever-improving service to the towns which have shown such an intelligent and liberal understanding of its difficulties.

Since Jan. 17, 1918, service has been temporarily suspended owing to inability to secure fuel.

#### COMMON SENSE NEWSPAPER COMMENT

Speaking of the situation the Worcester *Telegram* of Nov. 1 said in part, editorially:

"In a small town of New York State the people were shocked when the trolley outfitings were sold to a junk dealer who took up the tracks and closed the service. Over there they were sorry, though they had refused to submit to having the fare raised above the 5 cents they had paid for many years. The people even thought too late that it would have been better to pay 10 cents a ride than to lose the service. It was a distinct loss to them because it meant commercially being pushed back into the woods. \* \* \* If the one-man cars cannot save the Worcester & Warren system, even with an increased list of fares, the junk buyer will arrive at his own sooner or later. But the people should have reasonable means to get to the city markets. They are not inclined to go back to the days of half a century ago, and the automobile is not yet so economical that every village or farm family can own one for hurrying back and forth to the city."

The effect of coal shortage and the readjustment of business on account of the war are beginning to show in the returns made by electric utilities. Reports of the central stations for December, 1917, indicate an increase of 11.5 per cent in revenue from the sale of energy and of 9.6 per cent in the kilowatt-hour output as compared with December, 1916. Estimated from returns for 55 per cent of the industry, the business for the whole industry in December was: Revenue, \$44,450,000; output sold, 2,345,000,000 kw.-hr.

## Saves 2000 Tons of Coal a Month

This Economy Secured in Cincinnati by Skip Stops—  
Other Savings Put Into Force by Street Railroad  
Commissioner Culkins

AN ACCOUNT of the savings made by economy measures introduced this winter on the Cincinnati electric railway system is given in a report recently submitted to the Cincinnati advisory committee of the United States Fuel Administration by W. C. Culkins, director of the department of street railroads of the city of Cincinnati. The department had prepared a plan for undertaking these reforms more gradually early this year, but when the request came from the federal administration for early action it was decided to put the changes into effect promptly. In many respects the conditions were not propitious for the change. During last winter the city experienced the heaviest fall of snow, the lowest temperature and the longest duration of cold weather in its history. In addition, there were two floods. For this reason the report of results made by Director Culkins is of especial interest.

#### REPORT ON SAVINGS IN CINCINNATI

Pursuant to the order issued by you on Jan. 14, 1918, directing the Cincinnati Traction Company to take measures for the conservation of coal, this department undertook the general supervision of the execution of that order. I have the honor to report herewith, relative to the progress made in the carrying out of such order up to this date.

The Chapel and Seventh Streets lines and all of that portion of the Third-Fifth Street line lying east of Fifth and Baymiller were abandoned on Jan. 19, 1918. In the year 1917 these lines operated approximately 500,000 car-miles. Taking the statistics of the Cincinnati Traction Company for the month of November, 1917, it is found that it requires 15.9 lb. of coal for each car-mile of operation. On this basis the saving of coal by the discontinuance of these lines will amount to about 4000 tons of coal per year.

Referring to that portion of your order directing the elimination of double stops, you are advised that this department has already eliminated the double stops in Cincinnati by order issued on January 1, 1918.

Your order directing the installation of the skip-stop system has been carried out under the most unusual and adverse conditions. In no city, where this plan has been adopted, has it been attempted during the winter or upon all lines at the same time.

In Cincinnati the installation was made during the most severe weather in the history of the city when the streets and sidewalks were covered with ice and snow. Notwithstanding this fact, evidence that the public generally are in sympathy with the plan is found, in that complaints and suggestions were received on less than 3 per cent of the stops changed.

At the time of the issuance of your order, there were on the lines of the Cincinnati Traction Company, 5331 stops. There are now 3301, 2030 having been eliminated or approximately 38.3 per cent. This does not include the double stops eliminated, which would bring the average up to 41.8 per cent. The average former distance between stops was 440 ft., and the average distance under the new plan is 694 ft., making the average added distance between stops 254 ft. Since it requires one minute to walk 266 ft., it will be seen that no great hardship has been entailed. Under the old plan the average number of stops was 12.1 per mile. This has been reduced to 7.8 stops per mile.

The actual saving of coal, by the elimination of these stops, can be determined only by experience, since each city presents its own peculiar conditions. However, a fair estimate may be had by taking as a basis the report on fuel saving by the introduction of the skip-stop system in Washington, D. C. This report was made by a board consisting of Clarence Renshaw and Myles B. Lambert of the Westinghouse Electric & Manufacturing Company, and John F. Layng of the General Electric Company. Their report was approved by L. B. Stillwell, consulting engineer, chairman, W. F. Durand, professor of mechanical engineering Leland Stanford University, and Comfort A. Adams, professor of electrical engineering Harvard University.



# Why a Crisis Exists

## F. J. Macleod Points Out Inherent Defects in Electric Railway Situation and Present System of Regulation

FOR present conditions in the electric railway industry, which are rapidly becoming intolerable for both the investors and the public, the war, in large measure but not wholly, is responsible. Indeed, the war has served only to disclose and intensify certain troubles and defects which are inherent and of long standing. Such is the opinion of F. J. Macleod, chairman Massachusetts Public Service Commission, as expressed in a recent address before the Economic Club of Boston.

### INHERENT RAILWAY TROUBLES

One inherent trouble, Mr. Macleod said, is over-production. Massachusetts has more electric railway mileage in proportion to its population and area than any other state in the Union. This mileage is in many cases badly located. Such a condition is the result of the era of speculation which set in with the advent of electrification. Competitive lines were built where there were traffic possibilities for a single line only, and lines were extended anywhere and everywhere in the sparsely-settled rural districts where there was no reasonable financial excuse for building at all. Most of these lines were saved from bankruptcy or the scrap heap by consolidation on a share for share basis with the more prosperous lines. From this union of prosperous and potentially bankrupt companies there emerged a number of electric railway systems with just sufficient vitality to keep their heads above water during fair weather, but incapable of meeting the stress of hard times or war conditions.

Broadly speaking, Mr. Macleod stated that Massachusetts electric railways immediately before the opening of the war were paying dividends as large as the average paid during the last twenty years, and were neither better nor worse off than at any previous time during this period. During this time the companies were content to provide for the bare needs of current

repair and maintenance. The large units of property were, however, gradually becoming worn out or obsolete, and the time was constantly growing nearer when replacements could no longer be deferred. As practically nothing was being done to make provision in advance for meeting this situation, the real financial condition of the companies was not disclosed by the dividends paid, or by the apparent results of operation, and the war merely precipitated a crisis which was imminent in any event, though probably in a less acute form.

Up to the present time the average dividends paid have been less than the going interest rate, and the rates of fare in some cases have probably been too low to support the properties. The companies, however, prior to the establishment of the Public Service Commission, made little serious effort to increase their rates or to face the problem in any thorough-going fashion. It was not until 1913 that rate-making powers were assumed by the commonwealth. Since that date, in Mr. Macleod's opinion, the commission has found it necessary to go farther than any other board in the country in allowing increases of electric railway fares, and in part as the result of war conditions to go farther even than the companies are willing to go on their own responsibility during the entire period when the rate-making power was practically in their own hands.

The commission has also endeavored, to the best of its ability and within the limitation of its powers, to stimulate greater operating efficiency on the part of the companies, and has succeeded in bringing about changes in methods which have resulted in substantial increases in net revenue. It was impossible, however, by any scheme of public regulation to put back at once the values which had been gradually drained out of the properties during a long series of years, and even the gradual rehabilitation of properties and credit which was about to set in was offset by war conditions.

### DEFECTS IN REGULATORY SYSTEM

The present regulatory system, Mr. Macleod averred, has failed, at least in the electric railway field, to meet the fiery test of war. Possibly the personnel of the public service commission is in part responsible, and abler and wiser men might have secured more satisfactory results. With similar conditions prevailing throughout the entire country, however, and in the light of the practical break-down of the regulatory system in the steam railroad field under war conditions, it is felt that the causes must lie deeper than mere defects of personnel in a single commission.

In the first place, there has been a lack of proper co-operation and co-ordination of activities between the companies and the regulating authorities. The present system in effect makes the companies and the commission jointly responsible for results and by its very nature requires them to work in double harness and pull together. In practice, however, the commission has been obliged in the main to leave practical operation

*(Concluded from page 460)*

According to their report, if, on the traction lines in Washington, D. C., the number of stops were reduced 40 per cent, the effect would be the saving of one-eighth of the coal used. The Cincinnati Traction Company consumes approximately 150,000 tons of coal annually, and upon the basis of their report, the saving would be approximately 19,000 tons per year. However, Washington is a flat city, requiring less power to start cars, and in addition its power houses are operated with an economy varying from 1.9 lb. per kilowatt-hour to 4.1 lb. per kilowatt-hour as compared with 4.72 lb. per kilowatt-hour in Cincinnati, therefore the saving in Cincinnati might be even greater than in Washington, and the total from the elimination of stops and the discontinuation of the three lines may result in the total saving upward of 25,000 tons per annum. The full benefits of this plan of operation both for conservation of coal and for the convenience of the public have not been realized because of weather conditions preventing the revision of schedules.

I have this day issued an order requiring the Cincinnati Traction Company to proceed with schedules and will suspend any further changes until this has been accomplished.

The company has conformed with your other orders, with the exception of that relative to the shortening of certain lines, which is now under consideration.

entirely in the hands of the management and periodically to hold a post-mortem on past financial and operating methods in capitalization and rate cases.

To Mr. Macleod's mind, one needed reform is for the commission to keep in constant and intimate touch with practical electric railway operation, and to give the companies the benefit of the advice and suggestion of its experts in regard to the most efficient and advanced methods of operation. In the past, Mr. Macleod said, such a program would not have received a very cordial welcome from the operating officers of the companies, but a different spirit now exists. In his opinion significant evidence of that fact is an editorial in the *ELECTRIC RAILWAY JOURNAL* of Feb. 9, advocating the admission of public service commissioners to full membership in the American Electric Railway Association.

Mr. Macleod thinks that the present system would be greatly improved if the commission were empowered to employ an adequate technical staff whose main function would be to prevent possible mismanagement or inefficiency of operation, rather than to sit in judgment upon past errors and to attempt to correct them after the damage has been done. In other words, public regulation must in large measure be preventive rather than punitive if the best results are to be obtained.

In the second place, there must be a fuller recognition of the absolute necessity of maintaining electric railway credit in order to obtain satisfactory operation and service. Under the present system the companies are dependent on voluntary contributions of private capital, and this capital will not be supplied unless the companies are in a position to pay a reasonable dividend and at the same time to lay aside a proper amount for depreciation and other reserve funds in order to prevent an impairment of assets.

Mr. Macleod emphasized the fact, however, that under proper public regulation dividends do not represent profits but merely interest upon invested capital. The man who invests his money in electric railway stock is entitled to the prevailing interest rate for the use of his money equally with the man who makes his investment in the form of bonds. Indeed, in so far as the stockholder assumes the risk of having his principal impaired or entirely wiped out before bonds are affected, he is entitled to something more than the bond interest rate. Public service companies, however, should be so managed and regulated that the risk to the investor and other speculative elements shall, so far as possible, be eliminated, and the dividend return practically limited to the going interest rate. But if the possibility of speculative profit is removed, it is essential that the investment be reasonably secure or private capital will not enter the field.

In the third place, Mr. Macleod pointed out that the effective carrying out of this policy requires a constant equilibrium between the company's revenues and its costs of operation. This in turn implies a greater flexibility in fare adjustments than is practicable under the present system. If there is a proper determination of the amount of the legitimate investment, if provision is made for securing economical and efficient operation and if the element of profit is eliminated, there is no reason why readjustments of rates should involve the delays and controversies which have marked rate proceedings in the past.

The idea that there is some mysterious sanction and virtue in a 5-cent fare, that the price of an electric railway ride should never be either more or less than that amount, although every element in the cost of service is constantly fluctuating, is to Mr. Macleod's mind an extraordinary fallacy, but one that is responsible in large measure for present electric railway troubles. The public must rid its mind of the idea that the revenue requirements of an electric railway are forever fixed by an accident of coinage, and that it is possible to ignore those business laws and economic principles which control all other enterprises. In the absence of any contribution from public taxation, the fare paid by each passenger should be neither more nor less than his proper fractional part of the total cost of operation, and with constant fluctuations in traffic, in the expenditures necessary for labor, fuel supplies and fixed charges, the proper fare for each passenger is bound to be a variable rather than a fixed amount.

#### REMEDIES SUGGESTED FOR MASSACHUSETTS

Mr. Macleod then discussed the service-at-cost plan devised by Homer Loring and described in the *ELECTRIC RAILWAY JOURNAL* of Nov. 17. The commission without expressing any official opinion in regard to the plan and terms of any particular bill embodying this plan, has indorsed the service-at-cost plan in principle, and believes that it should be enacted into law. For most of the important electric railways in the state, Mr. Macleod said, the plan will undoubtedly result in a substantial improvement in present financial and operating conditions, even if it may not in all cases fully restore financial credit and prosperity.

Mr. Macleod then explained why the commission has recommended a special means of settling the difficulties of the Boston Elevated Railway. As noted in the issue of Feb. 9, the essential features of the commission's plan for Boston are full public control, an absolute guarantee of dividends, the possibility of requiring a portion of the cost of operation to be borne out of the general tax levy, and the assurance of comprehensive improvements in existing service and facilities. The special character of the Boston problem, owing to the expensive tunnels and rapid transit lines which form such a large proportion of the Boston Elevated system, is recognized in the existing law under which the rights and obligations of the company in regard to fares and many other matters differ from those of other electric railways. Possibly, Mr. Macleod said, some of the special features embodied in the Boston Elevated plan might also be adopted in the case of other electric railways, but for the present, and until this plan is actually tried, it does not seem desirable to extend its application to all electric railways of the commonwealth.

The construction gang of the Central Kansas Power Company of Gypsum, Kan., recently, with fifteen men, including a foreman, set and tamped 120 30-ft. and 35-ft. creosoted yellow-pine poles in one day. On this job the labor was subdivided as follows: Instead of the erecting gang tamping the poles in as is the usual custom, they did nothing but lift the poles into the holes. Two gangs of tampers of four men each followed. The work was so arranged that each man was kept busy all the time.

## Sliding Scale of Rates Recommended

Percentage of Return Allowed Dependent Upon Economies Effected in Operation—Fixed Rates Unsatisfactory and Contrary to Public Interest

IN VIEW of the interest of electric railway companies in flexible fares, all recognition by commissions of the advantages of the principle of a sliding scale of rates, even when applied to a lighting company, is of interest. A recent decision of this kind is that rendered by the Indiana Public Service Commission "in re the Hydro-Electric Light & Power Company" (P. U. R. 1918-A, page 325). This corporation has a considerable excess capacity over prevailing demands. In formulating a new rate schedule, the commission pointed out that users of current were paying the interest charges upon an investment considerably greater than that necessary to supply their present needs. The development of new business and the more complete saturation of the territory would reduce the cost of energy. It was therefore in the interest both of the utility and of the public that every incentive be given to the utility to develop its business.

With this end in view, the commission adopted a sliding scale of rates under which, for every 10 per cent reduction in rates, the permitted earning power of the corporation should be increased one-half of 1 per cent per annum. At the same time, the commission provided that, if the utility found it necessary to increase rates, the permitted rate of return should be decreased by one-half of 1 per cent per annum for

measured by its own success in creating economies and increasing the volume of business."

The most significant feature of the decision is the recognition of the fact that fixed rates, which can only be changed with the approval of the commission after protracted delay, are unsatisfactory and contrary to the public interest. As the commission remarks, no one can tell what the future holds in store for the utilities. They must be free to act, but, at the same time, a company's self-interest must be made to coincide with that of the public so that rates will not be advanced unless necessary and will be lowered as soon as it is possible to do so.

## Getting More Energy Out of Fuel

IN ONE of a long series of articles on the transformation of energy appearing in the *General Electric Review*, Esbil Berg in the March issue gives some especially valuable data on the results of using high pressure and superheat. Two diagrams are reproduced to depict graphically the results of his analysis.

In Fig. 1 is a half longitudinal section of a steam turbine cylinder in which there are ten expansion stages. At each stage the diagram shows the temperature, steam condition (superheat or percentage saturation) and pressure. The thermometers are so placed that a curve can be drawn through the tops of the mercury columns. Fig. 2 is a summary of the whole subject, indicating how an increase in the working range of temperature increases the heat available for power production. The significance of these curves can

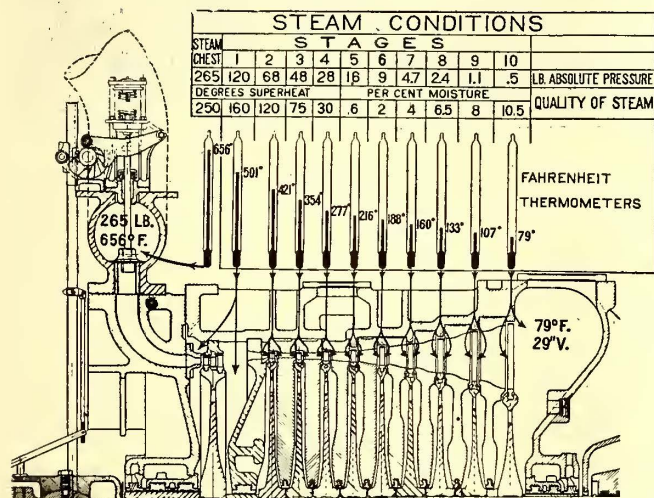


FIG. 1—SECTION OF TEN-STAGE TURBINE SHOWING CONDITION OF STEAM IN EACH STAGE

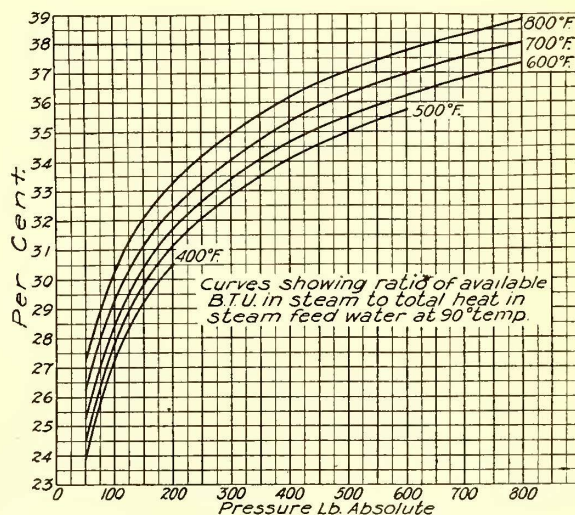


FIG. 2—RELATION OF IDEAL THERMAL EFFICIENCY AND PRESSURE; FEED WATER AT 90 DEG. FAHR.

every 10 per cent increase in the rate. The commission fixed a base rate schedule calculated to produce 6½ per cent on the ascertained valuation of the property and figured that the complete development of the business would enable the corporation to earn a return of 8½ to 9 per cent.

The commission makes it clear that its decision is prompted by a desire to assure to the company "a safe, sustaining rate of return under any conditions that are likely to arise" while at the same time giving to the corporation the strongest possible incentive to strive for an "increased percentage of earnings

be appreciated by reference to the report of tests of the Interborough Rapid Transit 30,000-kw. turbines, abstracted in the issue of the *ELECTRIC RAILWAY JOURNAL* for May 13, 1916, page 903. It must be remembered that of the percentage of heat in the steam given as available all cannot be recovered, as there are radiation and mechanical losses to be provided for. However, in the best modern machines as high as three-fourths of the heat can be changed into mechanical form, or say nearly one-fourth of the heat in the steam coming over from the boilers, with practical pressure and superheat.

## Retail Food Prices Up 39 Per Cent Since 1907

Increase in the Cost of Living, However, Is Not So Great as the Change in Common Index Numbers

THE retail food prices were 12 per cent higher in 1916 than in 1915—a much greater increase than in any other year since 1907. Retail food prices have risen each year since 1907 except in 1911 and 1915, and in 1916 they were more than 39 per cent higher than in 1907. This information is contained in Bulletin 228 of the Bureau of Labor Statistics of the United States Department of Labor, entitled, "Retail Prices, 1907, to December, 1916."

To enable the reader to see the percentage charges more readily, the retail prices of twenty-seven articles of food are reduced to relative prices, the average for 1916 being taken at 100. Individual relative prices have been computed for as much of the period since 1907 as possible, and general weighted relative prices for all combined have been calculated, the price of each article being weighted according to the quantity consumed in the average workman's family.

Every article reported for the period has increased in retail price each year almost without exception save for 1911 and 1915. The general weighted relative prices for all the commodities follow: 1907, 72; 1908, 74; 1909, 78; 1910, 82; 1911, 81; 1912, 86; 1913, 88; 1914, 90; 1915, 89; 1916, 100.

Bulletin 226 of the Bureau of Labor Statistics covers wholesale prices. This shows that the upward movement of wholesale prices which began in the latter part of 1915 continued without interruption through the whole of 1916, becoming most pronounced in the closing months of the year. In December the weighted index number for all the 342 articles studied stood at 118 as compared with 89 in January, indicating an average increase in wholesale prices of nearly 33 per cent. The increase over the level of prices in December, 1914, was more than 49 per cent. During 1916 phenomenal advances were recorded in the wholesale prices of many commodities belonging to the groups designated as farm products, food, cloths and clothing, fuel and lighting, and metals and metal products.

A similar statement, covering a more recent period, has just been issued by a committee of university economists under the leadership of Prof. Irving Fisher of Yale. This committee, acting for the Treasury Department, has been making a study of the purchasing power of money in war time. According to its first statement, the committee has found that the average of wholesale commodity prices in January, 1917, were 81 per cent above that of July, 1914, while the rise in retail prices was 57 per cent.

Commenting upon this statement, the *Engineering & Mining Journal* says in a recent issue:

"This confirms the opinion, not infrequently expressed, that the cost of living has not increased so much as is indicated by the common index numbers, which reflect the basic commodity prices. The individual is more concerned with retail prices, but even they enter but partly into his cost of living. Other things, such as rent and the use of public services, constitute important parts. It is doubtful if rents on the average have in-

creased as much as 57 per cent during the last three years, and it is well known that the charges for public services have increased but slightly in any cases, and not at all in most cases. Therefore, if the finding of Professor Fisher's committee be correct, it is certain that the present cost of living is not 1.57 times that of July, 1914, and that the actual increment is materially less than that."

