

# Electric Railway Journal

Consolidation of STREET RAILWAY JOURNAL and ELECTRIC RAILWAY REVIEW

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## The Supplement This Week Shows Our Marines

WE ARE PUBLISHING this week our third patriotic supplement, the subject being "Our Marines," who have been upholding American ideas in France during the past two weeks and adding to their illustrious record for bravery. The purpose of these supplements is to remind those at home of what our boys are doing and enduring abroad in their fight for civilization. If this is kept in mind there should be no danger of lack of support through profiteering on the part of employers or slacking on the part of employees.

The popularity of the previous patriotic supplements issued by this paper is shown by requests for additional copies which have come from all parts of the country—indeed, of the world. Thus one railway company in the Central States asked for as many as fifty copies of the last poster to put up in its depots, and through the head of a municipal department in an Australian city our first poster is being reproduced in that distant country to stimulate enlistment. The poster this week is by the same artist as the others and was drawn especially for the McGraw-Hill Company, Inc.

## A Twelve o'Clock Railway in a Nine o'Clock Town

"I'm a Twelve o'Clock Fellow in a Nine o'Clock Town" ought to be the official song of the Norfolk division of the Virginia Railway & Power Company. Elsewhere in this issue we discuss some of the extraordinary and heroic measures which this company has undertaken to give the government all the transportation and power it needs for the great military work in Norfolk, Portsmouth and vicinity. The article does not discuss service in Norfolk itself, and with good reason, for service in Norfolk is no better than municipal regulations in a narrow-streeted town permit. These regulations, unfortunately, do not embody the fundamental mode of relief for a village with the population of a city—namely—the adoption of one-way operation for all traffic. If Philadelphia, Providence and San Francisco recognize the value of the one-way traffic idea, Norfolk certainly need have no fear as to rash pioneering. To be sure, a few favored property owners and business men will emit wails of anguish because half the traffic is taken off of their street, but the pain will prove temporary because they will soon see that more people will come down to shop and play if they have a reasonably clear space in which to move about. In Norfolk, conditions of congestion are so aggravated that it would be sheer folly to put on more cars for the simple reason that even the present schedules cannot be operated satisfactorily.

This situation was pointed out by the operating company long before the present phenomenal increase in population. Its plea was ignored then, and it is ignored now when not a minute should be lost in the completion of the great war projects in this section. In fact, unless the municipality rises to the occasion by instituting an immediate traffic survey to check, not oppose, the suggestions of the company, it may find the long arm of the federal government stretching Norfolkward, and Uncle Sam's arm is peculiarly elastic these days.

## Practical Line Analysis a Good Reason for Zoning

IT WAS our recent privilege to look over a traffic study made in a town of 50,000 people with a view to proving the need, at a forthcoming hearing before the state commission, for a higher rate of fare. Quite a surprise was sprung upon the management when its expert produced statistics of travel not by lines but by fractions of lines. Here, for example, was a line 4 miles long on the first 2½ miles of which 70 per cent of the traffic originated, whereas the remaining, outer, 1½ miles produced only 30 per cent. Two things immediately became obvious: First, that many short riders would walk if they had to pay more than 2 cents a mile; second, that the long riders were getting too much service at an absurdly low rate of fare. This condition proved so prevalent that the company has already decided not to ask for a flat increase in fare but simply to put all the facts before the commission that the latter may decide whether real relief can be obtained in better ways than by the driving off of short riders.

## Welfare Work Being Revived to Hold Platform Men

FOLLOWING a period of discouragement because it did not prove a sure cure for resignations and strikes, welfare work seems to be coming to the front again. Out of a score of properties visited recently about one-half had recently opened "at-cost" restaurants, and in some in the busier war centers sleeping quarters for unmarried men had been leased or built. Quite plainly such practices are dictated primarily by the acute shortage of labor and the high cost of living, but they have in them greater possibilities than saving a dollar or two a week for the platform man. No restaurant, no shower bath, no pool table, no punching bag, no anything will keep men in the service unless there is enough humanity behind these things to promote loyalty—love for the job and love for the boss of the job. The soldier and sailor

who are willing to lay down their lives are not doing it for pay but for loyalty. Many a railway man to-day is sticking to the platform despite the temptation of other work because he has learned to love his work under a management which takes a truly personal interest in him. Therefore, we earnestly beseech all managers who are installing or improving these facilities to continue to give their personal attention. The men will soon discover and immediately resent any attempt to put such important connecting links in the hands of a patronizing or indifferent subaltern.

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### Progress Being Made but Exact

#### Date of Millennium Still Uncertain

**A**BNORMAL circumstances sometimes bring unusual results. Here in the United States we struggled for years to find a way to pull down that costly bugaboo—the rush-hour peak. Nothing would make a bend in it. And the fellow on the street figured the wonderful profits that seemed to exist in those hours of heavy travel. Various city and state supervising bodies insisted on showing the railway operators “how to make more money” by ordering still more cars to push up the peak. True, a few railway managers here and there were lucky enough to get the co-operation of business men who opened and closed their plants earlier so as to spread the peak and thus distribute the existing facilities of transportation to better advantage. But these cases were rare, and when reports of them were made at annual conventions, the other delegates only marveled that individuals could be so considerate, and they thought the situation too good to last. Then came the great war and the adoption of measures of economy in all lines of industry. Uncle Sam was a man of broad vision and promptly recommended skip-stop and other coal saving changes in operation, which led to some good results. At the seat of government in Washington, a strong appeal was made to those who could help to better the local service by closing stores and offices at different hours. Action of this kind is slow in making itself felt because it runs counter to that most inflexible law—habit, but there is hope that Washington will lead the way in this most important reform.

And now comes a brother manager from Cardiff, Wales, who has asked the press to inform women intent on shopping and not engaged in war work, that unless they could manage to do their buying in reasonable hours, they would be excluded from the cars altogether. He even suggests that it might be necessary for women to produce certificates to show that their business entitled them to ride in the cars.

We do not know whether to recommend this drastic measure to railway men in this country. In the first place, it is likely that a large proportion of the women patrons of our car lines would produce their knitting bags as evidence that they are engaged in war work and thus entitled to certificates of exemption. To speak seriously, there are many things being done now that would have been deemed impossible before the war. It may not be too much to expect that some authority will decree that cars during the working hours be reserved for working people. The millennium may be at hand.

### Skip-Stop Principle of Small Cars Staves Off Jitney Competition

**T**HROUGHOUT the land almost every electric railway is working on the skip stop. It's not so easy, however, for those who have jitney competition to do much skip-stopping when the jitney is ready to stop at the doorstep of the passenger. These roads rightly feel that literal obedience to the suggestions along these lines of the Fuel Administrator would cause them heavy losses of patronage so long as the gasoline engine—usually old and inefficient—could go merrily on its career of wasting man-power as well as fuel.

To many of these railways the small, one-man lightweight car has come as a solution. Through its very size it embodies that diminution of stops that must be fixed arbitrarily in the case of larger car operation. The best that can be hoped for by the national skip-stop program is a cut of one-third, and this is practically what the one-man car does because it carries say thirty-two passengers to the larger car's forty-eight. To be sure, the grand total of stops made by all the cars may be greater than before, but the cars that make them will be averaging 1 cent instead of 2 cents for power per car-mile. Hence there still will be a great saving in the use of fuel without the least inconvenience to the passengers or the loss of any of their patronage.

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### Show That Electricity Saves Gasoline

**O**NE way to take a cold bath is to plunge in boldly all at once; another way is to inch in gingerly—toes, ankles, knees and waist until the neck strikes water with a shiver and a b-r-r-r-r! The latter style of natatorial dissipation describes pretty fairly the way we have plunged into certain activities relative to the war. A good example is the conservation of that gasoline which is so badly needed at the battlefield where the use of the more efficient railroad is impossible.

Despite the repeated warnings of so competent an authority as Mr. Bedford of the Standard Oil Company, pleasure automobiles are still crowding our highways and are being used for joy rides literally by the million. Alarmed undoubtedly by the prospect of further curtailment in output, the automobile interests are now turning to the auto-truck, using its splendid emergency work “over there” as a specious argument for its unlimited use “over here.”

From the very beginning of the war, the European belligerents made prohibitive the use of gasoline for non-war or important business purposes. So the ancient hack and ox-wain have reappeared in astonishing numbers. In America such a reversion would hardly be necessary. The elimination of jitneys and the retirement of private machines would, in many cities, lead to the use of good electric cars now idle. There is always also the possibility of the skip stop and higher rates of braking and acceleration for increasing passenger service without increasing cars or fuel requirements. As for auto-trucks, we have previously declared how wasteful they are in every respect in any district now supplied with electric railway facilities.

It is not human nature to expose one's own frailties, so we should not expect the automobile and auto-truck

interests to dwell upon the dark side of the shield. The job of preaching that gasoline should not be used extravagantly wherever other transport means are at hand is distinctly up to the electric railway man. Certainly patriotism and self-interest could not harmonize better.

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### N. E. L. A. Gets Right Down to Business

IF WE HAD not believed before in the value of national association conventions in war time, last week's gathering of the National Electric Light Association at Atlantic City would have converted us. The position of the ELECTRIC RAILWAY JOURNAL in this matter is, however, well known and it is not proposed at this time to rehearse the arguments pro and con.

The meeting at Atlantic City was characterized by consistency and concentration of purpose. The war has forced many and perplexing problems upon the electric lighting industry. These involve the labor supply, fuel questions, operating methods which shall insure continuous and satisfactory service under adverse conditions, financing, and many other kindred topics which stress the mind and vex the spirit of the public utility operator to-day. Such matters as these naturally provided the material for discussion at the Atlantic City convention. The abstract of the proceedings printed in this week's issue is intended to reflect the spirit of the meeting rather than exhaustively to report the letter of the discussion.

There are two important functions which are performed, with others, by a war-time convention properly planned and held. On the one hand it enables the organization which it represents to see itself in perspective. At the same time it demonstrates to the public and particularly to the government the nature, extent and operating conditions of its organization. It is very important at this time for our federal government to know the public utilities better. As the war progresses the government will assume more and more of control and responsibility in the utility field. It is obvious that a convention like that of the electric light and power interests, which are second only in importance to electric railways among the utilities, will serve to bring the government and these utilities closer together.

The National Electric Light Association is leading its industry in the movement for conservation. Its convention was marked by simplicity; no unnecessary expense has been incurred by its committees; it has reduced the size of its monthly bulletin for the purpose of saving paper; and through its committees it is bringing to the attention of its clientele valuable information which will enable central station companies to maintain good service economically.

The N. E. L. A. convention ought to be of great value to the electric railway industry, in preparing for the October convention. Compared with the usual attendance, the N. E. L. A. convention was a small one, but the influential people were there and that is what counts in these times. By the same token we may assume an attendance of proportionate size and the same representative character at our October convention. On account of the small attendance at Atlantic City it was possible to incorporate the section meetings, usually held separately, into the general program. This

proved to be an effective plan, under the circumstances, in that it insured adequate attendance at the section meetings and also very effectively brought the work of the sections to the attention of the whole convention.

The electric lighting and electric railway industries are so closely related that somehow it ought to be possible to carry over the spirit of the June convention to that which is to be held in October. Can we not somehow so absorb the spirit of the former that when our own meeting convenes in October we can start off where the electric light people ended? This war-time spirit ought to be cumulative, and if everyone goes to Atlantic City in October with the determination that the convention is in some way to bring the end of the war a little nearer, the success of the convention is insured in advance.

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### The War Finance Bill in Its Present Shape Is Unsatisfactory

THE practical results of the war finance act have been a great disappointment to the utilities. The original purpose of the act was generally understood to be to help the public utilities and other essential industries to take care of issues of their securities as they should mature. In ordinary circumstances no such assistance would be necessary. Indeed such loans could probably still be negotiated in the former way, even at current interest rates, if it was not for the flotation of government bonds. But the government asks to be regarded in the loan market as a preferred customer. It says, and properly, to bankers and others who otherwise would absorb refunding utility issues, that their first duty is to the government. Take and help float government loans at 4 and 4½ per cent—so many railway men understood the purpose of the war finance bill to be—and the government will assist in caring for your maturing utility issues at a high, though not exorbitant, interest rate. The utilities hoped that such assistance would be direct, under Section 9 of the war finance corporation act, but under the present ruling it must in most cases be indirect through the banks, under Section 7. The formation of a corporation by banking interests to handle utility financing has been suggested, but this plan has barely passed the proposal stage. As yet many bankers seem reluctant to aid the utilities, because of the lessened earning power of such enterprises, and thus the expressed purpose of the lawmakers has been largely negated.

There is every reason why the government should intervene in favor of the electric roads, because with both their income and expenditure controlled, they cannot help themselves. But entirely independent of equitable grounds, business policy should dictate prompt relief as a war measure. Unless it is afforded, receiverships in a great many cases are bound to result, with widespread injury to credit because of the extent to which utility bonds are held for investment, as well as with injurious effects on service which is necessary to war workers. In other words, an amendment to the war finance bill or a reinterpretation of it so as to afford direct relief to utilities is justified on both ethical and practical grounds. The government should step in, both to lend credit and to assist in increasing rates that the roads shall be more nearly self-supporting.

# The Fuel Problem and the N. E. L. A.

National Electric Light Association Held Two-Day Convention Last Week at Atlantic City for the Discussion of War-time Questions—Principles Covered Apply to Electric Railways Also



HEADQUARTERS OF THE N. E. L. A. CONVENTION AT ATLANTIC CITY, JUNE 13 AND 14

**A** WIN-THE-WAR Convention was held by the National Electric Light Association at the Hotel Traymore, Atlantic City, on June 13 and 14. The sessions were held in a hall within the hotel. The attendance, which was about 300, was very representative. The keynote of the convention was that of patriotic service of men and companies. This thought was expressed in resolutions presented on Thursday afternoon by the committee on the president's address, Samuel Insull, chairman, which said in part, in referring to the war:

"With a realizing sense of the stupendous sacrifices involved, but with an abiding faith in the ultimate result, we pledge all that we have and all that we are to the holy cause."

## THURSDAY SESSION

The presidential address of John W. Lieb not only discussed the work of the year but presented also a strong outline of our national ideals and unswerving purpose in the war. Defining the electrical industry as including electric railway, telephone and telegraph, electric light and power systems, and manufacturers on whose output these enterprises depend, Mr. Lieb said that this industry employs 920,000 men, represents \$10,750,000,000 of invested capital and has an annual output of \$2,675,000,000. Of these totals, the electric light and power industry represents 125,000 men, \$3,000,000,000 invested capital and annual business of \$575,000,000. He urged the central stations to pay especial attention to the linking up of regional systems so as to save fuel and increase reliability and economy of operation. He also advocated the further development of water powers as well as the advancement of the clock to be operative all the year instead of during a limited spring and summer season.

The secretary reported, among other war economies,

that the monthly bulletin of the association had been reduced materially in size.

The membership committee reported a total membership as of June 10, 1918, of 11,440, divided as follows: Class A, 1083; class B, 9013; class C, 93; class D, 253; class E, 954; foreign, 44. This is a decrease of 3392 for the eleven months ended May 31, 1918, principally in class B and class E, due in large part to enlistments in military service.

The afternoon session was devoted to the reports of the national committees on gas and electric service, and public utility conditions and to the public policies committee, with a symposium on labor problems of the hour. In reporting for the national committee on public utility conditions, P. H. Gadsden pointed out that not only operating expenses are higher than ever before, but \$250,000,000 in public utility securities will mature during 1919, and enormous investments are required to provide the increased service demanded by war industries. To provide the additional station and substation equipment alone, nearly \$200,000,000 will be required in 1918. The serious part of the situation is that ordinary channels of financing are not open, owing to the war conditions. Between 600 and 700 rate increases have been allowed since Jan. 1, 1918, and it is hoped others will be secured. Mr. Gadsden said the committee was convinced that the federal government has the right to fix rates of public utilities which will enable them to exist in time of war. Whether it can be induced to do so remains to be seen.

At the annual dinner on Thursday evening addresses were made by P. B. Noyes, director conservation division, Fuel Administration; Samuel Insull, Dr. S. S. Wheeler, Arthur Williams and W. W. Freeman. Mr. Insull, in his address, said he wished to sound a note of optimism. While he admitted that the wording of the law creating commissions in some states is some-

what ambiguous so far as authority to increase rates is concerned, most commissions have authority to increase insufficient rates, and, so far as the electric light and power business is concerned, he hardly thought the industry had cause to complain about their decisions. It was reported that of the 460 applications made for increased rates in 1917, upwards of 400 decisions were given favorable to increases, and there are but few cases presented to commissions during the first half of 1918 where some relief has not been granted. A more serious trouble, in the speaker's opinion, is that of the refunding of maturing securities and the placing of new securities for necessary capital expenditures made during the war. But in his opinion, if the companies are diligent in the presentation of their situation to the authorities, they are bound to get relief.

The session on Friday was devoted largely to engineering topics. A feature of the convention was that the section meetings, usually held independently, were a part of the regular sessions. At the electrical vehicle section, a paper entitled "The Electric Vehicle as a War Measure" was presented by James H. McGraw, a member of the executive committee of the section.

On Friday afternoon W. F. Wells, vice-president and general manager Edison Electric Illuminating Company of Brooklyn, was elected president for the ensuing year.

## The War and the Labor Problem

**The Utilities, Confronted with Labor Shortage, Must Learn to Get Along with Less Labor and to Utilize Labor Normally Unavailable for Their Work**

THREE phases of the labor situation occupied the attention of the Atlantic City meeting. These were the supply of labor to keep the utilities in operation, the distribution of skilled and unskilled labor among the industries and the utilization of the working capacity of soldiers returned from the front no longer fit for military service.

In the first connection E. S. Mansfield, Edison Illuminating Company, Boston, Mass., told how young women are being trained and used as substation operators on that property. Their employment for this purpose was the outgrowth of satisfactory experience in utilizing women in other classes of work where they replaced men, who had left the company for war work. Some months ago a class of eighteen girls was put under instruction for substation work. At first theoretical and book instruction was given but it was found later that what they needed was actual operation under instruction. They were, therefore, put through a regular course of closing switches and telephoning, load dispatching, receiving messages and checking them, etc., always under guidance. They were also examined as to their progress both orally and in writing.

Of the entire class fifteen were assigned to the Thirteenth Station, Rosedale, and they are now operating there, three on a shift of eight hours each, three shifts per day, six days per week. They are still supervised by a man attendant who insures co-operation, but eventually this supervision will be omitted. The girls are paid during instruction, at the same rate as the men, starting at about \$15.40 per week. Eventually the use of the young women will be extended to other

substations and it is quite possible that in time they will become the main dependents for substation operation. Among the qualifications considered for this work were originality, self-confidence, and quickness of thought to act in emergencies.

### GETTING TOGETHER ON THE LABOR QUESTION

At the meeting considerable interest was manifested also in what has come to be known as the "Rochester plan" of co-operation in labor supply. Rochester is a center of war munitions manufacture, and about a year ago the Chamber of Commerce undertook the formation of a central employment bureau for the purpose of furnishing workers for the war plants with minimum interference with other industries. By assessing a reasonable tax upon the establishments which would be benefited in proportion to the proposed benefit, a considerable fund was raised, and a superintendent with the necessary assistants was employed. Back of the bureau was a representative executive committee recruited from the ranks of leading business men.

At first a campaign of advertising in the surrounding territory provided a reasonable supply of men, but later it had been found necessary to provide for training unskilled workers for special tasks. In addition the ranks of workers for the munitions plants were filled by drafts made on other manufacturers. In the matter of wages it was early recognized that good wages must be paid in order to make working conditions attractive, and the wage data of the region were studied in order to insure reasonable equality of payment for similar service. At the same time figures of living costs were gathered, but the impracticability of raising wages in proportion to increases in cost of living was recognized. In explaining the Rochester plan James C. Hutchings, Rochester, N. Y., pointed out that to raise wages in proportion to increased cost of living means that a man shall have every comfort and luxury in war time that he enjoyed previously. It is obvious, said he, that we cannot hope to win this war and yet live as well as we lived three years ago. Eventually we may have one man out of six of the 36,000,000 active wage earners in the country prior to the war engaged in destruction at the front. Those behind the lines must make a sacrifice for the good of the work at the front.

### REHABILITATING THE DISABLED SOLDIER

The third aspect of the labor situation discussed at the meeting related to the employment of crippled soldiers. D. H. McDougall, secretary Canadian Electrical Association, explained what had been done in Canada along this line. There the work appears to be well organized and a systematic effort is made to enable returned soldiers to enter occupations to which they are fitted, while at the same time provision is made for training them for their new duties if necessary. It seems that there is great danger that returned soldiers may not feel inclined to go back to work, but rather to eke out an existence on their pensions. It is made clear to them in Canada that any compensation which they may receive for work done will not in any way interfere with their pensions.

The employment of returned soldiers fit for work and not suffering from disability is in the hands of the Provincial Soldiers' Aid Commission. There is also

a new commission known as the Department of Soldiers' Civil Re-establishment. The latter made an industrial survey of trades and occupations with a view to fitting the returned soldier into the industrial machinery with minimum risk of disappointment. A large number of occupations were studied with reference to the physical and mental requirements of workers.

#### VOCATIONAL TRAINING COMPULSORY

It was found that once a man had received his discharge there was difficulty in reaching him. Now a man must show that he has been interviewed by the industrial re-educational officer before a discharge is granted. Canada has adopted compulsory vocational training under discipline if a man is not able physically to resume his former employment. After discharge and perhaps in receipt of a pension, a man is allowed pay and certain expense money while undergoing vocational training. This amounts with his pension to about \$50 per month, as a minimum, while the total payment may run up to \$100 per month.

With special reference to men who have been blinded in the war, the considerable effort that is being made in their behalf in the allied countries was described by Dr. S. S. Wheeler, president of the Crocker-Wheeler Company, Ampere, N. J. Dr. Wheeler's own company has successfully employed blind men in winding coils for electrical machines, and he has succeeded in interesting manufacturers in France and Great Britain in the same work. At the Crocker-Wheeler works blind coil-winders are paid at piece rates and they are able to earn good wages without any contributions made to them on account of their infirmity.

#### CIVILIANS MUST "FIND THEMSELVES" WITH RELATION TO THE WAR

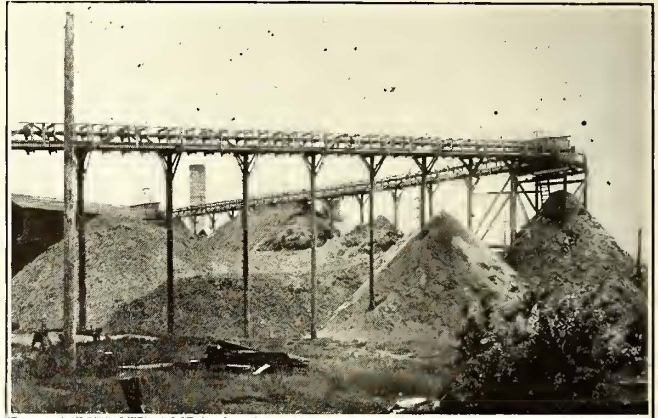
While on the subject of labor and the war it is not out of place to call attention to a paper by Arthur Wright, of London, England, also read at this meeting, on the subject of "War by Civilians." His contention was that it is not patriotic to wait until each citizen is forced into the occupation which will best enable him to contribute to the winning of the war, but he must take the initiative in the matter. The civilian should at once bring himself to believe that all that really matters at this time is the successful prosecution of the war.

While he did not make any specific suggestions as to what civilians in general could do, Mr. Wright called attention to the fact that in the allied countries there are many capable men and women who are devoting a great deal of time to rather insignificant work of a war nature, when with the necessary initiative they could be of vastly more use by using their special capabilities in some definitely efficient direction. He devoted his paper largely to controverting the following prevalent and pernicious fallacies: (1) The war cannot last much longer. (2) Business must be carried on as usual. (3) The war will necessarily ruin most businesses. (4) Civilians need do little on their own initiative, as the government will in due course call for all the help needed. (5) Owing to the terrible tragedies that are being daily enacted on the battle front, it is both unpatriotic and unfeeling to preach cheerfulness and optimism as to the future.

## Progress in Electrical Machinery

Getting Greater Output from Existing Equipment Is the Task of Mechanical and Electrical Engineers Because They Cannot Get Much New Machinery

THE usual reports on power generation and distribution were not presented this year, but the committees brought out a number of valuable data. The committee on electrical apparatus showed that many companies have equipment with considerable overload capacity when compared to present-day ratings and temperatures. This could be more fully utilized. For in-



EQUIPMENT FOR UTILIZING WOOD REFUSE FOR FUEL IN A HYDRAULIC PLANT STEAM AUXILIARY

stance, one plant had two water turbines which could develop 24,000 hp. each but the generators connected to them would not carry more than 10,000 kw. of load. By installing Sirroco fans on the rotors of the generators and inclosing the parts of the generators above the floor line, it was possible to supply cold air chilled by means of sprinkler heads so that 14,000 kw. could easily be carried. Later this was pushed up to 16,300 kw. with safety. Many companies also have increased line voltages to obtain greater line capacity by changing transformers from delta-delta to Y-delta connection.

The report of the committee on power generation was not available in finished form, as it usually is, but a statement was made that it will shortly be available through the technical press. The report took up such subjects as thawing frozen coal, storage of coal, methods to be used in handling coal, coal inspection, firebrick, boiler cleaning, etc. For the committee on underground distribution, E. B. Meyer, Newark, N. J., reported particularly regarding emergency cable practice. At the present time maximum use must be made of distribution equipment, and interruption of service to war industries must be avoided. It is especially important then to remember that the carrying capacity of cables is lower in summer and to increase the capacities of such cables particularly during hot, dry seasons. This can be done by the circulation of air through the cable ducts, circulation of water around the cable, hydration of the surrounding soil and moistening of cables and materials which conduct away the heat rapidly.

In special cases aerial cable has been used for operation at 13,200 volts. In one case the cable was insulated with paper on the individual conductors, with a paper jacket and a final covering of reinforced rubber over the whole. For mechanical protection a galvanized steel

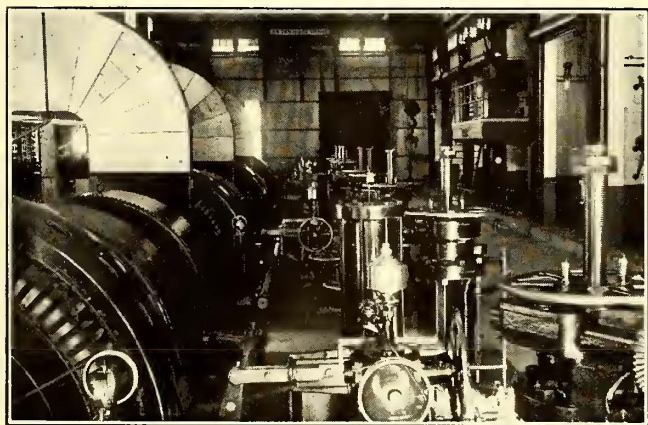
tape was wound over the cable. Such construction permits the use of ordinary pole lines for cable support. Two or more cables may be installed and changes or repairs made on the circuits without taking out of service any line, except the one on which the actual work is being done. The aerial cable construction is, of course, to be used only in special cases where it is desirable to cross underneath highway or railroad bridges and where open wires are undesirable or underground construction costs prohibitive.

## War-time Problems in the Power Plant

**Coal Shortage Overtops Everything Else in the Minds of Public Utility Operators at This Time—Quality as Well as Quantity Is a Factor in This Shortage**

**I**N THE FIELD of power generation the discussion at Atlantic City naturally centered in fuel conservation. P. B. Noyes, director conservation division, United States Fuel Administration, analyzed the reasons for the fuel shortage and raised the question as to how we ought to meet the increased demand of 100,000,000 tons of coal for the coming year. This will mean an increase of more than 220,000,000 tons in excess of anything mined before the present war. To emphasize the magnitude of the coal movement in this country he said that the entire wheat crop of the country could be moved in twenty-six days, using the average number of cars employed throughout the year in the coal movement, and the cotton crop in one and one-third days.

Mr. Noyes believed that the fuel shortage will be more acute next winter than last and the problem is how to secure an equitable distribution of the coal that will be available. He said that the Fuel Administration wishes to make the utility business a 100-per cent war industry and then to assure it 100 per cent coal. In the conservation movement the ideal is to get consumers



FORCED AIR CIRCULATION INCREASED THE CAPACITY OF THIS POWER PLANT

to realize that in saving coal they are keeping people at work and thus contributing to the winning of the war.

