

# Electric Railway Journal

Consolidation of Street Railway Journal and Electric Railway Review

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## Interborough Directors Make a Mistake in Not Testifying

FROM the standpoint of public policy the directors of the Interborough Rapid Transit Company have made a mistake in declining to explain the high dividends declared by the company from 1912 to 1918. Errors in judgment in forecasting for any considerable time the profits of the company may be readily understood, in view of the fall in the purchasing power of the nickel following the opening of the World War. There may also have been a reasonable expectation on the part of the directors that the company would receive power to increase the rate of fare, as has been the case in every other large city in this country. As regards such mistakes the public will be lenient, if frank explanation of them is made. But the directors in question unfortunately have not taken this opportunity to take the stand in the transit hearing, although the attitude of the railway witnesses up to this time has seemed sympathetic to the announced purposes of the inquiry.

The facts so far brought out appear to be that soon after the Interborough Rapid Transit Company had commenced operation in 1904 and had leased the Manhattan Elevated Railway, the combined property was found to be quite profitable. At first the directors were conservative as regards the dividends declared, but in 1912, when contract No. 3 came up for signature, the company found itself to be in so powerful a position that it was able to exact a large preferential from the city. Obviously that was the time to have husbanded its resources, because the contract required the establishment of a large number of lines which obviously would not pay for some time. But, considering it was protected by its preferential, the company continued the policy of high dividends, paying 16 per cent in 1912, 12 per cent in 1913, 15 per cent in 1914, 20 per cent in 1915, 1916 and 1917, 17½ per cent in 1918 and 5 per cent in 1919. The total amount paid on the capital stock of the company in the past eighteen years—187½ per cent—would not be considered excessive in most other lines of business for a company which had proved a money maker. Nevertheless the policy of high annual dividends was continued after the money inflation due to the World War had become generally apparent and thereby reduced the company's cash reserve.

It is too early to comment fully on the reasons for the various financial acts taken by the directors, but the part the holding company—the Interborough-Metropolitan, later the Interborough Consolidated—played in the dividends declared is apparently an important one. The creation of this holding company was perhaps a natural and useful step at the time and has many counterparts in railroad and industrial financing. Before its organization, the subways and the surface lines were being operated separately. It was evident that money would be saved and efficiency secured by unified operation, but on account of several factors it was impossible to combine the two properties into one. The natural move was a holding company, as named above.

This company acquired the greater part of the stock issues of the Interborough and of the Metropolitan surface lines and issued preferred and common stock as well as 4½ per cent collateral trust bonds, securing the latter by its holdings of Interborough stock in the ratio of two \$1,000 bonds to 10 shares of stock. While the Interborough stock at this time seemed amply able to pay more than the 9 per cent dividend required for the interest on these bonds, yet the organization thus created was essentially a pyramiding of securities on the basis of possible future profits before these profits were reasonably secure. Then a time came when the profits of the Interborough decreased because of rising expenses, and the holding company apparently became a convenient agent from which money could be borrowed to tide over what appeared a temporary condition. An interesting sidelight on the result of this financial policy is furnished by the fact that the 4½'s referred to which sold at the time of issue close to par now sell at about 13, while the Interborough Consolidated preferred and common stock which sold as late as 1915 at about 80 and 25 respectively are now quoted at about 6 and 2.

This is not the only time, either in railroading or other lines of business, that an enterprise starting out under most favorable auspices has been brought to grief through too great optimism for the future or because of an improper forecast of coming events. There is so much that is intrinsically stable about public utilities that there ought not to be a possibility of their becoming a basis for speculation in Wall Street. In the proposed new financing of railway properties in New York this point should be assured so far as is reasonably possible.

## For Politics or Spur to the Company?

WHETHER or not the people of Chicago derive any benefit as the result of the Illinois Commerce Commission's order for a 5-cent fare, two things were accomplished. The campaign pledge of the Governor and Mayor was carried out, for certainly they cannot be held accountable for failure of their pledge if the courts stand in the way of its accomplishment. And by ordering a rate of fare impossibly low, the traction question is left unsettled and therefore is preserved to future campaigns as the premier of issues.

Some of the conclusions reached by the commission are without substantiation in evidence presented and some ignore evidence to the contrary. In the former category are the commission's statements on the matter of service, which forms the predominating note of the order. The service is "grossly inadequate and inefficient," the companies are "managing and operating their street railways extravagantly and inefficiently," and citation is made of "certain items of operating costs peculiarly indicative of slack management." Another significant statement in this connection is as follows: "We believe respondent companies will profit most by basing their claim for additional rates of fare on the value of



the service they render to the public as well as on their own constitutional rights." In another place the commission states that the character of service being rendered is not worth more than 5 cents.