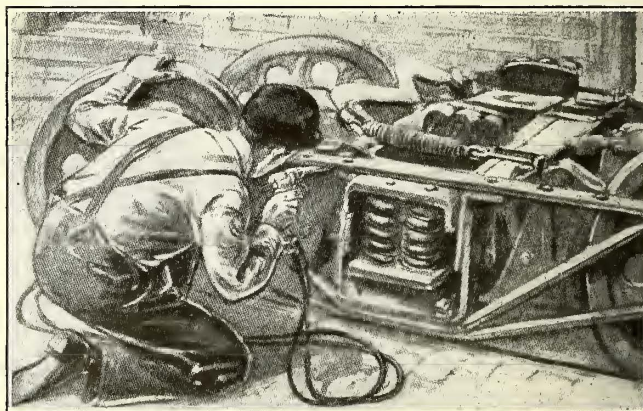
## Paint Gun Conduces to Economy in the Shop

BY C. M. PETTINGER

Master Mechanic Steubenville, East Liverpool & Beaver Valley Traction Company, East Liverpool, Ohio

MANY progressive electric railway shops are already using paint guns for work which does not require personal touch or which is difficult of access. Many others, however, do not realize the extensive use to which this handy apparatus can be applied with a consequent saving of labor and cost.

We have had a "Spraco" paint gun manufactured by the Spray Engineering Company, Boston, Mass., in our shops for some time and find many profitable uses for



PAINT GUN IN SERVICE WHERE BRUSH WORK IS DIFFICULT

it. Among our rolling-stock units are some modern light-weight steel cars which have been in service for about two years. As the pressed shapes used in the underframe construction as well as the sheets used on the sides are of very light material, they would soon be destroyed if they were not protected by a coating of paint to prevent the rust from attacking the steel.

To protect the underframe of these cars from rust we have inaugurated the following system: All our steel cars, when going through the paint shops, are first jacked up out of doors. After removing the trucks, the entire bottom of the car is thoroughly cleaned with wire brushes, scrapers and compressed air blast, removing all the accumulation of mud and any rust that is found in any part of the underframe. After the car has been thoroughly cleaned it is sprayed by means of the paint gun, using a mixture of red lead and oil.

The cost of applying this paint has averaged about \$2 per car for labor, taking about five or six hours' time at 35 cents per hour. As we have never done this particular work with a brush, it is impossible to give any comparison as to the cost of doing it with a brush and with a gun. It is evident, however, that it would be very difficult to do this particular work with a brush and impossible to do it as efficiently as with the

gun, for the reason that the paint is driven into the recesses and joints that would be hard to reach with a brush.

The paint gun is also used for painting trucks, and we find that it makes quite a saving. Thoroughly to paint the trucks of a double-truck car with a brush requires the labor of one man for three or four hours, while with the gun he can do it in a half hour. The cost, of course, depends on the wages paid the man, but we usually employ an apprentice or laborer for doing this class of work.

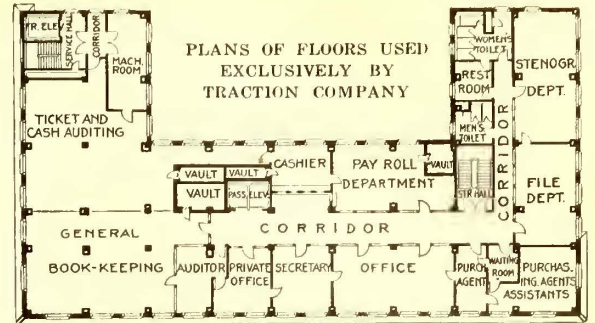
There are, in addition, a great variety of uses to which the paint gun is applicable, such as painting the interior of motors, controller covers, and in fact practically any painting where insulating paint is used.

### New Interurban Terminal Building at Akron, Ohio

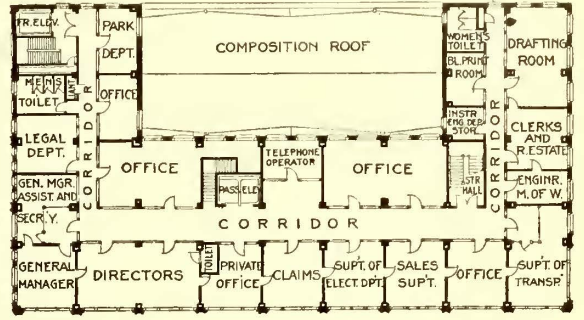
**T**HE Northern Ohio Traction & Light Company, Akron, Ohio, now has in the course of construction an attractive new terminal building which will provide a large waiting room and many comforts for the traveling public. There will also be an eight-track train shed of sufficient capacity to shelter at least twenty-four cars. The building is expected to be completed next summer to a temporary height of four stories, the first three of which will be used principally by the traction company and the fourth for general office purposes. The arrangement of the first three floors is shown in the accompanying drawings.

The street side of the first floor will be occupied by stores, with a wide entrance corridor extending back from the center of the building into a large waiting room. The ticket office will be located opposite this corridor, and an exit from the waiting room to the concourse will be made on either side of the ticket office. A tunnel from the concourse will extend along the rear end of the train shed and communicate with the concrete walks between each pair of tracks. The tracks will be built with open-type construction and ballasted with crushed stone. By means of the tunnel and the general arrangement of the station, there will be no crossing of tracks by passengers at any time. The cars entering the station will circle around the rear end over a single track and then turn to the left into the various tracks in the station. The switches for both the incoming and outgoing cars will be controlled from a tower so that any trains can be routed in and out as they arrive without the motorman being obliged to make a number of stops to throw switches.

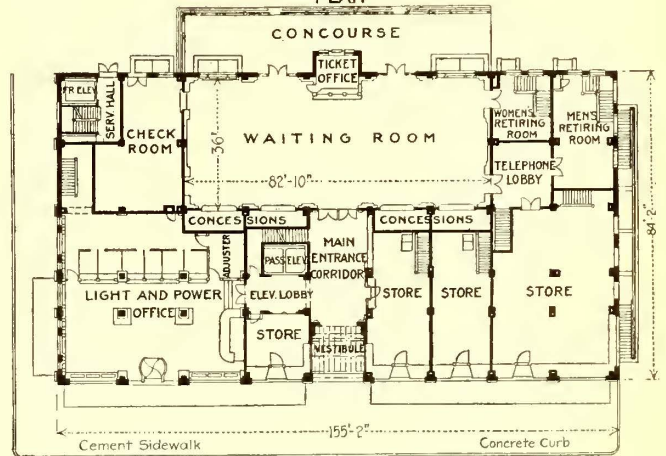
The new terminal is located on the street which will connect with the new viaduct to be built across the river to the north of Akron, so that ultimately trains will come over this viaduct and directly into the station, without any traverse of other streets in the city.



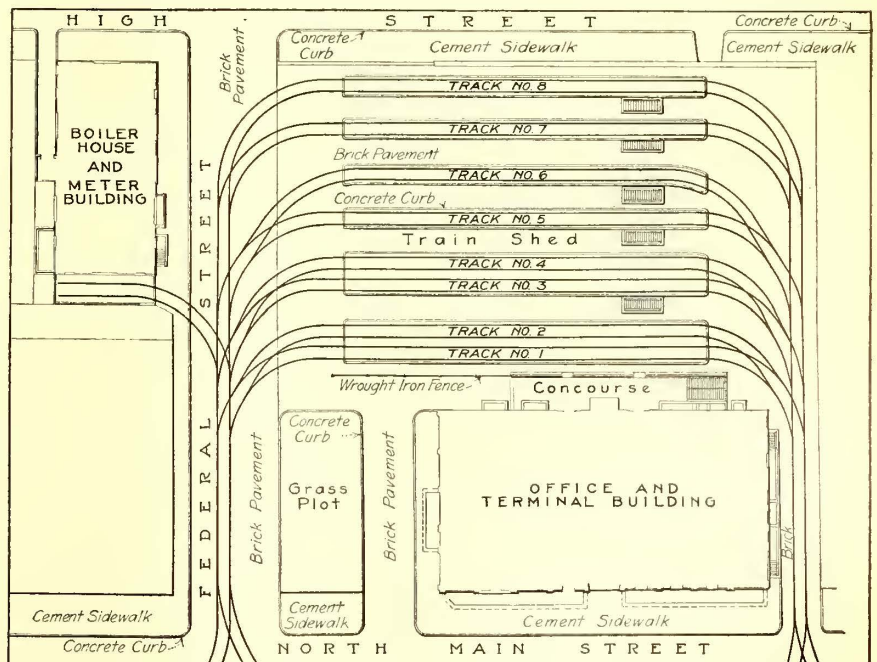
THIRD FLOOR PLAN



SECOND FLOOR PLAN



FIRST FLOOR PLAN



GENERAL LAYOUT OF TERMINAL BUILDING AND TRAIN SHED

## Women and War Work

### The Employment of Women in Transportation Work as Viewed by the Women, the Public and the Labor Union

THE New York (N. Y.) Evening Post has been conducting a series of articles dealing with the new industrial opportunities for women brought about by the change in labor conditions resulting from the war. The scope of these articles, so far as they have appeared, has been devoted largely to the employment by electric railway companies of women conductors and guards. The first of the series was contributed by Col. T. S. Williams, president of the Brooklyn Rapid Transit Company, and was published in the ELECTRICAL RAILWAY JOURNAL for March 2.

The second article by "A Woman Conductor" appeared in the Post on March 2. Some of the points emphasized were that girls seek work in the transportation department because of the novelty of the work, the higher wages received and the "fresh air" claim. The writer of this article states that the girls receive 27 cents an hour and can make \$21 a week working seven days and overtime. The particular run on which she is employed is from 1 to 3:35 in the afternoon and from 7:19 in the evening until 2:29 in the morning. The intervening hours are spent at the carhouse rest rooms, so that the girl is actually away from home about 16 hours. More trouble is encountered from women passengers than men and no ill-treatment is received by the girls from the motorman or men conductors. It is obvious that all of the girls do not have runs like the above, but have more opportunity for home and social life.

The third article, appearing March 4, was contributed by a member of the National Consumers' League. This writer questions the general opinion that there is a shortage of labor and that women are performing a "patriotic service." It is stated that although the wages are higher than women are accustomed to receive, they are conspicuously low in New York for the class of service demanded. Emphasis is placed upon the point that exploitation of women in place of men should be avoided.

The writer believes that inasmuch as night work in practically all industries in New York has been forbidden by law, some legislation should be passed at once to prevent women from being employed on night runs. The fact that the women often have to be on duty 14 hours to get in less than 10 hours' time and that on many cars they have to stand for long periods is also objected to.

The fourth article, which was contributed by the president of the New York Allied Printing Trades Council, appeared on March 5. In this article the writer states that organized labor is not opposed to the employment of women in any occupation which is not detrimental to their health. He brands as false the statement that there is a scarcity of labor and declares that the railways are representing this to be the condition "with the deliberate intention to deceive the public and defraud the unfortunate women who may be induced through 'patriotic' reasons to do their 'bit,' as well as earn a livelihood, by going into occupations that have been exclusively for men in the past." He declares the condition to be a result of the refusal of

railways to pay the men the "prevailing rate of wages." The solution to the problem which organized labor would present is to organize the women into unions for the purpose of exerting collective pressure on the corporations.

## Trend of Labor Decisions

### Latest Government Bulletin Shows Important Court Findings About Compensation Laws, Wage and Hour Legislation, and Strike Injunctions

AN UNUSUAL array of important decisions is presented by the United States Bureau of Labor Statistics in its annual compilation of court decisions on labor questions, just published as Bulletin No. 224. A number of the decisions of the Supreme Court of the United States, handed down since December, 1916, are included in this bulletin, but for the most part the decisions were made in the calendar year 1916.

Most notable among the Supreme Court decisions, on account of the circumstances attending the enactment of the law construed by it, is the decision sustaining the constitutionality of the Adamson eight-hour law for trainmen in interstate commerce and declaring at the same time the right of Congress compulsorily to arbitrate disputes between the railroads and their employees for the benefit of the public.

The first broad decisions ultimately deciding the constitutionality of workmen's compensation laws are also noted in this volume. Although a number of state courts of last resort had passed upon laws of this type, it was not until the Supreme Court of the United States had given the seal of its approval that the matter could be considered as finally settled. In upholding the compulsory compensation law of New York and of Washington, the latter also providing for a compulsory state insurance fund, the farthest reach of compensation legislation has received judicial approval. The elective law of Iowa was likewise sustained.

Another important decision by this highest court was that sustaining the Oregon ten-hour day for factory employees without regard to sex or age—a marked reversal from the action of the same court in 1905 in holding the ten-hour law of New York applicable to bakeries unconstitutional. The power of the State to enact laws limiting the hours of service of adult males in private employment, as well as the hours of females and of children, is now recognized. The fixing of wages for women and minors under eighteen is also a valid exercise of the police power according to another decision of this court, the Oregon minimum wage law being left undisturbed in its position of constitutionality as determined by the Supreme Court of that State. On this point the federal supreme bench was equally divided, one justice not voting.

Of hardly less interest than these decisions of the Supreme Court is the action of the court of last resort of Massachusetts in declaring unconstitutional an act which undertook to limit the issuance of injunctions in labor disputes, declaring that injunctions should issue only when property rights are affected and that labor is not property. The court took the view that this attitude excludes from the protection of the law those who have no other property than their right to work, and it held that such a deprivation could not be effected by statute.

# Jitneys in Los Angeles Losing

**Report of Board of Public Utilities Shows Unprofitable Operation on Car-Mile Basis—Many Complaints from Public**

JITNEYS in Los Angeles, Cal., are operating at a net loss per car-mile ranging from 0.47 cent in January, 1917, to 0.11 cent in June, 1917. These figures are given in the report of the Board of Public Utilities of that city for the year ended June 30, 1917.

Jitneys began operating in Los Angeles during July, 1914. By the end of 1915 the number had increased to 1300, and it was impossible for the Board of Police Commissioners to regulate them properly under the ordinance in effect at that time. The conditions became worse as time went on, and the city finally passed a restrictive ordinance in October, 1916, placing the jitneys under the supervision of the Board of Public Utilities. In March, 1917, another ordinance was passed increasing the license fees according to the average charges in sixty-two cities. The jitneys operating during the latest check reported on June 25, 1917, numbered 250. Of 323 in service on Jan. 1, only 159 had survived.

## MANY SERIOUS COMPLAINTS AGAINST JITNEYS

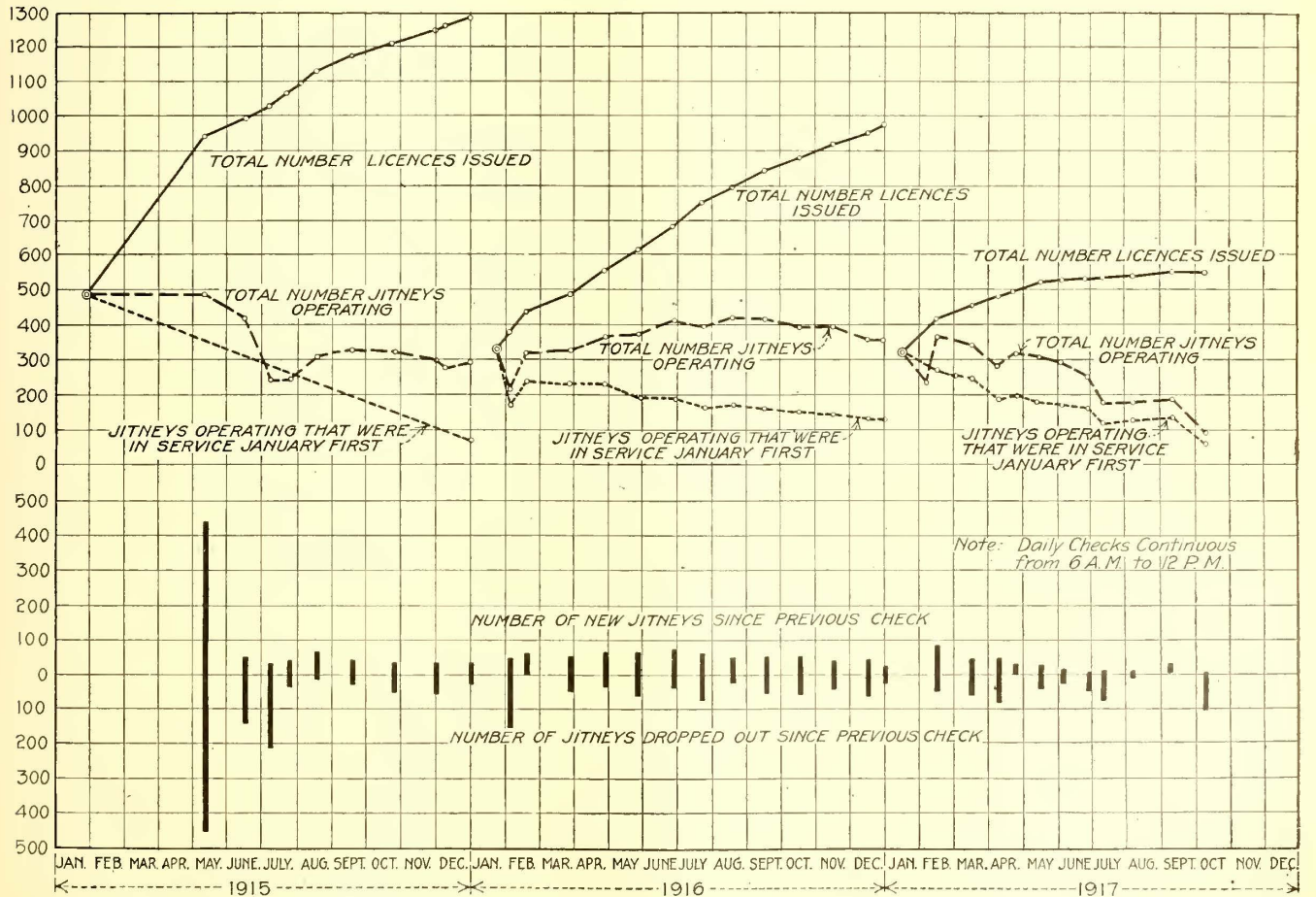
The number of complaints against jitneys for the year ended June 30, 1917, was 1212. The largest numbers of complaints were 268 for reckless and hazardous operation, 129 for deviation from and turning on routes, 119 for discontinuance of operation without cause and 103 for operation without city license and indemnity bonds. Other complaints covered such topics

LOS ANGELES JITNEY OPERATING STATISTICS FOR 1917  
(Compiled from Monthly Reports Made by Operators to the Board of Public Utilities)

|  | Jan.     | Feb.     | Mar.     | April    | May      | June     |
|--|----------|----------|----------|----------|----------|----------|
| Miles run per car.   | 3241     | 3057     | 3641     | 3330     | 3641     | 3649     |
| Passengers carried per car .....   | 3330     | 3353     | 3660     | 3651     | 3941     | 3920     |
| Passengers per car-mile .....  | 1.027    | 1.095    | 1.005    | 1.095    | 1.081    | 1.073    |
| Earnings per car..   | \$167.66 | \$168.98 | \$186.69 | \$184.60 | \$199.04 | \$197.64 |
| Expenses per car, exclusive of driver's wages, depreciation and interest ..... | \$93.68  | \$92.01  | \$98.15  | \$101.50 | \$100.31 | \$105.87 |
| Earnings per car-mile (cents) ...  | 5.17     | 5.51     | 5.13     | 5.54     | 5.47     | 5.42     |
| Expenses per car-mile (cents):   |          |          |          |          |          |          |
| As reported ....   | 2.89     | 3.00     | 2.70     | 3.05     | 2.76     | 2.90     |
| Including depreciation and interest .....                                      | 3.54     | 3.77     | 3.26     | 3.67     | 3.22     | 3.43     |
| Including depreciation, interest and driver's wages .....                      | 5.64     | 5.87     | 5.36     | 5.77     | 5.32     | 5.53     |
| Net gain per car-mile (cents) ...  | ...      | ...      | ...      | ...      | 0.15     | ...      |
| Net loss per car-mile (cents) ...  | 0.47     | 0.36     | 0.23     | 0.23     | ...      | 0.11     |

as failure to report accidents (fifteen), drivers charged with crimes (seven), misconduct of drivers towards passengers (seven), drivers smoking on duty (three), short-changing passengers (three), dirty appearance of drivers (two), boisterous and objectionable conduct at terminals (two), excessive fares charged (ten), cars operated without proper sign on windshield (forty-three), and cars operated in unsafe condition (four).

The operating loss of the jitneys during the period from January, 1917, to May, 1917, inclusive, is as shown by the accompanying table. It should be noted that 40 per cent yearly depreciation and 6 per cent interest are allowed on the cost of equipment to the op-



GRAPHIC HISTORY OF THE JITNEY AT LOS ANGELES, CAL.

erator. Drivers' wages average \$2.50 per day, or 2.1 cents per car-mile on a basis of 120 miles per car per day. The accompanying diagrams show how since 1915 the jitney service each year has fallen off as the months passed.

## For a Fair Settlement

St. Louis Company in Series of Advertisements Has Been Securing Public Support in Tax and Franchise Controversies

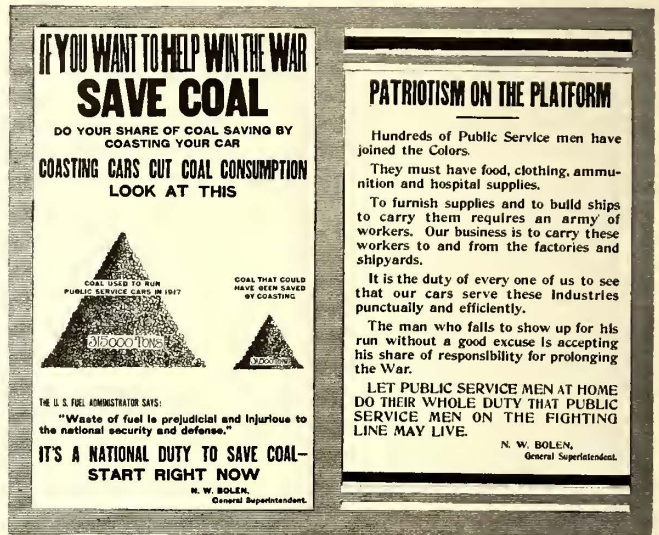
THE United Railways of St. Louis has been publishing in daily and weekly newspapers a series of forty-five advertisements to procure public approval for a fair readjustment of tax and franchise controversies between the company and the city. These advertisements, which were written by Frank Putnam, appeared during the period from August, 1917, to January, 1918, inclusive. They have now been reissued by the company in the form of a complete set of proof pages, with an index.