Following Mr. Noyes, Samuel Insull, president Commonwealth Edison Company, Chicago, Ill., among other things said that, while the orders, in general, issued by the Fuel Administration have had a tendency to reduce the load factor on power plants and hence the earning capacity of the business, he realized the importance of these orders. For example, while the first order as to electric signs affected the earning capacity of the

Edison Company out of proportion to the saving obtained yet Mr. Insull would have issued the order himself had he been in Mr. Garfield's place. He attributed a part of the fuel shortage to the fact that, in Illinois at any rate, the miners are not working more than 60 per cent of the time, due to lack of open-top cars.

H. A. Wagner, president Consolidated Gas, Electric Light & Power Company, Baltimore, Md., urged the public utility companies to take a leading part in cutting down the use of open-top cars for non-essential purposes, bringing before public authorities and local fuel administrators the necessity for such action. Mr. Wagner also called attention to the poor quality of the coal now being furnished to utilities and suggested that if the quality were better fewer cars would be required to transport the coal. He thought that mines producing coal with high B.t.u. content should get more than their pro-rated supply of cars so that the greatest number of heat units possible might be available.

### WATER POWER CAN SAVE SOME COAL

According to W. W. Nichols, Milwaukee, Wis., water power can be used greatly to reduce the coal consumption. Although 1917 was a year of light demand in water-power machinery, more than 1,000,000 hp. of this machinery was built and installed, representing a saving of 8,500,000 tons of coal besides a further saving in production, labor and transportation. Ten per cent of the estimated coal shortage of this year, therefore, would be met if the industry could do as well in installing water-power machinery.

Without building new plants development can be brought about by increasing the capacity of plants already built, and replacing machinery installed prior to 1911. By this means 6,000,000 tons of coal could be saved in the twelve months.

Referring to the possible effect of the development of water power on coal conservation, Philip Torchio, New York Edison Company, pointed out that at best the use of water power could only delay the exhaustion of our coal supply. The available water power in the Eastern States represents only about 8 per cent of all the power demand in that section, or 5 per cent of the estimate of Mr. Noyes for next year's demand. Mr. Torchio said that the average efficiency in generating energy from coal is 5 $\frac{1}{2}$  per cent, whereas now steam power can be produced at 19-per cent efficiency. The theoretical saving in coal by using the most economical means of generation would, therefore, be about two-thirds of the quantity now used.

Following Mr. Torchio, George A. Orrok, New York City, considered the possibilities of utilizing the culm which has accumulated around the anthracite mines. His data seemed to show that the amount of culm which is available for use is less than has been estimated by many. Of the 108,000,000 tons which have been dumped into culm banks in the last 130 years, one-quarter has probably gone back into the mines to prevent the falling in of the roofs or is otherwise unavailable; washeries have been in operation and have recovered a great deal of good coal also. Mr. Orrok also spoke of conveying coal by means of water. With water of one-half the volume of the coal, and with a 14-in. pipe and a velocity of 5 ft. per second nearly 4,000,000 tons of coal per year could be transported.

# Electric Railways Are Serving the Nation

**New Orleans Company Saves More Than 8000 Tons of Coal Annually Through Rerouting and Near-Side Stops—Shipyard Workers Operate Staten Island Cars—Service for Aviators and Shipbuilders at Dallas, Mobile and Beaumont**

EVERY day electric railways are endeavoring to utilize their limited resources, as far as possible, to co-operate with government authorities in the prosecution of the war. The service performed varies, but a general idea of what is going on can be gained from sketches of the activities in different localities.

The ELECTRIC RAILWAY JOURNAL of June 1 contained a description of war work under way in certain Atlantic Coast cities. To this there are now added below several articles dealing mostly with Southern cities.

## Sixty-five Seats per Passenger!

**War Brings Rerouting in New Orleans—Curtailement of Waste Mileage Is Saving 5000 Tons of Coal and 138,335 Car-Hours a Year**

FOR many, many years the New Orleans Railway & Light Company, New Orleans, La., has been suffering from a most wasteful multiplication of service under the franchise requirements of the underlying companies. It had become almost a sacred tradition to route practically all the lines along Canal Street, although crews and passengers had become tolerably familiar with the attractions of that famous thoroughfare. The cars were not content to go through only the busy section, but they wandered idly to a point (called Liberty Place) near the river.

Traffic checks showed that outside of five blocks in the center of the district so few riders were left that on the average each one had the privilege of using any of the sixty-five seats. This sounds fantastic, but it is true. All this waste was distressing—to the public, in causing unnecessary congestion, and to the railway, in causing unnecessary expense.

### REROUTING TO AVOID WASTE MILEAGE

Finally, as a war measure to save coal, the company through Nelson H. Brown, manager of the railway department, put a thorough rerouting plan into effect on Dec. 23, 1917. The loop on Canal Street was shortened by landing passengers from lines terminating at Canal Street within a radius of five city blocks. Those desiring to continue to the river may do so by transferring to any of the six heavy trunk lines which use Canal Street between Rampart and Liberty Place. The lines have double-truck cars and short headways.

By the rerouting and changes on Canal Street, congestion was eliminated, speed was increased and headways were shortened. The following table shows the number of cars moved in each direction through Canal Street during the peak, before and after the change:

	To the River			From the River			
	Before	After	Decrease	Before	After	Decrease	
Track 1.....	111	80	31	Track 1.....	111	80	31
Track 2.....	119	65	54	Track 2.....	119	77	42

Another study carried out at the same time reduced the excessive off-peak service and increased the peak service as follows:

	A.M. Peak	Noon	P.M. Peak
Cars before the change.....	392	306	441
Cars after the change.....	413	281	459

Through the more effective use of car-hours, eighty platform men were saved. No man lost his job, however, as applications were not accepted while the rerouting was under way. In addition, the normal ratio of resignation left practically no surplus. As a matter of fact, the draft may soon make a shortage.

The coal saving from the rerouting is at the rate of 5000 tons a year. Expressed in car-hours, the saving is equivalent to 138,335 car-hours a year. At 92.14 cents per car-hour for the operating accounts alone, the economy is a very welcome one—all the more so since it has been obtained by enriching the service instead of pauperizing it.

It should be added that before these changes became effective, the public received ample notice through car posters and comprehensive newspaper articles. In order still further to avoid annoyance and confusion, supervisors (inspectors) were located at the prominent street corners to direct people who were unfamiliar with the change.

Few requests for alterations in the rerouting plan have been made. On the whole, it appears to be as satisfactory to the public as it is to the railway.

Beginning on May 20, the company introduced a further improvement in service by abolishing the double stop (far-side and near-side) formerly in vogue at every rail intersection, whether steam or electric. The percentage of use of both stops at a crossing had been found to range from 25 to 60 per cent according to the time of day. By making stops on the near side only, the company saves 35,189 stops daily. At ½ lb. of coal per stop, this means 9 tons a day or 3285 tons a year—a tidy addition to the tonnage saved by the rerouting. Moreover, through the saving of ten seconds per stop, the running time is being reduced to the extent of from two to six minutes per trip. This saving is to the advantage of the public.

### 4000-FT. EXTENSION IS BEING BUILT

New Orleans has had no great enlargement because of war activities. The chief thing in that line is the shipbuilding plant which the Foundation Company is building on the Industrial Canal between the Mississippi River and Lake Ponchartrain. The canal itself will not be ready for eighteen months.

To serve the shipyard and other business that may develop, the New Orleans Railway & Light Company has begun a 4000-ft. extension of its Claiborne line with material from a postponed double-tracking of South



Claiborne. This track is laid directly on the neutral ground or park strip of France Street to Galvez Street. Eventually it will be extended still farther toward the lake.

The canal will also cause the Dauphin Street line to be shifted three blocks farther from the river to St. Claude Street, which will have one of the three bridges to cross the canal.

### More Than 3500 Shipbuilders at Beaumont

**B**EAUMONT, Tex., is now busy with the building of wooden ships, and the community has hopes for steel and concrete ones, too. Toward the end of May about twenty-two ships were on the ways, and four had already been launched.

Of the five plants at Beaumont those of McBride & Law, with 450 employees, and J. N. McCammon, with 400 men, are within two blocks of the main street. The Tarver Shipbuilding Company, with 200 men, is within eight blocks of the Beaumont Traction Company's lines. The other two, the Lone Star Shipbuilding Company, employing 1300 men, and the Beaumont Shipbuilding & Dry Dock Company, employing 1500 men, are located across the river, but within half a mile of the company's lines. These two yards expect to employ approximately 500 additional men each within the next sixty days to equip the wooden boats that are being built in this section for the government. There will be fifty-two wooden vessels equipped for sea by these two companies.

The only changes in electric railway service thus far required have been increases at peaks and the earlier starting of interurban cars. Such cars now leave Port Arthur at 5.45 a.m. instead of 6 a.m., in order to accommodate about seventy-five shipyard and refinery workers who live there because of lack of housing facilities in Beaumont. Building in Beaumont, however, is now being actively carried on to avoid this. The Beaumont Chamber of Commerce figures that 10,000 people have been added to the population of 36,000 of a year ago.

### Handling Aviators at Dallas

**I**N OR NEAR Dallas are two centers of the aviation forces—Love Field, the headquarters of a flying squadron; and Camp Dick, a ground school. Love Field is 4½ miles from the center of Dallas. It has from 1000 to 2000 occupants. Transportation is *via* jitney, as there is no electric railway service direct to the field.

Camp Dick is located on the Dallas Fair Grounds and has a population of about 3400. Electric railway service is furnished by the south belt line of the Dallas Railway, partly with regular cars run on an eight-minute headway off-peak and a four-minute headway for peak service. Chartered cars are also used for the twenty-minute run between the camp and either the steam or interurban terminal in Dallas, at a charge of \$4 one way or \$7.50 round trip. These chartered cars are likely to average 100 occupants. They are run chiefly for special occasions like train connections. Since the beginning of this service the car-hours of this line have been increased from about 255 to 276 a day and the earnings about \$100 a day.

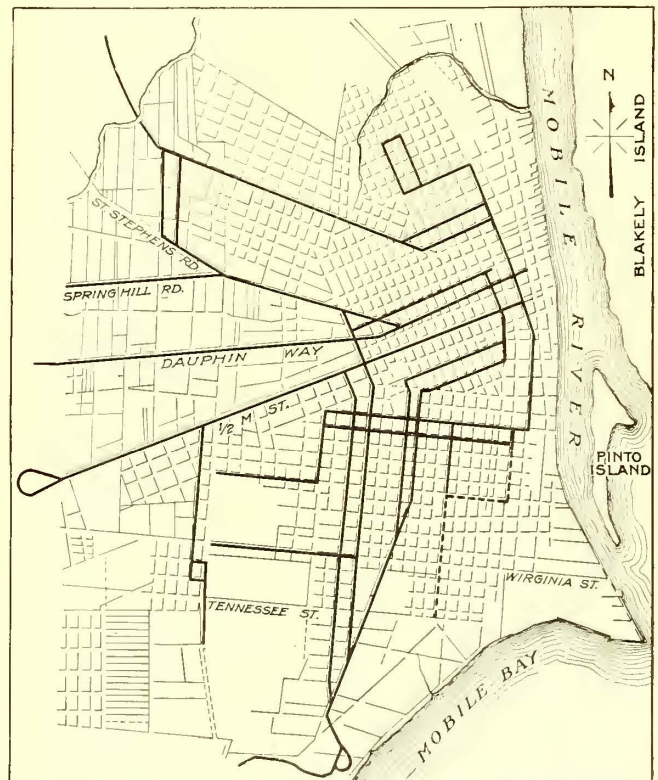
## Mobile's Piers in the Bridge to France

### Much Shipbuilding Within Mobile—Outside, at Chickasaw, Is a 13,500-Acre Yard and Town Development of Steel Interests—New Railway Facilities Required

**T**HE splendid location of Mobile as a shipbuilding center has not been overlooked by the Emergency Fleet Corporation, the United States Steel Corporation and other big interests. Hence not only is the waterfront in Mobile itself covered with ships on the ways, but preparations are also going on outside for the making of fabricated steel ships, at one of the most elaborate housing developments in the country.

#### BIG ACTIVITIES AT CHICKASAW

To take this last-named work first, the salient facts about it are these. In 1917 the United States Steel Corporation, through its subsidiary the Tennessee Coal & Iron Company, bought a wooded tract of nearly 21 square miles (13,500 acres), bigger than Mobile itself, at Chickasabogue (Chickasaw Creek) 5 miles up the Mobile River. Although clearing did not begin until November, 1917, a recent visit to the property disclosed the fact that scores of buildings for the workers



NEW SHIPYARD LINE PLANNED FOR MOBILE  
Solid lines, existing railway; dash lines, proposed extension

had already been completed. The housing development alone calls for two self-contained towns, 1000 dwellings for negroes and 600 for whites. At this plant the Chickasaw Shipbuilding Company, the subsidiary shipping company formed, will build 9600-ton steel ships for the export business of the United States Steel Corporation. Thus this development is not primarily for the present war alone. About 6000 men will be employed here soon, and eventually 20,000.

To give electric railway service in this district the

Chickasaw Shipbuilding Company has built a 2-mile line on its own property to connect with the Prichard-Magazine-Whistler suburban line of the Mobile Light & Railroad Company. This suburban line is a single-track route up to Prichard, the end of the 5-cent zone. There the line bifurcates, one branch going to Whistler and the other to Magazine Point, the rate on each branch being 10 cents. The shipyard connection is beyond Prichard, making a third fork.

Until recently the private 2-mile line was incomplete, no copper having arrived. In the meantime the shipping company was giving a temporary service with two open trailers, leased from the Mobile Light & Railroad Company, and hauled by a steam locomotive. It is expected that on June 24 the line will be operated by the Mobile Light & Railroad Company. This will permit the through routing of cars and make it unnecessary for the shipbuilders to maintain a railway organization.

As before stated, shipbuilding developments are also being carried on within Mobile, where there are five companies building ships, employing about 3500 men.

### Public Utility Representatives Confer With Fuel Administration Regarding Coal Conservation

A CONFERENCE was held at Philadelphia, Pa., on June 12, between representatives of the United States Fuel Administration and the public utilities of the State for the purpose of furthering measures instituted to conserve fuel.

The discussion was concerned primarily with the skip-stop system of electric railway operation, and it developed that it would be necessary for the Pennsylvania Fuel Administrator to initiate the discussion of the skip-stop plan through the county representatives. It is understood that these will be instructed to get in touch with municipalities and companies operating in their local districts, while the State Administrator will get in touch with the Public Service Commission.

Bulletin No. 1957 of the United States Fuel Administration was made the basis of further discussion on the general subject of coal conservation in the boiler room, regardless of the skip-stop system. The bulletin mentioned contains a questionnaire, from which a number of questions are reproduced below, as they suggest possible lines of fuel saving. The first section of the bulletin contains forms for recording local power plant data, concluding with a query as to the changes which are in progress which are expected to reduce fuel consumption and when these will be in effect.

The second section of the bulletin contains these and other operating questions:

*Fuel*—What provision is made for weighing fuel used each shift or day? What records are made of fuel used each shift or day? What grate surface is in use each shift, exclusive of banked fires? How much coal is used each shift, exclusive of banked fires?

*Air Supply*—Are means provided for measuring the draft over the fire? Are means provided for determining the excess air by flue-gas analysis? Are dampers provided for equalizing the draft in the furnaces? Is there a convenient means for regulating the draft by main or up-take dampers? Is there an automatic damper regulator in working order?

*Boiler and Furnace Settings*—Are the grates warped, broken or otherwise defective? Where have air leaks been observed?

### Shipbuilders Running Cars

Former Employees of Staten Island Railway, Partly Paid by Shipping Authorities, Operate Cars To and From Work

OWING to the shortage of labor on Staten Island, N. Y., the operation of electric railway cars to the local shipyards is being cared for by shipyard workers with previous railway experience. These shipyard men run the cars out of the carhouse of the Richmond Light & Railroad Company in the morning, take loads of shipbuilders to work and then go to work themselves in the yards. The cars stand on sidings during the day. After finishing their day's work, the shipyard car operators bring the other shipbuilding employees home. The cars are then stored at night as usual.

The cars are in operation from two to two and one-half hours daily, and during this limited time they are handled as in normal or regular runs. The working conditions of the men differ in no respect from those for regular operation. From seventy-five to 100 passengers are carried on a car in each direction. Twelve cars are now in use, but the number will be increased to twenty.

At present there are twenty-four former conductors and motormen of the Richmond Light & Railroad Company operating the cars. These men form part of the 125 to 150 employees of the company who left for shipyard work when this was begun on Staten Island. The pay of the car operators is shared between the shipyards and the railway. The regular shipyard pay is 50 cents an hour, with time and a half for overtime. The regular pay of the railway is 30 cents an hour. Under the arrangement with the United States Shipping Board, the railway pays the car crews 30 cents and the shipyard authorities 45 cents an hour, making a total of 75 cents an hour at the overtime rate.

The general results of the use of shipyard conductors are a source of satisfaction to the company. The fare returns are commensurate with those secured in regular service. It would be difficult for conductors to tamper with the fare collection, however, for the passengers seem to appreciate the service and watch the conductors. Only two attempts to "knock down" fares have been observed and these were reported by the passengers.

The use of former employees on the shipyard runs, however, has not relieved the general labor situation confronting the railway. On the contrary, this is more acute than formerly, owing to the general labor stringency. The company now needs 100 men to make up its usual total. It has advertised in daily, weekly, Sunday and trade papers in seven states where there are organized industrial centers, but the responses thus far have been few and the results meager. No effort has been made to secure women conductors because of the use of open cars with running boards.

When the United States Shipping Board first made the proposition to the company to furnish transportation for the shipyard workers, the railway stated that it could not handle the work without assistance. It was then arranged that sidings should be built in the yards, with the board standing part of the expense. The co-operation in this respect and with regard to the assumption of part of the wage payment to the car operators has enabled the company to take care of the shipyard traffic.

## Handling an Extra Hundred Thousand at Norfolk

For Government Work Company Builds a Million Dollar 66-Mile Transmission Line and Changes 20 Miles of Track to Broad Gage

IN JULY, 1917, business at Norfolk was below normal; by April, 1918, the population had increased from 100,000 to 200,000, exclusive of the large floating population of soldiers and sailors. This, in a sentence, is the result of war activities at Norfolk.

In all probability, the increase in population at this port equals that at Baltimore, Washington and Philadelphia, but the problem is immeasurably more acute in both the housing and transportation aspects because Norfolk could not possibly absorb all the newcomers, or a large proportion of them, by the device of turning residences into rooming houses.

As for railway service, the same degree of difficulty obtains. Norfolk with its narrow streets is simply an overgrown village, and its administration has retained the village viewpoint. This is clear from the fact that Granby Street, the main thoroughfare, is so narrow that vehicles cannot be run between the rails and the curb. Yet the municipality has not yet considered the logical remedy of routing a number of the downtown streets for one-way car and vehicular traffic. As usual, the selfish interests of land owners and business men in the congested section are allowed to hamper the general welfare of the city.

Thoroughly satisfactory street railway service was impossible even before the present boom conditions began. It may therefore be imagined what obstacles the Virginia Railway & Power Company must encounter now, not only in serving the usual city routes but also in meeting the imperative needs of the new governmental depots.

### PRINCIPAL DEVELOPMENTS IN NORFOLK DISTRICT

The principal developments which have created such an extraordinary demand for more facilities in the Norfolk district may be summarized as follows:

Naval Base 9 miles from Norfolk on the site of the 1907 Jamestown Exposition, near Sewell's Point, involving a development of \$30,000,000 to \$50,000,000 on 400 acres of existing ground and another 400 acres of fill. Many of the State buildings of exposition days, which had been converted to residences, are now being used for officers' quarters, in addition to the hotel. Hundreds of new buildings for storage, training and other purposes have already been put up and more are coming.

Norfolk Quartermaster's Terminal, U. S. A., at Bush Bluff 6 miles from Norfolk on the way to the Naval Base. Here about 6000 men are employed in making piling and erecting eight storage warehouses of concrete, brick and tile, each 160 ft. wide by 1680 ft. long. About 13 miles of track are used here temporarily by the contractors. Housing is being provided for about 4500 of the men, but this does not prevent practically all of them from going to Norfolk when they have the money. It is hoped to complete construction work here before cold weather sets in, thus calling only for the use of existing open cars as hereinafter noted.

Tripling in size of the Portsmouth Navy Yard, in-

volving an addition of 35,000 to 40,000 men to the population of Portsmouth.

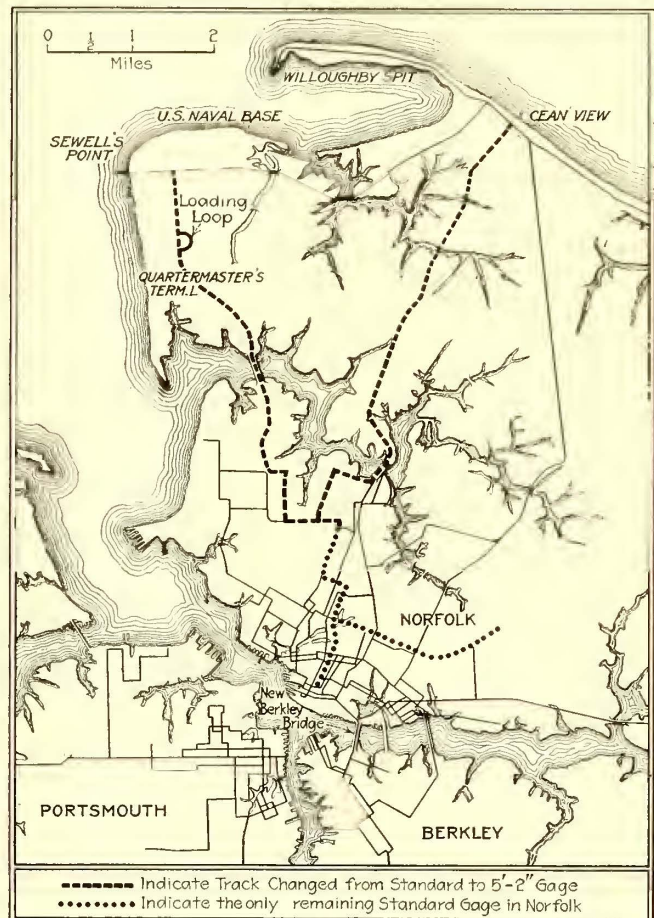
Construction of U. S. Engineers' Depot in Norfolk, at which about 1500 stevedores are employed.

Deepening of harbor to increase the width of the 40-ft. channel from 400 ft. to 800 ft.

Amusement travel of soldiers and sailors from Newport News.

### CHANGING 20 MILES OF TRACK TO WIDE GAGE

One of the greatest difficulties which faced the Virginia Railway & Power Company in giving service to the outlying developments was the fact that the lines



CHANGING THE TRACK GAGE IN NORFOLK FOR WAR PURPOSES

to the Jamestown Exposition (Naval Base) grounds and to Ocean View, 14 miles from Norfolk, which afforded a second route thereto, were 4-ft. 8½-in. gage whereas the Norfolk city lines were largely 5 ft. 2 in. To have attempted to change everything to standard gage would have involved at least three times the expense and far more time than to change these lines to broad gage, inasmuch as most of the special work was of the latter gage. Moreover, most of the standard gage track was open construction. This made it possible to change the gage of 12 miles of track—Norfolk to the Naval Base—in two days. Another 8 miles will be changed over soon to care for the Bay Shore line to Ocean View, making a total of 20 miles changed over. This leaves only 2½ miles standard-gage track owned by the Virginia Railway & Power Company in Norfolk

plus 0.8 mile of track owned by the Norfolk Southern Railroad. This standard-gage track is shown on the accompanying map in the form of a badly-bent "T," the east-west leg of which is owned by the Norfolk-Southern while the portion south of the junction is operated in common by the two companies. At the Naval Base also, about 1 mile of track remaining within the grounds has been left at 4 ft. 8½ in. and leased to the government.

It may be added that the lines in Portsmouth and Berkley remain standard gage, except for the new Berkley Bridge and approach.

Through the expedient of changing the Jamestown Boulevard line to broad gage there were made immediately available forty open cars used for pleasure travel on the broad-gage line which serves Ocean View. In addition twelve closed motor cars were borrowed from the Norfolk city lines, and another forty-eight are to come. The latter loan will include twenty-four open trailers from Richmond. Out of 100 cars for the Naval Base and Quartermaster's Terminal service, nevertheless, fifty cars must be fitted for change in gage.

Aside from these changes, the company is using at Norfolk sixteen new vestibuled motor cars which arrived from the St. Louis Car Company last December in fulfillment of an order placed long before the various developments just described were expected.

#### ABSENCE OF STAGGERED HOUR BLOCKS THOROUGHLY SATISFACTORY SERVICE

Except for the fact that the men at the Quartermaster's Terminal are released half an hour earlier than those at the Naval Base, almost all the workmen must be handled simultaneously. There is not enough difference in time to use cars more than once. Since this service also overlaps the peaks in Norfolk itself, it is evident that the transport problem is most difficult. When the closing hour is sounded at the Naval Base, thousands upon thousands of laborers, hundreds of mule teams and motor trucks and scores of automobiles make one mad scramble to get out of the stockade as if they were trying to escape from imminent death. Despite the fact that scores of cars are standing in line only the first suitable one will do. Men will be seen hanging to fenders even when there is plenty of standing room inside, their obvious purpose being to escape the payment of fare. A prepayment area outside the Naval Base does not appear practicable to the company because of topographical conditions and the use of a 5 and 10-cent fare.

Partial relief, so far as preventing the clogging of the line is concerned, will be afforded here and at Sewell's Point by the construction of a third track for the storage of twenty-five to thirty cars.

The service from the Naval Base, as at other points, is handled in trains of two or three cars. To move two trailers at good speed is not difficult because of the entire absence of grades. Through runs are made wherever practicable.

If the company had any assurance of the permanence of this business, it would order multiple-unit equipment and operate five-car trains or more, but obviously it must meet the present conditions as best it can with existing equipment. The ideal arrangement for handling the twice-a-day traffic to and from the

Naval Base would be to borrow an old steam locomotive and use it to haul a train of coaches. The Virginian Railway could have done this by running a spur, but it did not care to disturb its freight business. However, the electric railway is now negotiating for steam equipment which may be used if proper arrangement for payment of fare can be made with the government.

In explanation of the foregoing, it should be stated that Naval Base employees are granted a railway fare allowance of 20 cents per diem whether they live in 5-cent or 10-cent zones. Because of the undisciplined way in which they board the cars, however, so many fares are missed that the service is unprofitable. If the 20 cents per diem per man was paid directly to the railway, the men could ride on badges good on the specials. This would simplify the work of the trainmen enormously and also segregate this travel from other services. However, the simplest, cheapest solution would be to stagger the working hours of the men at the Naval Base at least, since they constitute the bulk of the travel.

Beside the service given by the railway, there are a number of automobiles and privateering motor trucks. The automobiles charge 25 cents for the trip. The motor trucks are not supposed to be used for this service, but many drivers are careful to hang about the Naval Base, after delivering their employer's supplies, for the personal profit of carrying a load to town at 10 cents per rider. Only a nominal license fee is charged for auto vehicles by Norfolk anyway.

The laborers at the Quartermaster's Terminal are not only smaller in number but also far more orderly. At this location, the company has built a loop where sufficient cars are stored to give prompt service.

Aside from the twice-a-day peak service required at these military bases, provision must be made for the riding of men on leave. This kind of traffic is extremely erratic. Regular days of leave may be suddenly canceled, an unusual number of men may receive a day off, or the expected travel will not materialize because pay day is too far away. No matter how spasmodic this travel is, and despite no notification of plans, the railway is always expected to be on the job.

#### A \$1,000,000 TRANSPORTATION LINE BUILT TO USE POWER GENERATED AT RICHMOND

The acuteness of the railway situation is paralleled only by the demand for more power. The Naval Base alone is already taking 3000 kw. and 1500 kw. will be needed at the Quartermaster's Terminal. These demands are of course exclusive of the general increase in power requirements made on the company.

As the 12,000-kw. turbine at Norfolk was already up to capacity and no additional turbine capacity could be secured before 1920, the company has had to go to the extraordinary expedient of building a 66-mile, 110,000-volt transmission line from Richmond to Suffolk in order to transmit 15,000 kw. from its 20,000-kw. turbine at Richmond. This line will be constructed with Archbold-Brady A-frame and anchorage towers now under fabrication. Increased railway and power equipment totaling 15,000 kw. has also been ordered for the substations at Lambert's Point, Sewell's Point, Naval Base and Ocean View. A portable substation has also been in use on the Jamestown line for several years.