Since it is very difficult to find that the commission has justified the 5-cent fare in its order, and in view of the evidence to the contrary submitted at the hearings, it is perhaps a plausible conjecture that the commission had it in mind to render a decision that would shock the companies into action to install economies known to be possible but not adopted. This would represent a somewhat unusual procedure, but it forms about the only satisfactory explanation—aside from politics—of a 40 per cent reduction order.

A unique part of the decision is the order to stop payments to the renewal fund and the recommendation that the city agree to release the company from paving, sprinkling and sweeping, both being required by the 1907 ordinances. These are of interest in view of the fight the city has carried to the United States Supreme Court (and lost) to hold the companies to the contract rate of fare. Now, apparently, the city is willing to accept elimination of the 8 per cent renewal requirement, though this has been the means of keeping the Chicago surface railways in a physical condition excelled by few if any street railways in the country. Its abandonment now might readily result in time in an opposite condition—a matter of very great concern to the car riders, for it would jeopardize the value of the property for which the city has agreed to pay in 1927 a certain price which is predicated upon the continuous expenditure of the 8 per cent in maintaining the property value. It is also interesting to note that no mention is made of a reduction in wages of employees, which, at 80 cents an hour for trainmen, are the highest in the country. This would have been unpopular with the labor constituency.

### Mr. Hoover Heaves a Heavy Brick and Helps Standardize Paving Bricks

THAT Secretary Hoover believes in practicing what he preaches is evidenced by the number of conferences relating to standards which are being held at Washington under his auspices. On Nov. 15 such a conference was held on the subject of "Elimination of Excess Varieties of Paving Brick." This was the second conference on the subject and there resulted an agreement to the effect that only eleven out of sixty-six varieties of paving brick which have found currency in the brick industry need to be retained. This amounts to a reduction of 83 per cent in variety and may be considered as a very practical illustration of what may be done in standardization through earnest co-operation.

The United States Chamber of Commerce and the National Paving Brick Manufacturers' Association were active in the matter and the last conference was largely attended by representatives of the various interests involved, about equally divided among manufacturers and users of paving brick. The importance of the industry affected and the results obtained through Secretary Hoover's ability to organize such conferences on standardization matters are considered as good evidence that the administration is standing back of its promises to attempt all possible means of reducing costs not only in government departments but also in all lines of industry. An abstract of the matters discussed at the conference will be found on another page.

### The Vice-Presidents Are Put to Work

THE committee appointments of the American Association, announced in last week's issue, are another indication of the closer active management to be expected under the new régime. President Todd has quite definitely put the vice-presidents—and as a matter of fact all the active members of the executive committee—to work. This is as it should be. These men were elected to manage the affairs of the association, and President Todd is to be congratulated that he has so adequately placed them all in positions which will assist the association in its committee work and assist the men concerned in the work which they perform on the executive committee.

An examination of committee chairmanships and personnel will show the four vice-presidents in active charge of four of the seven most important committees—the six standing committees and the membership committee. The other three are headed by three past-presidents, eminently qualified for their particular posts. This use of the vice-presidents puts into operation in a practical way the principle of having vice-presidents take a definite place in association management. They will be better presidents in the future for this very reason.

It will also be seen that every executive committee member is on some committee and also that every committee has a member of the executive committee among its membership.

All this is good and augurs well for association activity during the coming year.

### Will Detroit Bury the Hatchet?

GOOD news comes out of Detroit. It is too soon to sound the tocsin of success for the negotiations under way there, but a good start has been made toward an agreement looking to mutual operating rights between the Detroit United Railway and the Detroit Municipal Railway over the so-called ouster lines. Mayor Couzens has delegated complete authority to the Street Railway Commission to act in his absence, and while he has the final word, it would appear unlikely that he would be unwilling to sanction any basis of agreement reached by those acting for him, particularly where the public has so much at stake. As far as the matter has been developed in the negotiations, the basis of the understanding would appear to be fair to both sides.