In introducing the series of advertisements, some of which are shown in part in the accompanying illustration, the company stated that it wished its customers to know all about the proposed settlement and the electric railway situation generally, so that the great power of an informed public opinion might help to get a fair settlement and open the way for more and better service. The company in subsequent advertisements proceeded to explain the proposed ordinances, the merits of various clauses, the importance of service over taxes and the need of a prompt settlement. It was always ready to answer in detail any queries made by any of its patrons.

The last advertisement stated that there had been a

## Patriotism on the Platform

IN ORDER to impress on its employees their ability substantially to help in carrying on the war the Public Service Railway, Newark, N. J., has posted in its carhouses copies of two posters which are reproduced herewith that they may tell their own story. They have been well received by the men.



POSTER INTENDED TO INCUCCATE PATRIOTISM AT HOME AS WELL AS AT THE FRONT

The posters are on white cardboard, 15½ in. x 26 in. in size. The one shown at the right-hand side in the cut is printed in blue and red to enhance the distinctly patriotic character of the text.

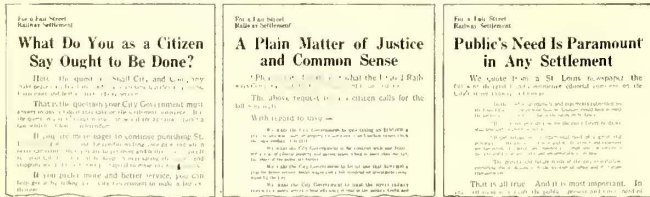
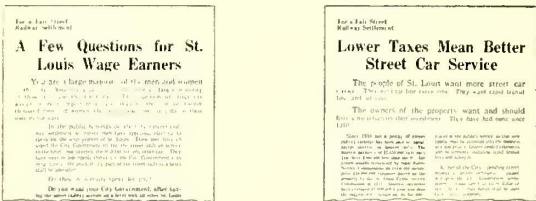
## Connecticut Company's Power-Saving Campaign

AS A CONTINUATION of the power-saving campaign described by William Arthur in the March 2 issue of the ELECTRIC RAILWAY JOURNAL the Connecticut Company has just distributed to its platform men copies of a booklet by Mr. Arthur entitled "Trolley-men's Handbook on Efficient Car Operation." This, it is understood, will be available at cost to other electric railways. It is of a patriotic character, outlines general principles and has no reference to any apparatus used in power-saving campaigns. The author is supervisor of coal conservation for the company.

With the booklets the company distributed copies of a leaflet on the coal situation containing a reprint of Federal Letter No. 18 from the United States Fuel Administration to the state fuel administrators. (See ELECTRIC RAILWAY JOURNAL, Dec. 8, 1917, pages 1033 and 1037.) The leaflet also contains the platform man's pledge suggested by the Electric Railway War Board.

## Company Supplies Employees with Fuel

The Georgia Railway & Electric Company, Atlanta, Ga., has made every possible effort to supply employees with coal for home use this winter. According to W. H. Smaw, purchasing agent, the company has delivered coal to many when the fuel was badly needed to keep the steam plants going. Every team which the affiliated gas company could spare was employed in making deliveries.



### UNITED RAILWAYS FARE READJUSTMENT CIRCULARS

great change in public sentiment during the year, because a large majority of the people now understood that the company needed their good-will, that it was trying to give the most and the best service possible under present conditions, and that any further betterment was impossible until a settlement was effected.

The course of the negotiations in St. Louis has been followed in the ELECTRIC RAILWAY JOURNAL from time to time.

Public Service Commissioner Whitney has written Acting-Mayor Smith that unless the Legislature empowers the commission and the city to make concessions to contractors engaged in building new subways in New York the work will be held up indefinitely.



# American Association News

*EXECUTIVE COMMITTEE of American Association Held Important Meeting at New York on March 5. War Board Announces P. H. Gadsden Will Be Resident Member at Washington, and E. C. Faber, Manager*

*SECTION ACTIVITIES Are Resumed After Lull Caused by Operating Difficulties Incident to Winter of Record-Breaking Severity*

## Changes in the War Board Organization

PHILIP H. GADSDEN, president Charleston Consolidated Railway & Lighting Company, Charleston, S. C., has been requested by the American Electric Railway War Board to assume direct charge of the work as resident member. His duties in connection with the financial problems of public utilities will make it necessary for him to remain in Washington most of his time. E. C. Faber, formerly traffic manager of the board, has been appointed manager. W. V. Hill, representative of the electric railways of the State of California, has been appointed assistant manager. The resignation of C. Loomis Allen as director of the board has been accepted as of Jan. 10, 1918.

## Coal for Electric Railways

THE War Board has issued Bulletin No. 12, giving information as to changes in the organization mentioned above and announcing certain changes in the method of handling emergency orders and requests regarding the distribution of bituminous coal made by the department of distribution of the National Fuel Administration. These are as follows:

First, all assignments of men to deal with emergencies affecting particular industries or classes of consumers are hereby canceled, except as they relate to railroad and bunker coal and to coal for gas and by-product plants and for steel and munitions plants.

Second, situations which can be passed upon by state administrators should be, so far as practicable, referred to them for action.

The department of distribution has divided the country into territorial districts grouped as follows:

Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Tennessee, Kentucky, Mississippi, Arkansas, Louisiana, Oklahoma and Texas.

Ohio, Michigan, Indiana, Wisconsin, Illinois, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas, Montana, Wyoming, Colorado, New Mexico, Idaho, Utah, Arizona, Nevada, Washington, Oregon and California.

New England, New York, New Jersey, Delaware, Maryland and Pennsylvania.  
District of Columbia.

The War Board suggests that if relief on coal matters cannot be obtained after conference with state fuel administrators, the War Board office should be communicated with and the matter will be taken up with the manager of distribution.

## October Convention to Be Held

*Executive Committee Favors Meeting But Without Exhibits—Recent Work of Association Committees Reviewed*

AT A MEETING of the executive committee of the American Electric Railway Association held in New York on March 5, the principal action taken was a decision to hold a convention next October. The convention will be one for all of the affiliated associations, as well as for the parent organization, but there will be no exhibits. Probably the convention will be two days in duration. No city has been selected as a place of meeting. These details have been left to President Stanley, who will announce his plans later.

The executive committee at its meeting this week also heard a report from Chairman McCarter on the work of the War Board; from J. K. Choate on that of the committee on electric railway revenue, and from P. H. Gadsden on the work of the joint committee with other public utility associations on higher rates. The executive committee also took up the subject of committee work of the affiliated associations. This matter was finally left in the hands of the president to act after consultation with the presidents of the affiliated associations.

A change was made in the rules governing the award for the best paper presented at a company section meeting. Hereafter, no one will be eligible to receive this medal who has the rank of general superintendent or a higher rank than that. The executive committee decided to remit the dues of individual members in military service for the duration of the war. It also approved the following resolution which it asked the Chamber of Commerce to consider at its annual meeting to be held in Chicago on April 10-12:

*Whereas, the maintenance of the country's public utilities in the highest possible state of efficiency is essential not only to the war program of the United States but also to the Nation's business and industrial interests, and*

*Whereas, such efficiency depends upon the preservation of the credit of the companies providing public utility service, and*

*Whereas, the increase of costs and the unusually onerous conditions of operation brought about by the war seriously threaten the ability of the public utilities to continue the furnishing of the necessary services they perform, and*

*Whereas, the protection of the credit of public utilities is very largely in the hands of regulatory commissions and other public authorities rather than in the utilities themselves, therefore be it*

*Resolved, that the Chamber of Commerce of the United States of America recommends to the state and local authorities that they recognize the unusual and onerous conditions with which public utilities are contending, and that in the interest of the nation, of business and of the public, they give prompt and sympathetic hearing to the petitions of such utilities for assistance and relief.*

Those in attendance were: President John J. Stanley; Vice-Presidents John H. Pardee and T. S. Williams; members of executive committee, M. R. Boylan, R. E. MacDougall, Thomas Finigan and John G. Barry, who represented E. W. Rice, Jr. Past-Presidents McCarter, Sergeant, Storrs, Ely and Henry were present, as were also P. H. Gadsden, J. K. Choate and C. C. Peirce, on invitation.

### Some Startling Data Presented at Public Service Meeting

THE meeting of the Public Service Railway company section held on Feb. 21 was an "economy" meeting in that all of the discussion centered around the necessity for doing things which will offset the rapidly mounting cost of operation. Martin Schreiber, chief engineer, read a carefully prepared paper on "Some Problems of the Railway Business." R. E. Danforth, general manager, gave a forceful talk on the seriousness of the situation confronting the electric railways. He read a letter from a prominent steam railroad man commending Public Service Railway for its service on one line, and he stated that he believed that this particular line was no more worthy of commendation than many others. Mr. Danforth attributed much of the

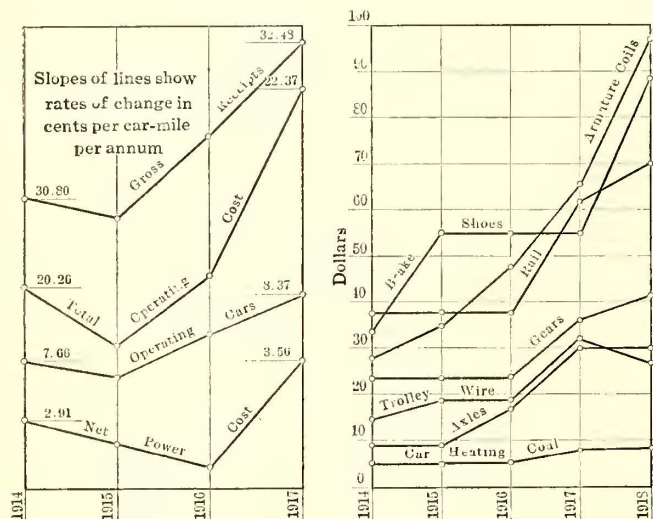


FIG. 1—DIAGRAMS TO SHOW RATES OF CHANGE OF ELECTRIC RAILWAY INCOME AND COSTS. FIG. 2—DIAGRAM SHOWING HOW MATERIALS COSTS HAVE INCREASED IN FIVE YEARS

present difficulty in maintaining equipment to the frequent labor turnover. Further, he urged that never was it more important for the men to be careful of the equipment, as it is almost impossible to get supplies. Not only are parts such as car wheels, field coils, etc., very scarce, but operating conditions tend to use them up more rapidly than when they are plenty. For example, recently a supply of 1600 car wheels was received by the company, but in four weeks they had all been used.

Mr. Danforth said, however, that while conditions are bad they will not compare with those in the trenches at the front, and the men should do their work willingly and cheerfully.

J. W. Brown, assistant superintendent, spoke on the subject of optimism. He explained that the railway was pulling out of the worst winter in thirty years, the average temperature for the winter being 25 deg., as compared with the general average of 34 deg. for December; that one snowstorm had cost the company \$140,000, and that there was a large loss of men from the service. Nevertheless he held that the future is bright. He urged all of the men to work, not in a spirit of hopelessness, but in one of cheer and courage.

Taking up Mr. Schreiber's talk more in detail, it may be said that it centered around the two charts reproduced. Fig. 1 shows the rate of change of gross re-

ceipts per car-mile and total operating costs, and two of its components. The diagram is arranged for comparison of the slopes of the lines and not of their absolute values. Mr. Schreiber went into some detailed explanation of the reasons for the depressions in the graphs, which had to do with increase in schedule speeds, commissioning of a new power plant, etc. He emphasized the fact that when the slope of the cost line is equal to or greater than that of the receipts the situation requires careful attention.

The second chart shown by Mr. Schreiber, Fig. 2, shows how the costs of materials have been going up. Advantageous contracts held some of these costs to a lower rate of increase than they otherwise would have had. This chart is based on an analysis of \$400,000 worth of materials purchased.

Because of the difficulties encountered in making ends meet, Mr. Schreiber emphasized the necessity of the measures which are being taken to increase economy and urged hearty co-operation on the part of all members of the company's organization.

### Milwaukee Holds "Electric Court" on Attorneys' Night

THE regular meeting of the Milwaukee Electric Railway & Light Company section was held on Feb. 14 with an attendance of two hundred. This being attorneys' night the scene was that of a court room and a fake complaint was prearranged, involving serious charges against the attorneys. A full court and jury was provided and the regular court form adhered to. The defendants were found guilty and the judge, being unable to pass sentence, discharged them.

After court dismissal the following talks were given: "Why Public Utilities Differ from Other Industrial Enterprises," by Attorney E. S. Mack; "Public Prejudice Against Street Railways," by Attorney C. Nuskat; "Closer Relations of Company to Employees," by Attorney J. D. Shaw; "Some Cases in Court," by Attorney Drew; "Paving," by Attorney J. C. Hardgrove; "Street Car Service," by Attorney W. A. Jackson.

G. T. Seely of the Chicago Elevated Railway was present and spoke briefly regarding the local car service.

### History Reviewed at Portland Dinner

THE Cumberland County Power & Light Company section held its regular meeting on Feb. 18 and dinner was furnished by the company. A. H. Ford made a few remarks on the 6-cent fare case, which was shortly to come before the Public Utilities Commission. C. F. Berry, treasurer, and one of the oldest men, as regards years of service, in the employ of the company gave a history of the Portland Railroad from the beginning of horse-car operation.

The company section orchestra furnished music and Deane Payne, a local newspaper man, entertained with stories.

The American Museum of Safety, which in normal times awards annually the Anthony N. Brady and other medals for achievement in safety work, will not make any medal awards this year. This step has been taken as a war-time economy.

# News of the Electric Railways

TRAFFIC AND TRANSPORTATION

FINANCIAL AND CORPORATE • PERSONAL MENTION • CONSTRUCTION NEWS

## Transit Commission Cases Heard

Supreme Court of Ohio Asked to Pass on Acts Creating Cleveland Transit or Subway Commission

Two cases affecting the Cleveland subway or rapid transit commission were argued in the Ohio Supreme Court on Feb. 19. One of them, filed by Prosecuting Attorney Samuel Doerfler, asks that the commission be ousted. The other, entered by City Law Director W. S. Fitzgerald, asks that C. J. Neal, city finance director, be restrained from paying the expense of the commission. Mr. Doerfler is said to be in earnest in his contest, but the other suit is a friendly one, intended to establish the constitutionality of the law under which the commission is established. A similar suit from Cincinnati is pending.

Former Appellate Judge Walter D. Meals and former Municipal Judge Pierre A. White appeared for the commission. Attorneys for the city and county argued that the Bower act, under which the commission was appointed, is unconstitutional and that no provision was made for it in the city charter. Judge Meals declared that the subway commission ordinance is constitutional and is the freest exercise of home rule imaginable. The charter was adopted as a home rule proposition.

It was contended by some that a charter amendment, instead of the ordinance, should have been submitted to a vote of the people and that in its present form there is no authority for the commission.

## Rebuilding Trenton Carhouse

The Trenton & Mercer County Traction Corporation, Trenton, N. J., has arranged for the rebuilding of its car-

house destroyed by fire recently. Newton A. K. Bugbee & Company, Inc., will do the steel work on the new structure; Edward La Rue the carpentry and Burton & Burton the mason work. The loss to the company through the destruction of the old building was estimated at \$65,000. Three new cars and two old ones were destroyed and five others were damaged. An idea of the damage to the building and its contents is conveyed in the accompanying illustration.

## London Purchase Agreement

The directors of the London (England) United Tramways have signed an agreement with the County Council, "settling all matters of difference," with reference to the purchase by the Council of the company's tramway undertaking in Hammersmith. Under this agreement the Council will pay to the company the sum of £235,000 "in satisfaction of all the items" included in the arbitrator's award, dated Feb. 12, 1912, which, until the signing of this agreement, has been the subject of litigation. Included in this purchase money is the Chiswick power station and depot of the company. The purchase money is to be paid on or before the expiration of one year from the termination of the present war, but until the purchase money is paid the company is to remain in possession of the purchased tramways and to take the receipts thereof for the benefit of the company. From and after the completion of the purchase the Council and the company are to have reciprocal running powers over the lines of the other, and the present arrangement between the company and the railway for through bookings at Shepherd's Bush and Hammersmith are to be continued by the company until the completion of the purchase.

## Local Transportation Provision

Bill Before the House Would Provide \$50,000,000 for Housing and Local Transportation

The committee on public buildings and grounds has favorably reported to the House of Representatives a bill authorizing the expenditure of \$50,000,000, through the Secretary of Labor for the purpose of providing housing, local transportation and other community facilities for war needs. If the bill passes Congress, as it is expected it will, in view of the fact that it is an administration measure, the necessary money must be appropriated in an appropriation bill, following the passage of an authorization.

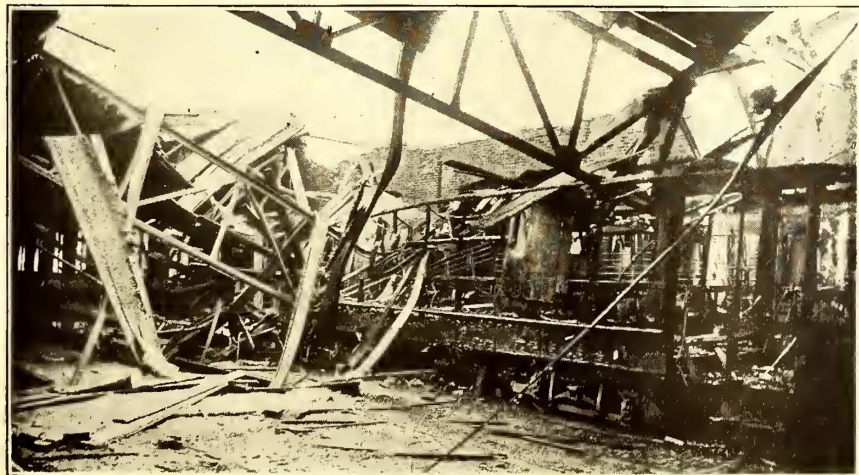
The report on the bill calls attention to the fact that it "gives to the Secretary of Labor the power to acquire by purchase or otherwise such local transportation and other community facilities, or parts thereof, and equipment, as in his judgment may become necessary for the proper execution of the trust created."

The committee's report in conclusion says, in part:

"Necessarily legislation of this character must lodge very broad discretion with those who are to administer it. It is a temporary expedient, and entirely new to our government, and, as we stated in the beginning, can only be justified by the conditions now existing, but those conditions seem to us to imperatively demand its enactment."

## Tacoma Purchase Vote on April 2

At the municipal election in Tacoma, Wash., on April 2 a proposition will be submitted to vote \$6,500,000 of utility bonds for the acquisition by condemnation or stipulation of the entire electric railway system of the Tacoma Railway & Power Company by the city of Tacoma. U. E. Harmon, city attorney, has been authorized to draw up an ordinance for presentation to the City Council, placing the proposition on the ballot at the spring election. It is proposed to vote approximately \$6,000,000 for the actual purchase of the system and \$500,000 for repairs and rehabilitation of rights-of-way and the purchase of additional equipment. Commissioner Atkins points out that the voting of utility bonds would not mean any increase in taxes, as the money to meet principal and interest on the bonds would come from the returns on the city's utilities. Mayor Fawcett of Tacoma opposes the plan to vote a \$6,500,000 bond issue. He asserts that the figure is double the value of the properties.



REMAINS OF TRENTON CARHOUSE

## Massachusetts Governor's Relief Message

### Immediate Readjustment of Fares for Boston Elevated Urged by Governor After Recent Labor Settlement

Governor McCall of Massachusetts, in a special message to the Legislature on March 1, recommended an immediate readjustment of fares on the Boston Elevated Railway, to continue in force during the war and for one year thereafter, in order that the company may be provided with the funds necessary to meet the wage increase granted as a result of the threatened strike of employees. The Legislature is studying electric railway finance, but the Governor believes immediate steps should be taken to meet the situation arising from the war crisis and the differences between the company and its employees.

#### GOVERNOR'S SECOND RAILWAY MESSAGE

The message of March 1 is the second the Governor has sent to the Legislature on matters pertaining to the finances of the Boston Elevated Railway. On the closing day of the 1917 session, the Governor anticipated the passage of a bill to provide for purchase by the State of the Cambridge subway, and sent a special message to the Legislature expressing disapproval of that act. In his message at that time, Governor McCall recommended the enactment of legislation which would give the Public Service Commission power, after investigation, to abrogate the contract made between the State and the elevated in 1897, under which a maximum fare of 5 cents could be charged on the company's lines. The Legislature refused to enact a law, but adopted an order directing the Public Service Commission to report to the Legislature this year on the financial condition of the company. The report of the commission is now pending before the committee on street railways, as is also a report of a special recess committee on the electric railway situation throughout the State.

The Governor's message of March 1 to the Legislature, is as follows:

#### SITUATION SERIOUS

"A serious condition which in my opinion demands your immediate consideration, exists upon the Boston Elevated Railway. During 1916 a contract was entered into between the railway and its employees, fixing a scale of wages for a period of three years. Since the contract was made the cost of living has increased rapidly so that the wages fixed in the contract do not amount to-day to a living wage, especially in the case of an employee with a family to support. The men demanded an increase. The railway on the other hand had only such income as the law permitted it to receive. The cost of the operation of the road has also increased greatly, and it is claimed that the fare it receives to-day is inadequate to enable it to render efficient service as a common carrier even upon the scale of wages fixed in the contract. I do not believe that the public desires

transportation which must be furnished in considerable part at the expense of men who are underpaid, or any transportation, the fair cost of which it does not pay, but which must in part be paid by somebody else.

#### FARE FIXED TWENTY YEARS AGO

"The present fare was established by the Legislature some twenty years ago, and only the Legislature has power to deal with it now. This fare was fully adequate at the time it was established and for many years afterward, but it is very widely claimed that it is inadequate in the conditions that now exist. I imagine it will not be disputed that the railway should be permitted to receive an income which with economical management will enable it fairly to perform its obligations as a common carrier. More than that it should of course not be permitted to receive. But less than that means poor service, underpaid employees, and ultimate bankruptcy. The Legislature, I am informed, is considering the general question of electric railway transportation both within the city of Boston and outside of it. But something should be done immediately to meet the conditions existing in Boston; and it may be done without prejudice to any of the propositions which the Legislature is now considering, as a method of dealing with the existing emergency.