# Automobiles, Inexperienced Labor and Other Accident Topics Discussed

Pacific Claim Agents' Association Takes Up Topics of Vital Current Interest at Its Portland Meeting—  
List of the New Officers Elected for the Ensuing Year

**T**HE ninth annual convention of the Pacific Claim Agents' Association was held at the Portland Hotel, Portland, Ore., on May 1, 2 and 3. President H. K. Relf, Spokane, Portland & Seattle Railway, called the meeting to order on May 1 and in his annual address explained that the meeting last year had been postponed because the country had just entered the war, but the consensus of opinion this year was favorable to the holding of a meeting. He also said that the Director General of Railroads had approved until further notice the retention of membership in the association by claim agents of steam railroads. At the close of the meeting the following were elected officers for the ensuing year:

President, H. G. Winsor, superintendent of investigation and adjustments, Tacoma Railway & Power Company.

First vice-president, W. H. Moore, claim agent San Diego Electric Railway.

Second vice-president, J. S. Mills, claim agent Oakland Traction Company.

Third vice-president, C. A. Blackburn, claim agent Butte Electric Railway.

Secretary-treasurer, B. F. Boynton, claim agent Portland Railway, Light & Power Company.

Executive Committee: J. H. Handlon, San Francisco; A. M. Lee, Seattle; Thomas G. Aston, Spokane; J. T. Rupli, Seattle; F. J. Lonergan, Portland.

The next convention will be held at Oakland, Cal., at a date not yet set. The papers by Mr. Lee and Mr. Handlon were read by title only because neither of them was in attendance at the meeting. Abstracts of the papers which were presented are given on this and the following pages.

## Accident Prevention Work

**Due to the Prevailing Shortage of Competent Help Safety Work Is Lagging, Although the Need for It Is Greater Now than Ever Before**

By B. F. BOYNTON

Claim Agent Portland Railway, Light & Power Company, Portland, Ore.

**T**HE accomplishment of much along accident prevention is very important just at the present time because so many of our old and tried men are leaving us to join the ranks and in the new material we are working with we have very young men and men along in years, and while I am satisfied they are doing the best they can, the results we obtained are not satisfactory.

In correspondence I have had with various companies, North, South, East and West, I find that the conditions are alike everywhere. Some of the big properties have discontinued most of their safety work and others have stopped it entirely. This I feel, is a great mistake as with the increasing number of automobiles and the inefficiency of the type of men we are having to handle our cars, we are really facing the most serious problem

that has come to the claim agent in many years. On our own property we are still working along safety lines as best we can by lecturing our men before they are put to work, and also having frequent talks with them at the various carhouses, and we are posting safety bulletins which we receive from the National Safety Council. I think these bulletins are a great help. I feel we should continue to do the best we can and get the real old-timers who are too old to go to the front to continue to hammer away, and that we should continually place before the men anything we feel would be something that would set them thinking along safety lines, but I can find no organization either East or West that is putting forth any new ideas relative to safety protection.

I intended including in this paper what was being done in caring for street traffic along safety lines, but as Mr. Coffin, of our Public Safety Commission, has been kind enough to write a paper relative to the commission and its government of traffic on the streets, I have eliminated that part of it from my paper.

## Old and New Employees

**How to Obtain Co-operation from Both Under Present Conditions—Serious Increase in Accidents as a Result of Constantly Changing Personnel**

By H. G. WINSOR

Superintendent of Investigation and Adjustments, Tacoma Railway & Power Company, Tacoma, Wash.

**T**HIS country has at present approximately 30 per cent of its man power actively engaged in work demanded by the government in connection with the war, and it is estimated that if the war continues another year, more than half of the man power of the United States will be employed in this manner. This abnormal condition affects our companies unfavorably in two ways: disorganization caused by enlistments and conscription and the advantages in seeking other employment where wages are much higher. We are eager to provide our share of men for the army, but not so willing to see our best men, many of whom have been in our service many years, leave their positions because they find it is difficult to pay living expenses on the most liberal wage that our properties can offer from the revenue secured on a 5-cent fare basis.

Owing to the demands of the war on the man power of the country, the personnel of all business institutions has changed or must soon do so. We can no longer depend on the young men as a potential factor in civilian endeavor and must turn to the man of middle age for the foundation of our organizations. This condition is at once a help and a hindrance in our re-organization work, a help because many of our most

reliable employees are men who have been long in our service and make a splendid nucleus on which to build; a hindrance because men of this age who have been accustomed to other kinds of work do not as a rule like either the working conditions or the discipline to which they are subject while employed by a transportation company.

If the subject of this paper can be answered it means the successful operation of our companies, but if an answer cannot be given, it indicates a very serious condition. I will consider the last phase of the subject first and will consider men employed continuously for a period of two years as old employees.

THE OLD MEN IN SERVICE

A fair understanding of the responsibility which both employee and employer should assume in bringing about co-operative efficiency in our organization is important and generally understood by the older employees. Their knowledge and experience is a value to the companies

Accident Prevention Is a Patriotic Duty

Our officials have endeavored to impress upon the minds of all of our employees the fact that accident prevention is a real patriotic duty, that the conservation of men is one of the fundamental principles which must apply in winning the war, and that the closest co-operation between all departments and individuals in the service is imperative in bringing about satisfactory results. And finally we apply a kindly word of admonition instead of a sharp rebuke to those who appear to be slackers in safety work, only applying disciplinary measures when this method fails. We believe good results are being obtained and that perseverance will in a measure bring satisfactory results. H. G. WINSOR.

which should receive just compensation. Their being in the minority should not deprive them of their rights to preference earned by faithful service. Their counsel and advice should be frankly sought in solving the unusual problems which now have to be solved. The importance of this cannot be too strongly emphasized.

Unjust criticism and ill-advised censure must be studiously avoided, and the company official should bear in mind the fact that the operation of a transportation company under present conditions brings just as many unusual difficulties to the employee as to the employer. We should not expect our older employees to act any differently as regards changed conditions than we do ourselves. How many of us are there who, under the strain of increased requirements of services to be given in many ways, coupled with steadily increasing demands for compensation, do not at times lose our poise? One of the dangers which should be avoided is to think only of our own troubles.

In my opinion a very large per cent of the old employees can be depended upon to maintain a co-operative spirit in their work even under conditions which reduce to a minimum the opportunity. While many

of our old and reliable employees are leaving the service the cause is in most cases a desire to increase the income to meet the higher costs of living and not because of dissatisfaction with operating conditions.

THE NEW EMPLOYEE

In discussing this subject it will be necessary briefly to review the changed conditions brought about by our entry into the war, so far as it affects the personnel of our men. The demand for labor has increased many fold, and with the demand came a natural increase in the value of labor as well as its product. In every line of industry except public utilities these increased values were compensated for by increased prices of products or service, and while, in many instances, wages of men employed by public utilities have been materially increased, the increase has not kept pace with other industries because of our inability to secure increased revenue. In consequence, the type of men applying for work has been more and more unsatisfactory, and many companies have found it impossible to operate cars that were needed because of an insufficient number of competent platform men. This causes criticism by the public, which while demanding more efficient service strongly opposes any increase in fares.

Under such conditions the efforts made to secure co-operation in accident prevention must be planned on the basis of an entirely new condition of operation. Together with the changes brought about by war conditions many of our employees are now organized as labor unions, a majority of the members being new employees who do not appreciate the importance of accident prevention or the close co-operation which should always be maintained between the operating and claim departments. They can see no particular benefit in the smoker or other forms of "get-together meetings" which have been productive of so much good, and their general attitude in a majority of cases is opposed to the spirit of co-operative effort. To overcome this condition both the claim department and operating officials are placed in a position which calls for much thought and diplomatic administration.

As an example of present-day conditions the following may be of interest: During the first three months of this year, the number leaving and entering the service of our company at Tacoma was 42 per cent of the total number employed. During the same period, as compared to the first three months of 1917, car collisions increased 154 per cent, car and vehicle collisions 95 per cent and collisions with pedestrians 142 per cent. A careful investigation of the cause of this increase reveals the fact that inexperience and misunderstanding contributed in a large measure.

Shall we assume that conditions are such that we are powerless to correct the fault? Shall we plead that war conditions are wholly responsible? Not if we expect to maintain good standing in our profession. We must find a solution, and the suggestions which I am about to make are only intended to point to a remedy which is not difficult of application and which if persistently applied should bring about an improvement. This remedy is education.

We can hardly expect a man who has never had experience in operating a street car to understand all of

the many details in connection with his work, nor can we reasonably expect that any ordinary man can absorb all of the instruction which he receives at once. Our organization has increased its force of instructors and has applied more comprehensive methods in following up the work done by new men. Our officials have endeavored to impress upon the minds of all of our employees the fact that accident prevention is a real patriotic duty, that the conservation of men is one of the fundamental principles which must apply in winning the war, and that the closest co-operation between all departments and individuals in the service is imperative in bringing about satisfactory results. And finally we apply a kindly word of admonition instead of a sharp rebuke to those who appear to be slackers in safety work, only applying disciplinary measures when this method fails.

We believe good results are being obtained and that perseverance will in a measure bring satisfactory results.

All employees should be encouraged to consult company officials regarding their troubles. They should also be made to feel that any suggestions offered for the good of the service will receive proper consideration and that the company appreciates the interest shown.

The principles involved are as old as time and there is nothing new in application except this—the demands of the times make it imperative that every patriotic citizen do his utmost to conserve this nation's resources.

## The Value of Courtesy

The Claim Department Is in a Position Particularly to See Its Importance—In the Event of an Accident Courtesy Has Financial Value

BY F. M. HAMILTON

Superintendent Department of Accident Investigation, Puget Sound Traction, Light & Power Company

MUCH has been said and written concerning courtesy, but it remained for a committee appointed by President Williams of the B. R. T. to place an actual cash value upon this polite and agreeable virtue, for in the report of this committee covering ways and means to offset the rapidly increasing cost of operation they place at the very beginning of the transportation department this item, "Greater Courtesy by Train Employees."

I have no doubt but that every member here present could suggest many ways in which the constant application of this principle would result in great saving of time, which—in the transportation business—is always the equivalent of money.

Courtesy has a maximum value in the transportation business because it is the lubricant which makes it possible to rub elbows with our fellow men without friction, and since the platform men and particularly the conductors of urban and interurban trains are constantly in contact with the public, it is of the utmost importance that these employees in particular be taught to be courteous to the passengers in their charge under any and all circumstances. And although I am not prepared to recommend the general adoption of a cut and dried courtesy code, such as is now in effect on some lines, I do believe that no opportunity should be missed to

bring this important matter to the attention of trainmen in every way possible, by bulletins, by daily reminders, by official talks, etc. However, unless the employees are made to realize that courtesy is a big item in that often not clearly definable thing known as "company policy," they are not likely to give it the important place in their daily work which it deserves.

Courtesy in its application to a public utility has a distinct value to the trainman, the company and the public: To the trainman, because it gives him the respect and co-operation of his passengers, and it is a well-known fact that a good-natured crowd can be handled quicker and safer than an ill-humored one; to the company, because it is weighed in the balance of public opinion, which in most cases is formed from a personal appraisal of its servants—the approval or disapproval of the treatment rendered by employees. The courteous man benefits those he comes in contact with by the sheer force of example, and the Bible statement that a "soft answer turneth away wrath" is literally true, and in no company section can this be better illustrated and proved than in the claim depart-

## Courtesy Must be Shown

Everyone having to do with the investigation of claims should be doubly courteous, for often we have to make up for the failure of some other employees to be courteous in the first instance. Always we must remember that the good-will of the public is of vital importance to our companies, and since we are ever ready to settle promptly every meritorious claim we should be able to reject the ones for which we are not liable without offense, even though we cause disappointment. Some people seem to be of the opinion that courtesy is not consistent with firmness, but they are badly mistaken, for only with courtesy is firmness to be distinguished from stubbornness.

F. M. HAMILTON.

ment. Let us always bear in mind that courtesy after all is but the exemplification of the Golden Rule.

I daresay that the experience of every one of you has been identical with mine, and that in taking up with claimants or their friends the matter of adjustment, the fact that they have received kind and courteous treatment by the motorman and conductor materially aids in effecting an amicable and satisfactory settlement, while discourtesy and neglect are remembered long after the pain and injury arising from the accident are forgotten. And I know of several instances where claimants have rushed to attorneys for practically no other reason than resentfulness of treatment accorded by crews. If we are right, we can afford to be courteous; if we are wrong, we cannot afford not to be.

We all know and we are ready to grant that the platform man has much to contend with and that he daily and hourly faces a multitude of people with a multitude of trying dispositions. But that is an integral part of his day's work, and he must accept it along with early and late hours, eating his lunch on the run, etc., and it should be thoroughly impressed upon him from the time he first meets the employing official that he must

be courteous under any and all circumstances. Now, I am not overlooking the matter of individual temperament or disposition, and the fact that some people are smiling and courteous by nature; that some are polite only when the mood is upon them; and that some belong to the "human crab" type; but these personal attributes should be apparent to the superintendent of employment, and the last class should never be even considered for service requiring close personal contact with the public.

So far I have only dealt with our subject in a general way—or in its direct application to employees coming in close contact with the public. But what about us of the claim department, whose special business it is to investigate accidents and occurrences out of which claims for injury and damage have been presented, or may arise? Are we ourselves alive to the importance of courtesy, and do we apply it to every detail of our business, or are we courteous only in the handling of claims wherein settlement has been determined upon, and neglect being as careful and courteous in explaining our reasons for declining. Everyone having to do with the investigation of claims should be doubly courteous, for often you have to make up for the failure of some other employees to be courteous in the first instance. Always we must remember that the good-will of the public is of vital importance to our companies, and since we are ever ready to promptly settle every meritorious claim we should be able to reject the ones for which we are not liable without offense, even though we cause disappointment. Some people seem to be of the opinion that courtesy is not consistent with firmness, but they are badly mistaken for only with courtesy is firmness to be distinguished from stubbornness.

### How a Municipality Teaches Safety

The Work of the Portland Public Safety Commission Is Described—Through Its Efforts Accidents Were Reduced by Half

BY H. P. COFFIN

Executive Secretary and Manager of the Commission

A PUBLIC SAFETY COMMISSION properly organized is an assurance policy in the hands of a law-abiding community against traffic violations, excessive speeding and accidents. It differs diametrically from an insurance policy in that it treats with present existing conditions and not the promises to pay of the unfortunate future. It represents primarily an effort to achieve uniformity of action in the field of public safety through the power of a wider public opinion awakened through education, corrective measures and a realization of what constitutes true conservation.

About three years ago this city had an epidemic of autophobia, which had a tendency to terminate in violato-paresis. Finally the Mayor called together a number of influential citizens to study the situation and make recommendations to reduce the hazard. Out of this sprang into existence the Public Safety Commission of Portland which has in this brief period established a national reputation in the results which it has accomplished.

In three years the number of motor vehicles have increased in this State from 23,581 to 50,800. Last

year through the work of the commission the accidents were cut in half. Twenty-eight citizens were killed and 846 injured, a large percentage of these injuries slight. In comparison with other cities of this size and taking into consideration our short blocks and narrow thoroughfares, this is much below the average.

During the period of the commission's existence it has standardized the traffic regulations, established uniform signs and signals, perfected the fire drill in the public schools, materially assisted in reducing the fire hazard, introduced into the ordinance the near-side stop of the street car, and the regulation of the jitney. It has secured the centralization of authority over traffic by a designated captain who gives his entire time under normal conditions to this work, initiated a survey of traffic conditions and submitted an elaborate report to the Council with recommendations for the betterment of traffic. Thirty thousand school children have listened to the story of "safety first," with the surprising result that for three months following this campaign not one child of school age was injured in an auto or street car accident.

The commission has also partially fitted out and encouraged the police through uniformed officers to carry on this work through the medium of screen pictures, talks and concrete examples of carelessness which have been shown to you.

#### 19,000 COMPLAINTS IN THREE YEARS

In the three years that the commission has been active, more than 19,000 complaints have been received and registered covering every kind of traffic violation and accident. This record is maintained in our office at police headquarters for the convenience of the police bureau and the judge of the municipal court.

The good accomplished by the commission has at last been recognized by the city through an ordinance introduced in the Council by the Mayor giving the commission added authority and power which will undoubtedly enlarge its usefulness to the community.

Now that we have a centralized bureau for the handling of traffic, it is our duty to co-operate with the captain in charge by making from time to time surveys and inspections, followed by a vigorous safety campaign among drivers and pedestrians, a full investigation of accidents as a preventive measure, a prosecution of chronic and flagrant offenders and finally, but not the least, the establishment of a bureau for the examination and licensing of auto drivers and their registration at police headquarters for the recording of violations and accidents. Thus keeping in close touch with the traffic, the commission is in position to make unbiased and practical suggestions for the benefit of the whole community and lends encouragement to the police in law enforcement. We have been encouraged by citizens advising us of their experiences in other cities with traffic conditions, complimenting us by a favorable comparison.

We have very little opposition in our work. It's only the malicious and ignorant that respond with "Bunk" when safety first is preached. Our people now realize its importance and appreciate the lack of co-ordination in the past.



## Employment of Women in Railway Work

How It Will Affect the Claim Department—Experience in New York, Brooklyn and St. Louis Indicates They Are Well Qualified for Railway Work

BY THOMAS G. ASTON

Claim Agent, The Washington Water Power Company,  
Spokane, Wash.

**R**AILROADS, both electric and steam, have employed women in some branches, and the number of branches in which they are employed is gradually increasing. The question for us to consider is what effect this employment of women in electric railway work will have on the work of the claim department. There is little precedent on the subject which can be used as a guide.

It is always to the advantage of the claim department to have all persons engaged in railroad service absolutely loyal and undivided in their support of the company for which they are working, and one of the first questions that arise is whether men and women will work in harmony in this class of work. Where there is the union and the union rules will not recognize women, opposition by the men on this ground will have to be met. Where the open shop rule prevails, undoubtedly the union men on the railroad will be slow to aid the incoming woman. Then, there is the general antagonism on the part of many men against the introduction of women in any line of life or work that heretofore has been peculiarly the field of man. It is like the opposition of man to woman suffrage and to the work of clerks, stenographers

and bookkeepers now commonly done by women with no thought of the propriety or impropriety or anything except of the physical and mental fitness for the job.

In Brooklyn and New York, the Central Labor Union protested to the Public Service Commission against the employment of women on electric railways, but the commission responded that it had no power to exclude any applicant from employment by reason of sex.

Information has been received that in one city where women conductors have been employed, there was a disposition on the part of the men to start the cars without signal from the women conductors and it is the belief of the employer that this was done deliberately. Whether or not unionism had anything to do with this, the information does not state. There do not seem to be any reported cases showing opposition to employment of women other than that furthered by unions as reported herein. In Italy, France and Great Britain, women have been very generally employed in this work

and the general public not only in the United States but also in Europe received the introduction of women in this work with much favor.

To learn the experience of people in the United States, a circular letter, containing the following questions, was sent to ten companies operating street cars:

1. What has been your experience in regard to the reduction or increase of accidents since you began to employ women?
2. What effect has it had upon the public—are they antagonistic or favorable toward employing women?
3. Have you found that disorderly passengers have taken advantage of the fact that women instead of men are operating your cars?
4. How do they conduct themselves at the scene of an accident?
5. How do they respond to an emergency?
6. What success do they have in getting information and securing witnesses at the scene of an accident?
7. Have you or have you not found them sympathetic with the injured party to the extent of admitting liability?

The responses brought the information that New York, Brooklyn and St. Louis are the only places where women are employed in this work. From New York and Brooklyn we are told that accidents have not increased, that the public seems favorable toward women conductors, that disorderly passengers have taken no advantage of the fact that women were used instead of men, that women conduct themselves very well at the scene of an accident, that they respond fairly well to an emergency, that their reports of accidents and the securing of witnesses seem as adequate as those of the men, that they have not been found sympathetic to the extent of admitting liability.

From St. Louis, Mo., we learn that the general public was favorable toward employing women, but the Central Trades & Labor Council and its members were against it, that disorderly passengers have not taken advantage of the fact that women were operating the cars, and that they conduct themselves in an agreeable manner at the scene of an accident.

### WOMEN WELL FITTED FOR THE WORK

The rapid growth of commercialism in this country has given to women positions which were formerly occupied by men. The hesitation and timidity that formerly possessed women when seeking employment away from the home is passing away. Men and women commingle and work together in many branches of industry. In all work, not requiring physical strength, they become as efficient as men. It is the opinion of the writer of this article, that because of the simplicity of operation of electric street cars in the United States,

### Women Operators Will Succeed

It is my opinion that because of the simplicity of operation of electric street cars in the United States, women can be as successful as drivers and conductors as men. It is a well-known fact that women become expert chauffeurs and show quickness of thought and excellent judgment in emergencies in the operation of automobiles. It certainly would not be any harder for a woman to drive a street car than it is to drive a large high-power automobile. Experience shows that women drivers of automobiles do not have as many accidents in proportion to the number of drivers as do men. The experience is the same in connection with the operation of elevators. It can be admitted that women are of a more nervous temperament than men, but it is also admitted that women are more cautious and are less reckless than men. It is the general opinion that they may become excitable and lose control of the machine when contending with congested traffic conditions. The correctness of this view is challenged. They are not so likely to take a chance, and the taking of chances is accountable for a great many accidents.

—THOMAS G. ASTON.

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It may be that the time will come in this country when we will need to employ women in the mechanical departments of steam and electric lines. A long war may force this necessity upon us. If that time does come, there seems to be no good reason why women cannot fill the positions except where great physical strength is required. In view of the various mechanical devices for lifting heavy articles which are used in all well-equipped shops, it would seem to be an unusual circumstance that would require more strength than women possess.

Venturing an opinion on this subject, I would say that women can successfully perform not only the duties of motormen and conductors but also most of the work in the mechanical department now done by men.

## Prevention of Automobile Accidents

Driver Usually Is to Blame but He Should Be Taught to Exercise Greater Care—Safety First Efforts of Motormen Effects 33½ Per Cent Reduction in Accidents

BY W. H. MOORE

Claim Agent, San Diego (Cal.) Electric Railway

**C**AUSES given for automobile accidents embrace almost every excuse that can be in any way connected with an automobile or street car, but the underlying cause of most accidents is carelessness on part of the driver of the automobile. In fact, the records show that he is responsible for 90 per cent of them.

In justice to him we must remember that the number of automobiles in use greatly exceeds the number of street cars. We must also consider that the driver of an automobile holds a decided advantage in the way of prevention, on account of being able to change his course at any time and because he is reminded of the presence of street cars by tracks upon which they run. The difference in favor of the motorman is largely due to the systematic training which he has received in being taught the necessity of attending strictly to his duties so that no careless act of his may cause an accident. By its system of training, accidents of all kinds on the San Diego Electric Railway for 1917 were reduced 33½ per cent below those of the preceding year, with the same number of cars operated, while the number of automobiles greatly increased.

If auto drivers knew something of the distance required to bring a heavy street car to a stop under various conditions it would go a long way toward discouraging the practice of autoists stopping upon car tracks in advance of approaching cars with a feeling of security that the street car must stop for them. The average automobile driver may have a thorough knowledge of his car but knows little or nothing of the control of a street car or railway train. No doubt, the majority if not all members of the Pacific Claim Agents' Association drive automobiles, but it is safe to say that none of you take any chances by driving upon car tracks in advance of cars approaching at high speed, because the danger to you is apparent on account of your knowledge of the control of the street car, while perhaps the thought has never occurred to your brother autoists.

Safety first should also be taught in the public schools as a permanent branch of the common school education. The lessons could be worked out in a practical manner and entered in the text-books graduated to suit the different grades of the schools. The object in attending school is to acquire knowledge and store it away for future use, and it is just as essential to the future welfare of a child that he be trained in the art of protecting life and limb as to be able to name the wild animals that inhabit a foreign country. The safety-first training now carried on in the public schools has no doubt accomplished a great deal of good, but the plan just described would be more thorough as well as productive of more lasting results.

As a farther prevention of automobile accidents there should be a uniform set of simple traffic rules in all Pacific Coast States, and, one of the most important clauses in such a law should be to make it a misdemeanor for a person carelessly to cause a hazard of accident. Such a clause would be warranted because a person who carelessly causes a hazard is equally guilty with the person who has caused an accident, because if an accident was averted it was not due to any care of good judgment on part of the party causing the hazard, but owing to circumstances or the presence of mind and quick action on the part of some other person. Such a law would also discourage the beginner from driving into the congested district of the city before he became proficient in the operation of his car. If the motorman of a street car knowingly indulges in carelessness to the extent of jeopardizing the safety of others, he is quickly deprived of his right to operate a car, and there is no reason why the heedless automobile driver should not suffer the same fate.

We have traffic laws, but to enforce them seems a difficult problem. One plan would be to have a certain number of the police in each city assigned exclusively to safety duty. This would give such officers ample opportunity for the enforcement of traffic rules and at the same time they would be unable to wink at violations of the law under the pretext of attending to other duties. If they did so their neglect would become so apparent that they would soon be called to account. There should also be a traffic ordinance in every city, giving the street car the right of way at street intersections. Such a law is warranted for the safety and convenience of the public, if for no other reason. As a farther prevention of automobile accidents every

motor propelled vehicle should be compelled to carry a sign inside the dash in a conspicuous place containing at least a dozen of the most important rules for the prevention of accidents. As a sample of such rules "Look both ways for approaching cars before driving upon car tracks," could be used. These words would soon become so firmly impressed upon the minds of the drivers that when a driver approached a railway track the subconscious thought would assert itself and prompt him to look before driving across.

### Written Discussion on Mr. Moore's Paper

By J. S. MILLS

Claim Agent, San Francisco-Oakland Terminal Railways

IT IS NOT my understanding that the object of this discussion is to find out what to do for ourselves so much as to find out how to obtain co-operation from automobile owners and drivers. Personally, I am very skeptical of any method which depends upon persuasion for its effectiveness. Education by way of illustrated pamphlets and newspapers is helpful to thoughtful people, but they give the least trouble. It is the thoughtless and reckless drivers whom we want to reach and no amount of literature seems to have the least effect upon them. To them, the much abused slogan "Safety First" is merely a catch phrase. It has no meaning.

The increasing number of automobile accidents clearly indicates the necessity for action along more effective lines than have been proposed by Mr. Moore.

Necessity always provides a remedy, and no great reform was ever brought about until the people were made to see the necessity for it, after which laws were promptly made to meet the demand. For example, the need for safety appliances in shops and factories and better railroad equipment was recognized and a considerable agitation of the subject was necessary to arouse the people, but the ever-increasing number of workmen minus fingers, arms and legs finally resulted in the passage of laws which enforced their installation. It was the same when the care of injured workmen was recognized as an unjust burden on charitable institutions and some form of insurance was demanded that commissions were appointed to investigate and their reports resulted in the adoption of workmen's compensation and insurance laws.

At the present time great numbers of people are being killed and injured by automobiles whose owners have no property other than the machine, and oftentimes only a small interest in that. In consequence, the dependents of the killed have no recourse at law, the injured must pay their own bills, and if unable to do so become burdens on the communities in which they live. In this situation the only remedy would seem to be the addition of a clause to existing state motor vehicle laws, making insurance against personal injuries compulsory. We are not entirely without experience in the workings of such laws, for when the "jitney disease" was at its height, city ordinances provided that a certain amount of insurance must be carried fully to protect passengers in the event of injury.

I am thoroughly convinced that if automobilists were compelled to carry insurance covering personal injuries, nearly all the reforms desired would soon

be accomplished, among them the much desired examination and training of operators in the same manner as is now practiced by street car companies in the selection and training of motormen.

## Moving Drafted Men Via Electric

**Government Accepts Electric Railway War Board's Offer of Facilities—Work Will Be Nation-Wide**

HENCEFORTH, as rapidly as the plan can be extended over the country, the transportation of drafted men for the United States Army will be carried on by electric railways. This is the result of a tender of such facilities by the War Board for the relief of the congestion on steam railroads.

After negotiations with government officials, it has been arranged that all drafted men will move by electric lines from the territories served by them direct to the different camps. If no through electric routes are available, the electric lines will be used to convenient junction points with steam railroads, provided the facilities of the electric lines are adequate to afford the services required for the entire movements and provided the steam trains later used do not originate at the same points as the electric trains.

The War Board has been requested by the official in charge of draftees to give information pertaining to the ability of electric lines to handle movements, prior to the issuance of government orders. Consequently the board is urging companies to furnish the data needed, such as schedules, maps and other traffic information for the preparation of itineraries if these are called for.