#### IMMEDIATE ACTION NECESSARY

"I recommend that anything in the charter of the railway or in the law to the contrary notwithstanding, our Public Service Commission during the continuance of the war and for one year thereafter, or until the Legislature shall otherwise provide, be given power to fix just, reasonable, and equal rates of fare upon the Boston Elevated Railway; and pending a hearing upon any application for change of rates, that the commission shall have power from time to time to fix interim rates to have force and effect until they shall finally make decision upon the application. It is, of course, not possible to foretell how long the present abnormal conditions regarding prices will continue after the war, but we may follow the analogy of the bill providing for the taking of the railroads for war purposes by the national government. Of course if conditions during the time proposed should warrant a decreased fare, it would be the duty of the Public Service Commission to establish it. I am convinced that immediate action on this subject is necessary in the interest of the public as well as those who own and operate the elevated railway."

The message was referred to the committee on street railways, and that committee arranged to begin hearings on March 5.

Governor McCall, at his noon conference with the State House reporters, following the reading of his message

in the House, said, in answer to questions:

"I have been contemplating seriously my action of to-day for a long time. Since Monday my conviction that something should be said along the line of what I have now said in my message has become acute. I made up my mind that now was the time to say it. But I believed that I ought not to say it until this threatened strike was disposed of, lest the two be linked together in the public mind. So I kept my intention secret."

At the hearing before the committee on street railways on the Governor's message counsel for the company stated that it preferred the cost-plus proposition as suggested by the Public Service Commission rather than the plan laid down in a general way by the Governor. The road preferred, if relief was to be given, that it have a tendency toward permanency.

## Praise for President Ahearn

Thomas Ahearn, president of the Ottawa (Ont.) Electric Railway, had some very complimentary things said about him and the company of which he is the head by the daily press recently. One paper remarked:

"The Capital City is fortunate in being served by a railway of undoubted excellence. This is due in no small degree to the organizing ability and the executive genius of Thomas Ahearn, president of the company, who has himself taken a personal interest in everything relating to the railway and the men who work for that corporation. It is rarely that any friction arises between the company and the municipal corporation, and everybody in Ottawa is proud of its street railway service."

## Major Belmont Takes a Hand

Major August Belmont, chairman of the board of the Interborough Rapid Transit Company, New York, N. Y., played an important part in the work of arranging the trade agreement by which some of the needs of the American forces in France will be supplied from Spain. His work is described by *Financial America* in part as follows:

"General Pershing soon found that many supplies he had been buying in Spain were not being delivered.

"The United States then stopped licensing exports to Spain. Then General Goethals selected Major August Belmont to aid our Ambassador in negotiations. When America entered the war, Mr. Belmont offered his expert knowledge of horses and business to the government. He received a commission as a horse buyer for the army.

"When General Pershing's difficulty arose Major Belmont was sent to Spain and on his recommendation a deal was made by which a reasonable amount of petroleum, cotton and other needs of Spanish industry will be allowed to be exported from America, together with equipment for Spain's much neglected railroads. General Pershing, in return,

will be allowed to draw on Spain's surplus products for his supplies. This checks Germany's evil influence with a friendly neutral, enlarges our source of supplies and also saves in ships, the exports to Spain occupying less cargo space than the bulkier products needed by General Pershing, which otherwise must be sent from America."

## Fuel Priority Revoked

### Administrator Garfield Suspends Provisions of Order of Jan. 17 Relating to Utilities and Other Industries

United States Fuel Administrator Garfield on March 5 issued an order revoking Sec. 1 of the regulation promulgated on Jan. 17, in all states east of the Mississippi except Pennsylvania, Maryland, West Virginia, Ohio and eastern Kentucky. The order, effective on March 5, suspends certain provisions relating to priority in furnishing coal to public utilities, railroads, domestic consumers, army and navy cantonments, hospitals and other preferred consumers.

#### REGULATION CONTINUES IN FIVE STATES

The five states in which the regulation continues in full force embrace the anthracite and bituminous producing fields which supply the eastern section of the country, and coal operators therein will continue to give preference to shipments for consumers in the order named in the regulation. It is also provided that in those states the provisions of Sec. 1 shall be extended to include contracts for coal made or accepted after Jan. 17, as well as contracts and orders on hand on that date.

The provisions of Sec. 1 of the order of Jan. 17 were:

Until further order of the United States Fuel Administrator, all persons selling fuel in whatever capacity, shall, in filling their contracts or orders now on hand, give preference to necessary current requirements of: Railroads, domestic consumers, hospitals, charitable institutions, army and navy cantonments, public utilities, by-product coke plants supplying gas for household use, telephone and telegraph plants, shipping for strictly governmental purposes (not including factories or plants working on contracts for the United States), manufacturers of perishable food for necessary immediate consumption and municipal, county or state governments for necessary public uses. Any tonnage remaining after the foregoing preferred shipments have been made may be applied to filling any other contracts or orders.

#### SITUATION GREATLY IMPROVED

Improved transportation conditions and other helpful factors have contributed to a material improvement in the coal situation in the territory where the coal priority list has been suspended. It was deemed to be no longer necessary because the flow of coal into those states is sufficient to meet normal needs.

Continuance of the order for a longer period would have resulted in the accumulation of reserve stocks of coal for the consumers benefited by priority. In the states where the regulation will continue to operate the car shortage has not been entirely overcome.

## San Francisco Traffic Needs

### City Engineer O'Shaughnessy Discusses Question of Financing and Extension of Municipal Railway

City transportation problems were discussed at length at a recent meeting of the San Francisco Commonwealth Club by M. M. O'Shaughnessy, city engineer. Judging from annual receipts of street railways, and taking the population at 550,000, he stated that San Francisco afforded the greatest patronage per capita of street railroads of any city in the United States. The receipts of the railways he estimated to be \$20 per head a year, or a total of \$11,000,000 a year.

#### MATTER OF EXTENSIONS A PROBLEM

In referring to the plan to build the outer tracks down Market Street, he said this was being done not because it was desirable so much as because it was the only thing to do unless elevated or subway lines were built. The two tracks now used were insufficient to carry the traffic, and would be less able to do so as the population increased.

According to Mr. O'Shaughnessy, one of the problems to be solved in directing the affairs of the municipal system was to decide the question of extensions. Applications were being constantly received for the extension of the system, but care was being taken to see that extensions were made only where additional facilities were really needed. For example, there were now three lines in the Richmond District only one block apart, while the industrial area south of the Union Iron Works, which is becoming well populated, was not served at all. Attention was therefore being given to possible connection with crosstown lines that would serve that section.

#### WOULD RECAPTURE BAY TRAFFIC

With regard to other extensions of the municipal system, Mr. O'Shaughnessy pointed out the desirability of trying to recapture traffic, estimated at 60,000 persons a day, now taken across the bay. He would do this by improving facilities for reaching desirable sections down the peninsula. A connection with San Mateo County on good grades and curves, by way of the Twin Peaks Tunnel, was thought to be entirely feasible, and a broad right-of-way was advised. The desirability of buying a right-of-way 300 ft. wide between Mission and Howard Streets from Fourteenth to Twenty-fifth, was mentioned. It was pointed out that an elevated line for rapid transit could be built down the center of such a route while provision for surface boulevards could be made on either side. This wide strip would have a great advantage as a fire protective measure, particularly desirable in that quarter of the city.

The bond limitation upon the city would have to be enlarged in order to accomplish the several transportation extensions which were likely to become necessary. At the present time the

maximum of 15 per cent on the assessed valuation of \$600,000,000 gave only \$90,000,000 maximum for the purchase of utilities. Of this, \$44,000,000 was now outstanding, leaving only \$40,000,000 to complete the Hetch Hetchy scheme, to purchase Spring Valley, and provide for transportation. Since San Francisco was irrevocably given to public ownership of utilities, a way must be found to permit acquisition beyond these limitations, and to this end Mr. O'Shaughnessy was of the opinion that the charter must be readjusted by putting a limitation of say 8 per cent on non-earning utilities such as schools and parks, then removing the limitation on self-supporting utilities. Mr. O'Shaughnessy was in favor of extending the boundaries of San Francisco and consolidating public utilities.

## Help the Red Cross

### Unselfish Action of Southern Public Utilities Employees Commended by Public and Press

Early in December there came to Z. V. Taylor, president of the Southern Public Utilities Company, Charlotte, N. C., from various cities and towns served by that company, suggestions that the annual banquet to the employees be called off and the funds donated to the American Red Cross. President Taylor directed that a referendum vote of the employees be taken, and as a result it was found that 99.93 per cent of the entire organization favored giving the funds to the Red Cross.

#### \$1546 TO RED CROSS

The company, with which the Southern Power Company is affiliated, ascertained that the average cost per man for the banquet was about \$3, so that it was decided that each man should receive a year's membership in the Red Cross, a paid-up subscription for the *Red Cross Magazine*, each costing \$1, and that the remaining \$1 be donated to the various chapters in the cities and towns in which the employees are located, for work either locally or nationally, as the chapter deemed expedient. In this way 1546 new members were added to the rolls of the Red Cross, this number of new subscriptions was turned over to the *Red Cross Magazine* and a similar amount of money, \$1,546, was turned into the various local Red Cross Chapters in North and South Carolina.

#### MANY EXPRESSIONS OF GOOD-WILL

In his letter of New Year's greeting to the employees President Taylor complimented the employees on their action in voting to give up the banquet this year for the Red Cross.

The publication of these facts in the various newspapers in territory served by the companies brought out many expressions of good-will.

## News Notes

**Roof of Car Blown Off.**—During the windstorm and blizzard on Feb. 26 the roof of a car on the Rome (N. Y.) Railway was blown clean off and fell in the street by the side of the track.

**Eighteen Cars Destroyed.**—Eighteen double-truck cars of the Public Service Railway were destroyed by fire on March 3 and the carhouse at Camden, N. J., was badly damaged. The loss is estimated at about \$150,000.

**Winnipeg Men Ask Increase.**—The trainmen in the employ of the Winnipeg (Man.) Electric Railway have asked the company for an increase in wages of from 2 to 3 cents an hour, effective from May 1. The present scale calls for wages from 28 cents an hour for the first six months to 36 cents an hour for the third year.

**Fort Dodge Officials Complete Tour.**—G. T. Motz, purchasing agent of the Fort Dodge, Des Moines & Southern Railroad, Boone, Iowa, and J. N. Duncan, master mechanic of the same railway, have finished their tour of inspection of the Illinois Traction System shops and power plants, as well as of track and line conditions.

**Wage Discussion Awaits Fare Award.**—Following a conference on March 2 between officials of the United Railways, St. Louis, Mo., and representatives of the newly formed union, it was announced that negotiations relative to the demands for higher wages will be put over until such time as the Missouri Public Service Commission decides whether the company may increase its revenue.

**Tax and Fare Cases Set for March 13.**—Hugh M. Caldwell, corporation counsel of Seattle, Wash., has been advised that March 13 has been set for arguing before the Supreme Court the case of the Puget Sound Traction, Light & Power Company for the collection of the 2 per cent tax on 1916 railway revenues. The 4-cent ticket case, decided against the city by the Superior Court of Thurston County and appealed by the city, has also been set for March 13.

**Agreement Reached on Lay-Offs.**—Officials of the Rhode Island Company, Providence, R. I., and the union of employees have reached an agreement for the payment of platform men for the lay-offs resulting from the discontinuance of all-night schedules. The company has agreed to pay the men for the time they lay off at the carhouse as if they were on trips. It is part of the agreement, however, that these men are subject to call and can be used for any work performed by platform men.

**Increase in Wages in Galveston.**—Trainmen in the employ of the Galveston (Tex.) Electric Company and of the Houston (Tex.) Electric Company, have received wage increases. The raise amounts to 2 cents an hour and will make the schedule range from 27 cents an hour for men in their first year to 32 cents an hour for men in their fifth year. The same scale is announced for both Galveston and Houston. This is the fourth voluntary increase granted by the companies within the last two years.

**Hudson Tunnel Bill Signed.**—Governor Edge of New Jersey has signed the three bills formally launching the interstate projects of linking New Jersey to New York City by a vehicular tunnel under the Hudson River and connecting New Jersey with Pennsylvania by a bridge over the Delaware River between Camden and Philadelphia. It has been estimated that the cost of the tunnel and bridge will be approximately \$25,000,000, of which New Jersey will pay half. New York will spend about \$6,000,000 as her share of the tunnel work.

**Sees Help in Electric Railways.**—The use of the electric railways of New Jersey for carrying freight and the construction of a barge canal from the Hudson River at Piermont, N. Y., to the Hackensack River at New Milford, N. J., are among suggestions made by Archibald N. Jordan, to the New York-New Jersey Joint Port Improvement Commission. Mr. Jordan also suggests that as a part of a general plan to relieve the present congestion of freight in the New York district, the abandoned piers at Piermont and Sandy Hook should be immediately rebuilt and extended to provide for the export of army supplies.

**Recommends Putting Off Transit Construction.**—W. S. Twining, director of city transit of Philadelphia, Pa., has recommended to Mayor Smith the abandonment, during the war, of the extensive high-speed transit program to be constructed out of the city loan for \$67,100,000, authorized on June 19, 1916. Action will probably be taken on the recommendations shortly, but it is planned that the work on the contracts held by the Keystone State Construction Company will not be started. This company has the awards for the subway lines south from City Hall to Pine Street and north from City Hall to Buttonwood Street. The two contracts aggregate \$6,000,000.

**Would-Be Regulator Has Change of Heart.**—The elaborate measure for regulation and prospective purchase by the city of the properties of the Louisville Railway introduced by Alderman W. H. Zeiser, in the General Council at Louisville, Ky., has been withdrawn by its author. In withdrawing the bill the Alderman stated that he did not believe Louisville was ready for the reforms and also that he did not think the railway was in position to stand the extra expense that would attach to the operation of the measure. Some of the things which the painter-regu-

lator sought to bring about were referred to in the *ELECTRIC RAILWAY JOURNAL* of Feb. 9, page 291.

**Discharge of Employee Sustained.**—A board of arbitration has approved the action of the Cleveland (Ohio) Railway in the discharge of Motorman Louis Yellon, whose car ran down and killed another employee of the company. The claim was made by Yellon that the accident was due to a frosted window. The board recommended that Yellon be employed in some other capacity by the company if he asked for it, and that further study be made of plans for preventing windows in the vestibules from frosting. Miss Florence Allen, attorney and suffragette, was chosen by the men as a member of the arbitration board to decide the matter.

## Programs of Meetings

### New England Street Railway Club

The eighteenth annual meeting and dinner of the New England Street Railway Club will be held at the Copley-Plaza Hotel, Boston, Mass., on March 28. The club has secured John W. Weeks, United States Senator from Massachusetts, and Thomas N. McCarter, chairman of the Electric Railway War Board and president of the Public Service Railway of New Jersey, as speakers for the meeting. Guy A. Ham will preside as toastmaster. The club urges those who plan to attend to make their reservations at once.

### New York Railroad Club

The fourteenth annual electrical night of the New York Railroad Club will take place on March 15. The subject is: "Recent Electric Locomotive Design." Edwin B. Katte, chief engineer electric traction of the New York Central Railroad, and chairman of the committee in charge, has announced the following program:

The New Haven Railroad's new 180-ton passenger locomotive; to be described by F. R. Hill.

The St. Paul Railroad's new gearless, bi-polar passenger locomotive under construction by the General Electric Company, will be described by A. H. Armstrong, with lantern slide illustrations from photographs of the general drawings.

The St. Paul Railroad's new quill-gear locomotive under construction by the Westinghouse Electric & Manufacturing Company, will be described by F. H. Shepard of the Westinghouse Company and illustrated by lantern slides.

The New York Central Railroad's latest electric passenger locomotive will be briefly described by Mr. Katte and illustrated by lantern slides.

There will also be moving pictures showing a heavy steam passenger train on the New York Central arriving at Harmon, the electric terminal. An electric locomotive will be shown being attached to the train, and the train will later be shown under electric operation.

# Financial and Corporate

## Port Arthur Loses Money

The Net Loss on All Municipal Undertakings for the Year Was \$55,425

In 1916 2,748,213 passengers traveled on the cars of the Port Arthur (Ont.) Municipal Railway. On July 25, 1917, the railway fares in the city were reduced. On the main line the rates are doubled at the boundary between Port Arthur and Fort William. During 1917 tickets totaling 3,246,953 were sold.

On the main line, as well as on each belt line, the number of passengers traveling steadily increased each month, but the increase was not sufficient to make up the decrease in the price of tickets within the city. The main line, however, made up at least \$2,000 each month since the change.

The electric railway revenue in 1917 amounted to \$125,000, being an increase of \$19,000 over 1916. The net deficit on the railway, however, was \$8,000 less than in 1916. The net earnings exceeded the operating expenses by \$23,000, but this excess was not sufficient to clear the interest on investment, depreciation charges and in sinking fund payments.

To sum up the position as regards public utilities during the last year Port Arthur faced a loss on its railway, telephone and water, and had a surplus on its light and power and Current River improvement accounts, the net loss for the year being \$55,425.

## Dallas Return 4½ Per Cent

An approximate annual return of 4½ per cent on the fixed valuation was shown by the Dallas (Tex.) Railway during the three months ended Dec. 31, 1917, according to the report just filed with the City Commission. The new service-at-cost franchise permits the company to make a return of 7 per cent. The report shows a total balance of \$22,241.88 available for authorized return. A summary follows:

|  |           |
|--|-----------|
| Gross earnings:                                      |           |
| Railway .....  | \$126,523 |
| Interurban terminal .....                            | 9,103     |
| Total gross earnings.....                            | \$135,627 |
| Operating expenses, plus appropriations to reserves: |           |
| Railway .....  | \$108,086 |
| Interurban terminal .....                            | 5,298     |
| Total .....  | \$113,385 |
| Balance available for authorized return .....        | \$22,241  |

## Commissioners Confer on Finances

Travis H. Whitney of the Public Service Commission for the First District of New York went to Washington recently for a conference between the special war committee of which he is a member and state commissions throughout the country. The principal

purpose of the conference was to express the attitude of the national government on the matter of the issuance of securities by public service corporations so that the various state commissions may work in harmony with the federal authorities. It is the desire that expenditures for public utilities shall be kept down to a minimum and in consequence a considerable amount of work previously considered necessary for the completion of the dual system of rapid transit lines has been postponed.

The Brooklyn Rapid Transit Company is required to refinance about \$60,000,000 of notes falling due on July 1 and the Interborough Rapid Transit Company desires to issue \$40,000,000 of additional bonds already authorized by the Public Service Commission for equipment expenditures under the dual system contract. The city of New York will also need to make an issue of bonds during the year in order to provide for the payment of subway construction.

## Indiana Road May Be Junked

Thomas Flinn, who purchased the property of the Bluffton, Geneva & Celina Traction Company, Bluffton, Ind., at foreclosure last fall, has been authorized by the Indiana Public Service Commission to junk the road after grain in the elevators along the line has been moved to railroad connections. The road was sold at a receiver's sale on Oct. 13, 1917, for \$118,000. Farmers along the road promptly appealed to the commission to prevent Mr. Flinn from abandoning the road. In his answer to the commission Mr. Flinn declared that the Circuit Court ordered the road sold unconditionally after it had been ruled that the company operating it was insolvent; that he bought the property without any conditions, and that the railroad was his to do with as he pleased. For these reasons he asked the Public Service Commission to deny the petition of the people living along the line.

## Interest on Income Bonds Passed

Announcement is made that the New York (N. Y.) Railways has passed the interest on its adjustment income 5 per cent mortgage bonds for the six months ended Dec. 31 last. The company paid no interest on its income bonds during the first six months of 1917. This is the first year since 1912 in which nothing has been disbursed to the income bondholders. In 1916, 5.17 per cent was paid on the issue; in 1915, 3.14 per cent; in 1914, 3.63 per cent; in 1913, 3.88 per cent, and in 1912, 0.77 per cent.

There are \$30,626,977 of these bonds outstanding, the interest upon which is adjusted at the end of each six-month

period, all surplus over and above interest requirements on the company's other outstanding bonds being available for the adjustment 5s. At the time the strike of employees of the New York Railways began a little more than a year ago the company appeared to be in line to pay the full 5 per cent on its adjustment income bonds as its earnings were showing up well in comparison with previous years.

The company has allowed 20 per cent for depreciation and has approximately \$2,000,000 in its depreciation fund, which in the event of the decision of the lower court being overruled by the higher court will be made available for such purposes as may be determined by the management. The income bond holders maintain that they are entitled to the money, whereas the management of the company asserts that it should be utilized for other purposes, or perhaps retained in that particular account to safeguard against the developments of the future.

## Des Moines 1917 Earnings

After paying all expenses, including depreciation, the Des Moines (Iowa) City Railway had a surplus of only \$14,239 as a result of 1917 business. Gross earnings for the year showed a gain over the previous year of \$140,000, but the operating expenses increased about \$180,000. The amount spent for improvements during the year totaled \$803,199.

The annual financial statement of the company for the calendar year 1917 as filed with the City Council is as follows:

|                            |             |
|----------------------------|-------------|
| Operating revenue .....    | \$1,527,121 |
| Operating expenses .....   | 976,823     |
| Net operating revenue..... | \$550,297   |
| Taxes .....                | 93,792      |
| Operating income .....     | \$456,504   |
| Non-operating income ..... | 2,898       |
| Gross income .....         | \$459,403   |
| Interest charges .....     | 324,682     |
| Net income .....           | \$134,721   |
| Depreciation .....         | 120,481     |
| Surplus .....              | \$14,239    |

Some of the larger increases in expense for 1917 were as follows:

|                                      |          |
|--------------------------------------|----------|
| Wages, conductors and motormen...    | \$35,772 |
| Interest .....                       | 47,273   |
| Taxes .....                          | 18,791   |
| Fuel for power.....                  | 29,923   |
| Power plant employees.....           | 3,453    |
| Carhouse employees .....             | 6,054    |
| Miscellaneous car-service expense... | 5,360    |

## \$100,000 for Seattle Valuation

H. M. Caldwell, corporation counsel of Seattle, Wash., has advised the City Council that in his judgment \$100,000 is the amount that should be filled into the bill authorizing the employment of experts to make a valuation of the properties of the Puget Sound Traction, Light & Power Company. To date the company has not intimated that it will ask for an order increasing the rate of fare from 5 cents to 6 cents, although the Public Service Commission has given notice that it will consider such an application.

# Financial News Notes

**Reduction in Par Value Put Off.**—The directors of the Cities Service Company, New York, N. Y., have abandoned the plan to issue ten shares of new common stock for each \$100 share outstanding.

**New St. Louis Director.**—F. O. Watts, president of the Third National Bank, St. Louis, Mo., has been elected a director of the United Railways, St. Louis, Mo., to replace John C. Roberts, resigned.

**Additional Bonds to Be Sold.**—The Ohio Public Utilities Commission has authorized the Western Ohio Railway, Lima, Ohio, to sell \$500,000 of its general mortgage 6 per cent gold bonds at 80, the proceeds to be used in making additions, extensions and improvements.

**Toronto Dividend Reduced.**—The directors of the Toronto (Ont.) Railway have declared a quarterly dividend of 1 per cent on the capital stock, payable on April 1. This compares with a previous quarterly rate of 2 per cent, which has been paid regularly since September, 1911.

**Middle West Stock Dividend.**—The directors of the Middle West Utilities Company, Chicago, Ill., have declared the regular quarterly dividend of 50 cents a share on the common and a stock dividend of \$1 a share, both dividends payable on April 1 to stock of record of March 15.

**Notes Extended a Year.**—The Illinois Public Utilities Commission has authorized the Aurora, Elgin & Chicago Railroad, Wheaton, Ill., to extend for one year the \$800,000 of outstanding three-

year 6 per cent notes which matured on March 1. The notes are secured by pledge of \$1,067,000 of Aurora, Elgin & Chicago Railroad first and refunding mortgage 5 per cent bonds due in July, 1946.

**Common Dividend Passed.**—The directors of the Virginia Railway & Power Company, Richmond, Va., have omitted the semi-annual dividend payment on the common stock usually payable in April. The board announced this action necessary in view of "the heavy expenditures required to provide the extraordinary service demanded by war activities, and the large increase in operating expenses due to wage increases and the heavy increases in cost of all supplies that are used by the company."

**\$150,000 Depreciation to Be Used.**—The California Railroad Commission has authorized the United Railroads, San Francisco, to use \$150,000 deposited in its depreciation fund to reimburse its treasury in part for expenditures for additions and betterments to its system from July, 1915, to December last. In a former decision in August, 1915, the commission directed the United Railroads to charge annually because of depreciation, \$550,000, of which \$300,000 might be expended for construction of additional facilities and extensions, and for the purpose of fulfilling franchise obligations, or for the improvement of service as authorized by the commission. The company reports that from July 1, 1915, to Dec. 31, 1917, it has expended for the improvement of its system \$617,742. By former orders, the commission has authorized the company to draw upon its depreciation fund to the extent of \$450,000 for the purpose of paying in part for the improvements.

**Modified Refunding Plan Operative.**—The protective committee representing the depositing certificate holders of the Dry Dock, East Broadway & Battery Railroad, New York, N. Y., has announced that the modified refunding plan adopted on July 7, 1917, has become binding upon all the depositing certificate holders. On Nov. 28, 1917, the Public Service Commission granted a final order providing for the refunding of the \$1,100,000 of certificates of indebtedness by the issuance of \$650,000 Series C refunding bonds. The protective committee has accordingly instructed the Union Trust Company to surrender all the 5 per cent deposited certificates of indebtedness to the Central Trust Company, New York, as trustee under the refunding mortgage made by the Dry Dock Railroad on Nov. 28, 1917. The new bonds will be registered in the names of the holders of deposit receipts as on the books on Feb. 15, but if desired the bonds may be converted into coupon bonds of the par value of \$100.

**City a Hard Taskmaster.**—Receivership proceedings are reported to have been brought in the district court at Nevada, Mo., by the Light & Development Company, St. Louis, Mo., against the Fort Scott Gas & Electric Company, Fort Scott, Kan., operating 7 miles of electric railway in that city. The local company at Fort Scott is feeling the war-time pinch. It would seem that it considers itself unduly burdened by municipal restrictions. Relief from these might furnish a way out. Conferences looking toward that end have been arranged according to one of the local papers which said recently: "Judge Kelso, chief counsel for the Light & Development Company, who filed the receivership suit, and Mr. Porter, one of the chief operating officers of the company, are in conference with the company's officials and with members of the Chamber of Commerce, to determine whether or not there is a possibility of getting the city off the company's back so as to make it possible for it to continue the operation of the plant without the cost incident to a receivership."

## Electric Railway Monthly Earnings

### BANGOR RAILWAY & ELECTRIC COMPANY, BANGOR, ME.

| Period         | Operating Revenue | Operating Expenses | Operating Income | Fixed Charges | Net Income |
|----------------|-------------------|--------------------|------------------|---------------|------------|
| 1m., Dec., '17 | \$83,790          | *\$45,341          | \$38,449         | \$19,665      | \$18,784   |
| 1 " " '16      | 73,741            | *41,805            | 31,936           | 18,654        | 13,282     |
| 12 " " '17     | 886,120           | *502,053           | 384,067          | 228,442       | 155,625    |
| 12 " " '16     | 829,988           | *460,877           | 369,111          | 214,916       | 154,195    |

### COMMONWEALTH POWER, RAILWAY & LIGHT COMPANY, GRAND RAPIDS, MICH.

| Period         | Operating Revenue | Operating Expenses | Operating Income | Fixed Charges | Net Income |
|----------------|-------------------|--------------------|------------------|---------------|------------|
| 1m., Dec., '17 | \$1,996,288       | *\$1,338,117       | \$658,171        | \$454,220     | \$203,951  |
| 1 " " '16      | 1,733,278         | *972,807           | 760,471          | 420,273       | 340,198    |
| 12 " " '17     | 19,723,736        | *12,285,005        | 7,438,731        | 5,289,106     | 2,149,625  |
| 12 " " '16     | 16,962,607        | *9,276,038         | 7,686,569        | 5,034,827     | 2,651,742  |

### CHATTANOOGA RAILWAY & LIGHT COMPANY, CHATTANOOGA, TENN.

| 1m., Dec., '17 | Operating Revenue | Operating Expenses | Operating Income | Fixed Charges | Net Income |
|----------------|-------------------|--------------------|------------------|---------------|------------|
| '17            | \$132,286         | *\$131,844         | \$442            | \$31,164      | †\$30,722  |
| '16            | 110,760           | *88,869            | 21,891           | 30,159        | †8,268     |
| '17            | 1,356,342         | *1,138,903         | 217,439          | 359,785       | †142,346   |
| '16            | 1,235,623         | *823,444           | 412,179          | 356,324       | 55,855     |

### EAST ST. LOUIS & SUBURBAN COMPANY, EAST ST. LOUIS, ILL.

| 1m., Dec., '17 | Operating Revenue | Operating Expenses | Operating Income | Fixed Charges | Net Income |
|----------------|-------------------|--------------------|------------------|---------------|------------|
| '17            | \$357,987         | *\$243,634         | \$114,353        | \$69,883      | \$44,470   |
| '16            | 296,312           | *184,854           | 111,458          | 63,749        | 47,709     |
| '17            | 3,692,471         | *2,481,519         | 1,210,952        | 785,382       | 425,570    |
| '16            | 3,027,699         | *1,820,774         | 1,206,925        | 755,033       | 451,892    |

### CITIES SERVICE COMPANY, NEW YORK, N. Y.

| 1m., Dec., '18 | Operating Revenue | Operating Expenses | Operating Income | Fixed Charges | Net Income  |
|----------------|-------------------|--------------------|------------------|---------------|-------------|
| '18            | \$2,031,462       | \$30,971           | \$2,000,491      | \$205         | \$2,000,286 |
| '17            | 1,854,449         | 21,729             | 1,832,720        | 297           | 1,832,423   |
| '18            | 19,429,505        | 366,471            | 19,063,034       | 2,770         | 19,060,264  |
| '17            | 11,301,249        | 242,904            | 11,058,345       | 216,291       | 10,842,054  |

### GRAND RAPIDS (MICH.) RAILWAY

| 1m., Dec., '17 | Operating Revenue | Operating Expenses | Operating Income | Fixed Charges | Net Income |
|----------------|-------------------|--------------------|------------------|---------------|------------|
| '17            | \$117,238         | *\$87,260          | \$29,978         | \$19,945      | \$10,033   |
| '16            | 119,184           | *61,871            | 57,313           | 17,740        | 39,573     |
| '17            | 1,303,860         | *910,176           | 393,684          | 218,215       | 175,469    |
| '16            | 1,297,586         | *828,025           | 469,561          | 186,919       | 282,642    |

### CUMBERLAND COUNTY POWER & LIGHT COMPANY, PORTLAND, ME.

| 1m., Dec., '17 | Operating Revenue | Operating Expenses | Operating Income | Fixed Charges | Net Income |
|----------------|-------------------|--------------------|------------------|---------------|------------|
| '17            | \$249,608         | *\$181,090         | \$68,518         | \$70,201      | †\$1,683   |
| '16            | 245,904           | *163,667           | 82,237           | 66,210        | 16,027     |
| '17            | 3,081,927         | *2,054,046         | 1,027,881        | 820,400       | 207,481    |
| '16            | 2,866,997         | *1,775,487         | 1,091,510        | 809,342       | 282,168    |

### LEWISTON, AUGUSTA & WATERVILLE STREET RAILWAY, LEWISTON, ME.

| 1m., Dec., '17 | Operating Revenue | Operating Expenses | Operating Income | Fixed Charges | Net Income |
|----------------|-------------------|--------------------|------------------|---------------|------------|
| '17            | 062,331           | *\$61,625          | \$706            | \$15,665      | †\$14,959  |
| '16            | 63,270            | *50,711            | 12,559           | 15,401        | †2,842     |
| '17            | 898,373           | *683,684           | 214,689          | 186,689       | 28,000     |
| '16            | 803,660           | *553,296           | 250,364          | 187,773       | 62,591     |

### COLUMBUS RAILWAY, POWER & LIGHT COMPANY, COLUMBUS, OHIO

| 1m., Dec., '17 | Operating Revenue | Operating Expenses | Operating Income | Fixed Charges | Net Income |
|----------------|-------------------|--------------------|------------------|---------------|------------|
| '17            | \$385,269         | *\$290,974         | \$94,295         | \$49,535      | \$44,760   |
| '16            | 336,954           | *200,513           | 136,441          | 43,565        | 92,876     |
| '17            | 4,024,186         | *2,943,929         | 1,080,257        | 558,589       | 521,668    |
| '16            | 3,537,399         | *2,105,124         | 1,432,275        | 516,373       | 915,902    |

### NASHVILLE RAILWAY & LIGHT COMPANY, NASHVILLE, TENN.

| 1m., Dec., '17 | Operating Revenue | Operating Expenses | Operating Income | Fixed Charges | Net Income |
|----------------|-------------------|--------------------|------------------|---------------|------------|
| '17            | \$223,117         | *\$136,403         | \$86,714         | \$40,137      | \$46,577   |
| '16            | 216,914           | *124,162           | 92,752           | 42,128        | 50,624     |
| '17            | 2,458,321         | *1,589,418         | 868,903          | 490,071       | 378,832    |
| '16            | 2,383,041         | *1,453,188         | 929,853          | 508,971       | 420,882    |

\*Includes taxes. †Deficit.



# Traffic and Transportation

## Northern Ohio's Case

Company at Akron Presents Statement of Earnings for the Years 1917 and 1916

A. C. Blinn, vice-president and general manager of the Northern Ohio Traction & Light Company, Akron, Ohio, recently made public a statement in which he set forth the conditions under which the company has been operating and the necessity for increasing its revenues. The statement was made in connection with the financial report of the company for the year 1917. The results for 1917 were compared with those for 1916, together with columns showing the increase and decreases in earnings and the percentages. In conclusion Mr. Blinn said:

"From these facts it can be readily seen that the Northern Ohio Traction & Light Company stands little chance of raising the new capital needed for extensions, new equipment and betterments, if its earnings continue to diminish as they must unless its revenues can be increased.

"The cold logic of the situation is that without increased earnings extensions and improvements must be postponed until more favorable conditions develop.

### ANY LET-UP IN WORK A CALAMITY

"I do not believe any thinking citizen wants affairs to take this turn. Personally, I should regard any let-up of improvement to this property as a public calamity. The industrial and commercial growth of the territory demands the largest possible development of the transportation and power services of this company; and anything that would retard the latter would seriously hamper the former. I do not believe the people of this territory want such a condition to arise.

"It can be prevented only by increasing revenues. This can be done in but one way—by permitting a fair and reasonable increase in fares and rates. When the situation is known and understood, I do not believe any reasonable person will object to paying a trifle more for his car ride—as he does for his bread and meat and everything else he eats and everything he wears. The majority of people have accepted philosophically the advanced prices charged for everything they use. They are paying their war taxes in postage and on tobacco, theater tickets and the like without a murmur. They realize that the manufacturer and merchant must have more for their wares or go out of business and they accept the situation without complaint.

"When it is realized that this company is in the same position as the individual and every other business enterprise—that it, too, is paying ad-

vanced prices for everything, I do not believe there will be serious objection to the trifling increase which will enable it to carry on its work of serving the public efficiently and earning a fair and reasonable profit.

### THE PUBLIC'S INTEREST

"The situation is one in which the public has a vital interest—I think an interest as great as that of the company. It should be understood that the company is not a thing apart from the communities it serves. On the other hand it is a vital part of those communities. It has the same interest in the growth and prosperity of these places as all other industries. When the city prospers, the company shares in the general good times. When the city meets with adverse conditions, the company must suffer with it. The interests of city and company are inseparably bound together, and in proportion as they work together both will prosper and grow.

"I have stated the facts frankly and openly because I believe the people are entitled to know just what the conditions are, to the end that, through better understanding and closer co-operation, we may get together and bring about a better service and go forward with the industrial and commercial development of this great section of Ohio."

The company has placed in its city cars in Akron and Canton, on its inter-urban cars and at its most important agencies a four-page bulletin containing the letters of President Wilson and Secretary McAdoo on public utilities and the report made to Congress by John Skelton Williams, Comptroller of the Currency.

## One Way Out

Portland Committee Thinks Its Tentative Franchise Draft Offers Solution of Fare Problem

A tentative draft of a proposed railway franchise, covering all the present lines of the Portland Railway, Light & Power Company, Portland, Ore., has been prepared by a committee from the Chamber of Commerce and various civic organizations, and presented to Franklin T. Griffith, president of the company, for his consideration. The franchise would relieve the company of all costs of street improvements, bridge tolls, free transportation for firemen and policemen, car license tolls, and provide for a 5-cent fare in the city.

It is pointed out by the committee in support of the franchise that under the grant the company could probably furnish adequate service for 5 cents. G. L. Rauch is chairman of the committee.

## Commission Has Power

Missouri Body Rules It Is Authorized to Hear Appeal for Fare Increase in St. Louis

The Public Service Commission of Missouri, by a vote of three to two, has overruled the contention of the city counselor of St. Louis, Mo., that the commission had no power to hear the application of the United Railways, St. Louis, for an increase in fares because of the fact that the company's franchise constituted a contract between the company and the city and limited fares.

The city counselor sent his brief to the commission in opposition on Feb. 25. In support of his contention Counselor Daues urged three points, as follows:

1. That the State Constitution contains a provision that no law passed by the General Assembly shall be valid unless the local authorities having control of the streets consent to such use.

2. In giving the consent required by this constitutional provision, the city may attach such conditions thereto as it deems necessary and proper.

3. That the ordinance under which the United Railways obtained consent to maintain and operate its system in the streets of St. Louis contains a provision limiting the fare of adults to 5 cents and of children to 2½ cents, and provides for universal transfers.

The brief said that the real question for the commission's decision was the construction that should be put upon the word consent. Mr. Daues held that the word as used in the Constitution has been judicially interpreted by the Supreme Court of Missouri. He quoted six decisions of the Supreme Court in support of his contention that the word "consent" has been construed as bestowing large powers on municipalities.

The United Railways brief, answering the contentions of City Counselor Daues and Mr. Woerner, set out the following:

1. That the constitutional provision cited by Counselor Daues and Mr. Woerner is intended merely as a limitation on the Legislature and is not a grant of power to the city.

2. That the conditions imposed by the city as the price of its consent for the use of the streets are subject to and must necessarily be in consonance with the laws of the State in force at the time of giving such consent or subsequently enacted.

3. That the city, in imposing franchise conditions such as the rate of fare, does not act in a sovereign capacity, or in its own behalf, but merely as the agent of the State, and the conditions it prescribes are therefore subject to modification or abrogation by the State.

In the company's brief attention was called to President Wilson's letter to Secretary of the Treasury McAdoo, on Feb. 22, in which the hope was expressed that to maintain street railways at their maximum efficiency during the war local authorities respond to their relief.

## New Jersey Company Seeks Seven-Cent Fare

Public Service Railway, Operating 840 Miles of Line, Needs More Revenue to Meet Present Unusual Conditions

Seven-cent fares and 2 cents for a transfer, with an additional cent where a second transfer is issued, are requested by the Public Service Railway, Newark, N. J., operating 840 miles of line, in a petition filed on March 5 with the State Board of Public Utility Commissioners at Trenton. The board has fixed March 14 at Trenton as the date for a hearing on the petition. The company has been instructed to furnish copies of the application to all municipalities, 146 in all, affected by the proposed increase.

### SUMMARY OF TEXT OF PETITION

The company set forth its petition in part as follows:

"In the year 1917 the cost of maintaining and operating your petitioner's railway system largely increased and will still further increase in 1918.

"In the year 1917 on account of increased costs of labor and materials the cost of maintenance and renewals of way and structures was \$405,514 more than it would have been at 1916 prices, and that due to the same causes the cost of maintenance and renewals of equipment of 1917 was \$183,657 more than the same would have been at 1916 prices.

"In the year 1917 the cost of power was \$658,339 more than the same power would have cost at 1916 prices.

"In the year 1917 the cost of conducting transportation, excluding the cost of power, was \$235,231 more than the same would have been at 1916 costs.

"In the year 1917 the taxes levied against your petitioner were \$279,142 more than those levied in 1916.

EXCESS COSTS \$1,761,885

"The sum of the excess costs in 1917 over 1916, as set forth above, is \$1,761,885.

"Notwithstanding the increased costs of labor and materials in the year 1917 over the costs of the same labor and materials in the year 1916, these costs have now very largely increased over the average 1917 costs, and will continue to increase during the year 1918.

"At the present costs of labor and materials the cost of maintenance and renewals of ways and structures in 1918 on the basis of work done in 1917 will be \$505,981 more than the cost of such maintenance and renewals in 1917, and the cost of maintenance and renewals of equipment in 1918 at present costs for labor and materials on the basis of work done in 1917 will be \$411,638 more than the cost of such maintenance and renewals in the year 1917.

"The cost of conducting transportation in 1918 at present costs on the basis of business done in 1917 will be \$621,236 more than the cost of the same in 1917.

"The sum of these increased costs for the year 1918 at present prices, on

the basis of the 1917 business, over what the same would have cost at 1917 prices as set forth above is \$1,538,856.

"The sum of these excess costs for the year 1917 over the year 1916 and of these excess costs for the year 1918 over the year 1917, all as shown above, is \$3,300,741.

"The cost of rails is now 94.6 per cent higher than the average cost of rails in the year 1916.

### OTHER COSTS

"The cost of track special work is now 109.5 per cent higher than the average cost of such special work in the year 1916.

"The cost of track labor is now 61.7 per cent higher than the average cost of such labor in the year 1916.

"The cost of car bodies is now 52.2 per cent higher than the average cost of car bodies in the year 1916.

"The cost of electric equipment of cars is now 66.7 per cent higher than the average cost of such equipment in the year 1916.

"The cost of all other materials and labor required by your petitioner, in the conduct of its business, has increased a large percentage over the average cost of such materials and labor in 1916.

"Your petitioner made capital expenditures for extensions and improvements in 1916 and 1917 of \$4,444,894, 8 per cent on which is \$355,591, and now needs large sums of money to maintain and improve its railway system in order to enable your petitioner to meet the present demands for service and to provide for the growing demands for service required by the government and by the public, and your petitioner, without the relief hereby asked for, will be unable to obtain the new capital necessary for such additional construction, equipment and extensions.

"In the year 1917 your petitioner carried 461,354,364 revenue and transfer passengers, of which number 22.15 per cent, or 102,201,402, were transfer passengers.

### WHAT THE COMPANY ASKS

"A charge of 7 cents in the rate of fare where 5 cents is now charged, a charge of 2 cents for the first transfer, and additional charge of 1 cent for a transfer issued on a transfer, would increase the annual revenue of your petitioner \$3,700,000.

"The present rates of fare charged by your petitioner are unjust, unreasonable and insufficient to allow your petitioner to furnish reasonable and adequate service, and maintain the integrity of the physical property, and that the increased rates of fare as stated previously are just and reasonable.

"Your petitioner therefore prays that your honorable body approve and by order fix 7 cents as the rate to be

charged by your petitioner where 5 cents is now charged, and in addition thereto a charge of 2 cents for each transfer issued on a cash fare and an additional charge of 1 cent for a transfer issued on a transfer, and that your petitioner may have such other and further relief as may seem reasonable and proper."

### PRESIDENT McCARTER'S STATEMENT

Thomas N. McCarter, president of the company, issued a statement as follows:

"In making an application to the State Utility Board for more revenue Public Service Railway is attempting to meet a most unusual situation which confronts it as the result of economic conditions arising out of the war. Abnormal demands have been and are being made upon the railway to provide transportation facilities for shipyards, munition plants and other industries that are directly engaged in war work and at the same time every element of cost that enters into the electric railway business has been going up to hitherto unheard-of levels.

"If the company is to meet the demands made upon it, if it is to provide cars for the thousands of extra war workers and if it is to keep its track and equipment in proper operating condition, it must have more revenue. The 5-cent fare does not cover the cost of electric railway transportation under existing conditions. It is obvious that such a state of affairs cannot go on indefinitely and the public must face the fact that it cannot continue to get its railway service for less than cost. In making up the revised rates of fare we have sought to secure only such additional revenue as will enable the company to provide adequate service and meet the abnormal costs of labor and material which the war has produced in our business as well as in all other businesses."