The compilation of such information is already under way for three states, Ohio, Michigan and Indiana. C. J. Laney, W. S. Rodgers and F. D. Norveil, representing the electric lines in these states, have been in Washington, and their surveys of the possible use of the electric lines are as follows:

A check of the drafted men to move on June 24-29 from Ohio county seats to Camp Sherman at Chillicothe shows that out of 800 men the interurbans can handle at least 50 per cent. The electric lines can move men from fifty-five counties out of a total of eighty-eight. The general movement will be as far as Columbus, since the interurban line from Columbus to Chillicothe is third-rail and cannot interchange cars with the other lines entering Columbus.

In Michigan out of a total of 7000 draftees to be moved at the end of June the electric lines can handle 4795 men in a period of five days.

From Indiana 1000 drafted men must be moved on June 24-26 to Camp Sherman. A large number can be handled to great advantage by the electric lines, and these will agree to carry from 45 to 50 per cent of the men over a five-day period. Delivery will be made to steam railroad connections.

The shipbuilders of the Bay Cities, California, had a riveting contest as a feature of their picnic at Idora Park, Sunday, June 19. Through the courtesy of the San Francisco-Oakland Terminal Railways, the pneumatic transfer compressed air battery of six 11-ft. compressors was loaned to furnish the driving power.

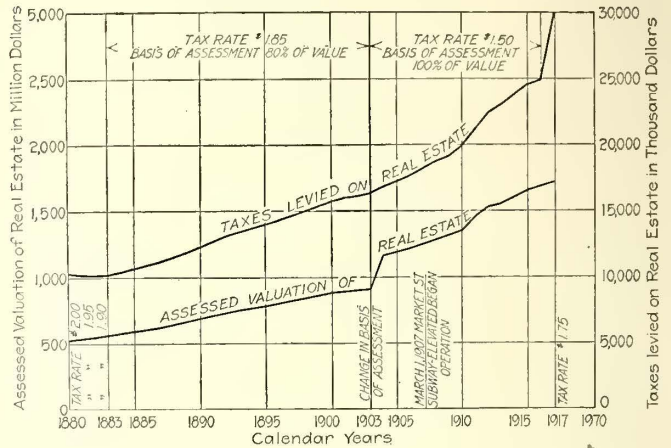
## No Abnormal Tax Increase from Rapid Transit

### Shifting of Population and Values in Other Sections Neutralizes Increase in Assessed Valuations in Districts Immediately Served

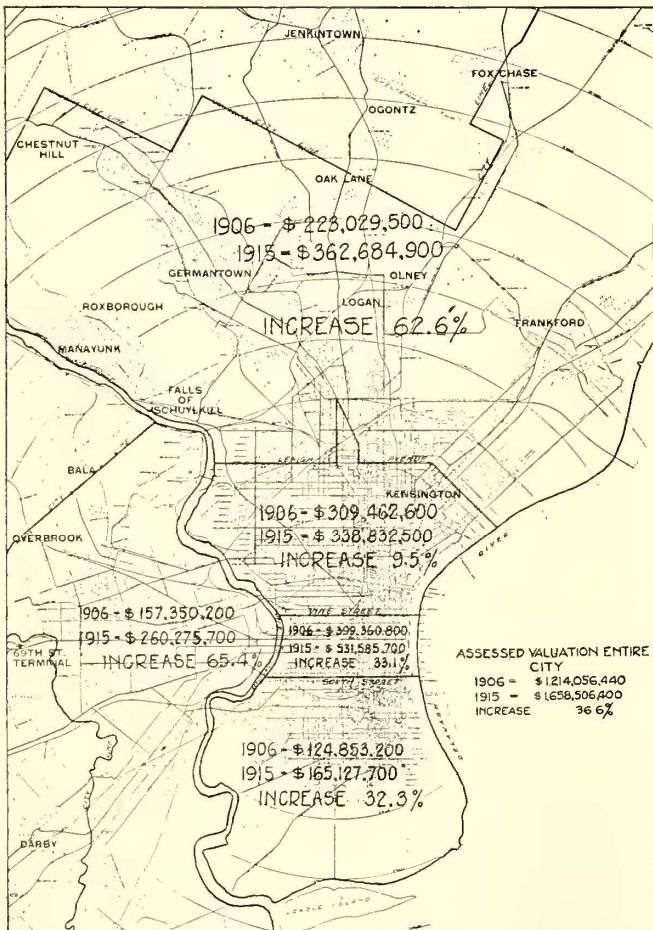
THE report of the Department of City Transit, Philadelphia, Pa., for the calendar year 1916 contains as one of its parts a noteworthy discussion of the effect of rapid transit construction upon real estate values and taxation. The report in general is a detailed statement of the negotiations and the engineering work for city-built rapid transit lines in Philadelphia from the time William S. Twining assumed the directorship of the department in February, 1916, up to the end of that year.

The report explains that prior to that time no final contracts had been drawn. The Department of City Transit had leaned toward a uniform 5-cent fare, with any city deficits to be borne by the general tax revenues. With Mr. Twining's advent recommendations were made

In the course of his report Mr. Twining mentions how he took exception to the premises formerly held by the municipality—namely, that the expansion of a city, due to rapid transit lines, will increase abnormally the total assessed value of the city's real estate; that its tax revenues will thus be abnormally increased, and that this abnormal increase should be available for meet-



ASSESSED VALUATION AND TAXES ON REAL ESTATE IN PHILADELPHIA



COMPARISON OF INCREASES IN ASSESSED VALUATIONS BY SECTIONS IN PHILADELPHIA

in regard to changes in the construction schedule the unification of the city's and the company's systems, and a flexible fare meeting the cost of service. The report describes in detail how a substantial foundation was laid during 1916 for the building of an acceptable contract for the operation of the new lines by the Philadelphia Rapid Transit Company—a development which has now reached its final stage.

ing city deficits arising from the building and the operation of the rapid transit lines. In Mr. Twining's opinion, rapid transit lines are unquestionably an indispensable factor in developing suburban real estate, but it has never been proved that such development produces an abnormal increase in the total assessed valuation of a city. It undoubtedly produces a large increase in the districts immediately served by the rapid transit lines, but the shifting of population and values in other parts of the city which results from the building of these lines, largely neutralizes this increase. As a result, no abnormal increase can be detected in the assessed valuation of the property in the city when awarded as a whole.

As tending to confirm this statement, Mr. Twining introduces in his report the accompanying diagram and map showing the assessed valuation in Philadelphia over a period of years. It will be noted, he says, that there is no abnormal increase to be detected due to the opening of the Market Street subway and elevated, which occurred in 1907. The assessed valuations of the city's real estate show a fairly uniform increase year by year. Some sections of the city show large increases and some are stationary or show a decrease. Mr. Twining does not dispute that a large increase in the assessed value of real estate in West Philadelphia took place following the building of the Market Street line. In considering the tax revenues of the city as a whole, however, he can detect no abnormal increase attributable to rapid transit.

In short, Mr. Twining thinks it a false assumption that an abnormal increase in tax revenue will be created as a result of building and operating rapid transit lines, and that without an increase of tax rates there will be a surplus of tax revenue available for meeting deficits. This assumes that there is a profit to a city resulting from its current taxes, whereas it is usually described as operating at cost, hence without profit.

## Using a Series Motor for Emergency Constant-Speed Work

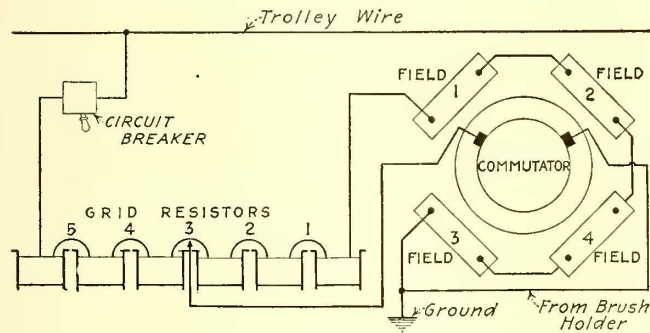
Description of the Methods by Which the Fields Are Connected in Series With Resistance As a Shunt Across the Armature

By F. J. FOOTE

Master Mechanic Ohio Electric Railway Company, Columbus, Ohio

IT IS FREQUENTLY very convenient to use a railway motor that is built for series operation for driving a machine or line shaft in a railway shop. In these cases it is nearly always desirable to operate the machine at as nearly constant speed as possible. It is well known that a series-wound motor will speed up when the load is light and slow down when the load increases, thus giving very unsatisfactory operation for many uses. It is, of course, possible to rewind the field coils so that the motor may be used as a shunt motor, and where it is to be used for an extended time this should be done for economic reasons.

However, for work that is more or less temporary the following arrangement has been found by the writer to give very satisfactory results, as the maximum of speed adjustment and the minimum of power consumption is secured thereby. The method consists in placing sufficient resistance in series with the fields to hold



SERIES MOTOR ARRANGED FOR CONSTANT-SPEED OPERATION

the current down to a safe value when connected directly across the line, and then connecting the armature across from the point on the resistance that gives the desired speed to ground.

An accompanying diagram shows the connections for a railway motor used recently for temporarily driving the stokers on a battery of boilers, while the stoker engines were being repaired. The sketch shows the fields and armature of a four-pole motor. The grid resistors used consisted of some sections from a car. Enough of these grid sections were used to reduce the current to something less than full load for the motor. The fourth field was connected to ground, the first field to the resistance, and the resistance was connected through a circuit breaker to the trolley wire. This made the field circuit complete.

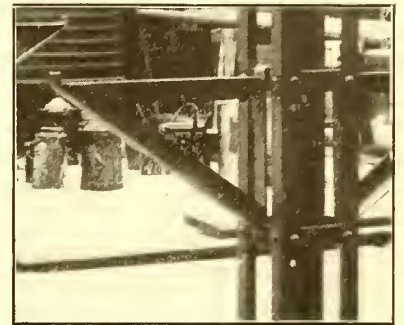
To furnish the voltage for the armature the cables from the brush-holders were connected, one to ground, the other to some point along the resistance, such as 3. If this gave speed too low, the connection was changed to 4 or 5; and on the other hand, if the speed was too high, the connection was changed to 2 or 1, as needed.

Of course, there was a waste of energy in this ar-

angement, but being only temporary, it was decided that this would be less expensive than to rewind the fields for shunt operation. The writer has tried various plans for using series motors for constant speed work, but the one just described is the most convenient and flexible, and has proved to be the most satisfactory of any of them.

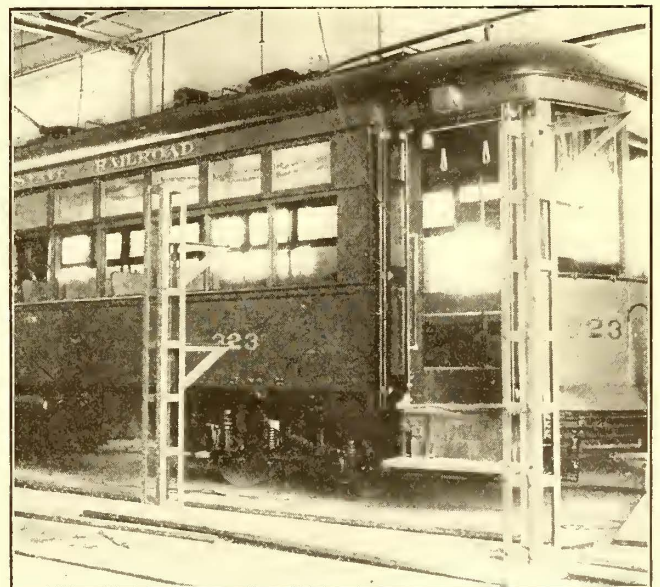
## Angle-Iron Posts for Car Painter's Platform

IN THE paint shop of the Empire State Railroad, at Lake Junction, near Syracuse, N. Y., rows of posts like those shown in the illustrations are installed between tracks for the purpose of supporting planks from which the painters work. These posts are set a couple of feet



CLOSE-UP VIEW OF BRACKET

in the concrete floor and extend about 7½ ft. above the floor. The posts are made of 2-in. x 2-in. x 3/16-in. angles connected by 2-in. x 1/4-in. flat steel pieces. These are riveted to the angles and are spaced on 15-in. centers from the bottom to the top of the posts. The brackets for the planks are also made up of angle iron of the same size as that used in the posts, the upper part of the bracket being 20 in. long. The back of the bracket is formed of a piece of flat steel, 2 in. wide, with the



ANGLE IRON POSTS IN LAKELAND PAINT SHOP, EMPIRE STATE RAILROAD

top bent over to form a hook. At the outer end the upper side of the horizontal angle is turned up to form a toe to prevent the planks from slipping off. The bracket is held in place by its own weight and is very easily moved. A typical steel city car from the Oswego division can be seen in the background in the lower picture.

## Substation Equipment for St. Paul's New Electrification

The Spokane River Hydraulic System Supplies  
Power to This Substation at 102,000 Volts,  
Using Three-Phase Alternating Current

THE substation equipment for the Columbia River division of the Chicago, Milwaukee & St. Paul Railway, now being electrified, will be similar to that used on the original Montana electrification of this railway. The modifications which will be made have been shown by experience to be desirable or necessitated by the difference in operating conditions.

Power for this division will be supplied in the form of three-phase, 60-cycle, 102,000-volt alternating current from the Spokane River hydroelectric system of the Washington Water Power Company. The high-tension line will parallel the railroad and, looping into the substations, will form the high-tension bus for each station. In the stations the current will be stepped down to 2300 volts and then transformed by motor-generator sets into 3000-volt direct current for train operation. There are to be three substations altogether, spaced approximately 30 miles apart and located at Taunton, Doris and Kittitas respectively. The equipment in each will be practically the same.

The incoming high-tension line will enter the substation through condenser-type bushings and will be controlled by a 3-pole Westinghouse type GA oil circuit breaker, arranged for remote mechanical operation and providing automatic protection against overloads and reverse power.

The transforming equipment is designed on the unit basis; that is, there will be a transformer for each motor-generator set, and no low-tension buses will be provided. The Taunton station will have two such units, to be immediately installed, giving it a capacity of 4000 kw., and the other two stations will each ultimately have three units, providing a capacity of 6000 kw. each.

The transformers will be of the oil-insulated, tubular, air-cooled, shell type, connected star-delta, with several full-capacity high-tension taps to provide the necessary flexibility. The normal capacity of each transformer will be 2500 kva., but they are especially arranged to carry the high overloads encountered in railway service. The ventilating ducts and the coils are vertical, so that the oil in absorbing heat from the coils flows upward in the natural direction, thus preventing the formation of hot spots under short-time heavy peak loads. Each transformer bank will have a type GA circuit breaker which provides overload protection.

The motor-generator sets will each consist of a 2800 hp., 2300-volt, 14-pole synchronous motor of 514 r.p.m., coupled to two 1000-kw., 1500-volt direct-current generators connected in series. Both the motor and the generators will be separately excited by means of direct-connected exciters.

The normal rating of the sets will be 2000 kw., but they are designed to carry 3000 kw. for two hours and 6000 kw. for five minutes. These very severe overload conditions make good commutation an absolute essential for satisfactory operation. As a 6-pole generator possesses inherently the best commutating characteris-

tics and will handle excessive currents without flashing, this type was adopted for these sets. It is recognized, however, that a short-circuit on the direct-current line at or near the substation will result in currents that would ordinarily cause flashing, but special arrangements have been made that will suppress flashing even under these extreme circumstances. The method employed was fully described in the *ELECTRIC RAILWAY JOURNAL* of May 4, page 858.

Because of the use of regenerative braking by the locomotives, the generators will at times operate as motors. For this reason they will be shunt wound so as to avoid the difficulty of operating differentially-wound motors in parallel, and to obtain satisfactory division of a heavy regenerating load without careful attention on the part of the operators.

The load factor on these substations will be comparatively low, so that it is desirable to eliminate as many continuous losses as possible. An interesting means for accomplishing this result is the use of separate motor-driven blowers which are automatically started when the temperature of the motor-generator sets reaches a predetermined degree. During periods of light loads or short-time peaks, the motor-generators will operate well within safe temperature limits without forced ventilation, but when the loads are heavy the necessary ventilation will be provided. In this way the expense of operating the ventilating sets during light-load periods is avoided.

In order to provide maximum protection to the operators, the control of the 3000-volt direct current has been designed in accordance with high-tension alternating-current practice. The circuits will be completely separated; all breakers and switches will be controlled from a gallery above the operating board; and it will be possible to isolate the station from the railroad operating system by means of remote controlled switches in the feeder circuits which can be opened under load. The normal control of the outgoing feeders will, however, be by type GA circuit breakers with overload and reverse power protection. Electrolytic lightning arresters will be mounted on the roof of each of the substation buildings.

All the equipment for these stations is being supplied by the Westinghouse Electric & Manufacturing Company.

## Convict Labor Rebuilds Power Plant

The United Gas & Electric Engineering Corporation has recently completed the rebuilding of a plant in Leavenworth, Kan. This work was carried on under difficult conditions as regards labor. The construction dragged very slowly until the Leavenworth company succeeded in obtaining permission from the Governor of Kansas to use labor from the State penitentiary at Lansing. The convicts were very glad to get a chance at work of this kind affording much more freedom and enjoyment than the humdrum prison life and it made the early completion of the work possible. In rebuilding the plant new equipment was installed consisting of stokers, boilers, a 1500-kw. turbine, a new concrete stack and a new condensing equipment consisting of a pumping pit in the river connected to the plant by 1500-ft. pipe lines.

## AMERICAN ASSOCIATION NEWS

### Jitneys Waste Man-Power

Letter from W. V. Hill of the War Board to General Crowder Says They Are Non-Essential

ON MAY 31, W. V. Hill, of the American Electric Railway War Board, wrote to Maj.-Gen. E. H. Crowder, Provost Marshal General of the Army at Washington, as follows:

Referring to your announcement with respect to amending the selective service regulations dealing with habitual idlers and men engaged in non-useful pursuits: In this connection I desire to call to your attention a class of men who are engaged in the so-called jitney-bus business. There are thousands of them most of whom are within the draft age operating these vehicles throughout the country in competition with electric railways, thus performing a duplicate and unnecessary service to the public. This service can and should be performed by the electric railways.

For illustration, take the situation in San Francisco, Cal.: There are approximately 500 jitneys operating on Market Street competing with the electric railway service for a distance of 3 or 4 miles, for they will not compete on long hauls. The car service is ample to handle all of the traffic, but as a result of the jitney competition the cars are obliged to operate with very light loads during most of the hours of the day.

It is therefore evident that the jitney is a non-essential, consuming large quantities of gasoline, rubber, steel, etc., as well as wasting man-power, for it will take the services of twelve men operating jitneys to perform the service of transporting the number of passengers occupying the seats of one street car which requires two men to operate.

On the other hand, some of the electric railways of the country have furnished as high as 40 per cent of their trainmen to the government under the selective draft act. The result is, they are confronted with a very serious problem of furnishing ample transportation facilities to shipyards, plants and industries engaged in manufacturing war materials—all of which are very essential to the proper conduct of the war.

The electric railways, unlike many other industries, have derived very little benefit by reason of the war, for the increased cost of operations, both in labor and materials, have placed these properties in serious financial condition, and state and municipal authorities have been slow to respond to their appeal for increased fares. This in brief is our situation.

We therefore trust you will give careful consideration to the foregoing, as it is an important factor to our government, depending upon us to keep open the arteries of transportation as indicated above.

### Bulletin on Housing Law

THE American Electric Railway War Board has issued Bulletin No. 25 giving the text of the federal housing act, approved on May 16, under which the President is authorized to purchase, acquire by lease, construct, requisition or condemn electric railways if needed to provide housing for war workers.

### Support for the War Board

REFERENCE was made last week to a circular letter on the work being carried on by the War Board in Washington sent by the American Electric Railway Association to those companies which have not yet contributed to its support. The explanation is made in this letter that it has been the policy of the board since its inception to represent all of the electric railways individually and collectively and not simply the members of the association, so that it is

being sent to all companies. The members of the board serve without compensation, but certain expenses are inevitable, such as office rent, collection of data, etc. Each road is being asked to contribute in proportion to its gross income. So far 126 roads in the United States have contributed \$23,275, but the time has come when additional revenues are needed.

### Pamphlet on Freight Haulage

THE American Electric Railway Association has had reprinted in pamphlet form the article by A. B. Cole on freight haulage on electric railways, published in the issue of this paper for May 11, and is sending copies to members of the Chamber of Commerce of the United States and other commercial organizations as well as to a number of manufacturers. Additional copies can be secured from the association office at a price of 10 cents each.

### Toledo Section Elects Officers

A MEETING of members of the joint section of the Toledo Railways & Light Company and associates at which officers for the coming year were elected was held on the evening of May 24. Interest in the election was very keen, the candidates for office having held a meeting on May 7 with the nominating committee to decide the manner in which the election should be conducted. After considerable discussion, it was decided that all those running for office should be provided with electioneering cards similar to those used by candidates for city offices, etc. In this way all prospective office holders were able to present their own reasons as to why they felt they were best qualified to fill the office for which they were running. As a consequence, it was no uncommon thing during the campaign to hear two rival candidates expounding their individual merits before different members of the joint section.

As a result of the interest felt in the election 250 members were present, and as the results were bulletined much good-natured bantering was evident. The officers elected were as follows:

Chairman, G. E. Snider, engineering department; vice-chairman, J. J. Duggan, Acme Power Company; financial secretary, J. L. Wright, electric meter department; treasurer, M. K. Thomen, engineering department; secretary, G. E. Lafferty, general office; members of executive committee, T. J. Nolan, H. Friede, and William Long.

To indicate the interest in the Toledo Section, it is worthy of mention that on May 24, 1917, the beginning of the first joint section year, there were 335 members. On Jan. 1, 1918, there were 292 members, and on May 24, 374 members. From May 24, 1917, to May 24, 1918, 159 members were dropped from the rolls due to the draft, enlistments, and other reasons, but during the same period 194 employees applied for membership, so that had the war conditions not come the section would probably now have 500 members. Eighty new members were admitted since the meeting of May 7.

Prior to the final result of the balloting a musical program, in charge of L. D. Scouten and F. M. Somerville, was rendered by the boys from the Starr Avenue carhouse. At the conclusion of the meeting a buffet lunch was served.

## LETTERS TO THE EDITORS

### Are Reconstructed Safety Cars Worth While?

THE SOUTHWESTERN ELECTRICAL & GAS ASSOCIATION  
DALLAS, TEX., May 30, 1918.

To the Editors:

Several of our members are interested in the subject of changing ordinary single-truck, double motor two-men cars with hand brake equipment into front entrance one-man cars, and I would like to have some data showing whether such cars could be reconstructed into one-man safety cars with efficient results. There are many types of old cars whose design lends itself to such reconstruction, so far as the mere mechanical conditions are concerned, while there are other types with which such reconstruction is out of the question.

A recent survey of this matter throughout the Southwest has led me to the conclusion that it will eventually pay almost any street railway a better return to use the complete one-man safety car rather than the reconstructed car. Recent observation and information have pretty well demonstrated that the average old type, single-truck car weighs too much per passenger for economical rapid acceleration and retardation and that a 30-in. wheel necessitates not only higher steps, which tend to delay loading and unloading and to increase step accidents, but the additional height of the car from the track seems to add greatly to the "jerk" made during rapid acceleration and braking. So far as the safety devices for the doors, the "dead-man's handle" and the fare receiving and recording devices are concerned, these can be placed on any car and will probably be as efficient on one type as another.

The main factors in favor of the safety one-man car specially built for the purpose are its smaller weight per passenger capacity and the lessened distance of the car floor from the rail. The front entrance is, of course, a necessity both from the point of fare-taking and recording and also from the fact that the passengers entering and leaving are less liable to be injured by extremely rapid acceleration and retardation, the tendency of such being to aid in "welcoming the coming and speeding the parting passenger" and doing so in such a manner that he is not thrown backward in either case.

I have been enabled in two cases to watch the parallel operation on the same lines of a car specially built for this purpose and reconstructed cars, the safety one-man cars being used on regular schedule and the reconstructed cars as fillers-in during rush hours. A very close record shows that the passengers prefer the first type and that there is with this type a distinct difference in the time of acceleration and braking at each stop. Meters on all of these cars show a distinct and quite large saving of current used in favor of the car built specially for the purpose. The "reconstructed" cars in both these cases have really had nothing added to them except certain of the safety devices—not including the dead-man's handle. They were equipped with 30-in. wheels, one step to the platform and motors of ample capacity for their previous two-men operation,

and they were of comparatively light weight for their passenger capacity

In these two cases the difference of economy of operation and satisfactory service to the public were so marked that it would seem to be unwise to reconstruct cars fully for safety one-man operation as under no conditions of traffic would they approach the "100 per cent service," which is possible with a car built specially for the purpose.

As this is an important matter with many of our members at the present moment, I would be very glad to have, from any of your readers who have tried reconstructing cars for this purpose, the operating and financial results obtained from a reconstructed car, as well as opinions as to the desirability of so doing.

H. S. COOPER, Secretary.

### Use Auto Trucks With Flanged and Rubber Tires

CLEVELAND, OHIO, JUNE 7, 1918.

To the Editors:

The insufficiency of steam road terminals and the lack of equipment of electric interurbans brought into use last winter the auto truck for both short-haul and long-distance freight transportation. That the need of this departure was great and the service helpful, goes without saying. The cost, however, was terrific—first, in the economic waste of the small unit, second, in the destruction of miles of improved highways, and, third, in the millions that now must be spent in the repairs yet to be made.

It is no stretch of the imagination to say that for every dollar earned, \$10 was either wasted or destroyed. Economic laws will eliminate the waste, but it is only improved service both in cost and time that will save the roads which otherwise must be destroyed in a short time.

As I see it, this can be brought about by the interurbans, and, at the same time, give to these struggling roads an increase of revenue which most of them so sorely need. How? By the interurbans entering the field not only as transporters of freight over the rail, but as deliverers of the same freight by auto truck when the end of the rail route is reached. To accomplish this all that needs to be done by the interurbans is to purchase auto trucks and equip these trucks with flanged wheels and couplers. When single trucks are to be used, couple them on to "locals;" when many are to be run, move them in trains. When the end of the rail route is reached, place on the wheels demountable rims with truck tires. The truck then will be ready for house to house delivery. By route-sorting the goods at the point of origination instead of at the destination, the labor necessary in loading and unloading will be saved. The cheapness of electrical rail movement is so great over that of a gasoline-propelled car operating on brick pavements that competition will be entirely out of the question.

The thought herein expressed came to me as I was driving over a new pavement completely destroyed last winter. I am submitting it to the operators of interurban properties for what it is worth.

PETER WITT.



# News of the Electric Railways

TRAFFIC AND TRANSPORTATION

FINANCIAL AND CORPORATE • PERSONAL MENTION • CONSTRUCTION NEWS

## Labor Hearing June 24

General Labor Principles Will Be Discussed Before Messrs. Taft and Walsh at Washington Session

A question of great importance to electric railways is to be argued in Washington on June 24 before Messrs. Taft and Walsh, joint chairmen of the Federal War Labor Board. This is on the point as to whether the lack of financial ability is to be considered a bar against the payment of higher wages to dissatisfied employees. In recent years several arbitration boards have held that employees are entitled to a proper standard of wages even though the employer may be able to show that financial disaster may result from taking on the additional burden. This is of particular interest to public utilities which are in the dilemma of not being able to raise the price of their product to meet the extra charges. In this connection, the board also has been asked to point a way out of the difficulty by suggesting measures of relief in the event that higher wage scales are established for any of the parties to the proceedings.

### CASES MULTIPLIED RAPIDLY

These developments are the result of controversies over wages for employees of the Detroit and Cleveland companies, and more recently for those working in Chicago, East St. Louis, Scranton, Newark, N. J., and Portland, Ore.

The Chicago hearing took place on June 12, after appeals to the board by employees of the Chicago Surface Lines, the Chicago Elevated Railways, the Chicago & West Towns and the Evanston (Ill.) Railway companies. The case of the Surface Lines was peculiar in that the company had not submitted to the jurisdiction of the board while the employees and the city, as partner in the net receipts, had done so. Attorney W. W. Gurley for the company referred to the fact that the present contract does not expire for two years and said that while the men might be entitled to more pay the financial condition of the company would not warrant such expenditure. He said that until the board could point a way out of the difficulty the Surface Lines would not agree to a joint submission.

A new point was presented by Attorney F. H. McCulloch for the Evanston Railway, who said there are no war industries in that city, and he did not see where the War Labor Board could assume jurisdiction. This company has usually followed the Surface Lines in fixing a wage scale, but the lawyer said if there is to be any submission he would insist on a separate hearing. Attorney Willard McEwen

for the West Towns company did not make the same claim as to war industries, but he insisted on a separate hearing. The men are not seeking a change in working conditions in any of these cases, but they insist that even though the existing agreement has not expired the wage schedule does not meet present cost of living and there will not be enough trainmen to operate the cars unless a change is made.