### City Marks Time

The City Council of Seattle, Wash., recently determined to take no action with respect to a possible increase of fares in Seattle until the Puget Sound Traction, Light & Power Company petitions the State Public Service Commission for such an order. The decision was made by the Council when a bill introduced by Corporation Counsel Hugh M. Caldwell was taken up. This measure provided for an appropriation of \$100,000 to employ experts to make a valuation of the company's property. Mr. Caldwell did not expect that this entire amount would be expended, but set the sum as a maximum expenditure. The judiciary committee was, however, directed to prepare a bill authorizing the corporation counsel to assist in the presentation of Tacoma's defense against complaints filed with the Public Service Commission against the company, charging inadequate service in that city. The corporation counsel warned the city that if the Public Service Commission assumed jurisdiction in the Tacoma case, and the case was dis-

posed of at an early date, a construction of the law might be obtained adverse to municipalities without the city of Seattle having an opportunity to participate in the litigation until after the law has been settled.

## Maine Fare Hearing

**Portland Case Adjourned by Utilities Commission for Several Weeks—Proposed Tariff Suspended**

The Public Utilities Commission of Maine on Feb. 25 opened the hearing on the application of the Cumberland County Power & Light Company, Portland, for increased fares on the lines of the Portland Railroad, operated under lease. The application is for a 6-cent fare in the central zone, covering the thickly populated sections of Portland and South Portland, and 2 cents on the mile zones on the interurban lines. The company consumed the day on the valuation made by George E. Haggas.

The valuation report as presented by Mr. Haggas included the following figures:

|   |             |
|---|-------------|
| Cost of reproduction (new) as of Dec. 31, 1917, the basis upon which the rate of return should be established .....           | \$8,614,361 |
| Cost of reproduction (new) less depreciation .....  | 7,518,458   |
| Mr. Haggas estimated that the proper annual reserve for depreciation was .....  | 134,500     |
| From his traffic survey he said he expected the proposed raise in rates to yield an increased gross revenue annually of ..... | 205,600     |

In his testimony A. H. Ford, vice-president and general manager of the company, said that the increased revenue was needed for expected increases in operating expenses for labor, materials, taxes, power and to provide a margin of safety on the fixed charges.

Before adjourning the meeting on Feb. 27 to meet again after two or three weeks the commission announced that the proposed increase in fares, which was to become effective on March 11, would be postponed for a period not exceeding three months.

## Another I. T. S. Hearing March 20

At the hearing of the objectors to the blanket petition of the Illinois Traction System for increased rates before the Illinois commission on March 5 and 6 witnesses for the company who appeared on Feb. 19 were cross-examined, and further testimony was presented following the objecting citizens. Champaign, Urbana, Danville, Bloomington, Granite City, Ottawa, Cairo, Galesburg and the Clinton Council approved the proposed rates and did not object. Jacksonville and Quincy waived cross-examination. The commission took all the motions under advisement and set March 20 for oral argument. By agreement the case of the Peoria Railway was postponed for sixty days. That city has retained Prof. E. W. Bemis to assist in opposing the straight 5-cent fare. The commission accepts the blanket petition as an emergency matter, and if the increase is granted it will retain jurisdiction.

## Portland Six-Cent Fare in Court

**Oregon Commission Regards Its Existence Threatened in Suit Brought by the City Against That Body**

Arguments in the case of the city of Portland versus the Portland Railway, Light & Power Company, in the matter of the 6-cent fare authorized by the Oregon Public Service Commission on Jan. 10, were begun in Circuit Court at Portland on Feb. 26. The city's case is presented by City Attorney La Roche, Martin L. Pipes and Wilson T. Hume. The Public Service Commission is represented by Attorney-General Brown and Deputy Attorney Bailey. The company is represented by Attorneys Harrison Allen, Frederick V. Holman, R. A. Leiter and W. C. Benbow.

### EXISTENCE OF COMMISSION THREATENED

Assistant Attorney-General Bailey, representing the Public Service Commission, in his speech on the opening day of the hearing, stated that the very existence of the commission was threatened in the court action now in progress, and that the commission will have lost its usefulness should the Courts decree that it has not the power to fix rates. Mr. Bailey reviewed the entire 6-cent fare controversy. He declared that the justice or injustice of the 6-cent fare was not at this time an issue before the court. He said:

"The only thing we have to consider in this case is whether or not the Public Service Commission had the jurisdiction to change these rates. It is the sole question here involved."

One of the points brought out by Attorney Bailey was the fact that a municipality at all times is only an agent of the State, and that any franchise or rate which is fixed by a municipality must be given or fixed with the understanding both by the city and by the public utility to whom the franchise is given that the State can at any time it sees fit step in and make different rules, rates and regulations. Attention was also called to the fact that Federal Judge Bean, in a case affecting the Portland Railway, Light & Power Company, where the City Council passed an ordinance compelling the railway to sell six tickets for 25 cents, granted the company a permanent injunction, holding that rate-fixing was vested in the Public Service Commission only.

### PREVIOUS CASE AS PRECEDENT

Frequent reference was also made to the Woodburn case, wherein the Supreme Court held that the Public Service Commission has the power to fix telephone rates, over the objections of the city of Woodburn. Attorney Bailey pointed out that the briefs to be filed in the present case will be almost identical in character to those filed in the Woodburn case.

Mr. Bailey's argument was based largely on the theory that the city of Portland is attacking the constitutionality of the act creating the Public Service Commission.

It is stated that the city will not

contend that the act is unconstitutional, but that the action of the commission in ordering the increase was a legislative act upon the part of its members, and therefore comes under the provisions of the laws of the State regarding the initiative and referendum. It is expected that this will develop as the strongest feature of the city's case, and it is stated by Commissioner Kellaher and City Attorney La Roche that a referendum vote on the 6-cent fare is possible.

It is expected that the city authorities will contend that the members of the State Commission were in session on legislative business when they directed the increase in fares, and that, therefore, under the law, a referendum may be filed by the people of Portland within ninety days time from the date such order was enacted.

## Fares in Ogdensburg

**Railway in That City Seeking Increase Has Paid No Return on Stock Since 1902**

The Ogdensburg (N. Y.) Street Railway recently presented its argument to the Public Service Commission of the Second District, under a petition which it has filed for authorization to increase its fares. There was no appearance by the city in opposition, and Judge Irvine, who presided, announced at the close of the hearing that he would correspond with the Ogdensburg officials and ascertain their views.

### SOURCE OF POSSIBLE DISCRIMINATION

State Hospital Commissioner Morgan asked that employees of the Ogdensburg hospital be afforded the same reduction privilege in the purchase of tickets as allowed mill employees, but N. F. Towner, representing the railroad, objected on the ground that the hospital was located at a distance from the city, that the haul was much longer and that there was a large added cost in operating in the winter months. Mr. Morgan said the hospital acted under an agreement with the railroad. He said he did not desire any preferences for the State employees over that accorded others. This discussion raised the question of whether there is a right to allow one person to ride on a ticket which cost him 3 cents and another person on a 5-cent ticket.

Paul B. Murphy, secretary and treasurer of the company, presented figures covering operation of the road for ten years. It developed that until in recent years the railroad has not been compelled to pay for power. No dividends were paid from April 1, 1902, to Dec. 31, 1917. It was shown that operating charges and tax valuations had increased and that contemplated street improvements would add to the company's expenses.

## Zone Fares Best for Rhode Island

### Special Legislative Commission Orders Adoption of System With Five-Cent Central Areas—Recommends Taxation and Franchise Reforms

An increase in fares through the adoption of a modified zone system, the abolition of municipal franchises, the elimination of paving obligations and a substantial reduction of taxes, are among the methods of relief recommended on March 7 by the special commission on Rhode Island Company affairs. This commission was appointed by the General Assembly early in 1917 to investigate the company's condition.

In accordance with the law creating the commission, that body has certified its findings to the Public Utilities Commission, and has ordered that the new rates of fare and the new transfer privileges be put into full force prior to April 1, 1918. The remainder of the commission's report is in the nature of recommendations made to the State Assembly.

#### ZONE SYSTEM IS FAVORED

The special commission declares that the flat 6-cent fare is inequitable and unjust, and it recommends and orders established a modified zone system with 5-cent central areas. In Providence the existing 5-cent fare limits are also adopted as new 7-cent fare limits, thus making a uniform increase for all persons in the area between the old and the new 5-cent zone limits.

Between the various central zones there will be intermediate 2-cent zones, and in general, it is said, the rate will be less than 2 cents a mile. To fit existing conditions, the length of zone varies somewhat, according to village or town lines.

The increase in fare between Providence and Woonsocket is 6 cents, from 20 to 26 cents. The fare between Providence and Pawtucket is increased to 7 cents, but the patron will hereafter be allowed to have a transfer at either end of the ride, a privilege now denied.

#### VALUE OF PROPERTY

The special commission finds that the true value of the company's property is \$29,000,000, and that it is entitled to a 6 per cent return on that sum, which would amount to \$1,740,000. It is also found that the company is now rendering service that compares favorably with service in other cities.

The commission has determined that the actual cash invested in the company is \$28,802,590. It reports that the Narragansett Pier division, being a steam road, has no logical position as a branch of the Rhode Island Company, and, therefore, does not figure it in the valuation of the company.

#### OTHER REMEDIES RECOMMENDED

The subject of taxation is discussed at considerable length in the report, and it is shown that the Rhode Island Company pays more than \$500,000 a year in the form of taxes. This sum, the commission finds, is "extremely exces-

sive." The company, the report shows, is under the jurisdiction of forty-two different authorities.

It is recommended that all municipal franchises be repealed and that all franchise taxes be cancelled. Local control should also be abolished, the report finds, and the Public Utilities Commission should have original and full jurisdiction over the company. The special commission recommends that the paving obligation be abolished, as it now stands, and the company pay only for what it destroys.

## Fare Request Refused

### Council of Columbus, Ohio, Rejects Appeal for Advance from Eight to Six Tickets for a Quarter

The City Council of Columbus, Ohio, on Feb. 26, refused the request of the Columbus Railway, Power & Light Company for an increase of fare from eight tickets for 25 cents to six tickets for 25 cents. This refusal was based on the following reasons:

1. It would be considered unlawful.
2. The request is unjust and unwarranted.
3. Present fares are thought adequate with efficient management.

Councilman Weinland argued that the company has no more right to ask for an increase in the rate of fare than he would to ask for a reduction of the rate of interest on a real estate loan.

Councilman Zimpfer asserted that it is not more revenue the company needs, but more efficiency in management.

Councilman Alcott based his objection on Section 3771 of the General Code which, he said, provides that "The municipality shall not, during the term of such grant or renewal, release the grantee from any obligation or liability by the terms of such grant or renewal of grant."

#### INVESTIGATING COMMITTEE PROPOSED

At the suggestion of City Attorney Scarlett, a committee will be appointed to employ a railway expert to make a survey of the company's property and books and ascertain the facts in the case.

The company has begun a series of advertisements in the local newspapers to acquaint the public with the necessity for an increase in the rate of fare.

#### PRESENT BURDEN TOO GREAT

The company says that the unusually low rate of fare was made in the interest of the public, and the terms of the franchise might have been carried out successfully under normal conditions, but now that revolutionary changes have come about, the company finds the present burden beyond its power to bear.

Attention is also called to a mistake people have been making in interpret-

ing the terms of the contract. The franchise provided for a reduction in the rate of fare when the gross receipts reached \$1,750,000. The gross receipts exceeded this amount in 1912 and the ticket fare was reduced to eight tickets for 25 cents. Gross receipts and profits have accordingly become confused in the minds of many, with the result that the impression prevails that the company is already making money and still wants to increase its fares.

Another advertisement appeals to the women of the city. Women use the cars more than do men. It is believed they will see the analogy between the greatly increased prices of other commodities and the requested increase in the rate of fare. They understand the fact that an income or allowance, fixed several years ago, will not cover the necessities of the household at present, and there is a similarity between this and the income of the company which was likewise fixed when there was no thought of the prices asked now for materials and the necessary demands of labor.

## Wants Fare Case Dismissed

### City of New York, Through Assistant Corporation Counsel, Wants Third Avenue Railway Appeal Denied

The Public Service Commission for the First District of New York was asked on Feb. 28 to dismiss or postpone the hearings on the application of the Third Avenue Railway for permission to charge 2 cents for transfers as a means of financial relief. The motion in question was made by John P. O'Brien, assistant corporation counsel representing the city of New York.

#### NORTH SHORE DECISION QUOTED

He based his motion on a recent decision of the commission in the New York & North Shore Traction Company case, in which the commission held that it had no power to grant the company the desired increase, because the franchise fixed the maximum fare at 5 cents. This decision was abstracted in the *ELECTRIC RAILWAY JOURNAL* of Jan. 19, page 125.

Mr. O'Brien contended that in some of the franchises granted to the Third Avenue Railway and its subsidiaries, provisions were made for a maximum 5-cent fare. He further contended that the proposal to charge 2 cents for transfers was tantamount to a proposal to increase the fare, and hence the case stood in exactly the same position as that of the North Shore company, namely, that the commission had no power to act. Mr. O'Brien's motion was denied, with the right to renew it on a future occasion should it develop that his contention was sound.

The hearing on Feb. 28 was largely taken up with the preliminary examination of Charles E. Schuyler, a real estate appraiser, who had made an inspection of the company's land and buildings. The hearings have been adjourned until March 11.

## Low Fare Tickets Stand

**New Jersey Court of Appeals Holds Company Must Sell Six-for-a-Quarter Tickets**

The New Jersey Court of Errors and Appeals handed down a decision on March 4 sustaining the Supreme Court of New Jersey and the Board of Public Utility Commissioners of New Jersey in the fight by the people of Trenton to prevent the Trenton & Mercer County Traction Corporation from abolishing the six-for-a-quarter tickets in Trenton. If the case is carried up it must now go to the United States Supreme Court. The same question is now hanging fire in the United States District Court. Justice Swayze of the New Jersey Supreme Court says that the Board of Public Utility Commissioners had jurisdiction in the case after the company claimed the State board was without jurisdiction. The Supreme Court says in part:

"We think there was a valid contract requiring the company to sell six tickets for a quarter, and hence the Board of Public Utility Commissioners might well conclude that such a rate was just and reasonable under the circumstances of the case."

## Brooklyn Service Order

**B. R. T. Required to Carry Time-table Data in Each Car on its Surface Lines**

The Public Service Commission for the First District of New York announced on March 5 the adoption of an order directing the Brooklyn Rapid Transit Company to place in each surface car a sign bearing the run number of the car and the schedule on which it is being operated, together with the time-table for the line operating the car. The order was presented by the committee on complaints, consisting of Commissioners Charles S. Hervey and F. J. H. Kracke, as the result of an investigation extending over several weeks into complaints against the company.

The order affects the operating units of the Brooklyn Rapid Transit System, and covers all surface lines in the Borough of Brooklyn.

Failure of the companies to operate their cars according to the schedules on file and within the prescribed limits of the new regulation will constitute a violation of the order and will be subject to the penalties imposed by the public service law.

Commissioners Hervey and Kracke made public a memorandum, submitted by them to the commission in connection with the new order, in which they said:

"Almost immediately upon taking up its work the committee on complaints became convinced that, because the operating schedules of surface railroad lines generally were not under formal commission order, satisfactory control was practically impossible. The committee now feels that the maintenance of regular and adequate service on

street surface lines can be enforced only if the companies are required to file definite schedules and if non-compliance with those schedules is made a violation of an order of the commission."

## Passenger May Elect

**Where Two Rates Exist Between Points the Passenger May Decide Under Which He Will Travel**

The Public Service Commission of Indiana on Feb. 22 held "that where a railroad publishes and files two passenger rates between two points on its lines, one a through rate, the other a combination of two intermediate rates, the passenger may elect as to which rate he will contract for passage under."

The case concerned was one brought by the Carmel Commercial Club against the Union Traction Company of Indiana. The company has a regular rate of 30 cents between Indianapolis and Carmel and vice versa. Also it has a rate of 19 cents between Carmel and Forty-sixth Street, Indianapolis, and 5 cents between Forty-sixth Street and the Traction Terminal Station and vice versa. Under the combination of fares the rate is only 24 cents.

Some time ago a number of Carmel business men got on an interurban car at Carmel, proposing to pay the two rates of 19 and 5 cents. The conductor contended that he must charge them 30 cents and the case was carried to the

## A Weekly Railwayman

**Kansas City Railways Carries Its Case Direct to the Public in a Paper Distributed on the Cars**

The Kansas City (Mo.) Railways, assisted by a member of the Public Service Commission of the State, by weather conditions and advertising, was able by the second week of February to restore the schedules that had been maintained last July. The active cooperation of the commission was extended through a member who at the request of the company was appointed to spend some time in Kansas City to observe the operation and problems of the railway.

The company had for several months been advertising extensively over the territory for men. While there has been a comparatively satisfactory response to the advertising, an insufficient number of applicants has proved to be qualified either in preliminary examination or in trial. The company was willing to go to the limit in securing additional men, and on Jan. 21 increased the rate of pay for men while in training from 50 cents to \$1.50 a day. The company also reduced the requirements of deposits by new men from about \$12 to \$5. Warmer weather late in January made it more comfortable for men to get out in the morning and schedules became fairly well restored.

On Feb. 4 the company began to

# THE RAILWAYMAN

Published Weekly by the Kansas City Railways Company.

Vol. 1

KANSAS CITY, MO., FEBRUARY 4, 1918.

No. 1

## Just a Word About Service and Some of the Conditions Now Existing Here and Elsewhere

Every street car patron knows the service during the last few months has not been up to standard. Of course, the Company has been blamed. An insufficient number of cars have been in operation and cars have been "bunched," running in "flocks," as one newspaper put it the other day, until the public has become tired of it.

No wonder you grew tired of it! We grew tired of it ourselves.

And that brings us to some of the reasons that have existed, and still do exist,

to cause imperfect street railway service in Kansas City. To quote a motorman: "It took me 19 minutes last night to get from Eight and Grand to Fifteenth and Grand, and I was getting my car over the track just as fast as I could." The reason? "Blocked by traffic." It happens every

day. Wagons will get on the track in front of cars and stick there; autos will dash in front of cars in crossing tracks, while drivers of dray wagons apparently cannot get over

the idea that the street car tracks were made for their especial benefit. Every time one gets on the track the street car is laid out for a minute or two. When this happens you will find a lengthened space between cars, and two or more cars in a bunch.

Here's another condition that exists in the down town section. Have you

ever gone along the streets and seen automobiles and wagons parked so closely to the curbing that you couldn't get a street car past unless you moved the car tracks? Of course you have. It is a common occurrence. The car crew must then secure the services of a policeman, lift the automobile or wagon so the car will clear or hunt up

~~~~~  
This publication is the first of its kind we have issued. Please read it, and offer any criticism or suggestion you may desire. It will be placed in the boxes on the cars each Monday morning hereafter. The Company takes this method of defending itself against any attacks that are manifestly unfair. In this we ask the Public's assistance.  
~~~~~

FIRST PAGE OF FIRST ISSUE OF NEW WEEKLY

commission. In its decision the commission held that the point involved was one of law and found what it believed to be a parallel in an Appellate Court case and its order was based on this ruling.

issue once a week a leaflet for distribution in the cars to the public. It is called *The Railwayman*. The company said that it took "this method of defending itself against any attacks that are manifestly unfair."

## Transportation News Notes

**Fare Increase Sought in Memphis.**—The Memphis (Tenn.) Street Railway has petitioned the Board of City Commissioners for an increase in fare from 5 cents to 6 cents.

**May Ask Fare Advance.**—There is a possibility that the Des Moines (Iowa) City Railway will ask for a rate increase at the spring city election on March 25, but no formal notice has yet been served to this effect.

**New Paper at Los Angeles.**—The Los Angeles (Cal.) Railway has begun the publication of *A-Z-U-R-I-D-E*, described by the company as "facts about street car service and thoughts by the trolley philosopher." The publication is 3½ in. wide by 6¼ in. high and contains four pages.

**Skip Stop Used in Fort Wayne.**—The Fort Wayne & Northern Indiana Traction Company has begun to use skip stops on the city lines of Fort Wayne, Ind. More than 40 per cent of the stops in the residence district will be eliminated. No stops will be eliminated in the business district.

**Five-Cent Fare for Fort Wayne.**—The Fort Wayne & Northern Indiana Traction Company, Fort Wayne, Ind., on March 4 was granted permission by the Public Service Commission of Indiana to charge a straight 5-cent fare and eliminate reduced rate tickets during the period of the war.

**Freight Bill Signed.**—Governor Edge of New Jersey has signed the bill passed by the last Legislature which permits electric railways to carry freight and express under rules to be fixed by the Board of Public Utility Commissioners. The Newark *Ledger* regards legal authority for the use of trolley cars for freight and passenger service as "a step in the right direction."

**New B. R. T. Talks.**—The Brooklyn (N. Y.) Rapid Transit Company began the publication of a new series of transit talks on March 5. The first one was headed "Other People's Troubles—and Ours." The company closed its appeal as follows: "If you will read these publications as they appear from time to time you will appreciate more keenly some of our difficulties, and, perhaps, to the extent of your ability, you will help us alleviate or remove them."

**1,300,000 Passengers a Day.**—Figures given out by the Public Service Railway, Newark, N. J., show that an average of 1,300,000 passengers were carried every day last year over its lines. The total for the twelve months was 476,974,983, a gain of about 25,000,000 over the previous year. The company

operates in 146 municipalities. About three out of every ten revenue passengers use transfers. The passengers carried on transfers figure in the total of 476,974,983.

**Publicity for Staggered Hours.**—The Philadelphia *Public Ledger* in its business section for Wednesday, Feb. 27, contained a dispatch from Cleveland under date of Feb. 26, in which it played up the plan of Fielder Sanders, City Street Railway Commissioner of Cleveland, to reduce the rush-hour peak by having stores, factories and other establishments stagger their times for opening and closing. Mr. Sanders' proposal was reviewed recently in the *ELECTRIC RAILWAY JOURNAL*.

**Women Conductors Must Stand.**—All employees of the Brooklyn (N. Y.) Rapid Transit Company in uniform riding on the cars of the company as passengers must stand when there are other passengers unseated in the cars. The question was raised in connection with women conductors. The company has recently restated its rule on this point as follows: "An employee in uniform always should defer to a passenger of either sex. An employee is to stand when there are other passengers unseated in the car."

**Service Hearing Dates Set.**—The Public Service Commission of the State of Washington has set March 11 as the date for hearing of the Seattle service complaints against the Puget Sound Traction, Light & Power Company and definitely set March 14 for the hearing in Tacoma. If the above dates are agreed upon, the Seattle case will be given priority as to hearing and probably as to decision, unless both rulings are rendered jointly. The question of a possible increase in fare in Seattle is more directly involved than complaints of service.

**Seattle Authorizes One-Man Cars.**—The joint committees on franchise and judiciary of the City Council of Seattle, Wash., recently voted unanimously to recommend that the Council pass an ordinance permitting the operation of one-man cars by the Puget Sound Traction, Light & Power Company over such of the routes named in the petition of the company as the Board of Public Works deems practicable. A. L. Kempster, manager of the company, advised the committee that the twenty-five one-man cars which had been received would be used merely to supplement the present service, and none of the larger cars will be displaced.

**Accident Fund Dividend Distribution.**—Payment of the 1917 annual safety-first dividend to its platform men was recently made by the San Diego (Cal.) Electric Railway. For several years it has been the policy of the company to set aside a fixed percentage of the gross earnings for the payment of accident claims and to divide any balance left in the fund among the men, in accordance with the number of hours each man has been on duty during the year. Last year the total saving was \$12,225 and the total hours of

service of all men was 642,761. The dividend was 1.902058 cents per man per hour. If a man worked 1000 hours during the year his dividend was \$19.02. About 270 men participated in the dividend distribution.

**Fare Increase Request Renewed.**—The Northampton, Easton & Washington Traction Company, Easton, Pa., is making another effort to increase its rates from 5 cents to 6 cents in each of its seven zones between Phillipsburg and Port Murray. The increase was asked some time ago and was opposed by Franklin Township, which pointed out a clause in the franchise of the company prescribing that only 5 cents should be charged in that township. The commission refused the request on that ground. The Supreme Court, however, in a recent decision held that such franchise contracts cannot obtain to the detriment of companies.

**Trenton Differences Up to Commission to Decide.**—The City Commission of Trenton, N. J., has turned down the proposal of the Trenton Chamber of Commerce to have a board of arbitration appointed to adjust the differences between the citizens and the Trenton & Mercer County Traction Corporation. The City Commission, through City Solicitor Charles E. Bird, says that matters must be adjusted by the Board of Public Utility Commissioners. The Mercer County Central Labor Union has asked the City Commission to call a mass meeting so that the entire community may have an opportunity to express an opinion as to whether the city of Trenton should purchase the property of the Trenton & Mercer County Traction Corporation. The labor unions propose to form a municipal ownership league to work to that end.

**Binghamton Tariff Suspended.**—The Public Service Commission of the Second District of New York on Feb. 21 ordered the Binghamton Railway to suspend until April 30 the proposed discontinuance of the sale of certain reduced-rate tickets and ordered the railway to publish and file a proper tariff amendment containing notice of the suspension. More than 400 employees of the International Time Recording Company at Endicott, 8 miles from Binghamton, on Feb. 16 filed with the commission a protest against the proposed discontinuance of a twelve-ride ticket book, good between Binghamton and Endicott and sold for \$1, making each ride 8 1/3 cents. The regular round-trip fare is 25 cents. Protest was also filed against discontinuing a twelve-ride book between Johnson City and Endicott, which sold for 60 cents when the regular round-trip fare is 15 cents. The company planned to discontinue the sale of tickets on Feb. 25. The railway has been served with the complaint and the commission will investigate the reasonableness of the proposed action of the railway. On March 4 the railway filed its answer to the complaint. It is expected that a hearing will soon be held.

# Personal Mention

## F. W. Coen Elected

Vice-President and General Manager of Lake Shore Made President of C. E. R. A.

F. W. Coen, vice-president, general manager and purchasing agent of the Lake Shore Electric Railway and affiliated properties, was elected president of the Central Electric Railway Association at the meeting in Dayton, on March 1. Mr. Coen has been connected with the Lake Shore Electric and its predecessors for twenty-five years. When in 1893 he took a clerical position with the Sandusky, Milan & Norwalk Electric Railway he had been employed in a bank in Vermillion for some time. At this time the railway mentioned had been in operation only a week. There were then about 18 miles of line, which made it one of the longest electric interurban roads in the world at the time. The interurban line was gradually combined with



F. W. COEN

local city properties, leading eventually to the formation of the Lake Shore Electric Railway in 1901. Of this system Mr. Coen was made secretary. In the meantime, however, in 1895, he had been assistant secretary of the Lorain & Cleveland Railway. After the formation of the Lake Shore Electric Railway Mr. Coen was successively promoted to be secretary and treasurer in 1906; general manager, continuing as treasurer only, in 1907, and vice-president and general manager in 1908. The last-named position he has occupied ever since. In his present position Mr. Coen is in active charge, with the same title, of the Lorain Street Railroad, the Sandusky, Fremont & Southern Railway, the People's Light & Power Company and the Bellevue Illuminating & Power Company. He is also a director of the Fostoria & Fremont Railway. Along with his administrative work Mr. Coen has identified himself with a number of activities

closely related to railway operation. He was secretary of the Ohio Interurban Railway Association for several years and promptly transferred his interest to the Central Electric Railway Association when it was formed. He has served successively as second and first vice-president of this association, and also as a member of its executive committee. He was a member of the original committee appointed by the American Electric Railway Association to formulate plans for co-operation with the federal government. As manager of a road which was a pioneer in through, high-speed passenger service Mr. Coen has made a special study of heavy traction matters. He has been very successful also in developing cordial relations between political bodies and the Lake Shore Electric Railway and in fostering a spirit of loyalty to the company among its employees. His election to the presidency of the association was, therefore, a logical development, particularly as he has had practical experience in personally working in nearly every department of the electric railway.

W. T. Bailey, formerly roadmaster of the Peninsula Railway, San Jose, Cal., is now on that company's pension list.

E. P. Haquette, formerly purchasing agent of the Oakland, Antioch & Eastern Railway, Oakland, Cal., has become connected with the sales division of the Pratt & Whitney Company, San Francisco, Cal., tool makers.

H. A. Clarke, general manager of the Central New York Southern Railroad and Ithaca Traction Corporation, Ithaca, N. Y., has secured a leave of absence in order to do some special engineering work in connection with applications of several electric railway properties for increased fares that are now pending before the Public Service Commission of New York and other states.

Arthur Gaboury, superintendent of the Montreal (Que.) Tramways, has received from the French government the title of Officer of the Academy, as a recognition of his signal services for the advancement of French activities. Knowing of Mr. Gaboury's unselfish and hearty interest in many matters outside of his profession, this distinction is regarded by his friends as well deserved.

E. C. Faber, formerly traffic manager of the Traffic Bureau of the Electric Railway War Board of the American Electric Railway Association, has been appointed manager of the War Board, a new position created as part of the reorganization following the resignation of C. Loomis Allen as director. An illustrated biographical sketch of Mr. Faber appeared in the issue of the

ELECTRIC RAILWAY JOURNAL for Feb. 2, 1918, page 256.

E. J. Smith has been appointed auditor of the Kentucky Public Service Company, Bowling Green, Ky., succeeding G. D. Warden, who has enlisted in the National Army. Mr. Smith was formerly assistant secretary and assistant treasurer of the Cayuga Cement Corporation, Portland Point, N. Y. Both companies are operated by The J. G. White Management Corporation, New York, N. Y. Mr. Smith for a number of years was connected with the accounting department of the Lehigh Valley Railroad at Sayre, Pa., previous to which time he served in the auditing department of the Ithaca (N. Y.) Traction Company.

Julien H. Harvey, superintendent of efficiency of the Kansas City (Mo.) Railways, has resigned to accept the management of a public safety campaign being started by the Rochester (N. Y.) Chamber of Commerce and the local Safety Council. The campaign will last from March 1 to Sept. 1. It will be conducted with the co-operation of the National Safety Council. It is planned to make the Rochester campaign the most comprehensive effort at public safety work that has been under-



J. H. HARVEY

taken by any community, and it is likely that it will provide an example for safety work throughout the United States. Mr. Harvey has been with the Kansas City Railways for fifteen years. He started as timekeeper and advanced through the positions of chief timekeeper, secretary to the president, superintendent of employment, division superintendent and superintendent of efficiency. He had held the last-named office for two years, and during that time organized and established the company's safety work, its power-saving system, its welfare building and loans, and similar enterprises in behalf of the employees, made general studies and established programs for the promotion of efficiency in operating, maintenance and administrative departments of the company, all of which work is now going forward in the hands of superintendents in such departments. Mr. Harvey was one of the organizers of the local Safety Council in Kansas

City two years ago and served two terms as president. He declined reelection as president of the local council because of duties connected with work of the National Safety Council. He has served one year as secretary of the electric railway division of the National Safety Council, and last fall was elected chairman of this section. Mr. Harvey was also elected to the executive committee at the national convention of the council. He had been named as chairman of the Public Safety Committee of the Kansas City Local Council and had been appointed chairman of this branch of work of the Kansas City Chamber of Commerce. The Rochester work, on account of its very wide scope and national importance, demanded a man of Mr. Harvey's special experience and equipment.

## Obituary

George F. Hargis, general manager of the Los Angeles & Mount Washington Railway, Los Angeles, Cal., is dead as a result of injuries received when he was struck by an electric railway car in that city recently. Mr. Hargis was one of the organizers of the railway of which he was the manager. He was well known in financial circles in Los Angeles.

H. Clark Prather, who recently left the service of the Peter Smith Heater Company to accept a commission as first lieutenant in the Ordnance Department, died at Davenport, Ia., on Feb. 21. Although Mr. Prather was still in his thirties, he had made a notable mark as an electric railway operator. Beginning as a lineman on the Union Traction Company of Indiana in the late nineties, he worked his way through the various mechanical departments on different properties until he became shop foreman successively on the Brooklyn Rapid Transit System and the Public Service Railway. On leaving the latter company he became superintendent of the Roanoke Railway & Electric Company and then entered the car equipment business as a member of the firm of I. R. Nelson & Company. He was soon called, however, by the Buffalo, Lockport & Rochester Railway as master mechanic where, after several years' service, he became general manager in October, 1913. In 1914 he was appointed manager of the Rochester-Syracuse division of the Empire United Railways and in 1915 assistant general manager of the Empire United Railways with headquarters at Syracuse. Following the breaking up of the original Empire United system he became connected with the Peter Smith Heater Company. Mr. Prather was a typical hard-working American who acquired his technical and general education through study at night. His kindly personality endeared him to all who knew him, whether they were below or above him in rank.

## Construction News

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

### Recent Incorporation

\***Fredericton, N. B.**—Application for a charter will be made for the construction of a new line from St. John Valley Road near Pokiok to a connection with the proposed Eastern Maine Railway at a point near the international boundary at North Lake in Orient, Aroostook County, 24 miles. It is proposed to ask for a charter to generate, use and sell hydroelectric power. The Eastern Maine Railway, Bangor, Me., is interested.

### Franchises

**Los Angeles, Cal.**—The City Council of Los Angeles will advertise the sale of two street railway franchises in Los Angeles, one being for the operation of the Temple Street line and the other for the operation of the Maple Avenue line. Both franchises cover lines long in operation by the Los Angeles Railway.

**Venice, Cal.**—The City Council of Venice will advertise the sale of a ten-year franchise to operate an electric railway on the ocean front.

### Track and Roadway

**Birmingham-Tidewater Railway, Birmingham, Ala.**—It is reported that this company will construct additional tracks from Pratt City to Ensley.

\***Tennessee Coal, Iron & Railroad Company, Mobile, Ala.**—It is reported that the Tennessee Coal, Iron & Railroad Company will build 1½ miles of electric railway to connect with the Mobile Light & Railroad Company's tracks, to provide service to the new Chickasaw Shipbuilding Plant. George Gordon Crawford, Birmingham, president.

**Washington Railway & Electric Company, Washington, D. C.**—Clarence P. King, president of the Washington Railway & Electric Company, on Feb. 28 asked the permission of the Public Utilities Commission of the District of Columbia to construct a single-track loop about the triangular block bounded by Twelfth, H and Thirteenth Streets Northwest for Washington, Baltimore & Annapolis Railway cars. According to the plan, Washington, Baltimore & Annapolis cars would leave New York

Avenue and Twelfth Street, pass south to H, west on H to Thirteenth and back to New York Avenue. This would permit unloading and waits on H Street and would not interfere with city cars, as is now the case on New York Avenue between Fourteenth and Fifteenth Streets. Use of the ground floor of the Masonic Temple as a station and waiting room is proposed. Mr. King said it would be necessary to widen the streets, the expense to be borne by the company. He asks prompt action. John A. Beeler, consulting engineer, recommended to the commission that Washington, Baltimore & Annapolis cars be removed from the Columbia line tracks and that the city terminal be located at Fifteenth and H Streets, Northeast.

\***Chatham County Traction Company, Savannah, Ga.**—This company proposes to construct a line to the Brampton tract of the Foundation Shipbuilding Company. All material for the line is on hand. H. C. Foss, secretary of the Savannah Electric Company, is reported interested.

**Honolulu Rapid Transit & Land Company, Honolulu, Hawaii.**—This company contemplates the relocation of its tracks on King Street to the center of the street.

**St. Joseph Valley Railway, Elkhart, Ind.**—It is reported that an extension may be built of the St. Joseph Valley Railway Company's line from Elkhart to Toledo.

**Boston (Mass.) Elevated Railway.**—Orders have been placed by the Boston Elevated Railway with the Union Switch & Signal Company, Swissvale, Pa., for material required for the signaling system in connection with the extension of its lines to Everett. The new work consists of a complete revision of the interlocking at tower "A," Sullivan Square; fourteen automatic block signals between Sullivan Square and Everett, and mechanical interlocking at Everett. A new electro-pneumatic interlocking machine, having a seventy-nine-lever frame, will be installed at tower "A." Provision is being made in the final scheme for operating all switches in the terminal and yards from this machine. Style "N" light signals will be used throughout. Alternating current is to be used for the control of all switches and automatic stops and for the control and operation of all signals, track circuits, relays and indicators. Model 15 double element track relays are being provided on all track circuits.

**Manufacturers Railway, St. Louis, Mo.**—The Board of Public Improvements of St. Louis has granted a permit for the electrification in part of the Manufacturers Railway. Current will be furnished from the Keokuk dam.



**Ohio Electric Railway, Springfield, Ohio.**—A movement has been started by the City Commissioners of Middletown to compel the Ohio Electric Traction Company to construct a permanent bridge south of the city which will withstand high waters. None of the structures erected in the past have been substantial, and it was pointed out that such bridges as were constructed are a menace to the public safety.

**Oklahoma (Okla.) Railway.**—According to a report from Oklahoma, J. W. Shartel, vice-president and general manager of the Oklahoma Railway, states that extensive interurban railway construction in Oklahoma will be undertaken as soon as the war ends, all of the lines planned under various auspices connecting more or less directly with Oklahoma City, which would be a center of interurban roads in that part of the country. The Oklahoma Railway will build from 30 to 40 miles of interurban railway every year. Plans for such extensions have been practically completed, but financing at present is out of the question, and it is doubtful whether materials could be obtained even if the money could be had. An extension of the Guthrie line is to be made to Stillwater and Cushing, about 40 miles, and the Norman line is to be extended to Lexington and Purcell. It is also proposed to construct a line from Oklahoma City to Shawnee, 40 miles.

**Oklahoma Union Railway, Tulsa, Okla.**—Announcement has been made that this company's extension from Tulsa to Sapulpa will be placed in operation by April 1.

**Pennsylvania Railroad, Philadelphia, Pa.**—The finishing touches are now being put on the electrification of the Philadelphia-Chestnut Hill branch of the Pennsylvania Railroad and April 1 has been set as the tentative date for the formal opening of the line. The Chestnut Hill line is 14 miles long and has been under construction since September, 1913. Originally the cost was placed at \$1,250,000. The war acted both to postpone the work and increase the cost to about \$1,500,000.

**Dallas (Tex.) Railway.**—Plans for changes in the street railway facilities at the State Fair Grounds so twenty cars can be loaded or unloaded at once and as many as fifty cars can be kept immediately available for rush crowds during the State Fair or at other times have been announced by Richard Meriwether, general manager of the Dallas Railway. Preliminary details have been arranged, blue prints and specifications have been made and the special work for the new loop and switches at the Fair Grounds has been ordered, to insure early completion of the work. These changes at the Fair Park will be part of the general plan for rerouting the car lines in that part of Dallas. The total cost of the changes and improvements, including the new car line out Second Avenue from First and Parry Avenues, just south of Fair Park, to the city limits a few blocks north of the Texas & New Orleans Railroad, will be \$121,000. Two and

one-half miles of new track and a great deal of special work in the way of switches and curved tracks will be laid. The work on the Second Avenue extension, which will serve a section of Southeast Dallas heretofore without car service, will begin as soon as the city can complete the work of widening the street and laying service pipes. The work at the Fair Grounds will begin as soon as the special work arrives, probably within sixty days. As part of this work, the railway company also will remove its tracks from Exposition Avenue, alongside the Fair Grounds, so that Fair Park may be extended across that street to include the old Gaston Park, now the property of the city.

**Dallas (Tex.) Southwestern Railway.**—At a recent meeting of the board of directors of the Chamber of Commerce of Dallas, the committee on railways and transportation indorsed the proposed interurban line from Dallas to Irving and recommended that the Chamber of Commerce and Manufacturers' Association stand ready to cooperate with the Dallas Southwestern Traction Company in procuring such right-of-way as was necessary to construct the road. E. P. Turner, president. [Dec. 29, '17.]

**Houston (Tex.) Municipal Railway.**—The City Council of Houston has awarded a contract to the Houston Construction Company at \$59,000 for the construction of the first unit of the proposed municipal line from a connection with the International & Great Northern Railroad north of Harrisburg Boulevard to the plant of the Sinclair Gulf & Refinery Company east of Simms Bayou, 4 miles.

### Shops and Buildings

**Pacific Electric Railway, Los Angeles, Cal.**—A new station will be built by the Pacific Electric Railway at Los Angeles Harbor.

**Union Street Railway, New Bedford, Mass.**—A contract has been awarded to J. W. Bishop Company, Worcester, by the Union Street Railway for the construction of the superstructure of a building to be used for a boiler house and turbine room. The structure will be 98 ft. x 126 ft., two stories, of brick and steel construction, and will cost about \$135,000.

**Kansas City (Mo.) Railways.**—This company will erect a one-story repair shed to cost \$8,200.

**Public Service Railway, Camden, N. J.**—The carhouse of the Public Service Railway at Camden was badly damaged by fire on March 3 and eighteen double-truck cars of the company were destroyed. The loss is estimated at about \$150,000.

**Dayton & Troy Electric Railway, Dayton, Ohio.**—The City Commission of Dayton has granted permission to the Dayton & Troy Electric Railway to erect a shelter station on the west side of Keowee Street, opposite Leo Street

**Toronto & York Radial Railway, Toronto, Ont.**—The carhouse of the Toronto & York Radial Railway on the Kingston Road, East Toronto, together with four cars, was recently destroyed by fire. The loss is estimated at \$25,000.

**Three Rivers (Que.) Traction Company.**—A new station will be built by the Three Rivers Traction Company at Gervais and St. Philippe Streets, Three Rivers, at a cost of about \$3,000.

### Power Houses and Substations

**San Diego Consolidated Gas & Electric Company, San Diego, Cal.**—The Railroad Commission of California has granted authority to the San Diego Consolidated Gas & Electric Company to purchase the Del Mar Water, Light & Power Company, which will be immediately connected with the system of the San Diego company.

**Gary (Ind.) Street Railway.**—It is reported that this company will construct a new power station at Eleventh Avenue, Gary.

**Sioux City (Ia.) Service Company.**—The improvements begun last spring by the Sioux City Service Company and costing approximately \$500,000 are practically completed. A greatly increased capacity for supplying power and carrying on the business of the organization with more efficiency is the result of the extensive addition of equipment, according to E. L. Kirk, general manager of the company. Among the larger items in the long list of improvements made recently are the substation installed beneath the business office in Fifth Street; a turbine and two boilers put in at the main power station, forming a complete new generating unit; new switchboards; the transmission line to Riverside, and underground work.

**Worcester & Warren Street Railway, Brookfield, Mass.**—Fire on March 4 practically destroyed the power house of the Worcester & Warren Street Railway at Brookfield. Four cars and two snowplows were destroyed. The loss is estimated at \$75,000.

**Harrisburg (Pa.) Railways.**—Three new transformers have been received by the Harrisburg Railways for installation at its substation at Reilly and Marion Streets. The substation primarily will take care of the Second, Third and Fourth Street lines, but all lines will use the power in rush hours.

**Valley Railway, Lemoyne, Pa.**—This company is installing a skip hoist ash remover at its local electric plant and it is anticipated that this work, in connection with other improvements, will be completed about April 1.

**Puget Sound Traction, Light & Power Company, Bellingham, Wash.**—This company is contemplating the erection of an electric transmission line to the Cokedale Mine.