Chairman Walsh announced that all the disputed points would be considered by the special section composed of Mr. Taft and himself. He invited the lawyers to join in the Washington hearing where the financial situation will be argued. It was said at the office of the American Electric Railway Association that Past-President Thomas N. McCarter would represent that body at the hearing.

## Schenectady Strike Settled

Men Agree to Temporary Advance—City Will Waive Its Franchise Fare Rights

The strike of the employees of the Schenectady (N. Y.) Railway has been settled. It was declared off on June 12 after the men had been out twelve days. They agreed to accept an increase of 6½ cents an hour, and after a four-hour caucus of the Council the Aldermen agreed to waive franchise rights to a 5-cent fare under certain conditions.

### SETTLEMENT BASED ON LETTER TO MAYOR

The basis of the settlement was a letter addressed by the Council to James R. Buchanan, federal commissioner of conciliation. This provided that the request of the company to the Council for permission to have the Public Service Commission pass upon its application for increased fares without regard to franchise limitations would be taken up immediately upon the report of the examiners to be employed by and to report to the Council as to the necessity of increased revenue for the company. In conclusion the letter said that if the report showed that the company needed more revenue by increased fares the Council would then grant the railway permission to apply to the Public Service Commission for relief without insisting upon the city's present 5-cent fare rights under the existing franchise.

The men demanded a 9-cent-an-hour increase. They have been getting a maximum of 31½ cents an hour. Final settlement of the wage rate will be determined by the Federal War Labor Board.

## Progress on Chicago Drafts

Agreement Reached on Several Additional Points in Proposed New Chicago Ordinance

Representation for the city and the employees on the board of directors of the surface and elevated lines may be made a part of the ordinance for the unification of the lines and the construction of a subway system. This proposition was put up to the companies by a sub-committee of the City Council on June 15. While Mr. Busby said he had no objection to offer, he would refer the matter to the board of directors.

### CHANGES IN FINANCIAL PLAN

Views of security holders on the proposed ordinance were made known to members of the committee by Mr. Busby. His statement applied only to the surface lines, but it is understood that similar contentions will be raised on behalf of the owners of the elevated properties.

The modifications suggested by Mr. Busby applied only to the financial plan, and it is understood that all parties are practically agreed on the other provisions of the ordinance. In brief, Mr. Busby suggested that the interest rate start with 6.35 instead of 6.22 per cent, and that an additional rate of 1¼ per cent be allowed on "new money." Provisions for refunding of existing securities were also discussed, and Mr. Busby contended that there should be proper protection for the money which will go into new construction, as these extensions would have no operating value if anything should happen to the rest of the property.

The sub-committee favored Mr. Busby's suggestion to the extent of removing the 5 per cent limit on cost of refunding. The members also allowed an interest rate of 6.35 on original capital only. At the same meeting Walter Fisher, special counsel, gave an opinion to the effect that the traction fund could not be used by the city for general corporate purposes and also that the city had no authority to invest part of this fund in Liberty Bonds.

### ORDINANCE IN MAIN ACCEPTABLE

An adjournment was taken to allow the companies time to give a final answer on provisions of the ordinance as already outlined.

At a meeting of the committee on June 19 Mr. Busby, speaking for all the Chicago companies, stated that the ordinance as previously outlined, accounts of which have appeared in the *ELECTRIC RAILWAY JOURNAL*, was acceptable.

## Massachusetts Wage Award

### Increase in Wages Awarded to Trainmen and Other Employees in Worcester, Springfield and Other Cities

One of the largest electric railway wage increases ever awarded in New England was announced on June 15 by Henry B. Endicott, executive manager of the Massachusetts committee on public safety, as arbitrator between the Amalgamated Association and the Springfield Street Railway, Worcester Consolidated Street Railway, Interstate Consolidated Street Railway, Attleboro Branch Railroad and the Milford, Attleboro & Woonsocket Street Railway. Mr. Endicott's award follows extended negotiations and conferences between the parties, and extends various agreements for one year from June 1, 1918, besides fixing the rate of pay and other matters bearing upon working conditions. It is estimated that the award will cost the Springfield company alone \$400,000 a year in extra operating expenses. Further fare increases appear likely.

On the Springfield system, the daily wage arrangement is continued and the award and previous rates are as follows:

	New Rates	Old Rates
First half year, rate per day..	\$3.33	\$2.555
Second half year, rate per day.	3.48	2.705
Second-year men, rate per day.	3.60	2.855
Third-year men, rate per day.	3.69	2.955
Fourth-year men and thereafter, per day.....	3.87	3.105

The employees of the Worcester company demanded that their wage scale be fixed for conductors, messengers and motormen at the rate of 45 cents an hour for the fourth and subsequent years of employment instead of at the previous rate of 34.5 cents. In the conferences the company agreed that the maximum rate should be not less than 40 cents an hour. Mr. Endicott found that, taking into consideration the constant increase in the cost of living and the pay of men now in similar industries in Massachusetts, 43 cents an hour was a fair rate, and so decreed. The new schedule for Worcester, which is also made to apply to the other companies except Springfield, is: Fourth year and thereafter, 43 cents; third year, 41 cents; second year, 40 cents; second six months, 38.5 cents; first six months, 37 cents per hour.

Mr. Endicott was asked to decide whether all employees other than messengers, conductors and motormen should receive an increase of 35 per cent in their wages. It appeared from the evidence that the wages of the miscellaneous employees had been based upon no uniform system. Wages of one class of employees in Springfield differed from the wages of the same class in Worcester. Inter-departmental wages also differed in the same city. Several classes of employees received substantial increases in pay since May 1 and others were working for the same scale which had been in effect for some time. The award states:

"If miscellaneous employees were to receive a uniform raise in wages, equal to that received by the blue-uniformed men they would be entitled to an addition of 24.5 per cent over their present rate. I appreciate that uniformity of wages both within each company and throughout all the companies as a group would be advisable if the companies were now just starting in business. I am inclined to believe, however, that apparent inequalities are often due to local conditions, or were originally caused by varying conditions of employment. An attempt to systematize them by an examination of the wage sheet alone without an accompanying intimate knowledge of the histories of the companies would probably lead to injustice. I therefore decide all employees whose wages \* \* \* have not been increased since April 30, 1918, shall receive an advance in pay to the amount of 24.5 per cent of the previous wage, and I leave the minor wage inequalities for gradual adjustment by the men and the companies."

The union urged an eight-hour day instead of a nine-hour day for shop and other employees. It was Mr. Endicott's opinion that a change from a nine-hour day to an eight-hour day at this time was inadvisable. He decided that the working hours should continue as they were prior to June 1, 1918.

The union raised the question whether, if a shorter work day was granted to men in any department such shorter work day should apply to all men doing the same kind of work in such department. It was contended that the hours in some departments were not uniform. In his finding Mr. Endicott refused to order uniformity in hours as requested, and stated that while uniformity was desirable and to be encouraged when practicable, this was not the moment to attempt a readjustment of working hours. The men urged that Sunday and holiday runs be arranged so that eight hours should be the maximum for a day's work, performed within ten consecutive hours, and that cars operating between midnight and 6 a. m. be paid for at the rate of a full day's pay. The arbitrator found it unwise at the present time to make such readjustments of service.

### San Francisco Loop Improved

With the completion of four tracks for the full length of Market Street in San Francisco, and the inauguration of through service on municipal cars from Twin Peaks Tunnel to the ferry, total traffic around the ferry loops has been increased about thirty-two cars per hour during the rush period. During the heaviest traffic in the exposition year 275 cars an hour passed around the loop by both systems. Experience since the completion of the im-

provements recently made indicate that the capacity of the loops will now be more than 300 cars an hour. Under the existing agreement as to routing of cars on inner and outer loops, however, the maximum loop capacity practicable is about 295 cars an hour.

About forty municipal cars have been added to the regular schedule in order to supply the new service on the outer Market Street tracks. A factor that has always prevented any great improvement in running time at the loops has been the heavy vehicular traffic constantly crossing the loop entrance and exit. Grade separation to eliminate this trouble has been frequently suggested, but funds for such changes are not now available. As the present need for increased capacity was brought about by the additional number of municipal cars to use the loop, the reconstruction costs have been borne exclusively by the Municipal Railway system.

### Shipping Board Acts Promptly

The United States Shipping Board Emergency Fleet Corporation, A. Merritt Taylor, director of passenger transportation and housing, finding it impracticable to secure from the Telford Road Company and from certain of the boroughs between Darby and Chester, Pa., such franchises for the Southern Pennsylvania Traction Company as that company would be justified in accepting, it proceeded to lay a second track for the account of the government, the same to be operated in conjunction with the company's existing single track, thus making a double-track railway.

In requisitioning so much of the roadbed of the Chester & Darby Telford Company as it required for right-of-way, the Fleet Corporation posted requisition notices along the turnpike.

Ninety thousand workers are engaged in the shipyards and munition plants in the district southwest of Philadelphia, including Chester. Many thousands must be added in the near future in order that the plants may be operated at full capacity and in certain instances materially enlarged.

The double-tracking of the railway on the Chester & Darby Telford road, which is known as the Chester Pike, will give track capacity for the conveyance of 19,000 passengers an hour in one direction. The capacity of the single track which has been in use is limited by a minimum headway or schedule time of fifteen minutes between cars. With two-track operation it will be possible to operate cars on a forty-second headway in each direction.

Provision has also been made by the Emergency Fleet Corporation for enlarging the power supply of the Southern Pennsylvania Traction Company. In addition arrangements have been made for the purchase of twenty-two additional cars. The contract for the construction of the new line has been awarded to McArthur Brothers, New York, who expect to complete the work in about two months.

## News Notes

**Air Brake Man Honored.**—The degree of Doctor of Engineering has just been conferred upon Walter V. Turner, manager of engineering for the Westinghouse Air Brake Company, by the University of Pittsburgh, in recognition of his valuable services to the engineering profession and to humanity.

**Wage Increase on Suburban Line.**—The Philadelphia Railways, operating 13 miles of line between Philadelphia and Chester, has increased the wages of conductors and motormen, from 30 cents an hour to 35 cents for first-year men, 36 cents for second-year men and 37 cents an hour for third-year men.

**Strike on Zanesville City Line.**—Because the company offered them an advance of 3 cents an hour, when they had demanded from 5 cents to 7 cents, the motormen and conductors on the city line of the Ohio Electric Railway at Zanesville walked out and completely tied up the service on June 4. The interurban lines were not affected.

**Rapid Transit Work Resumed.**—Nearly 6000 of the men engaged as laborers on subway and rapid transit construction work in New York returned to work early in the week commencing June 17 under an agreement reached between the Board of Estimate, the Public Service Commission, and contractors and the labor unions, whereby the men are to be paid the increased wage demanded.

**Would Arbitrate the Woman Question.**—The Toronto (Ont.) Railway is said to have expressed its willingness to refer the question of the employment of women as conductors to a conciliation board. This plan is said to meet with the approval of the men, who at a meeting on May 11 adopted a resolution opposing the use of women at this time. The opposition of the men was referred to in the issue of the *ELECTRIC RAILWAY JOURNAL* of May 8, page 983.

**Trustees to Act On Wage Increase.**—M. C. Brush, president of the Boston (Mass.) Elevated Railway, on June 14 sent a letter to the executive board of the union of the employees of the company informing that organization that he will take no action on their request for an increase in wages as it is a matter for the consideration of the new board of trustees. These will be appointed by the Governor and will take charge of the road about July 1.

**Wage Demands in Vancouver.**—The British Columbia Electric Railway, Vancouver, B. C., already confronted with a demand for increased wages from the conductors and motormen rep-

resenting an additional expenditure of \$520,000, has recently had presented to it a proposed agreement from the electrical workers in the company's employ, which, if granted, will mean another additional expenditure of \$120,000. The proposed agreement is a very extensive one, and is designed to establish a flat rate of \$6 a day for skilled men.

**Pennsylvania Commission's Docket Crowded.**—The calendar of the Public Service Commission of Pennsylvania for the week ended June 15 contained a long list of minor cases, including a score or more jitney complaints from western counties and small contract matters between public utilities. The commission will not take any vacation, although the members individually and at different times will be absent for a few weeks from their duties. At Wilkes-Barre on June 13 the commission planned to hear the city of Wilkes-Barre and nine surrounding boroughs present their claims that the rates of the Wilkes-Barre Railway are unreasonable. Inadequate service is charged by the opponents of the increase.

**Dayton Men Demand an Increase of Wages.**—Although the managers of the electric railways at Dayton, Ohio, expressed their willingness to submit to the National War Labor Board demands made by their employees the men early in the week commencing June 17, assumed a threatening attitude and insisted that the companies grant their request in full. This includes an increase from a minimum of 28 cents and a maximum of 45 cents an hour to a minimum of 45 cents and a maximum of 50 cents an hour. On June 19 the employees of the Peoples' Railway, the City Railway and the Dayton Street Railway went on strike. The companies have asked the City Commission to take over roads and operate them.

**Buffalo Rounding Up the Crooks.**—Three conductors employed by the International Railway, Buffalo, N. Y., have been convicted of stealing fares recently and the case of another conductor now under arrest is still pending. One of the trio was fined \$100; a second was fined \$50 and a third was fined \$25. It is charged that the men collected the fares from passengers without allowing the passengers to deposit the fares in the fare box. The case of a fourth conductor is being investigated by company officials co-operating with the police. He is charged with making and selling a device which could be inserted in the fare box in such a manner that the coins would not register.

**Wage Advance in Davenport.**—The Tri-City Railway, Davenport, Iowa, has voluntarily increased the wages of its employees for the fourth time within the past year. Under the 1917-1918 contract, which was effective until June 1, 1918, the wage scale for trainmen varied from 27 cents to 32 cents an hour. On Nov. 1 an increase of 1 cent an hour was voluntarily granted, and on Dec. 1 a 7 per cent war bonus was added to this. On May 1 last the 7

per cent war bonus was increased to a 10 per cent, and on June 6 the war bonuses were discontinued effective June 1 and a straight 4 cents an hour increase was granted, making the present wage scale from 32 cents to 37 cents an hour. Shop men will also receive an increase in wages at this time.

**Policy With Regard to Returning Employees.**—The management of the Honolulu Rapid Transit & Land Company, Honolulu, T. H., has notified the employees of the company to the effect that "employees entering the federal military service, who shall thereupon notify the company in writing of their intention of returning to their present employment, will be considered as on extended leave; and will be entitled to their seniority upon reporting for duty with an honorable discharge within sixty days from the date of said discharge or termination of federal service, if in a satisfactory physical condition. The retention in service of new employees and their respective rights of seniority and the rights of seniority of present employees, will be subject to the foregoing regulation."

**Classification of Military Engineers Suggested.**—The fact that many engineers are in the National and the enlisted army at a time when the national organizations are constantly receiving requests for engineers, chemists and other technical men has impelled the Engineering Council, representing the national engineering societies, to address the secretaries of war and navy on the subject. The council urges that "technically trained men of all ages should be enrolled and conserved for technical duties, and special efforts should be made immediately by the War and Navy Departments to find and record such men among drafted and enlisted forces and to assign them to places in which their special qualifications are needed." The Engineering Council offers to assist in locating and classifying such men, if its assistance is desired.

**Advance for Interurban Men.**—Platform men employed by the Buffalo, Lockport & Rochester Railway, Rochester, N. Y., have been granted a wage increase. For the first six months of service, the men will receive 30 cents an hour; second six months, 32 cents an hour; after the first year, 37 cents an hour in passenger service and 41½ cents an hour in express service. The train crews of the Buffalo, Lockport & Rochester have severed their affiliation with the Order of Railway Trainmen, associated with the Brotherhood of Locomotive Engineers, and have joined the Amalgamated Association of Street & Electric Railway Employees. The Buffalo, Lockport & Rochester men are now allowed to operate their cars between the terminals in Rochester and Lockport. Heretofore the cars were taken at the Rochester city lines by local crews and in Lockport they were taken at the city line by crews of the International Railway, Buffalo, N. Y.

# Financial and Corporate

## \$17,320,000 Advance to B. R. T.

W. F. C. Will Grant Loan if Note  
Holders Will Exchange 70 Per  
Cent of Maturing Fives for  
New Sevens

The War Finance Corporation on June 19 came to the aid of the Brooklyn (N. Y.) Rapid Transit Company with an announcement that it would make a direct loan of not more than \$17,320,000 to the company for re-financing purposes. This advance is based upon a proviso requiring holders of the company's maturing notes to consent to exchange not less than 70 per cent of the face value of their holdings for new three-year 7 per cent secured notes. The notes to be retired consist of an issue of \$57,735,000 of 5 per cent notes which will come due on July 1.

As collateral for the direct loan the War Finance Corporation will take new three-year notes at par. These will be secured by \$57,735,000 of first mortgage 5 per cent bonds of the New York Municipal Railway Corporation, now deposited as security for the present notes, and by \$39,000,000 of ten-year 6 per cent bonds of the Brooklyn Rapid Transit Company to be issued under a consolidated and refunding mortgage recently approved by the stockholders. The directors of the War Finance Corporation have decided that the Brooklyn Rapid Transit Company application comes within the scope of the "exceptional cases" clause contained in Section 9 of the act.

The War Finance Corporation received letters from the Comptroller of the City of New York and from the Public Service Commission of the First District of New York expressing a desire that the application of the company be granted in the interest of the city.

### B.R.T. EXPLAINS PLAN

After the announcement by the War Finance Corporation, the railway issued a statement in part as follows:

"A circular will be sent to noteholders during the next few days inviting them to deposit their notes with the Central Union Trust Company of New York under an extension plan under which noteholders will have the privilege of accepting for each \$1,000 note either (a) \$300 in cash and \$700 face value of the new three-year 7 per cent secured notes, or (b) \$1,000 face value of the new three-year 7 per cent secured notes.

"The indenture will provide that the company will cause to be pledged thereunder any additional consolidated and refunding mortgage bonds to an amount equal at face value to expendi-

tures made out of the current surplus earnings of the company for capital purposes and for which the company may be or become entitled to draw bonds from the trustee, as well as any first mortgage 5 per cent sinking-fund gold bonds acquired by the company with such current surplus earnings.

"In order to conserve cash and to that extent to avoid the sale of additional securities pending the life of the new notes, the indenture will further provide that while the notes are outstanding the company will pay no dividends upon its capital stock in cash or in any securities or script unless such security or script shall by its terms rank subsequent to the rights of the holders of the notes as against any of the assets of the company.

"The plan has been approved by Kuhn, Loeb & Company, the Central Union Trust Company of New York and Kidder, Peabody & Company, the bankers who placed the maturing issue of notes and who represent a large amount thereof."

### \$100,000,000 UTILITY POOL PROPOSED

James N. Wallace, president Central Union Trust Company; Thomas W. Lamont, of J. P. Morgan & Company; Charles H. Sabin, president Guaranty Trust Company, and Frederick W. Strauss, of J. & W. Seligman & Company, all of New York, have been appointed as a committee by W. P. G. Harding, managing director of the War Finance Corporation, to consider the question of giving aid to public utility companies. The appointment of the committee is the result of a recent conference in New York between directors of the War Finance Corporation and representative bankers, as noted in the ELECTRIC RAILWAY JOURNAL of June 15.

One matter which this committee is said to have under consideration is the organization of a \$100,000,000 corporation, the function of which would be to purchase the securities of public utilities and in turn discount its paper with the War Finance Corporation. Bankers throughout the country would be asked to subscribe to the capital stock of the company in proportion to their ability to do so, thus spreading any risk which might be involved and at the same time insuring the active co-operation of leading financial interests in all sections toward securing better treatment for public service properties.

It is reported that conferences in the matter have been held, but that no definite decisions as to the formation of such a corporation have been reached.

The Chicago Clearing House has named E. D. Hulbert, of the Merchants Loan & Trust Company; George M.

Reynolds, of the Continental & Commercial National Bank, and F. O. Wetmore, of the First National Bank, as a committee to consider the need of public utility relief from the various financial burdens of the present.

### POWER NEEDS RECOGNIZED

The War Industries Board has sent to Congress the draft of a proposed bill to appropriate \$200,000,000 to increase the power supply in overloaded industrial centers of the East. Cities along the Atlantic seaboard in which munitions and materials for war are being manufactured would be the especial beneficiaries under the measure, which has been committed to the care for the present of Representative Kitchen, chairman of the House ways and means committee, and of Senator Martin of Virginia, chairman of the appropriations committee. The measure is said to have the backing of President Wilson.

It is felt in Washington that much more than \$200,000,000 will be needed, inasmuch as in the Pittsburgh district alone, which supplies power for a radius of 100 miles, \$40,000,000 or \$50,000,000 for additional plant facilities might be needed. The War Industries Board is now making a census of the various power needs of the different localities engaged upon war work.

The proposed measure is emergency legislation. It is expected by the Washington correspondent of this paper, however, that it will be difficult to pass in Congress, although all government interests engaged in obtaining war material admit that such legislation is needed at once.

### Lima Tramway Earnings Gain

The report of the Lima (Peru) Light, Power & Tramway Company for the year ended Dec. 31, 1917, shows a gross revenue of \$2,142,480, an increase of \$156,120 over 1916. The operating expenses amounted to \$1,436,295, an increase of \$76,740. In commenting on these results the directors refer to the increased tramway traffic, increased employment of electric power and the high premium on Peruvian currency as factors contributing to the improvement in revenues. On the other hand, the increased cost of raw materials and the growing difficulty of securing materials at any price from the United States are factors reflected in the increased expenses.

The gross revenue from the tramways in 1917 amounted to \$1,085,890, expenses to \$694,995 and net profits to \$390,895. The gross revenue increased by \$84,130, expenses by \$61,520 and net profits by \$22,610.

Four quarterly dividends were declared during 1917, amounting to a total of 5 per cent for the year. The net profits were distributed as follows: \$374,720 for amortization and depreciation; dividends distributed, \$328,460; carried forward to profit and loss, \$3,010. The balance of the profit and loss account on Dec. 31, 1916, was \$456,195.

## Standard G. & E. Gains

Reports for Railway Subsidiaries Show Revenues Nearly Back at the 1913 Mark

The gross earnings of the subsidiaries of the Standard Gas & Electric Company, Chicago, Ill., for 1917 showed an increase of 12.92 per cent over the previous year. These gross earnings, aggregating \$19,341,487, were derived from seven different classes of utilities, 4.18 per cent coming from electric railway operation. The accompanying statement gives a summary income report for the utilities giving railway service. The total railway receipts in 1917 were \$808,625 as compared to \$753,725 in 1916. The receipts almost reached the 1913 mark of \$828,168.

The Arkansas Valley Railway, Light & Power Company exceeded expectations for 1917. The year was one of exceptional prosperity for the territory served. The gross earnings increased 13.3 per cent, with an increase of 14.2 per cent in net. In 1916 these increases were 7.6 per cent and 11.7 per cent respectively.

The Ottumwa Railway & Light Com-

earnings and 16.85 per cent of the aggregate net earnings. The increase in taxes in 1917 was \$273,602, and the increase in six years has been \$826,666.

# Financial News Notes

**Small Bond Issue Authorized.**—The Chicago, Lake Shore & South Bend Railway, Michigan City, Ind., has been authorized by the Indiana Public Service Commission to issue \$28,000 of bonds to reimburse the treasury for sums expended for extensions and betterments. \*

**Northern Ohio Proposes New Security Issues.**—Application has been filed with the Ohio Public Utilities Commission by the Northern Ohio Traction & Light Company, Akron, for permission to issue \$600,000 of first mortgage 5 per cent bonds and \$160,000 par value of preferred stock.

Railway, controlled by the Springfield Railway & Light Company, has been authorized by the Illinois Public Utilities Commission to issue two lots of 5 per cent gold bonds, one for \$75,500 and the other for \$107,000. The total amount of \$182,500 is needed to pay notes issued by the company since Dec. 31, 1913, representing improvements of a permanent nature.

**Lethbridge Deficit \$28,800.**—The Lethbridge (Alta.) Municipal Railway in 1917 did slightly better than was anticipated. The deficit for the year amounted to \$28,878, whereas the result had been estimated at \$30,178. The cost of operation was kept as low as possible, according to the report of the local commissioner, and the improved patronage increased the earnings. The earnings figures for the last calendar year follow: Earnings \$52,203; operating expenses, \$43,821; fixed charges, \$37,260; deficit \$28,878.

**\$350,000 of Arkansas Valley Notes Offered.**—H. M. Byllesby & Company, Inc., Chicago, Ill., and Bonbright & Company, Inc., New York, N. Y., are offering for subscription at 97¼ and accrued interest \$350,000 of bond secured 7 per cent gold notes of the

1917 INCOME STATEMENT OF RAILWAY SUBSIDIARIES OF STANDARD GAS & ELECTRIC COMPANY

Company	Gross Earnings	Net Earnings	Interest Charges (Net)	Amortization of Debt Discount and Expense	Dividends Charged to Preferred	Earnings Retained in Surplus or Depreciation Reserve	Deficit after Interest Charges
Arkansas Valley Railway, Light & Power Company	\$1,428,467.23	\$645,222.05	\$370,532.75	\$2,500.00	\$66,578.35	\$135,000.00	\$70,610.95
Fort Smith Light & Traction Company	508,669.52	154,266.14	181,912.33				\$27,646.19
Northern States Power Company	7,154,508.89	3,389,780.50	1,709,837.74	140,000.00	916,911.05	188,931.71	435,000.00
Ottumwa Railway & Light Company	365,406.66	142,989.07	67,982.03	250.00	32,382.00	24,375.00	18,000.04

pany during the year added a considerable amount of new lighting and power business. The Fort Smith Light & Traction Company is retaining its former standing among the subsidiaries. During January and February, 1918, this company earned materially in excess of its proportionate interest charges, and for the twelve months ended Feb. 28, 1918, it showed a surplus. The improvement is due primarily to the establishment of a number of new industries, whose location was partly influenced by the discovery of new gas fields in the vicinity.

The report states that the placing of securities of the respective companies in the communities served has proved to be even more successful in 1917 than was anticipated from the excellent results obtained in 1916. Customer ownership is appealing to the public in an increasing degree. From Jan. 1, 1917, to March 23, 1918, inclusive, local sales numbered 5240, aggregating \$4,008,350 par value of securities.

On Dec. 31, 1917, the total depreciation reserves of the subsidiary companies amounted to \$3,273,658. The surplus balance of these companies totaled \$1,505,125, making an aggregate amount of \$4,778,783. This has been invested in extensions and enlargements of the properties.

The total taxes of the subsidiaries during 1917 were \$1,436,414, equal to 7.42 per cent of the aggregate gross

**Abandonment in Tennessee.**—The Holston Valley Railway, operated by the Bristol (Tenn.) Traction Company, between Bristol and Big Creek Park, Tenn., a distance of 10 miles, will discontinue operation. Orders have also been issued by J. A. Caldwell, receiver for the Bristol Traction Company, for the removal of the former company's tracks on several of the streets in Bristol.

**Pittsburgh Argument on July 1.**—The United States District Court for the Western District of Pennsylvania has fixed July 1 for hearing arguments on the questions at law raised in answer to the bill brought by the protective committee of bondholders of the Pittsburgh Railways and subsidiaries against the Philadelphia Company, Pittsburgh Railways and the United Traction Company, Pittsburgh.

**\$1,000,000 Mortgage Authorized.**—The stockholders of the Syracuse & Suburban Railroad, Syracuse, N. Y., have authorized a mortgage of \$1,000,000 to secure an issue of bonds for that amount. Of the money raised through this issue, \$550,000 will be used to pay outstanding bonds. Part of the remainder will be used to reimburse the company for capital expenditures and the rest will be held in the treasury.

**Authorized to Fund \$182,500 of Notes.**—Springfield (Ill.) Consolidated

Arkansas Valley Railway, Light & Power Company dated June 1, 1918, and due Dec. 1, 1920. The total authorized issue is \$1,500,000. The proceeds of the sale of the notes will reimburse the company for expenditures incurred for additions and improvements to the property.

**\$1,581,000 of West End Refunding Bonds.**—The West End Street Railway, Boston, Mass., has requested the authorization by the Public Service Commission of an issue of \$1,581,000 of its bonds to refund an equal amount of bonds due on Aug. 1, 1918. In case the proceeds of the sale of the bonds are more than sufficient for that purpose the West End company will pay to the Boston Elevated Railway such excess to be invested in permanent additions, alterations and improvements upon the property of the West End in accordance with the terms of the lease.