# Manufactures and the Markets

DISCUSSIONS OF MARKET AND TRADE CONDITIONS

FOR THE MANUFACTURER, SALESMAN AND PURCHASING AGENT

ROLLING STOCK PURCHASES • MARKET QUOTATIONS • BUSINESS ANNOUNCEMENTS

## Census Statistics on Car Manufacture

Production of Electric Road Equipment in 1914 Valued at More Than \$10,000,000

Census figures of the production of street and electric railroad cars for 1914 by establishments engaged primarily in their manufacture have just been published. They show fourteen of these establishments, with an output of 2348 cars valued at \$8,078,348, as compared with 1922 cars in 1909 valued at \$4,602,435, and 3966 cars in 1904 valued at \$8,302,512. In addition to the cars reported for this industry in 1914, there were 194 electric railway cars, valued at \$711,198, built by establishments engaged primarily in the manufacture of steam railroad cars; 304 cars, valued at \$811,104, by repair shops of electric railway companies; and seventeen cars,

Table II shows, by character of construction, the number of each class of cars built in 1914, together with the value.

| Class                   | Number |          |                   |                               |           |
|-------------------------|--------|----------|-------------------|-------------------------------|-----------|
|                         | Total  | All Wood | Steel Under-frame | Steel Body with Wood Interior | All Steel |
| Aggregate               | 2,365  | 434      | 1,083             | 560                           | 288       |
| Electric railway, total | 2,348  | 421      | 1,083             | 557                           | 287       |
| Passenger               | 2,174  | 360      | 1,022             | 523                           | 269       |
| Freight                 | 66     | 34       | 18                | 6                             | 8         |
| Other varieties         | 108    | 27       | 43                | 28                            | 10        |
| Steam railroad          | 17     | 13       | .....             | 3                             | 1         |

Table III summarizes the statistics of establishments engaged in the manufacture of electric railway cars for

| Product                    | 1914         | 1909        | 1904         |
|----------------------------|--------------|-------------|--------------|
| Total value <sup>1</sup>   | \$10,494,953 | \$7,809,866 | \$10,844,196 |
| Electric railway:          |              |             |              |
| Number                     | 2,348        | 1,922       | 3,966        |
| Value                      | \$8,078,348  | \$4,602,435 | \$8,302,512  |
| Passenger:                 |              |             |              |
| Number                     | 2,174        | 1,787       | 3,677        |
| Value                      | \$7,439,906  | \$4,346,098 | \$7,878,470  |
| Closed:                    |              |             |              |
| Number                     | 1,876        | 1,323       | 2,621        |
| Value                      | \$6,802,764  | \$3,500,781 | \$5,777,257  |
| Combination:               |              |             |              |
| Number                     | 143          | 369         | 502          |
| Value                      | \$383,694    | \$704,309   | \$1,240,864  |
| Open:                      |              |             |              |
| Number                     | 155          | 95          | 554          |
| Value                      | \$253,448    | \$141,088   | \$860,349    |
| Freight, express and mail: |              |             |              |
| Number                     | 66           | 92          | 10           |
| Value                      | \$174,334    | \$179,293   | \$24,022     |
| Other varieties:           |              |             |              |
| Number                     | 108          | 43          | 273          |
| Value                      | \$464,108    | \$77,044    | \$400,020    |
| Steam railroad:            |              |             |              |
| Number                     | 17           | 167         | 136          |
| Value                      | \$72,034     | \$111,813   | \$59,663     |
| All other products, value  | \$2,344,571  | \$3,095,618 | \$2,482,021  |

<sup>1</sup>In addition, 515 cars, valued at \$2,084,802, in 1914; 850 cars, valued at \$2,660,674, in 1909; and 418 cars, valued at \$994,654, in 1904, were made as a subsidiary product by establishments engaged primarily in other industries.

<sup>2</sup>Includes thirty-eight horse cars, valued at \$29,182.

valued at \$562,500, by establishments engaged primarily in other industries, making a total of 515 cars, valued at \$2,084,802, as compared with 850 cars, valued at \$2,660,574 in 1909.

Table I shows the number and value of cars constructed in the industry, by class, for 1914, 1909 and 1904.

There were fewer electric railway cars built in 1914 than in 1904, a decrease of 40.8 per cent, while the value of these cars shows a decrease of only 2.7 per cent. The average value of electric railway cars in 1904 was \$2,093 and in 1914, \$3,441. In 1914, 12.2 per cent of the electric railway cars were all steel; 23.7 per cent were steel body with wood interior; 46.1 per cent steel underframes, and 17.9 per cent, all wood.

each census from 1889 to 1914, and gives percentages of increase.

There has been very little change in the number of establishments in the in-

|   | Number or Amount |              |              |             |                  |
|---|------------------|--------------|--------------|-------------|------------------|
|   | 1914             | 1909         | 1904         | 1899        | 1889             |
| Number of establishments  | 14               | 14           | 14           | 20          | 17               |
| Persons engaged   | 4,286            | 4,005        | 4,997        | 3,736       | ( <sup>1</sup> ) |
| Proprietors and firm members  | .....            | 1            | 3            | 7           | ( <sup>1</sup> ) |
| Salaried employees  | 446              | 421          | 264          | 144         | ( <sup>1</sup> ) |
| Wage earners (average number)   | 3,840            | 3,583        | 4,730        | 3,585       | 1,785            |
| Capital   | \$14,751,582     | \$14,167,999 | \$12,975,703 | \$7,615,397 | \$2,468,315      |
| Salaries and wages  | 3,199,674        | 2,770,566    | 3,237,825    | 2,185,379   | 1,174,790        |
| Salaries  | 732,647          | 593,617      | 398,246      | 234,503     | ( <sup>1</sup> ) |
| Wages   | 2,467,027        | 2,176,949    | 2,839,579    | 1,950,876   | ( <sup>1</sup> ) |
| Paid for contract work  | 129,904          | 233,508      | .....        | 3,000       | ( <sup>1</sup> ) |
| Cost of materials   | 6,349,779        | 4,260,470    | 5,341,444    | 3,966,863   | 1,699,235        |
| Value of products   | 10,494,953       | 7,809,866    | 10,844,196   | 7,305,368   | 3,302,115        |
| Value added by manufacture (value of products less cost of materials) | 4,145,174        | 3,549,396    | 5,502,752    | 3,338,505   | 1,602,880        |

<sup>1</sup>Figures not available.

## Administration Statement on Coal Price Regulation

Fuel Administration to Announce Decision on All Applications for Revision Made Prior to April 1

In connection with the government regulation of coal prices the following statement is authorized by the United States Fuel Administration:

"The regulation of coal prices by the Fuel Administration is the first attempt ever made, at least on a large scale, by the United States government to fix and establish prices for any of the great industries. It is very important to both the public and the coal industry that the prices so fixed should be based on accurate information as to the conditions prevailing in different fields, and that, when once this information has been received, the right principles should be employed in making use of this information.

"The Fuel Administration believes that it has devised a speedy and accurate method for using the cost information which it has in hand, and that it has worked out the fundamental principles which should guide it in considering applications for modifications of coal prices.

"It is the purpose of the Fuel Administration to announce decisions on all applications for price revisions now before it, prior to April 1, 1918, and, prior to that time, to make such changes in the classification as seem to be necessary, in order to relieve uncertainty on this score as far as possible before the beginning of the new coal year.

"By this statement, the Fuel Admin-

istry since 1889, but the number of wage earners, capital, and value of products have increased very materially. For the decade 1904-1914 there was a decrease in the average number of wage earners and in value of products of 18.8 per cent and 3.2 per cent, respectively.

## Commutator Brushes Subject to Graphite Supply

An Active Market Existing—Quotations Take a Sharp Jump Upward—Deliveries Prompt

While a few manufacturers of commutator brushes state that the trade is steady and that there have been advances of no particular consequence, the majority declare the market is extremely active. With this variance of opinion, perhaps it may be well to consider the opinion of a maker who is of the belief that it is necessary to know what is required in order to fill specifications with the proper brushes. In other words, "anything will do" is no longer permissible; for the reason, as this brush man asserts, "cheap brushes are put on the motor, the dope runs out, and the sparks bore and wear streaks in the commutator, and all sorts of disorders take place." The demand for commutator brushes has grown steadily, the sale increase being fully 30 per cent over last year's selling record. After an apparatus is installed there is a continuous call for brushes, so the market is never stagnant or at a low level.

Advances in graphite from time to time have occasioned mark-ups in the price of brushes. On Oct. 1 last the increase was fully 50 per cent, which was considered by the trade an extraordinary price enhancement. Since then, so far as can be ascertained, no further price advance has been attempted. Graphite is short of the market, is high and possibly may reach a still higher quotation, if the word of responsible brush manufacturers is to be accepted as authoritative. Brush makers handle their grade of graphite as a secondary finished product, the bakers of the metal being the primary handlers.

Ceylon graphite, the best grade, sells for \$160 a ton, and under the British embargoes the importations are curtailed. The market is easing off slightly, but the producers are sold up to 1919. Prices to consumers of brushes are made on the quantity basis. For example, buyers of 10 brushes of divers

(Concluded from page 486)

istration does not wish to be understood as stating that the examination of the prices now being made will complete its price work. On the contrary, the administration will continue to collect and study facts relating to the cost of production of coal and the prices at which it is sold. It will make such further readjustments from time to time as are necessary to keep the prices on a scale fair to the public, fair to the coal industry, and sufficiently high to encourage production. It hopes, also, to take measures in the very near future to encourage and insist upon the use of less wasteful methods of mining, the sale of clean coal, and the more definite recognition of the different qualities of coal in the government prices."

sizes are quoted net on the list. On 50 to 100 brushes of a miscellaneous character 20 per cent is given. On 1000 brushes of the same size and quality 40 per cent, and an inside special of 50 and 10 is granted when larger orders are placed.

So far the greater number of commutator brush manufacturers have anticipated their requirements on graphite and have had an ample stock for manufacturing. This was the condition for several years and up to the present time. It is now admitted nearly everyone is buying at the market, with possibly a couple of exceptions. Such factories have fortunate connections, thus enabling them to get raw material, possibly not at any better price, but insuring a sufficiently large supply to meet the requirements of their trade contracts.

Deliveries of brushes are prompt out of stock and go forward either by express or parcel post. With the growing demand, however, the manufacturers, while apparently confident of the possibilities of the future, still confess, if current conditions continue, there may be a reversal not altogether pleasing or satisfactory either in price or deliveries.

## Rolling Stock

New York Municipal Railway Corporation, Brooklyn, N. Y., noted in the ELECTRIC RAILWAY JOURNAL of Feb. 23 as having ordered 100 new cars for its subway system has specified the appended details for this equipment. No delivery date, however, is designated.

Number of cars ordered.....110  
 Name of road...New York Municipal Ry.  
 Date order was placed.....Feb. 26, 1918  
 Builder of car body..Am. Car & Foundry Co.  
 Type of car.....Subway  
 Seating capacity.....78-90  
 Weight (total).....86,160-light lb.  
 Bolster centers, length.....47 ft. 0 in.  
 Length over bumpers.....67 ft. 0 in.  
 Length over vestibule.....64 ft. 7 1/4 in.  
 Width over all.....10 ft. 0 in.  
 Height, rail to trolley base.....12 ft. 2 in.  
 Body.....Steel  
 Interior trim.....Steel and Agasote  
 Headlining.....Agasote  
 Roof.....Arch  
 Air brakes.....Westinghouse, type A. M. U. E.  
 Axles.....New York Municipal Railway  
 Bumpers.....Hedley Anti-Climber  
 Control type.....Westinghouse A. B. F.  
 Couplers.....Westinghouse  
 Curtain fixtures.....Curtain Supply Co., No. 089  
 Curtain material.....Pantasote  
 Designation signs.....Elec. Ry. Supplies Co.  
 Gears and pinions.....Gen. Elec. Co., grade F.  
 Hand brakes.....Peacock, with Kling Shieve  
 Heaters.....Peter Smith  
 Journal boxes.....McCord  
 Motors, type and No.....Gen. Elec. Co., 248-A  
 Motors.....Outside or inside hung, inside  
 Sash fixtures.....Edwards  
 Seats, style.....Hale & Kilburn, cross and longitudinal  
 Seating material.....Rattan  
 Springs.....Elliptic and spiral  
 Trolley wheels or shoes.....Third-rail shoe,  
 New York Municipal Ry.  
 Trucks, type.....New York Municipal Ry. A-55  
 Ventilators.....Perry  
 Wheels (type and size).....32 in. and 34 1/4 in.

Harrisburg (Pa.) Railways, referred to as ordering five new cars in the ELECTRIC RAILWAY JOURNAL of Feb. 23 for its road, specify the following

## Cost of Ball Bearings Going Higher

Deliveries Expected to Become Longer Owing to the War Demands of the Government

Deliveries of ball bearings are expected to get worse during the next three months at least owing to the war demands of the government on the manufacturers. Indications are that prices will advance owing to the condition of supply and price of raw and manufacturing materials. Owing to the increasing volume of rejections, the cost of steel is much greater to the manufacturers. The cost of labor has gone up in the past two years from 50 per cent of ball production cost to 60 per cent and is still advancing. It can thus be imagined to what extent labor costs have risen when everything else has advanced so much. Files and grinding machinery, diamonds for truing wheels, etc., have been increasing very rapidly and represent a real item of cost.

The most pertinent facts of the market are, therefore, a greatly curtailed available production for commercial purposes, increasing delay in deliveries, and advancing prices.

details for this equipment, which were to be delivered March 1:

Number of cars ordered.....5  
 Name of road.....Harrisburg Ry. Co.  
 Date order was placed.....Sept. 29, 1917  
 Date of delivery.....March 1, 1918  
 Builder of car body.....J. G. Brill Co.  
 Type of car.....Semi-convertible  
 Seating capacity.....48  
 Weight (total).....40,000 lb.  
 Length over bumpers.....43 ft. 10 in.  
 Length over vestibule.....42 ft. 10 in.  
 Width over all.....8 ft. 2 in.  
 Height, rail to trolley base, 12 ft. 9/16 in.  
 Body.....Steel  
 Interior trim.....Cherry  
 Headlining.....Agasote  
 Roof.....Arch  
 Air brakes.....Westinghouse  
 Axles.....Forged steel  
 Bumpers.....Hedley Anti-Climber  
 Car trimmings.....Bronze  
 Control, type.....K-35  
 Curtain fixtures.....National "B"  
 Curtain material.....Pantasote  
 Designation signs.....Keystone  
 Door operating mechanism.....Nat. Pneumatic  
 Fare boxes.....None  
 Fenders or wheelguards.....Own make  
 Gears and pinions.....Nuttall Co.  
 Hand brakes.....Peacock  
 Heaters.....Consolidated  
 Headlights.....Golden Glow  
 Journal boxes.....J. G. Brill Co.  
 Lightning arresters.....Westinghouse  
 Motors, type and number.....Four 514-C  
 Motors.....Outside or inside hung, outside  
 Registers.....International  
 Sanders.....National  
 Sash fixtures.....Edwards  
 Seats, style.....Hale & Kilburn  
 Seating material.....Rattan  
 Step treads.....American abrasive  
 Trolley catchers or retrievers.....Kuntson  
 Trolley base.....Nuttall Co.  
 Trolley wheels or shoes.....Kalamazoo  
 Trucks, type.....27 M. C. B. Brill  
 Ventilators.....Railway Utility  
 Wheels (type and size).....33 in. cast iron

Philadelphia (Pa.) Rapid Transit Company will place in its service the 100 new passenger cars ordered recently from the J. G. Brill Company by the Emergency Fleet Corporation. Possibly the additional rolling stock may reach 150 in number. The cars are of the same general type now being operated by the Philadelphia company. They will be forty feet long, with Gen-

eral Electric Company equipment, and the cost is about \$6,000 each.

Ocean Shore Railroad Company, San Francisco, Cal., is reported as being in the market for new cars.

Public Service Railway, Newark, N. J., lost eighteen double-truck cars in a fire on March 3 at the Camden carhouse.

Tri-City Railway.—This company has received the first of twenty cars purchased from the Chicago Surface Lines in January. Four others will be received and placed into service at once.

Worcester & Warren Street Railway Company, Brookfield, Mass., had its power house practically destroyed by fire on March 4. Four cars, one new and valued at \$5,000, besides two snow ploughs, were burned. The entire loss is estimated at \$75,000, fully covered by insurance. Defective insulation is reported to have caused the fire. The road suspended service Jan. 16, and the power house has not been in use since Dec. 16.

Toronto & York Radial Railway, Toronto, Canada, on Feb. 24 had its Scarborough divisional carhouse totally destroyed by fire, together with four cars. The damage is placed at \$25,000. The cars were valued at \$5,000 a piece. The loss is covered by insurance. On Feb. 5 this company also had six inter-urban cars destroyed by fire, which also burned its Metropolitan division carhouse, as mentioned in the ELECTRIC RAILWAY JOURNAL of Feb. 16.

**Professional Note**

Robert H. Whitten, formerly with the Public Service Commission, First District, New York, has opened an office for consulting work on city planning at 277 Broadway, New York. Mr. Whitten has had some five years' experience in city planning and zoning work in New York City, following his connection with the New York Public Service Commission, First District. He is the author of an authoritative treatise on the valuation of public service corporations and also of a monograph on the regulation of public utilities in Great Britain. Mr. Whitten is a member of the American City Planning Institute.

**Trade Notes**

George Siess, who has been stores manager of the Cleveland office of the Western Electric Company, was recently appointed assistant manager of that office.

Waverly, Sayre & Athens Traction Company, Waverly, N. Y., has equipped its one-man cars with the Johnson fare box, furnished by the National Railway Appliance Company.

J. B. Howell of the sales department of the Bound Brook Oil-less Bearing Company has entered active service in the United States Army and is now training at Camp Dix.

W. W. Briggs has resigned as general agent of the Great Western Power Company to become manager of the New York division of the Westinghouse Lamp Company, taking effect April 1.

Guide & Signal Light Company, Indianapolis, Ind., has been incorporated by Richard McClellan, L. Greenburg and Robert Eaglesfield. The company is capitalized at \$100,000 and proposes to manufacture electrical devices.

Nelson P. Hall has been appointed district sales manager for the Chicago territory of the Van Dorn & Dutton Company. He was formerly connected with the sales force of the Electric Service Supplies Company of Chicago.

Moloney Electric Company, Ltd., Toronto, Can., announces that it has opened a branch office and warehouse at Halifax, N. S., for the Maritime Provinces. E. A. Seath, who has been transferred from the Montreal office, will have charge of that territory.

Raymond W. Murphy, who was until recently in charge of the Pacific Coast offices of the Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., has been transferred to the Philadelphia office of the company, where he is assistant manager.

J. D. Todd, who until recently was connected with the Western Electric Company at Kansas City, Mo., as assistant sales manager, became associated with the Missouri Valley Electric Company, Jan. 1, as vice-president and manager. Mr. Todd will make his headquarters at Kansas City.

Stephen A. Staeger announces the dissolution of the firm of Staeger & Dewey, and that he will continue in consulting engineering practice, with offices in the Light & Power Building, Watertown, N. Y.

War Trade Board, Washington, D. C., in an official announcement states that after Feb. 1 a new export application form will be used in place of all forms hitherto in existence. It will be the only application form in use. Copies of the blanks, with information pertaining to their use and other pertinent directions, may be had on application to the board.

**New Advertising Literature**

Stow Manufacturing Company, Binghamton, N. Y.: Bulletin entitled "Portable Tools of Proven Value."

Allis-Chalmers Manufacturing Company, Milwaukee, Wis.: Circular descriptive of its type "S" centrifugal pumping unit.

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.: Leaflet 3998 descriptive of the company's automatic railway substations.

Vulcan Steel Products Company, New York, N. Y., is publishing a spirited illustrated monthly house organ entitled *Vulcan*. It is a journal of co-operation and help for the Vulcan company's interests, particularly in its rapidly developing export trade.

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa.: Technical information regarding Bakelite Micarta-D gears is contained in a pamphlet recently published by the company. The distinctive feature of this material for noiseless gears and pinions are listed, together with its physical properties. Methods of turning and drilling and gear cutting are described and illustrated with many half-tones and drawings. Methods of attaching to the driving shaft which have proved suitable for gears of all sizes are shown and tables of pitch, teeth and other gear data are also given. There are formulas for the horsepower rating, the amount of power which can be transmitted through press fit and for calculating other variables in gear practices.

**RAILWAY MATERIALS**

|   | Feb. 27          | March 6          |
|---|------------------|------------------|
| Rubber-covered wire base, New York, cents per lb.         | 27-30            | 30               |
| Weatherproof wire (100 lb. lots), cents per lb., New York | 28 1/4 to 34 1/4 | 28 1/4 to 34 1/4 |
| Weatherproof wire (100 lb. lots), cents per lb., Chicago  | 33 1/2 to 38     | 33.42 to 38.35   |
| Rails, heavy, Bessemer, Pittsburgh                        | \$55.00          | \$55.00          |
| Rails, heavy, O. H. Pittsburgh, per gross ton             | \$57.00          | \$57.00          |
| Wire nails, Pittsburgh, per 100 lb.                       | \$3.50           | \$3.50           |
| Railroad spikes, 9/16 in., Pittsburgh, per 100 lb.        | \$3.90           | \$3.90           |
| Steel bars, Pittsburgh, per 100 lb.                       | \$5.00           | \$5.00           |
| Sheet iron, black (24 gage), Pittsburgh, per 100 lb.      | \$4.85           | \$4.85           |
| Sheet iron, galvanized (24 gage), Pittsburgh, per 100 lb. | \$5.80           | \$5.80           |
| Galvanized barbed wire, Pittsburgh, cents per lb.         | \$4.35           | \$4.35           |
| Galvanized wire, ordinary, Pittsburgh, cents per lb.      | \$3.95           | \$3.95           |
| Cement (carload lots), New York, per bbl.                 | \$2.25           | \$2.25           |
| Cement (carload lots), Chicago, per bbl.                  | \$2.31           | \$2.31           |
| Cement (carload lots), Seattle, per bbl.                  | \$2.65           | \$2.65           |
| Linseed oil (raw, 5 bbl. lots), New York, per gal.        | \$1.35           | \$1.43           |
| Linseed oil (boiled, 5 bbl. lots), New York, per gal.     | \$1.36           | \$1.44           |
| White lead (100 lb. keg), New York, cents per lb.         | 10               | 10               |
| Turpentine (bbl. lots), New York, cents per gal.          | 46 1/2           | 45 1/2           |

\*Nominal. †Government price in 50 ton lots f.o.b. plant

**NEW YORK METAL MARKET PRICES**

|  | Feb. 27 | March 6 |
|--|---------|---------|
| Copper, ingot, cents per lb.               | 23 1/2  | 23 1/2  |
| Copper wire base, cents per lb.            | *27     | *27     |
| Lead, cents per lb.                        | 7 1/4   | 7 1/4   |
| Nickel, cents per lb.                      | 50      | 50      |
| Spelter, cents per lb.                     | 8       | 7.875   |
| Tin, Straits, cents per lb.                | \$85.00 | *85.00  |
| Aluminum, 98 to 99 per cent, cents per lb. | 35-37   | †32     |

**OLD METAL PRICES—NEW YORK**

|  | Feb. 27 | March 6 |
|--|---------|---------|
| Heavy copper, cents per lb.                    | 22      | 22      |
| Light copper, cents per lb.                    | 19 1/2  | 19 1/2  |
| Red brass, cents per lb.                       | 18      | 18      |
| Yellow brass, cents per lb.                    | 13      | 13      |
| Lead, heavy, cents per lb.                     | 6       | 6       |
| Zinc, cents per lb.                            | 5 1/2   | 5 1/2   |
| Steel car axles, Chicago, per net ton          | \$42.41 | \$42.41 |
| Old car wheels, Chicago, per gross ton         | \$30.00 | \$30.00 |
| Steel rails (scrap), Chicago, per gross ton    | \$35.00 | \$35.00 |
| Steel rails (relaying), Chicago, per gross ton | \$60.00 | \$60.00 |
| Machine shop turnings, Chicago, per net ton    | \$17.00 | \$17.00 |