**Short Iowa Road Abandoned.**—Electric railway communication between Sioux City, Iowa, and Dakota City, Neb., has been severed by the Sioux City, Crystal Lake & Homer Electric Railway and will not be resumed. The line between Sioux City and Dakota City was built about twelve years ago, but has never been a paying proposition. The property was recently ordered to be junked. Already a portion of track in Dakota City has been torn

up and the rails between Crystal Lake and Dakota City have been sold. Cars will be run during the summer season between South Sioux City and Crystal Lake.

**Purposes of New Puget Sound Issue.**—The issue of \$12,250,000 of 7 per cent three-year mortgage gold notes of the Puget Sound Traction, Light & Power Company, Seattle, Wash., referred to in the ELECTRIC RAILWAY JOURNAL of June 15, will be used to refund \$10,057,000 of 6 per cent mortgage bonds of the company maturing on Feb. 1, 1919, and to enable the company to take care of construction work now under way, including the White River development of 20,000 hp., the 10,000-kw. steam unit at Georgetown, and the steam plant on Western Avenue. These projects will cost in the neighborhood of \$1,250,000.

**Crosstown Road to Be Sold Under Foreclosure.**—The property and franchises of the Central Crosstown Railroad are to be sold at auction by Referee Lyttleton Fox, and the New York Railways Company, which is now operating the road, will be the purchaser if the Public Service Commission clothes it with the necessary authority. Foreclosure proceedings against the Central Crosstown Railroad were instituted because of a default of principal and interest under the company's first consolidated mortgage. A public hearing on the application of the New York Railways for permission to make the purchase was set by the Public Service Commission for June 20.

**\$2,151,000 of Refunding Bonds Authorized.**—The Public Service Commission for the Second District of New York has authorized the Albany (N. Y.) Southern Railroad to issue \$2,151,000 of first refunding mortgage thirty-year 6 per cent bonds. Of this amount \$1,451,000 is to be used by the company in exchange for a like amount of first mortgage thirty-year 5 per cent bonds now outstanding. The company is also authorized to pledge \$700,000 in 6 per cent bonds as security for its three-year

notes amounting to \$550,000, to be sold at not less than 96, and the proceeds are to be used to reimburse the treasury, to discharge floating liabilities outstanding on June 30, 1917, and to pay for proposed new construction amounting to \$190,683.

**P. R. T. Wants War Taxes Shifted.**—E. A. Ballard, counsel Philadelphia (Pa.) Rapid Transit Company, recently asked the ways and means committee of the House of Representatives to draft the new war-revenue bill so that the underlying companies must pay the war taxes themselves. The leases under which the Philadelphia Rapid Transit Company now operated requires this corporation to pay all taxes on the earnings of the underlying companies, but Mr. Ballard desires the law to state specifically that the contracts apply only to ordinary taxes and not to special war taxes. The leased companies are planning to oppose this change, on the ground of the inviolability of the contract.

**Drawing New Plan to Care for Interest Payments.**—T. Porter, secretary of the committee of bondholders of the Barcelona Traction, Light & Power Company, Ltd., Barcelona, Spain, on June 18 addressed a statement to the holders of the bonds of the company to the effect that owing to the delay and complications resulting from the continuance of the European war, it will be impossible for the company to resume full payment in cash of the interest on its bonds on Dec. 1, 1918, as was contemplated when the bondholders met in June, 1915. He says the committee, in consultation with the directors, are formulating a plan, the basis of which will be the payment in cash of a portion of the interest commencing with the coupon due on Dec. 1, 1918, with compensating arrangements for deferring payment of the full interest. In due course the plan will be submitted to the bondholders for their approval. In the meantime the committee requests holders of the interim scrip issued during the last three years

in satisfaction of the interest coupons, to defer lodging the same for exchange into definitive notes.

**Indianapolis Security Holders Organize.**—J. F. Wild, president of the J. F. Wild State Bank, Indianapolis, Ind., has been elected as the chairman of a committee of fifteen security holders of the Indianapolis Street Railway to represent the newly-organized Association of Indiana Holders of Indianapolis Street Railway Securities. The committee is composed of the following: H. H. Hornbrook, Indianapolis; W. T. Durbin, Anderson; E. L. Mckee, Indianapolis; Walter J. Ball, Lafayette; R. K. Willmann, Hartford City; John W. Smith, Muncie; Frank Donnar, Greencastle; Henry C. Bennett, Robert Elliott, George C. Hitt, Otto N. Frenzel, Samuel Reid, J. F. Wild and Michael Ready, Indianapolis, and W. L. Hough, Greenfield. J. M. Pearson, of J. F. Wild & Company, has been appointed to act as secretary of the organization. The plan to organize was referred to in the issue of June 8.

**New Orleans Refunding Plan Arranged.**—The New Orleans Railway & Light Company has authorized an issue of \$4,000,000 of one-year 7 per cent notes, dated June 1, 1918, due June 1, 1919, and callable at 100 and interest on thirty days' notice, for the purpose of refunding its two-year notes of an equal amount which matured on June 1, 1918. The company requests that all holders of the matured two-year notes deposit same for exchange for the new notes dollar for dollar. Details of the extension, as well as copies of the correspondence between the Mayor of New Orleans and the company, in response to the latter's request for increased rates, have been mailed to all note-holders of record. The company was unable to meet the notes at maturity on account of the refusal of the War Finance Corporation to advance the necessary funds. The letter of President D. D. Curran of the company on this phase of the matter was published in part in the issue for June 8.

## Electric Railway Monthly Earnings

BANGOR RAILWAY & ELECTRIC COMPANY, BANGOR, ME.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., Apr., '18	\$74,840	*\$44,032	\$30,808	\$19,557	\$11,251
1m., Apr., '17	70,632	*41,137	29,495	18,841	10,654
12m., Apr., '18	897,032	*530,058	366,974	232,075	134,899
12m., Apr., '17	860,144	*486,017	374,127	219,215	154,912

CHATTANOOGA RAILWAY & LIGHT COMPANY, CHATTANOOGA, TENN.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., Apr., '18	\$145,620	*\$107,066	\$38,554	\$30,996	\$7,558
1m., Apr., '17	111,840	*77,929	33,911	29,649	4,262
12m., Apr., '18	1,503,319	*1,279,649	223,670	364,362	†140,692
12m., Apr., '17	1,260,774	*875,961	384,813	358,215	26,598

COLUMBUS RAILWAY, POWER & LIGHT COMPANY, COLUMBUS, OHIO

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., Apr., '18	\$346,988	*\$242,089	\$104,899	\$56,644	\$48,255
1m., Apr., '17	304,819	*222,485	82,334	44,938	37,396
12m., Apr., '18	4,157,639	*3,088,042	1,069,597	598,598	470,999
12m., Apr., '17	3,677,280	*2,339,418	1,337,862	522,904	814,958

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

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., Apr., '18	\$1,721,352	*\$1,122,208	\$599,144	\$494,273	\$104,871
1m., Apr., '17	1,502,961	*895,423	607,538	430,014	177,524
12m., Apr., '18	20,311,495	*13,326,305	6,985,190	5,504,730	1,480,460
12m., Apr., '17	17,735,092	*10,142,214	7,592,878	5,087,199	2,505,679

CUMBERLAND COUNTY POWER & LIGHT COMPANY, PORTLAND, ME.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., Apr., '18	\$246,126	*\$169,013	\$77,113	\$71,158	\$5,955
1m., Apr., '17	233,439	*158,628	74,811	66,499	†8,312
12m., Apr., '18	3,090,145	*2,150,267	939,878	841,377	98,501
12m., Apr., '17	2,959,916	*1,893,698	1,066,218	810,671	255,547

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

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., Apr., '18	\$321,032	*\$245,482	\$75,550	\$67,686	\$7,864
1m., Apr., '17	298,279	*185,584	112,695	64,945	47,750
12m., Apr., '18	3,806,380	*2,728,789	1,077,086	795,086	282,505
12m., Apr., '17	3,247,423	*1,999,445	1,247,978	962,727	485,251

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

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., Apr., '18	\$73,081	*\$57,264	\$15,817	\$19,412	†\$3,595
1m., Apr., '17	68,053	*50,275	17,778	15,702	2,076
12m., Apr., '18	873,818	*728,709	145,109	194,767	†49,658
12m., Apr., '17	836,375	*596,756	239,619	185,585	54,034

PORTLAND RAILWAY, LIGHT & POWER COMPANY, PORTLAND, ORE.

Period	Operating Revenue	Operating Expenses	Operating Income	Fixed Charges	Net Income
1m., Apr., '18	\$616,280	††\$366,427	\$249,853	\$178,385	\$71,468
1m., Apr., '17	473,358	*260,594	212,764	183,824	28,940
12m., Apr., '18	6,530,330	††3,961,029	2,569,301	2,134,071	435,230
12m., Apr., '17	5,617,994	*3,048,517	2,569,477	2,182,930	386,547

\* Includes taxes. † Deficit. †† For the month \$18,518, and for twelve months \$252,848 included for depreciation.

# Traffic and Transportation

## Trenton Fare Case Continued

Final Hearing in Appeal for Six-Cent Fare Expected to Be Held on June 25

The hearing on the application of the Trenton & Mercer County Traction Corporation, Trenton, N. J., for a straight 6-cent fare was continued before the Board of Public Utility Commissioners on June 13 and will probably be completed on June 25. An appraisal of the company's property was presented as made by the J. G. White Engineering Company. John W. Burke, of the White Company, occupied the stand the greater part of the day. He placed the value of the physical property at \$4,875,614. George L. Record, representing the city of Trenton, objected to the acceptance by the utility board of this valuation, stating that a previous one had been made in 1915.

### VALUATION FIGURES ADMITTED

The company maintained that the utility board had ruled that an appraisal of property would be required in connection with any application for increased rates, and that previous valuations were only general approximations. Chairman Slocum, of the utility board, permitted the appraisal to be admitted as evidence. The valuation did not include any allowance for intangibles. In the Passaic Gas case, it was stated, the utility board allowed 30 per cent for intangible items, and if a similar allowance was made in the present case the total valuation of the Trenton system would amount to more than \$8,300,000.

Mr. Burke said he based his valuation on what he termed "normal fair prices." He said the valuation at prevailing war prices would be \$6,148,700, which is about \$1,250,000 more than his estimate of the fair value of the physical property. Mr. Burke estimated the annual depreciation fund for renewals, replacements and reserves at from \$150,000 to \$175,000.

### FARES ELSEWHERE NO CRITERION

President Rankin Johnson, recalled to the stand, gave figures he was asked to furnish at the last hearing as to cost of materials and equipment during the years 1914, 1915, 1916 and 1917. Counselor Edmund M. Hunt endeavored to have the witness testify as to a comparison of fares in Trenton and in other cities of the country, but President Slocum ruled that it was immaterial in this case what the fares were in other cities. Mr. Johnson read correspondence between the company and the trolley men's union in which an increase to 40 cents an hour flat rate was demanded and in which the company offered a graduated scale reach-

ing a 40-cent rate after five years of service. Mr. Johnson testified that the company had figured, when it made its application for an increased fare, on spending \$20,000 a year for increased pay for its employees. The men's demands would entail an added expenditure of from \$60,000 to \$80,000. Mr. Record asked that this testimony be ruled out as the pay increase was as yet not an accomplished fact, but President Slocum ruled that it should remain in the record.

The hearing was adjourned until June 25.

## Columbus Fare Hearing Begun

At a meeting of the Columbus City Council on June 7 Samuel G. McMeen, president, and Harold W. Clapp, general superintendent of the Columbus Railway, Power & Light Company, Columbus, Ohio, presented arguments for the increase of the rate of fare from eight tickets for a quarter to 5 cents straight, with universal transfers. Six business men joined in the plea.

President McMeen declared that the company wanted to pay its employees more money for their work, but could not do so at the present rate of fare. In connection with this, though he did not mention it, there are rumors that the men are organizing for the purpose of demanding an increase in their wages. Mr. McMeen further stated that if a temporary bridge is erected across the Scioto River at Broad Street the company will lay tracks, so that cars may be operated on the West Broad Street line across it.

J. Clare Miller, director of the Columbus Chamber of Commerce, declared that efficient service was needed in order to carry out the work at the plants which are making war materials. In view of the increased cost of all labor and materials, he favored an increase in the rate of fare, so the company will be able to furnish such a service.

George M. Schwartz, president of the Manufacturers' and Jobbers' Association, reported that at a recent meeting of that organization, most of the members spoke in favor of granting an increase in the fare. Several others spoke along the same line and one or two stated that some extensions must be built in order to keep pace with the increase in population and the growth of the town.

Councilman Aleot declared he would oppose any increase in the rate of fare because of the following clause which he said appears in the franchise:

"The municipality shall not, during the terms of such grant or renewal, release the grantee from any obligation or liability imposed by the terms of such grant or renewal of a grant."

## All Baltimore Skip Stops

This Method of Operation Applied to Entire Maryland City in About a Month

The staggered skip-stop method of car operation has been applied to all the lines of the United Railways & Electric Company, Baltimore, Md.

The process of application was a gradual one, beginning on April 7 with two lines. In quick succession the method was adopted on other lines so that in about a month the entire system was being operated under this plan.

The adoption of the staggered skip stop on the lines in Baltimore was accompanied with extensive publicity to inform the patrons of the method of operation; its purpose and advantages, and the points of each individual line which would be affected. This publicity included the use of advertising space in the newspapers, car window posters, large car cards, the company's publication for its patrons, *Trolley News*, and other agencies.

The company presented in a special edition of *Trolley News* a letter from P. B. Noyes, director of conservation of the United States Fuel Administration, to F. A. Meyer, fuel administrator of Maryland, urging the adoption of the staggered stop in Baltimore as the means of coal conservation. A letter from Mr. Meyer transmitting Mr. Noyes' letter to the Maryland Public Service Commission was also presented to the public. While the United Railways had for some time been considering the staggered skip stop and had actually tried the skip-stop method of operation on a few lines last year, the application of the staggered stop at this time was due particularly to the urgent recommendation of the government.

### TERRITORY SURVEYED CAREFULLY

Extreme care was exercised in surveying every one of the lines of the United Railways for the purpose of fixing the stops in each direction on all of these, and these surveys were checked and rechecked by experts who personally went over the ground in order to see that the stops should be absolutely fair and equitable to the public. That this detail work was very thoroughly done is testified to by the fact that there have been comparatively few complaints.

As the staggered skip stop was put into operation on each line the stopping places were clearly indicated by signs on the poles nearest the stopping points which designated these points. These signs were labelled "North Stop," "South Stop," "East Stop," or "West Stop." The lettering was black on a white background.

A special edition of *Trolley News* was issued for each line as the staggered skip stop was applied to it, and these special editions were placed in the racks of the cars of the line affected. They described the method of operation and gave a list of the stopping places of the cars in both directions.

## Rate Limit Removed in Jersey

### Highest Court Supports State Regulation of Franchise Rates— Public Service Fare Case Is Now Closed

The last legal barrier to the determination of fair rates in New Jersey has been removed by a ruling of the court of final jurisdiction that franchise rates are alterable. This decision is of far-reaching importance in connection with pending applications for higher fares, including that of the Public Service Railway, which operates through most of the State. The hearings in this particular case have been completed, and it is expected that a decision will soon be announced by the Board of Public Utility Commissioners.

#### STATE RATE-MAKING IS SUPREME

The ruling in regard to the paramountcy of the State rate-making power was handed down on June 17 by a seven-to-two vote of the New Jersey Court of Errors and Appeals. The case was that of the Atlantic Coast Electric Railway vs. Board of Public Utility Commissioners. The decision affirms the opinion of the Supreme court of the State as expressed in the recent Collingswood Sewerage Company and Northampton, Easton & Washington Traction Company cases, noted in the *ELECTRIC RAILWAY JOURNAL* of March 30, page 623.

The syllabus of the decision now rendered by the Court of Errors and Appeals makes the following statements:

"The Senate and General Assembly, in whom by our Constitution the legislative power is vested, must necessarily, as the representative of all the people of the State, be held to retain all the sovereign powers, except as far as they have by unmistakable language intrusted them to others. The traction acts of 1893 and 1896 did not expressly authorize municipalities to contract with street railway companies. The power is implied from the power to grant or refuse consent to a location of tracks, and to impose lawful restrictions; the implication of power ought not to be extended beyond the necessities of the case.

"Full effect can be given to the language of the traction acts of 1893 and 1896 by holding that the force and effect of a contract under Section 32 of the act of 1893 is the force and effect of a contract by which the municipality and the railway company, the only parties thereto, are bound, but that no restriction is thereby implied on the sovereign powers of the State to fix such just and reasonable rates as subsequent conditions may make desirable.

"The power of a municipality to impose lawful restrictions upon granting consent to the location of tracks of a street railway is subject to the condition that they be reasonable. The lawful restrictions that may be imposed upon granting consent to the location of tracks of a street railway

must be lawful not only at the time, but from time to time, that is, at all times."

#### CONSTITUTIONAL QUESTION NOT INVOLVED

In its opinion the court says:

"Our Constitution does not, like the Constitutions of some other states, confer upon municipalities the right to grant street franchises. We have been careful to keep the sovereignty of the State unimpaired and have not parcelled out the sovereign powers among minor political subdivisions.

"Municipalities with us act solely by virtue of legislative authority and as legislative agents. The Legislature may intrust to municipal corporations certain powers and may even authorize them to make irrevocable contracts, but the courts ought to be, as they have been, astute to see that such powers are not unnecessarily extended by implication."

Upon the legal reasons above expressed, the Court of Errors and Appeals has now reversed the Supreme Court decision which held that because Bradley Beach had a contract with the Atlantic Coast Electric Railway for a straight 5-cent fare, without a transfer within Bradley Beach, the commission was without power to grant a transfer and thereby bring about a change in the rate.

#### FINAL ARGUMENTS IN PUBLIC SERVICE CASE

The Board of Public Utility Commissioners on June 12 heard the final arguments on the application of the Public Service Railway for permission to raise its fare from 5 cents to 7 cents and also charge 2 cents for transfers, with an additional cent for a transfer upon a transfer. Notes on the testimony presented in this case since April have been published from time to time in the *ELECTRIC RAILWAY JOURNAL*.

The counsel for the municipalities, in closing, argued that it would be preposterous for the commission to set aside the 5-cent fare clauses in franchises and at the same time permit the franchises otherwise to stay in force. The municipalities, it was asserted, should have the right to dictate entirely new franchises. The city counsel, however, opposed the whole idea of altering the existing franchises, on the ground that restrictive fare clauses should not even be set aside as a war measure.

Thomas N. McCarter, president, made the final arguments for the railway. In his view, the fundamental question in New Jersey as in all parts of the country is whether or not the electric railway industry can continue to perform its functions, so important for war purposes. Judging by what has developed since the proceeding was started before the commission and what is going on in the steam rail-

road field, he felt that the relief to be granted ought to be greater than that asked for in the petition. There ought to be 7-cent fare with a suspension of the right to transfer. With the danger of increased wages coming from an order of the War Labor Board, with the danger of increased taxes and with the certainty of higher coal and other costs, he did not believe that any less increase would give the desired relief.

## Trans-Bay Fares Increased

### Key Route Permitted by California Commission to Equalize or Balance Rate Situation

The Railroad Commission of California has granted the application of the San Francisco-Oakland Terminal Railways for an increase of its commutation and suburban rates to conform with rates carried in the tariffs filed with the commission on June 5 by the Southern Pacific Company covering trans-bay service. Nothing in the order is to be construed as authorizing an increase in fares on the traction division of the San Francisco-Oakland Terminal Railways.

The Railroad Commission has, on the other hand, dismissed the application of the Southern Pacific Company for an increase of trans-bay and suburban rates. The company asked for this action, or an indefinite continuation of its application.

The San Francisco-Oakland Terminal Railways, the Key Route company, asked the commission for authority to increase its passenger fares between San Francisco and points reached by its lines in Alameda and Contra Costa Counties. Shortly after the case came before the commission, the Southern Pacific Company also asked the commission for authority to increase its trans-bay passenger fares with the exception of the creek route, and later included this. Still later the Key Route applied for a readjustment of its street car fares in Alameda and Contra Costa Counties. All these proceedings were consolidated and hearings held. It was at this time that the railroads were taken over by the government under Director General McAdoo, and the trans-bay suburban service of the Southern Pacific came under federal control.

Director General McAdoo initiated new passenger and freight rates on all federally controlled railroads, the passenger rates effective on June 10. This new rate increased commutation fares 10 per cent on the Southern Pacific lines.

The Railroad Commission, considering this action of the federal authorities, that trans-bay rates have been on a parity continuously since the inauguration of the service of the two systems, and that the entire suburban transportation structure rests on this basis, decided that this parity should be continued pending a complete study of the situation. The commission has before it all of the data necessary for



definite conclusions, but it has not yet been possible to come to a final decision. It states its belief that a 10 per cent raise is entirely warranted.

The rate increases (commutation and one-way fares) for trans-bay service are to apply only while the San Francisco-Oakland Terminal Railway's rate application (No. 2985) is under consideration by the Railroad Commission and until the effective date of the final decision as to the proper rates to be granted upon such application. The trans-bay rates now are: Monthly trans-bay commutation rates, \$3.30; increased from \$3. One-way trans-bay rates, 11 cents; increased from 10 cents.

### Poughkeepsie Fare Increase Allowed

The Public Service Commission for the Second District of New York has granted the petition of the Poughkeepsie City & Wappingers Falls Electric Railway for a 6-cent fare upon the understanding that no dividends are to be paid upon the capital stock until the railroad and equipment of the company are brought to a state of efficiency. Chairman Hill's memorandum specifically details improvements which should be made by the company.

The commission held that the company was not giving proper service and that this fact would warrant it in denying an increased fare on the principle that service should precede payment and unless the increased revenues will be used to better the service, the commission says it would be extremely reluctant to grant an increase.

There were no municipal fare restrictions in franchises given the company. An abutting property owner, in a statutory written consent, required a 5-cent fare limit between Vassar College and the New York Central Railroad station and this limitation was invoked at the hearing. The commission holds that fares cannot be fixed by private contract as regulation of rates is a governmental function.

No questions were raised on the trial as to the accuracy of the company's proof of its financial condition and the commission says there seems to be no escape from the conclusion that the company has made its case for an increase of rates.

The extent to which so-called intangible assets of a public service corporation, as a component part of the capitalization upon which a return should be computed, is another matter that is discussed.

### Company Upheld in Forfeiture Case

Judge Chatfield in the United States District Court for the Eastern District has granted a permanent injunction restraining the city of New York from forfeiting the contract of the Manhattan & Queens Traction Corporation for failing to complete the extension from South Jamaica to the city line.

## Six-Cent Fare for Buffalo

### City Council Votes to Recommend This Fare to Public Service Commission as War Measure

Recognizing the necessity for allowing the International Railway, Buffalo, N. Y., to charge a higher rate of fare than 5 cents so as to prevent a walk-out of the company's employees, who demanded a substantial wage increase, and also to keep the company from threatened receivership, the City Council on June 14 voted to recommend to the Public Service Commission that the railway be allowed to charge a 6-cent fare within the city of Buffalo.

#### COMPANY WILL APPEAL TO COMMISSION

An immediate application will be made by the company to the commission for permission to charge a 6-cent fare in the city of Buffalo. As the result of the action taken by the City Council, there will be no objection on the part of the municipal authorities. It is expected that the 6-cent charge will be approved by the commission so it can be put into effect by July 15.

The approval by the City Council of the company's application for a 6-cent fare prevented a strike of the company's motormen and conductors called for June 15. As soon as the Council agreed to recommend the increased fare to the commission, officers of the company conferred with representatives of the platform men. As a result a new wage scale was agreed upon to become effective as soon as the 6-cent fare is approved by the commission. The new scale follows: First-year men, 35 cents an hour, an increase of 8 cents an hour over the old scale; second-year men, 37 cents an hour, an increase of 9 cents; third-year men, 39 cents, an increase of 10 cents; fourth-year men, 41 cents, an increase of 10 cents, and fifth-year men, 41 cents, an increase of 7 cents.

#### FINANCIAL RETRENCHMENT TO FOLLOW

Under the provisions of the agreement between the City Council and the International Railway the company agrees to suspend all dividends other than those necessary to provide funds to pay the interest on the bonds of the International Traction Company. This means that dividends will continue to be paid on common stock of the International Railway, but that no dividends will be paid on the common stock of the International Traction Company.

Petitions are being circulated in the city for a referendum vote on the action taken by the City Council. The Corporation Counsel of the city says that a referendum can properly be held, but Henry W. Killeen, of counsel for the railway, says that a referendum is illegal because the action of the City Council does not give the company a higher fare, but merely recommends that the Public Service Commission give the company permission to charge a higher rate of fare. This procedure is necessary because of the company's

franchise, known as the Milburn agreement, which fixes 5 cents as a maximum fare which can be charged within the city limits.

The extra money collected by the company by reason of the 6-cent fare must be placed in a separate fund which shall be devoted exclusively to the payment of the increased wages of the company's employees; to provide additional maintenance and renewals requested or directed by the Public Service Commission, and to provide other betterment of service which may be required by the City Council.

Each month the company is to make a written report to the Council of its receipts and disbursements in the city for the calendar month in form as may be required by the Council. All the books, accounts, reports, agreements and documents of the company are to be open and accessible to the Council at all times. All contracts, franchises and grants made by the city since 1890 are to remain in force notwithstanding this agreement.

#### COMPANY HELD BY \$300,000 BOND

The agreement will continue for the duration of the war and for six months thereafter. The company has agreed to give the city permission at that time to take steps in an action which may, if successful, abrogate the company's 999-year franchise. The company will give a bond for \$300,000.

The action of the City Council followed an investigation into the company's financial condition. The inquiry covered a period of almost six weeks. The report of the investigators showed that the company was in a very poor financial condition and was unable to pay its employees a higher wage without an increase in the rate of fare.

### Advance Asked in Class Rates

Petitions are being filed by the interurban railways of Indiana with the Public Service Commission, asking for an increase of 25 per cent on all class and commodity rates. The petitions of the Public Utilities Company, Evansville; Marion & Bluffton Traction Company, the Evansville Railway and the Ohio Electric Railway were filed on June 17, and the petitions of the other interurban railways of the State were to be filed by June 19.

In nearly all of the petitions for an increase in freight rates it is shown that the electric railways are practically doing an express business at steam road rates, and unless they receive the same rate of increase that was granted to the steam road carriers, which will be effective on June 25, the electric railways will be swamped with freight business which they would not have the facilities to handle. A decision is asked by June 25.

## Compromise Fare Increase Approved

### Massachusetts Commission Signifies Its Willingness to Approve Modified Fare System, with Reduced Rates at Off-Peak Hours

In a forty-eight page finding dated June 11 the Public Service Commission of Massachusetts announced its willingness to approve a compromise fare increase schedule on the Bay State Street Railway, following extended hearings during which representatives of the company and the principal municipalities served agreed upon many of the rates under consideration and as modified in conference. A new schedule will be filed by the company embodying the various changes.

The unit of cash fare is at present 6 cents. In general, the city districts have an inner zone in which free transfers are given and an outer zone in which the unit fare carries only to and from the city center or intermediate points, without transfer privileges. The maximum haul per single fare varies considerably. The interurban lines are divided into zones of varying lengths which frequently overlap to avoid charging a double fare for short local rides. North of Boston the longest zone on such lines is 7.93 miles and the shortest, 1.37 miles, the corresponding maximum and minimum south of Boston being 7.02 miles and 1.37 miles. Many reduced-rate tickets are sold, mainly to accommodate regular travel of comparatively large volume.

The schedules considered apply somewhat different treatment to the urban and suburban lines, as distinguished from the interurban. In nearly all of the cities a new inner zone of greatly restricted area is created, the radius being between 1.5 and 2 miles. Outside, but usually within the free transfer territory a second zone averaging about 1 mile in width is created. Under the schedule (No. 77) as filed, the fare within the inner area is 6 cents, with free transfer privileges at the center, no reduced rate tickets being sold. The cash fare between any point in the outer zone and any point in the inner zone is 8 cents, but six tickets are sold for 45 cents.

The compromise schedule restores the 5-cent rate, by the use of tickets, for rides within the inner area which do not extend beyond the center, and the 7.5-cent ticket to and from points in the outer zone, with transfer privileges, is superseded by a 7 1/7-cent ticket without transfer privileges. The agreement between the company and the communities, which was outlined previously in the *ELECTRIC RAILWAY JOURNAL*, also describes the practice, new to Massachusetts, of charging less than the regular rate in the off-peak hours, when traffic is slack. These are:

Six tickets for 25 cents, good only on local rides to and from the center of the first zone, without transfers or through rides.

Four tickets for 25 cents, good in the same manner to the center of the first zone from the second zone.

In general, these off-peak tickets will be good from 9 a. m. to 4.30 p. m. (to 6.30 p. m. Saturdays), but not good at other times or on Sundays and holidays.

The Chelsea zone has been elongated to reach to Scollay Square terminus in Boston, and on the line between Boston and Lynn, through Chelsea, the schedule (No. 77) provides for tickets sold at the rate of eight for \$1, where the cash fare would otherwise be 18 cents, in order to meet steam railroad competition.

Another schedule before the commission, No. 75, covers the interurban lines outside the city zones and in general follows the "copper zone" plan with rates varying according to traffic density. Out of 403 miles of main track outside the outer city zone, the rate is 2 cents on 249 miles, 2.5 cents on 37 miles and 3 cents on 117 miles.

The third schedule before the board, No. 62, eliminates all reduced-rate tickets which the company deems unnecessary and attempts to place the remainder on a uniform basis. Forty-nine such tickets out of seventy-three are retained, their use being confined to the rush hours and the rate is made 70 per cent of the regular cash fare.

The company estimated that the three schedules would add \$2,021,000 annually to its revenue, an increase of 19.8 per cent upon the 1917 gross income within Massachusetts; and that the compromise plan will reduce this increase to \$1,671,000.

#### THREE INCREASES SINCE 1916

Since September, 1916, the company has been permitted to raise its fares in Massachusetts on three occasions, the average increase in rate being about 20 per cent. While provision was made in the city districts for the sale of twenty tickets for \$1, in practice less than 30 per cent of the riders in these districts used these tickets. The total gain expected from the three increases was about \$1,120,000. The gain in 1917-1918 under the increased rates was at the rate of \$863,359 for a year, which was hardly more than might have been expected from two years' increase in traffic without any change in fares. Traffic fell off last winter on most Massachusetts lines owing to severe weather and service reduction. The Bay State company estimates that about 24,000 men in its territory have gone into the army and that the loss in revenue resulting exceeds \$300,000 a year. War activity has led to influx of population at certain points, and the company's final conclusion is that all three increases added about 8 per cent, or \$792,000 a year, to the revenue.

Last May wages were increased \$65,000 by 1916 agreement. Early this year the company agreed to pay its employees in addition a special war bonus of about \$300,000 a year. Ef-

fective June 10, the men are to receive an additional \$750,000 a year. Operating expenses have risen from 18.72 cents per car-mile in 1914 to 29 cents in 1918. The estimated total charges for 1918 are \$12,710,255 and the estimated gross income, \$10,507,488.

After discussing what the company has achieved in the way of operating economies and possible sources of increased revenue, the commission concludes that the main reliance must be placed upon an increase in passenger fares. The city lines were responsible for 15.74 per cent of the 1917 income deficiency and the country lines for 84.26 per cent. Under the compromise plan the city lines will produce 63.77 per cent of the desired increase and the country lines 36.23 per cent. Under Schedule 77 the commission is of the opinion that the fares fixed by the company are high in relation to the areas established in the inner zones. The minimum fare in the larger cities for a 3-mile ride from the center would be 7 1/7 cents in the rush hours and 6 1/4 cents in the off-peak hours, even under the compromise plan, and in some instances it would be 10 cents, where the limit of the outer zone is less than 3 miles from the center. The only advantages which the larger cities have over Woburn, Gloucester and the Hyde Park district of Boston lie in the 5-cent tickets in rush hours and the 4 1/6-cent tickets in off-peak hours, available for short-haul rides.

#### RELATION OF PUBLIC CONTROL ACT TO FARE SITUATION

Under the Bay State public control act, recently passed, the property (if the act is accepted by the company, as it probably will be) will be taken over by a new company capitalized on such a basis that the annual interest and dividend charges (computing common stock dividends at 6 per cent) will not exceed 6 per cent upon the amount found by the commission in 1916 to be the rate base, plus subsequent additions and improvements. New capital is to be furnished, partly by the security holders and partly through the issue of serial bonds in effect guaranteed by the State, any resulting burden being distributed proportionately upon the cities and towns served. To this extent the credit of the State will be placed behind the company.

The decision reviews other features of the Bay State act as previously published in the *ELECTRIC RAILWAY JOURNAL*, and points out that the legislation passed meets the requirements of the company to an extent probably not anticipated at the time of the hearings. It re-establishes the company's credit, relieves the company from burdens in relation to amortization charges, depreciation allowances, and contributions toward highway and bridge work, etc., so as to prevent fares from reaching an unduly high level during the period of the war. The trustees to be appointed by the Governor will have full control of rates, but as this control will probably not be assumed before au-

turn, the commission feels that the decision in the pending case could not be postponed with propriety.

With respect to the proposed rates on rural interurban lines covered by Schedule 75, little question can be raised. The decision holds that the copper zone system is logical in conception and deserves a fair trial. In deciding whether the rate on a particular line should be 2, 2.5 or 3 cents per mile, certain rather arbitrary distinctions have been made, but the higher rates have not been applied to lines where the traffic would justify a lower rate.

#### CITY ZONES COVER THICKLY-POPULATED DISTRICTS

Schedule 77, relating to the city districts, raises more difficult questions. If it were not for the increase of \$750,000 a year in wages the commission would be disposed to require radical changes. Taking into consideration the financial benefits to be derived from the new legislation, the burden imposed upon the city districts under this schedule would, in the opinion of the commission, be unjust as the situation stood prior to the granting of the last wage bonus. This wage increase is nearly half the sum the company expects to derive from the new compromise schedule. The commission concludes that no change need be made at this time. The zone system of fares proposed within the city districts seems to be better adapted to the urban territory in which the company operates than to the similar territory served by certain other street railways. In the main, the cities are compact, the thickly-settled portion falling largely within the inner zone limits. There seems to be a general feeling that the preservation of a 5-cent rate for short-haul traffic within the central areas and the experimental introduction of a still lower rate during the off-peak hours compensate in substantial measure for the disadvantages of the zone plan, and will offer an opportunity to test the effect of low charges in inducing extra riding.

Regarded from this point of view, the new schedule is an attempt to confine the inner zone within which the minimum fare is charged to the limits of the thickly-settled portion of a city, rather than an attempt to reduce it to an arbitrary circular area with a radius of about 1.5 miles; and for this reason the precedent established is in the commission's opinion less undesirable and dangerous to the public interest. As the short-haul offsets the long-haul riding in city traffic, the central single-fare area may often, without detriment to earnings, be made larger than would appear possible.

In regard to Schedule 62, dealing with the so-called "workingmen's tickets," the chief question is whether these should be provided more generally. The commission does not feel called upon to suggest additional applications under present conditions in a sweeping manner, but reserves the right upon petition to take up particu-

lar cases, and its attitude is the same with regard to zone limits. The board feels that the new 7 1/7-cent tickets, taking the place of the 7 1/2-cent tickets, should be used in connection with through rides to or from interurban territory beyond the outer zone. Otherwise through riders would have to pay the 8-cent cash rate and would thus be worse off under the compromise plan than under the original schedule. With minor modifications, the commission is prepared to approve a new schedule tentatively prepared as Bay State Tariff No. 78, combining and superseding those before the board, which are now canceled by the commission.

#### What Virginia Cases Portend

The favorable action by the Corporation Commission of Virginia in connection with the recent fare application of the Charlottesville & Albemarle Railway and the Lynchburg Traction & Light Company, both of which have been referred to recently in the *ELECTRIC RAILWAY JOURNAL*, is regarded to have been influenced by the conference which the committee representing the public utilities of Virginia held with the Corporation Commission the latter part of April. At the end of that hearing the chairman of the commission indicated that a statement would possibly be issued setting out in a general way the attitude of the commission, but up to June 6 this had not been done. The attitude of the commission, however, is apparently to consider the applications in the nature of a war emergency, for so far as the records are available they show that all of the grants of increases have been limited to Nov. 30, 1919.

## Transportation News Notes

**Illinois Road Would Raise Fares.**—It has been announced that the Chicago & Joliet Electric Railway, Joliet, Ill., will petition the Public Service Commission of Illinois for an increase from 5 cents to 7 cents on all city lines and an increase of one-half cent a mile on the interurban lines.

**A Two-Page Publicity Spread.**—In connection with its application to the Illinois Public Utilities Commission for a 7-cent fare, as noted recently, the Alton, Granite & St. Louis Traction Company published in the Alton daily papers a two-page advertisement setting out in full why a higher fare is needed. This will be followed by smaller advertisements dealing with particular phases of the situation.

**Electrics Seek Increase of Interstate Rates.**—Increases in both passenger and freight rates to conform with the 25 per cent advance for roads under

federal control was asked of the Interstate Commerce Commission on June 15 by the Ohio Electric Railway. The Terre Haute, Indianapolis & Eastern Traction Company has also filed an application for increase in fares between points on its line in Indiana and Illinois to the basis of 2 1/2 cents per mile.

**Folder on Fares and Service.**—The New York (N. Y.) Railways has issued over the signature of T. P. Shonts, president, an eight-page folder 6 in. wide by 9 in. high entitled "Street Car Fares and Street Car Service." It contains a list of 6-cent fare cities, zone fare cities, cities in which fare appeals have been made and extracts from statements made about the public utilities by Comptroller of the Currency Williams, Secretary McAdoo and President Wilson.

**Transportation of Soldiers a Question.**—As a result of a campaign by the Hearst papers of Chicago, the City Council of that city has referred to the committee on local transportation the question of requesting the surface and elevated lines to carry men in the uniform of the United States Army, Navy and Marine corps without compensation. The railways have not as yet made any statement as to what action they will take if such a request is made. It is expected that the matter will come up for decision at an early date.

**Skip Stops at El Paso.**—The El Paso (Tex.) Electric Company announced that the skip stop would be introduced on June 5 on the Fort Bliss, Highland Park and Government Hill lines which have no direct jitney competition. The stops are located every other block, averaging six or seven to the mile. Stop signs are hung from the span wires. Announcement of the change was made in the newspapers. It was planned to allow one day's grace in accustoming riders to the change by advertising to them in the cars on June 5 substantially as follows: "We stopped to pick you up to-day, but hereafter the skip-stop rule will be rigidly enforced. Better take the right corner!"

**Workingmen's Tickets to Go.**—The International Railway, Buffalo, N. Y., has filed with the Public Service Commission for the Second District of New York, a new tariff schedule to go into effect on July 1. It is proposed to discontinue the sale of tickets in strips of ten for 25 cents, good for use between points within the city of Niagara Falls between the hours of 6 and 7 a.m. or between 6 and 7 p.m. The tickets will not be accepted for passage on and after July 1, but unused portions will be redeemed on a basis of 2 1/2 cents per coupon. The proposed change effects an increase.

**Five-Cent Fares the Rule.**—E. I. Lewis, chairman of the Public Service Commission of Indiana, has announced the granting of a straight 5-cent fare to the Louisville & Southern Indiana Traction Company, which operates in New Albany and Jeffersonville. This practically completes the institution of straight 5-cent fares in the larger cities

of the State by the commission as a war-time relief measure. In Indianapolis this relief could not be granted as the company did not surrender its franchise. The case of the railway there must be passed on by the Supreme Court before the commission can act.

**Modification of Zone Charge.**—The Peekskill Lighting & Railroad Company, Peekskill, N. Y., according to a schedule filed with the Public Service Commission for the Second District, has reduced its fare from 7 to 5 cents between any two stops within zone 2, in line division, northeast of Locust Avenue to and including Lake Mohegan, and between any two points within zone 3, Verplanks division west of Montrose to and including Verplanks. Monthly commutation tickets good for fifty-four rides between Verplanks and the corner of the Albany Post Road and Welcher Avenue will be sold for \$3.78. This is a new fare.

**Fare Protest Served on Company.**—The Public Service Commission for the Second District of New York has served upon the United Traction Company, Albany, the complaint of Mayor McIntyre of Rensselaer against the company's proposal to increase the Rensselaer-Albany fare to 6 cents with no transfer. It is expected the complaint will be heard upon the hearing of the suspended schedule of the company increasing interurban rates affecting Albany, Troy, Cohoes, Green Island and Waterford. The date has not been fixed. The complaint claims the rate of fare between Albany and Rensselaer is fixed at 5 cents by the laws of 1905.

**Wants to Apply Steam Rates.**—The Joplin & Pittsburg Railway, Pittsburg, Kan., which recently was authorized by the Public Service Commission of Kansas to charge 2 cents a mile in that State outside of towns, has now petitioned the commission for permission to charge 3 cents a mile. Besides asking an increase to 3 cents a mile for passenger fares, the company wants a flat raise of 25 per cent in freight rates to conform to the advances allowed the steam railroads. A hearing will be held before the commission during the week commencing July 2. The matter of fares over the line was reviewed briefly in the *ELECTRIC RAILWAY JOURNAL* for May 11, page 935.

**Portland Jitneys Prepare for Comeback.**—It is expected that jitneys will be operating shortly in Portland, Ore., under the provisions of the new bonding act approved by the voters at the recent city election, noted in the *ELECTRIC RAILWAY JOURNAL* for June 1, page 1065. E. W. Rossman, president, secretary and treasurer of the Jitney Bus Union, states that sufficient numbers of men have been enrolled in the United Motor Bus Association to insure the operation of jitneys under a blanket bond of \$10,000, and securities in the form of Liberty bonds will be deposited with the city treasurer in the near future. One hundred men will deposit \$100 each to make up the necessary amount.

**Violation of Traffic Orders Charged.**—The Public Service Commission of Maryland has adopted a resolution directing its general counsel to commence an action against the United Railways & Electric Company, Baltimore, for the purpose of having alleged violations of the order of the commission dated Feb. 18, 1918, and other service orders covering overcrowding, etc., prevented by mandamus or injunction. About two years ago the commission adopted rules regarding the crowding of the cars. Since that time there have been many complaints alleging violations of the rules. Some months ago the company petitioned the commission to make modifications. The commission did so. It has since been charged that the company has not lived up to the letter of the modified orders.

**Grand Jury Reports on Women Employees.**—A special Grand Jury which for several weeks had been investigating complaints as to the conditions surrounding the employment of women as conductors and guards on the surface and subway lines of the Brooklyn (N. Y.) Rapid Transit Company on June 17 handed in a presentment to County Judge McDermott charging the company with "inexcusable neglect" in failing to cause a careful investigation to be made of the character of each woman applying for work. The conditions, the Grand Jury finds, are such as to make the conduct of a few reflect upon the many decent and self-respecting women employed by the company and should be remedied forthwith. The company regards the finding of the Grand Jury as "primarily a tribute to the high standing and character of the great majority of the patriotic and courageous women in our service."

**Professor Richey on Rate Inquiry Board.**—Prof. Albert S. Richey of Worcester Polytechnic Institute has been appointed a member of a special commission to decide whether the New Brunswick Power Company, St. John, is entitled to increase its railway fares and rates for electric light, power and gas. His colleague on the commission will be Le Guy W. Currier, Boston, Mass. A bill introduced in the New Brunswick Legislature to authorize the New Brunswick Power Company to advance its electric railway fares and its rates for gas and electric current was defeated owing to opposition by St. John citizens and newspapers, but a bill introduced at the city's instance was passed, providing for an investigation of all the company's property, franchise rates, etc., with the proviso that the commission to be appointed under it may grant temporary relief, if it is satisfied that the same is necessary.

**Mr. Cobb Retorts.**—Numerous criticisms in the daily papers of the suggestion by John T. Cobb, the Boston banker, that the New York traction companies abandon night service to save expenses have led him to reply that his suggestion was made only because economies had to be effected and he thought that it would be less incon-

venient to a smaller number of people for the companies to shut off night service than to curtail day service, but any more satisfactory plan would be welcomed by the managements and undoubtedly also by the Public Service Commission. The metropolitan press seems now to have a better understanding of the subject. The *New York Sun* in a recent editorial said: "Radical cutting down of the city's transportation lines is impossible, if we are to remain efficient. It cannot be done. If the transit companies absolutely need higher fares, we will pay them."

**East St. Louis Company Would Increase Rates.**—The East St. Louis (Ill.) Railway announced by advertisement in the daily newspaper on June 18 that it was filing with the Public Utilities Commission and the Interstate Commerce Commission tariffs for increased fare from 5 cents to five tickets for 30 cents (7 cent cash fare) on all East St. Louis city lines, and for increased fare from East St. Louis to St. Louis from 10 cents to five tickets for 55 cents (12 cents cash fare). The East St. Louis Railway owns and operates the cars which operate over the East St. Louis city tracks, but the East St. Louis & Suburban Railway and the Alton, Granite & St. Louis Traction Company also carry city passengers on interurban cars. All three companies will be affected in so far as the rate of fare affects passengers whose destination is anywhere within the city limits, but the East St. Louis Railway is the company which will be principally affected by the increase. The company incorporated as part of its announcement the estimated results of the increase as affecting the East St. Louis Railway. It also presented data on the need of the increase.

**Schenectady Fare Appeal.**—Horace E. Andrews, president, and J. P. Barnes, general manager, representing the Schenectady (N. Y.) Railway conferred recently with the Public Service Commission for the Second District. They asked if the commission was willing to take up the Schenectady fare question and Chairman Hill informed them that the commission would take the same position it has taken on fare questions in Buffalo and White Plains, namely that unless jurisdiction is legally conferred upon the commission so that it could make a binding order, the commission cannot see its way to act. A move to secure the necessary action of the city has since been made in connection with the settlement of the strike referred to on page 1201 in this issue of the *ELECTRIC RAILWAY JOURNAL*. The hearing of the petition of the company for annulment of existing orders of the commission requiring the sale of round-trip tickets between Schenectady and Albany and Troy and also between Schenectady and Ballston Lake was adjourned by the commission on June 13. The railway is to file new tariffs at once covering proposed rate changes and then the commission will hear the evidence on the company's petitions to annul and also the necessity for rates under the new tariff.

## Personal Mention

**H. H. Lyons**, superintendent of the Ordway division of the Arkansas Valley Railway, Light & Power Company, Pueblo, Cal., has enlisted in government service, and will take special training at Fort Collins.

**Henry Hoffer** has been appointed chief instructor of the Washington Railway & Electric Company, Washington, D. C. Mr. Hoffer succeeds E. C. Elliott, who becomes assistant superintendent of transportation of the company.

**J. J. Stanley** has been elected president of the Syracuse & Suburban Railroad, Syracuse, N. Y., succeeding W. J. Harvie, who remains as general manager and a member of the board. Mr. Stanley is president of the Cleveland (Ohio) Railway.

**Arthur W. Warner**, head of the real estate department of the Interborough Rapid Transit Company, New York, N. Y., has obtained an indefinite leave of absence and will enter the government service to assist in the buying, commandeering, and valuation of property for the army and navy.

**E. C. Elliott**, chief instructor of the Washington Railway & Electric Company, Washington, D. C., has been appointed assistant superintendent of transportation of the company. Mr. Elliott graduated from the platform of the old horse car and has been in the service twenty-five years. He passed through the stages of conductor, starter, clerk, inspector and instructor. In the latter capacity he succeeded W. F. Dement in charge of the company's school.

**William F. Dement** has been appointed superintendent of transportation of the Washington Railway & Electric Company, Washington, D. C., in which capacity he has been acting for some time. Mr. Dement began his railway career with the Columbia Railway in 1890, as a driver of a one-horse car and was advanced to clerk and then supervisor. In 1900, when the road became a part of the system of the Washington Railway & Electric Company, he was promoted to depot clerk and later to inspector. He organized and conducted the school for instruction of motormen and conductors.

**F. H. Williams** of the Manitoba *Free Press* has succeeded H. C. Howard as publicity agent for the Winnipeg Electric Railway, Mr. Howard having joined the business staff of the Vancouver *Sun*. Mr. Williams is well known in Western Canada, having been connected with the Winnipeg *Telegram*, the Edmonton *Capital* and the Edmonton *Bulletin* during the past six years. He has only recently returned from France where he served ten months in the trenches with the Forty-second Battalion of Montreal. Mr. Williams

had his left leg shattered by an explosive bullet in the battle of Vimy Ridge, on April 9, 1917, and spent nine months in a hospital before being sent back to Canada.

**Leslie Sutherland**, vice-president and general manager of the Yonkers Railroad, has been elected second vice-president of the Third Avenue Railway, New York, N. Y., which controls the Yonkers Railroad. Mr. Sutherland began his railroad career in 1908, when he was appointed receiver of the Yonkers Railroad. After the receivership was lifted in 1912 Mr. Sutherland was elected vice-president and general manager of the company, which position he continues to hold in addition to his new office with the Third Avenue Railway. Despite the tightened conditions of the money market when Mr. Sutherland was made receiver of the



LESLIE SUTHERLAND

Yonkers Railroad he succeeded in borrowing \$600,000 on receiver's certificates, practically rebuilt the road, restored it to public prestige and doubled the receipts in four years. Mr. Sutherland has had a wonderful career of achievement. He left school when twelve years of age. He held several minor positions and then began the study of law. On account of ill health he was obliged to give up office work and became an apprentice bricklayer. While serving in this trade he entered Cooper Union, New York, taking the course in the school of science and art. It seems now rather singular that one of the buildings on which Mr. Sutherland worked as foreman of construction was the cable house of the Third Avenue Railway on the Bowery, of which property he now becomes vice-president. In addition to his business interests, Mr. Sutherland has been prominent in public life, being twice elected Alderman, serving twice as president of the Board of Aldermen and later as Mayor of Yonkers. He was

twice elected county clerk of Westchester County. Mr. Sutherland has also represented the Republican party in ward, city, county, State and national conventions. Throughout all Yonkers and Westchester County Mr. Sutherland's name is a household word. He is Yonkers' favorite son.

**K. B. Conger**, assistant secretary and assistant treasurer and real estate manager of the Hudson & Manhattan Railroad, New York, N. Y., has been appointed by the Director General of Railways general manager of the company in charge of the operating affairs of the railway.

**J. C. Moore** has resigned as auditor of the Chicago, North Shore & Milwaukee Railroad, Chicago, Ill., to accept a similar position with the Chicago, South Bend & Northern Indiana Railway, South Bend, Ind. Previous to his position with the Chicago, North Shore & Milwaukee Railroad, Mr. Moore had been auditor of the Oklahoma Railway, Oklahoma City, Okla., and assistant auditor for the Union Traction Company of Indiana, Anderson, Ind.

**C. A. Hall** has been appointed manager of the electric light and power department of the Eastern Pennsylvania Railways, Pottsville, Pa. Mr. Hall was employed in 1904 by the Consolidated Light Company, Huntington, W. Va. In 1907 he went with the Ohio Valley Electric Railway, Huntington, W. Va. He became superintendent of the Canonsburg Electric Light, Heat & Power Company, Canonsburg, Pa., in 1909, and following the purchase of this utility in 1911 by the West Penn Power Company, Pittsburgh, Pa., he was appointed local manager of that corporation in charge of the Canonsburg territory. Under Mr. Hall's management this property was entirely rebuilt and many improvements made to the service.

**W. B. Atwood**, formerly general superintendent of the Wheeling (W. Va.) Traction Company, has become safety engineer with the Mahoning & Shenango Railway & Light Company, Youngstown, Ohio. The accident expenditure of the company at Youngstown is considered too high by the officers, and to Mr. Atwood will be intrusted the work of studying accident prevention on the property and then adopting such corrective measures as may suggest themselves to him as applicable. Before going to Wheeling in 1916, Mr. Atwood was vice-president and general manager of the Geneva, Seneca Falls & Auburn Railway, Seneca Falls, N. Y. He was graduated from Cornell University, and has had considerable steam railroad experience in addition to his electric railway work.

**C. C. Coulthard** has been appointed assistant superintendent of the lines of the Mahoning & Shenango Railway & Light Company in New Castle, Pa. Mr. Coulthard became connected with the New Castle Traction Company, the predecessor of the Mahoning & Shenango Railway & Light Company, on

May 3, 1900, but began his career in 1892 on an electric line which was operated by the Pennsylvania Railroad from Ellwood City to Ellwood Junction. He was a conductor for two years on this line. Later he went to the Shelby Tube Works. When Mr. Coulthard entered railway work in New Castle the company was under the general management of Gaylord Thompson. He continued on through the administrations of A. A. Anderson, M. E. McCaskey, W. C. Smith and G. J. A. Paul and into the present management.

W. J. Grambs, formerly superintendent of light and power of the Puget Sound Traction, Light & Power Company, Seattle, Wash., has been appointed supervisor of the Sea Training Bureau of the United States Shipping Board for the Pacific Northwest. He will have charge of the receiving station in West Seattle and the training ships *Iroquois* and *Chippewa* recently taken over by the government. These duties will be performed in addition to his work as section chief of the recruiting service of the Shipping Board for Washington and Oregon noted some time ago. Mr. Grambs entered government service on Sept. 1, 1917, and has had charge of the navigation schools in Seattle, Tacoma, Portland and Bellingham and the marine engineering school at the University of Washington. John Harsberger holds the position formerly held by Mr. Grambs.

## Obituary

S. M. James, assistant superintendent of transportation for the Kansas City (Mo.) Railways, died suddenly at his home on May 19. Mr. James had been with the company at Kansas City for the last eighteen years as a member of the transportation department.

Capt. Frank W. Hulett, engineering corps, American Expeditionary Force, was recently reported killed in action in France. Captain Hulett was thirty-five years of age. He was graduated from Yale University in 1908. He was in the service of the government for two years in the Philippines, and for five years was electrical engineer of the Lewiston, Augusta & Waterville Street Railway.

Charles F. Freeman, aged seventy-two years, organizer and former president of the Dallas (Tex.) Rapid Transit Company, which was later sold to Stone & Webster, died at his home in Dallas on May 31. Mr. Freeman as president and manager of the Rapid Transit Company, now known as the South Bend Line and consolidated with other companies under the Strickland-Hobson franchise, is said to have brought the first electric street car to Texas. Mr. Freeman continued as president of the Rapid Transit Company until 1902, when the property was sold to Stone & Webster.

# Construction News

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

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

## Franchises

Los Angeles, Cal.—The Board of Public Utilities of Los Angeles has approved the application of the Los Angeles Railway for a franchise over Country Club drive to the new high school. The company is prepared to extend the Eleventh Street line at once.

Hamden, Conn.—The Connecticut Company has received an extension of time on its franchise to construct a line in Hamden from the Dixwell Avenue terminus to Centerville, passing through Highwood and connecting with the Whitney Avenue line.

New York, N. Y.—The New York & North Shore Traction Company has asked the Board of Estimate for the right to abandon its franchise for the two lines extending from Flushing to Whitestone and Little Neck. A public hearing on the application was scheduled to be held in Flushing on June 21.

Philadelphia, Pa.—The finance committee of the City Councils of Philadelphia has refused to approve an ordinance providing for a new contract between the city and the Frankford, Tacony & Holmesburg Street Railway, relative to bearing the costs of keeping Frankford Avenue in repair. The city, however, will spend \$60,000 for that purpose as an emergency war measure.

Seattle, Wash.—The application of the Puget Sound Traction, Light & Power Company for relief from its franchise obligations during the period of the war has been referred by the Mayor of Seattle to a committee of two Councilmen and Thomas F. Murphine, superintendent of utilities.

## Track and Roadway

Pacific Electric Railway, Los Angeles, Cal.—An extension to Yucaipa will be built by the Pacific Electric Railway as soon as possible.

Chatham County Traction Company, Savannah, Ga.—The Railroad Commission of Georgia has granted the Chatham County Traction Company authority to issue \$150,000 capital stock. The company is building a line from Savannah to Port Wentworth. (April 27, '18.)

United Railways & Electric Company, Baltimore, Md.—Several lines of the

United Railways & Electric Company will be rerouted, necessitating the building of several short connections.

Detroit (Mich.) United Railway.—In conjunction with the new car line now under construction, connecting Ferndale and Dearborn Avenues, the Detroit United Railway will build an additional line to the northerly end of the Ford shipbuilding plant on the River Rouge, north of Fort Street. The new line, which will be double-tracked, will connect with the new Ferndale line at Dix Avenue and extend north 1 mile on the east side of the Péré Marquette Railroad. The company will spend approximately \$500,000 in constructing these two new lines, and most of the track will be on private right-of-way.

Trenton & Mercer County Traction Corporation, Trenton, N. J.—Officials of the Trenton & Mercer County Traction Corporation and members of the Board of Public Utility Commissioners of New Jersey recently held a conference relative to the construction by the company of an extension to connect the West State Street and Trenton Junction lines and the Pennsylvania Railroad Company's tunnel and subway under the Delaware and Raritan canal near the State Hospital. Rankin Johnson, president, said his company was ready to proceed with the work of building the new road. The traction company will have to cut its tracks to permit the Pennsylvania Railroad to complete its tunnel and subway improvements. The tracks will have to be relaid at a new grade. The company has asked the commission for permission to remove the tracks from a private right-of-way on a portion of the Trenton Junction line. The tracks on the Trenton Junction line near the State Hospital woods were recently damaged by a washout.

Brooklyn (N. Y.) Rapid Transit Company.—The Public Service Commission for the First District of New York has requested the Brooklyn Heights Railroad, a subsidiary of the Brooklyn Rapid Transit Company, to change its track layout in Long Island City so as to accommodate larger cars of the Graham Avenue line, which was recently extended over the Vernon Avenue bridge to Long Island City.

New York (N. Y.) Railways.—A public hearing will be held on July 14 in the Board of Estimate chamber on the matter of changing the tracks of the New York Railways on Central Park West from the east side to the center of the street.

Poughkeepsie City & Wappingers Falls Railway, Poughkeepsie, N. Y.—The memorandum of Commissioner Hill of the Public Service Commission for the Second District of New York in

the decision permitting the Poughkeepsie City & Wappingers Falls Electric Railway to charge a 6-cent fare specifically details improvements which are to be made by the company. These include the replacement of 5384 ft. of single track in Main Street with double track, reconstructing 12,461 ft. of track on the South Side line, repairing track, securing two additional cars for the Wappingers Falls division, to repair and properly clean cars, replace wires and poles, install automatic block signals, reroute and make other improvements tending toward safety of operation, convenience of passengers and better service.

**Chillicothe & Camp Sherman Electric Railway, Chillicothe, Ohio.**—The Public Utilities Commission of Ohio has approved the steps which are looked to for securing of traction service from Chillicothe to Camp Sherman. The commission approved the joint application of the Chillicothe & Camp Sherman Electric Railway Company and the Chillicothe Electric Company for authority to transfer property to the new company, the Chillicothe & Camp Sherman Electric Railway Company. The price to be paid for the property transferred to the new company is \$270,800, which is to be met by transfer of securities of the new company, \$50,800 of common capital stock, \$120,000 7 per cent preferred stock and \$100,000 6 per cent mortgage bonds. (June 1, '18.)

**Mahoning & Shenango Railway & Light Company, Youngstown, Ohio.**—Operation has been begun by the Mahoning & Shenango Railway & Light Company on its 3-mile extension to East Hill and Buhl Park, Sharon.

**London & Lake Erie Railway & Transportation Company, London, Ont.**—An offer has been made by the London & Lake Erie Railway & Transportation Company whereby the city of St. Thomas may acquire the south end of the line running between St. Thomas and Port Stanley for approximately \$150,000.

**Toronto (Ont.) Suburban Railway.**—This company will install a safety switch at the intersection of Lansdowne Avenue and Davenport Road.

**Southern Pacific Company, Portland, Ore.**—A plan has been formulated in Portland whereby special trains operated by the Southern Pacific Company, with transfer privileges to all city lines of the Portland Railway, Light & Power Company, may be operated for the benefit of shipyard workers in South Portland, and the plan will be submitted to the government and railroad officials. The plans were formulated by Edward M. Cousins, traffic expert, who says they have the approval of representatives of the Shipping Board, and the special committee of the City Council appointed by Mayor Baker to devise means for handling special problems pertaining to public utilities in Portland. A similar plan has been worked out for shipyard workers in the East Side, Peninsular District, St. Johns and Vancouver,

providing for operation of trains by the Oregon-Washington Railroad & Navigation Company with transfer privileges to city lines. Three yards in that vicinity employ 7000 men, who are compelled at this time to walk eight blocks up a steep incline to reach street cars. A plan is also under way to place broad-gage street cars on the Southern Pacific electric lines, running near the three shipbuilding plants.

**Seattle (Wash.) Municipal Railway.**—A contract has been awarded to Geske & Company, Seattle, at \$16,186 for furnishing labor, material, etc., for the elevated line along East Marginal Way and West Spokane Street. The committee appointed by the Board of Public Works, Seattle, has decided upon a 20-ft. vertical clearance, an 18-ft. horizontal span, 9 ft. from the center of the track to the elevated track supports, as the specifications for clearances for the railroad tracks under the city's elevated railway to the industrial district in the southern part of the city. The railroads have agreed to these specifications, and the Board of Public Works has adopted the committee's decision.

**North Coast Power Company, Vancouver, Wash.**—The Public Service Commission of Washington has instructed the North Coast Power Company to install an electric signal service on the line from the Cowlitz, Chehalis and Cascade office on Pacific avenue to Eleventh Street. One block will be placed at the office, another on John Street and the third at Eleventh Street.

## Shops and Buildings

**Lake Shore Electric Railway, Cleveland, Ohio.**—Negotiations have been opened by the Lake Shore Electric Railway with the Sandusky Brick Company for the leasing of part of the old Goozman property on Wayne Street for a package station. It is understood that the company will use the north side of the building for the station. Loading platforms sufficiently long enough to handle several cars will be built and a spur run in from Wayne Street to enable the cars to reach the platform.

**Ohio Electric Railway, Springfield, Ohio.**—Plans have been prepared by the Ohio Electric Railway for the removal of its carhouse, repair shops and storage house from Columbus to Springfield. Ground has been purchased for the new building in West North Street. The contract for the construction of the storage house has been awarded to the Concrete Steel Construction Company. Contracts for other buildings have not been let.

**Oregon Electric Railway, Portland, Ore.**—A report from the Oregon Electric Railway states that it will purchase within the next few days one 13-in. brass finishing lathe, one ¾-in. plate binding roll, one double-end punch and shear and one 42-in. wheel lathe.

## Power Houses and Substations

**Alabama Power Company, Anniston, Ala.**—The 90-mile transmission line of the Alabama Power Company from the power plant in Walker County to the government development work at Muscle shoals has been completed. The company is now building a 30,000-kw. extension to its Warrior reserve steam plants, which is to be completed by Oct. 1.

**New Orleans Railway & Light Company, New Orleans, La.**—The economizer and boiler in the central power plant of the New Orleans Railway & Light Company, at Market and South Peters Streets, recently exploded from unknown causes. It was estimated that the plant was damaged in excess of \$50,000.

**Union Street Railway, New Bedford, Mass.**—Work on the new \$1,000,000 power house of the Union Street Railway at the foot of Middle Street is progressing steadily, most of the steel framework being erected. It is expected that the concrete chimney, which will be 220 ft. high, will be completed within the next couple of weeks.

**Albany (N. Y.) Southern Railway.**—Of an issue of \$2,151,000 of first refunding mortgage thirty-year 6 per cent bonds, recently authorized by the Public Service Commission for the Second District of New York, \$190,683 will be used by the Albany Southern Railway for new construction. The new work proposed includes new crib work on the Albany-Greenbush bridge, additional transmission line, additional power facilities in Rensselaer and gas mains.

**Pacific Power & Light Company, Astoria, Ore.**—The construction of a new power transmission line has been completed by the Pacific Power & Light Company from its local system to a connection with the lines of the Northwestern Electric Company at its conduit plant on the White Salmon River, a distance of about 7½ miles. The line provides for an interchange of power between the Pacific Power & Light Company, the Northwestern Electric Company and the Portland Railway, Light & Power Company. The Pacific Power & Light Company has installed a new feeder panel for motor load control at its Toppenish substation.

**Rutland Railway, Light & Power Company, Rutland, Vt.**—New additions and extensions to its transmission system are being considered by the Rutland Railway, Light & Power Company to provide for increased capacity.

**West Virginia Traction & Electric Company, Morgantown, W. Va.**—Work has been begun by the West Virginia Traction & Electric Company on the erection of a new transmission system from Morgantown to Masontown to supply energy to the plant of the Elkins Coal & Coke Company.

# Manufactures and the Markets

DISCUSSIONS OF MARKET AND TRADE CONDITIONS

FOR THE MANUFACTURER, SALESMAN AND PURCHASING AGENT

ROLLING STOCK PURCHASES • MARKET QUOTATIONS • BUSINESS ANNOUNCEMENTS

## Enormous Increase in Consumption of Wire

Railways Are Buying, But Official Requirements Dominate the Market—Rubber Supply Sharply Curtailed

Unless reports are misleading the demand for copper is growing steadily. The supply is variously stated as sufficient for all purposes and again a shortage is in sight. Perhaps these views are colored by the attitude of the people expressing them toward the market and also possibly by price considerations. At any rate wire and cable manufacturers, referring to their output of electric railway goods, state copper is difficult to obtain. Sellers are not numerous, and it appears as if the fixed governmental price is mentioned as too low. Consequently if an advance can be obtained a disposition to hold on to the metal with the hope of realizing a higher profit from commercial users, at least, is not surprising. Possibly this and other phases of the situation received consideration at a meeting of the producers with the sales managers of copper selling companies in New York on Tuesday. The distribution of supplies was discussed, but not a word on the price situation was disclosed.

Deliveries have also hampered the operations of the wire and cable plants. Even on government orders the delays occasioned by wrong routing and sidetracking of copper pressingly needed to fill orders has hindered the shipment of finished goods materially. Five cars of copper coming to a New York cable manufacturer from a near-by Southern point took more than five weeks to reach its destination. Of the great quantity of wire and cable used for power-house transmission and also for railway lines it is said the consumption has risen enormously since the first of the year, the majority of manufacturers reporting vastly increased sales.

The amount of wire goods sold during the last few weeks was about 75 per cent higher than in January. This ratio is being maintained. According to the statement of a large manufacturer the price of wire may not go up, but it certainly would not be lowered.

The consumption of rubber by rubber-covered, cable and weatherproof wire manufacturers has been curtailed by governmental restriction on its importation to about seven-tenths of what is usually called for. Furthermore, manufacturers' requirements and the use to which the material is to be put must be given in detail and every stage

of the process and the ultimate destination and purpose of the finished article must be furnished. The prices fixed by the government, after placing rubber on the restricted import list which went into effect on May 1, as previously mentioned in the *ELECTRIC RAILWAY WAY JOURNAL*, are on the following scale: 62 cents a pound for standard smoke sheet; 63 cents a pound for standard quality first latex crepe; 68 cents a pound for fine Para, c.i.f. New York.

Producers of rubber-covered wire are displaying some concern over the future outlook for rubber. It is this condition that is beginning to have an effect on prices.

## Largest Output of Bituminous Coal in History

Labor Shortage Is a Disturbing Factor and Is Seriously Restricting Production of Anthracite

Bituminous coal production during the week ending June 8 was the largest in history, according to the report of the United States Geological Survey. The soft coal produced (including lignite and that made into coke) is estimated at 12,465,000 net tons an increase over the week of June 1 of approximately 1,900,000 net tons or 17.8 per cent and the same increase over the week of June 8, 1917. The average daily production is estimated at 2,077,000 net tons, considerably in excess of the 1,791,000 net tons during the week preceding and 1,789,000 net tons during the same week of the preceding year.

With a depleted working force the anthracite industry is creating an output of 275,000 tons daily by intensive methods, but this cannot be maintained if further inroads are made in the ranks of the mine workers. Many collieries are now running with from 25 to 40 per cent short of a full force. The constant dwindling of the anthracite miners is now a serious question. It entails decreased production with probable cost increase to some consumers. The labor question seems to be the main disturbing factor to maximum hard coal production at the present time and it is one that should receive the immediate attention of interested officials. Before the war there were 177,000 mine workers in the anthracite industry. The number has been drawn down to about 145,000 now. With such reduced labor power, the existing output of coal is large. It is being accomplished with the aid of the much more highly developed mining facilities.

## Trolley and Register Cords Again Advanced

Government Restricts the Importation of Asphalt—Prices to Go Higher—Raise on Cement

Several minor articles in general use by traction companies are either advancing in price or a shortage is impending. Trolley, bell or register cords, which were marked up during the spring, are reported as tightening in price. An advance of 9 cents a pound was made within a few weeks. Shortages of raw material have increased the cost of production of all cords, and there is little to indicate that they will be any cheaper for a long time to come.

The War Trade Board has placed asphalt upon the restricted imports list. Imports for 1918 will be limited to a total quantity of 30,000 tons from Venezuela and 32,000 from the Island of Trinidad. All outstanding licenses for the importation of asphalt are revoked as to shipments made after June 15. Allocation of the amounts permitted to be imported, regulation of the price and other details will be arranged after conference with the War Industries Board.

Asphalt importers, after this official announcement, said it would have no immediate effect on prices, but an advance should be looked for in a short time. It was bound to come as soon as the stocks on hand were depleted. An increase of 50 cents a ton was made last week. Asphalt filler is likely to go higher at the same time.

On June 25 cement will be advanced 8 cents a barrel at all points on carload lots. Contracts now being entered into are being executed on that basis.

## Industrial Survey for War Work

Charles A. Otis, recently president of the Cleveland Chamber of Commerce, has been made chief of the new Resources and Conversion Section of the War Industries Board, and has suggested the Cleveland plan as a model for all of the other nineteen regions into which the country has been divided. Under this plan, the Cleveland district, which comprises fifty-four counties in northern Ohio and three in northwestern Pennsylvania, has been divided into eight sub-regions, each with a local war industry commission which reports to the district committee on the possibility of caring for government war orders.



## Material for Cars Difficult to Obtain

### Manufacturers Frankly Admit Their Anomalous Position—Prices and Promises in Same Class—Labor's Attitude

Priority certificates for the delivery of needed material for the manufacture of railway equipment, rolling stock and supplies are now the all-important consideration in the acceptance of orders. Unless long deliveries on rolling stock are acceptable it seems there is no other way to obtain cars, unless the equipment is directly or indirectly for government use or for the purpose of aiding in the prosecution of the war. A recent order for one-man cars was placed specifying August as the delivery date. The purchasing agent of the company thought he was particularly fortunate in securing the shipment so early. The remark was qualified by the statement that cars of this type are now almost carried in stock. That is to say, some of the builders have standardized the safety car and are therefore in a better position to construct and ship such orders at a definite time.

Another company in the market for a lot of closed double-truck cars, 50 ft. in length, finds that one car builder who was consulted stated his plant's capacity was taken up in the production of gun carriages and he would be unable to fill a rolling stock order under a year and a half. In other words, he would rather not take the order under the circumstances. Of course, other builders are in better shape, and it was ascertained that on this particular lot delivery could be made in October. A priority certificate would probably shorten the time—ninety days being about the period designated.

Snowplow requirements have been delayed this year later than usual; but a number of companies have finally placed orders. Deliveries are specified from September to December. Equipment of this kind is not carried in stock, consequently anticipation must be the rule if plows and sweepers are expected. The drawback is in obtaining material. Price is secondary in almost every instance. The selling agents of a concern in this line have recently been instructed by their factory not to book orders for any equipment unless the buyer is in a position to get priority on getting and delivering the raw material. This applies on everything.

With the government assuming the allocation of steel and iron products the situation is rendered still more uncertain and trying. An inquiry for a quotation on steel fenders a few days ago was met with the reply from the manufacturers that it was impossible to name a figure until the material could be located and delivery was assured. In other words, at present and probably for an indefinite period, shipment of completed orders is too hazy a proposition even to discuss. The curtailment in the supply of steel is rendering a change necessary in the construction of cars. Where steel parts

have always been specified, wood is being substituted.

Skilled labor is becoming scarcer. Rather, it is shifting from one industry to another, as higher wages are offered. Possibly the government is planning to control the supply of labor and its distribution, as announced on June 13 by the Department of Labor, and thus may bring relief. Not a manufacturer of railway material or devices but has had his plant's efficiency and production more or less affected. As for wages demanded and paid it is almost beyond belief as compared with the prewar scale. It has also played no small part in the enhancement of prices and uncertain shipping promises. The plan will have its first practical test beginning July 15.

After that date all industries employing more than 100 workers will be compelled to obtain labor through

the Federal Employment Service. This restriction will be eventually extended to cover skilled men. "Pirating labor" by bidding high prices for workmen, thus causing the shifting of numbers of skilled operations from one industry to another, sometimes crippling important war work, is also to be taken in hand.

The operation of traction roads has been greatly hampered by the lack of sufficient platform men. The car crews have been decimated by the glittering wage offers of shipyards and munition plants. In one instance from 125 to 150 motormen and conductors on one railway operating in shipyard territory abandoned their regular work for this employment. The road is still 100 men short of a full operating complement, and it is employing every man of age and upward fit to handle and control an electric car. One important line in the leading Eastern city running on an average of 1000 cars daily, now has only 600 in service, shortage of competent car crews causing the limitation in the service the company is able to render.

### Rolling Stock

Gary (Ind.) Street Railway referred to in last week's *ELECTRIC RAILWAY JOURNAL* as having received six double-end center-entrance cars (two motors and four trailers), supplies the appended specifications:

Number of cars ordered.....	Six
Name of road.....	Gary Street Railway
Date order was placed.....	June 12, 1917
Date of delivery.....	March and April, 1918
Builder of car body.....	McGuire-Cummings Mfg. Co.
Type of car.....	Two motor and four trailer, double-end center-entrance
Seating capacity.....	56
Weight (total).....	Motor, 43,000 lb.; trailer, 30,000 lb.
Length over bumpers.....	45 ft.
Length over vestibule.....	44 ft.
Width over all.....	8 ft. 6 in.
Height, rail to trolley base.....	11 ft.
Body.....	All steel
Interior trim.....	Cherry
Headlining.....	Agasote
Roof, arch or monitor.....	Arched
Air brakes.....	Westinghouse Traction Brake Co.
Bumpers.....	Rico anti-climbers
Control, type.....	HLD
Couplers.....	Tomlinson No. 8
Curtain fixtures.....	Rex all-metal
Curtain material.....	Pantasote
Designation signs.....	Hunter illuminated
Door operating mechanism.....	National Pneumatic Co.
Fare boxes.....	Johnson
Fenders or wheelguards.....	H-B life guards
Gears and pinions.....	Westinghouse
Hand brakes.....	Double-acting
Heaters.....	Gold Car Heater Co., No. 405-E with thermostatic control
Headlights.....	Crouse-Hinds combination
Motors, type and number.....	4 WH-514-A
Registers.....	International
Sanders.....	O-B Pneumatic
Sash fixtures.....	Edwards No. 13-O, D-1
Seats, style.....	Hale & Kilburn
Seating material.....	Rattan
Step treads.....	Universal anti-slip
Trolley catchers or retrievers.....	Knutson
Trolley base.....	Union Standard No. 13-D
Trucks, type.....	Light weight with 6-ft. wheelbase
Ventilators.....	Railway Utility Co.
Wheels (type and size).....	Griffin 26 in.

Tacoma (Wash.) Municipal Railway, through C. D. Atkins, commissioner of public works, has purchased ten pas-

senger cars from the Minneapolis (Minn.) Street Railway at a cost of \$60,000. They were recently received and put in service on the tideflats car line serving the shipyards and industrial districts. Previous mention of the transaction, then in contemplation, was made in the *ELECTRIC RAILWAY JOURNAL* of May 11.

Public Service Railway, Newark, N. J., which placed an order for thirty-three cars with the Cincinnati Car Company, as noted in the *ELECTRIC RAILWAY JOURNAL* of May 4, furnishes the following specifications:

Number of cars ordered.....	33
Name of road.....	Public Service Ry. Co.
Builder of car body.....	Cincinnati Car Co.
Type of car.....	Passenger—prepayment motor car
Seating capacity.....	46
Weight (total).....	Approximately 42,500 lb.
Bolster centers, length.....	24 ft. 6 in.
Length over bumpers.....	48 ft. 4½ in.
Length over vestibule.....	34 ft. 0½ in.
Width over all.....	8 ft. 7 in.
Height, rail to trolley base.....	11 ft. 5½ in.
Body.....	Semi-steel
Interior trim.....	Cherry
Headlining.....	Agasote
Roof, arch or monitor.....	Combination
Air brakes.....	General Electric Co.
Bumpers.....	Channel iron
Car trimmings.....	Bronze
Conduits and junction boxes.....	Westinghouse
Control, type.....	WH-HL
Couplers.....	Tomlinson
Curtain fixtures.....	National Lock Washer Co.
Curtain material.....	Double Pantasote
Designation signs.....	Hunter
Door operating mechanism.....	Public Service Ry. Co.
Fare boxes.....	Johnson
Fenders or wheelguards.....	H-B life guard
Hand brakes.....	Horne Mfg. Co.
Heaters.....	Gold Car Heating Co.
Headlights.....	Trolley Supply Co. No. 14
Journal boxes.....	Symington Torsion lid
Lightning arresters.....	Westinghouse-MR
Motors.....	2-WH. 307, C. V. 4, outside hung
Registers.....	Sterling No. 15
Sanders.....	Public Service Ry. Co.
Sash fixtures.....	O. M. Edwards Co.
Seats, style.....	Longitudinal—H. B. & W.
Seating material.....	Canvas lined rattan
Step treads.....	Lead—Public Service Ry. Co.
Trolley catchers.....	Ideal
Trolley base.....	U. S. No. 14
Trucks, type.....	Standard O-45
Ventilators.....	Garland
Wheels (type and size) Drivers.....	33 in., steel; Pony: 22 in., cast

**Trade Notes**

Goldschmidt & Forbes, Inc., New York, N. Y., have been appointed agents for New York and New Jersey for the Drew Electric & Manufacturing Company, Indianapolis, manufacturer of electric railway, light, power and gas materials.

Railway Improvement Company, New York, N. Y., has just shipped twenty-one Rico coasting recorders to the Australian General Electric Company for use on the lines of the Melbourne-Brunswick-Coburg Tramways Trust, Melbourne, Australia.

Princeton (Ind.) Utilities Company has been chartered by James C. Johnston, Samuel T. Heston, Jacob L. Knauss and Sampel L. May. The company is capitalized at \$40,000 and proposes to supply light, heat and power in the city of Princeton and surrounding country.

American Chamber of Commerce, Paris, France, in its fortnightly information pamphlet, publishes a list of articles which are prohibited for exportation and re-exportation. Among other commodities is given that of compositions of products for electric insulation and tubes and pipes for boilers.

Jeffery-Dewitt Insulator Company, Huntington, W. Va., which has opened its new plant at Kenova, W. Va., will continue operation of the present factory at Detroit and enlarge it to meet

the demands for manufacturing spark-plug porcelains and other porcelain material of that nature.

O. S. Lair, department manager for the Western Electric Company in various cities of the United States for the last seventeen years, and for the last four years manager of the Los Angeles (Cal.) office of the company, has resigned. Mr. Lair will become associated with the W. Ross Campbell Company, Los Angeles.

A. Huetter, for a number of years superintendent of the Boonton (N. J.) Rubber Manufacturing Company, is now vice-president and general manager of the Premier Rubber & Insulation Company of Dayton, Ohio. The new plant of the company, completed April 1 and in operation since May 1, is a one-story brick building, 68 ft. x 100 ft., with a separate power house of its own.

Westinghouse Electric & Manufacturing Company, East Pittsburgh, Pa., has purchased the property, business and good-will of the Krantz Manufacturing Company, Inc., of Brooklyn, N. Y., manufacturer of safety and semi-safety electrical and other devices, switchboards, floor boxes, bushings, etc. The supply department of the Westinghouse Company will act as exclusive sales agent of the products of the Krantz Manufacturing Company, whose business will be continued under its present name. H. C. Hoke of the Westinghouse company, will represent the supply department at the Krantz factory.

**New Advertising Literature**

General Electric Company, Schenectady, N. Y.: Bulletin 46,019A, describes the construction and specification of its portable instrument Type P-8.

Illinois Electric Porcelain Company, Macomb, Ill.: Catalog on electrical porcelain installations in which it features power insulators for distribution voltage.

Walter A. Zelnicker Supply Company, St. Louis: Bulletin No. 237, or that for May, 1918. It contains seventy-two pages descriptive of used and new material for sale by this concern.

Ohio Brass Company, Mansfield, Ohio: "Guarding the Grade Crossings" is the title of an illustrated catalog describing in detail, accompanied by statistics, the company's national trolley guard, with various illustrations shown in connection with prominent electric railways throughout the country.

Page Steel & Wire Company, New York, N. Y.: Illustrated booklet entitled "Aristos Copperweld Copper Clad Steel Wire." It contains notes on the manufacture of wire in general, on physical and electrical properties of composite (copperweld) wire, gives tests, specifications and suggestions for determining sizes of wire on high-tension and trolley lines, and contains information for calculating line drop, feeders and short transmission lines, sag and tension in spans.

**NEW YORK METAL MARKET PRICES**

	June 12	June 19
Copper, ingots, cents per lb.	23½	23½
Copper wire base, cents per lb.	26½	26½
Lead, cents per lb.	7½	7.235
Nickel, cents per lb.	40	40
Spelter, cents per lb.	7.62	8
Tin, Chinese,* cents per lb.	.92	.90
Aluminum, 98 to 99 per cent., cents per lb.	†33.00	†33.00

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

**OLD METAL PRICES—NEW YORK**

	June 12	June 19
Heavy copper, cents per lb.	22	22
Light copper, cents per lb.	19½	19½
Red brass, cents per lb.	19	19
Yellow brass, cents per lb.	13	13
Lead, heavy, cents per lb.	6½	6½
Zinc, cents per lb.	5½	5½
Steel car axles, Chicago, per net ton.	\$41.52	\$41.52
Old carwheels, Chicago, per gross ton.	\$29.00	\$29.00
Steel rails (scrap), Chicago, per gross ton.	\$34.00	\$34.00
Steel rails (relaying), Chicago, gross ton.	\$60.00	\$60.00
Machine shop turnings, Chicago, net ton	\$16.00	\$16.00

**ELECTRIC RAILWAY MATERIAL PRICES**

	June 12	June 19	June 12	June 19
Rubber-covered wire base, New York, cents per lb.	27 to 30	27 to 34		
Weatherproof wire (100 lb. lots), cents per lb., New York.	34½ to 37.10	35 to 37.10		
Weatherproof wire (100 lb. lots), cents per lb., Chicago.	35.42 to 38.35	35.42 to 38.35		
T-rails (A. S. C. E. standard), per gross ton.	\$70.00 to \$80.00	\$70.00 to \$80.00		
T-rails (A. S. C. E. standard), 100 to 500-ton lots, per gross ton.	\$67.50	\$67.50		
T-rails (A. S. C. E. Standard) 500-ton lots, per gross ton.	\$62.50	\$62.50		
T-rails, high (Shanghai), cents per lb.	4½	4½		
Rails, girder (grooved), cents per lb.	4½	4½		
Wire nails, Pittsburgh, cents per lb.	3½	3½		
Railroad spikes, drive, Pittsburgh base, cents per lb.	4½	4½		
Railroad spikes, screw, Pittsburgh base, cents per lb.	8	8		
Tie plates (flat type), cents per lb.	*3½	*3½		
Tie plates (brace type), cents per lb.	*3½	*3½		
Tie rods, Pittsburgh base, cents per lb.	7	7		
Fish plates, cents per lb.	*3½	*3½		
Angle plates, cents per lb.	*3½	*3½		
Angle bars, cents per lb.	*3½	*3½		
Rail bolts and nuts, Pittsburgh base, cents per lb.	4.90	4.90		
Steel bars, Pittsburgh, cents per lb.	5	5		
Sheet iron, black (24 gage), Pittsburgh, cents per lb.	4.90	4.90		
Sheet iron, galvanized (24 gage), Pittsburgh, cents per lb.	5.80	5.80		
Galvanized barbed wire, Pittsburgh, cents per lb.	4.35	4.35		
Galvanized wire, ordinary, Pittsburgh, cents per lb.	3.95	3.95		
Car window glass (single strength), first three brackets, A quality, New York, discount†.	80%	80%		
Car window glass (single strength, first three brackets, B quality), New York, discount.	80%	80%		
Car window glass (double strength, all sizes AA quality), New York discount....	82 & 3%	82 & 3%.		
Waste, wool (according to grade), cents per lb.	11½ to 22	11½ to 22		
Waste, cotton (100 lb. bale), cents per lb.	13 to 13½	13 to 13½		
Asphalt, hot (150 tons minimum), per ton delivered.	\$38.50	\$38.50		
Asphalt, cold (150 tons minimum, pkgs. weighed in, F. O. B. plant, Maurer, N. J.), per ton.	\$42.50	\$42.50		
Asphalt filler, per ton.	\$45.00	\$45.00		
Cement (truck lots), New York, per bbl.	\$3.20	\$3.20		
Cement (carload lots), Chicago, per bbl.	\$3.26	\$3.26		
Cement (carload lots), Seattle, per bbl.	\$3.60	\$3.60		
Linseed oil (raw, 5 bbl. lots), New York, per gal.	\$1.59	\$1.59		
Linseed oil (boiled, 5 bbl. lots), New York, per gal.	\$1.58	\$1.58		
White lead (100 lb. keg), New York, cents per lb.	10½	10		
Turpentine (bbl. lots), New York, cents per gal.	52½	42½		

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