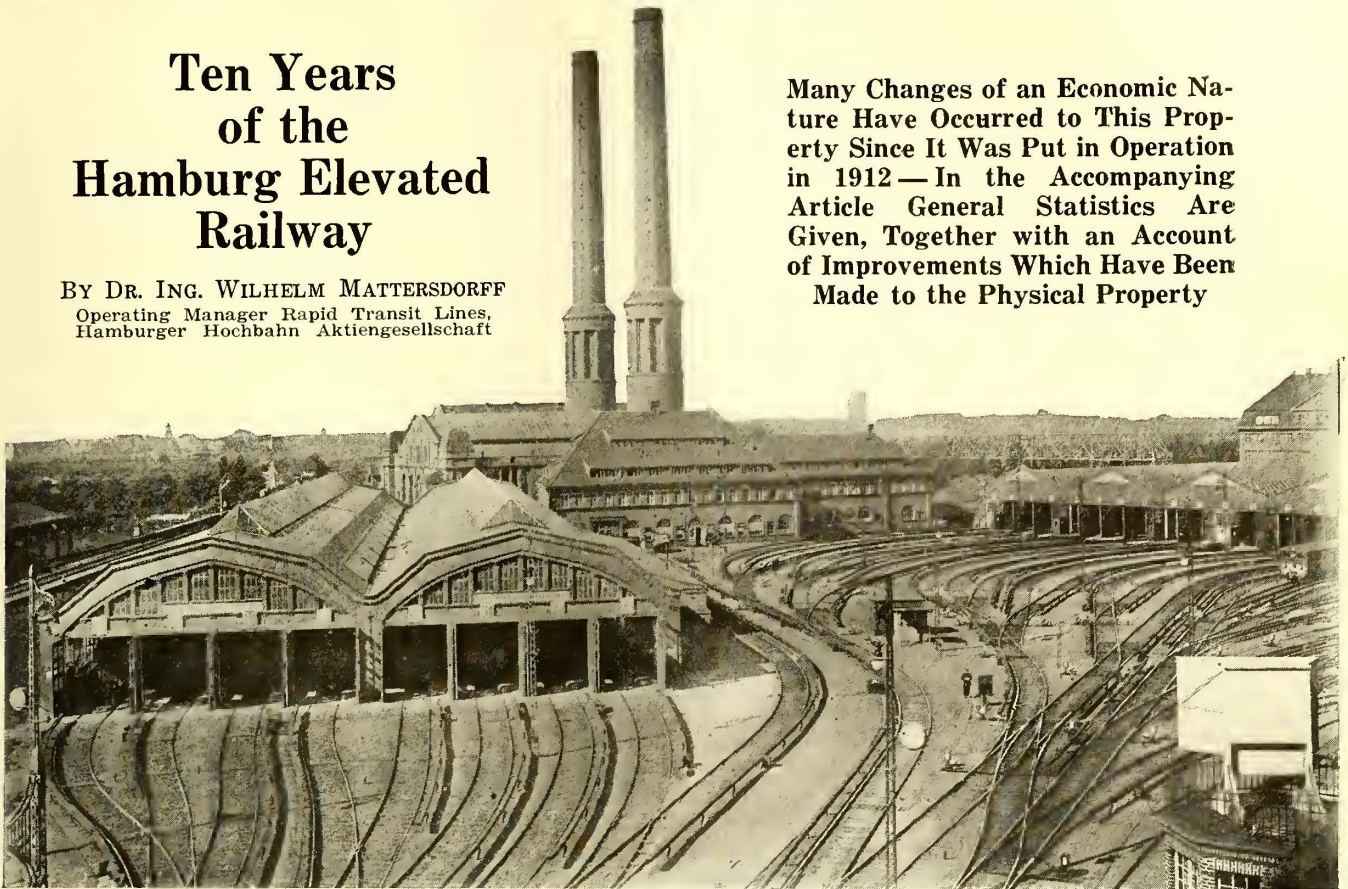
No matter what the outcome may be of the present negotiations, the event of the holding of the conferences is propitious for the company in that it marks the complete entry of Alex Dow into the relations of the company with the public. This means a great deal. As the representative of the new interests in the company he comes to the problem with a new point of view and the prestige for fair dealing that has made the Detroit Edison Company, of which he is president and general manager, a popular private institution and a huge success financially. Mr. Dow's sitting in at the conference augurs well for the future of all concerned. In short, the warring interests in Detroit would appear to be about to bury the hatchet. They ought to bury it. And having buried it, both factions in Detroit ought to forget the location of the place where the interment took place.



# Ten Years of the Hamburg Elevated Railway

BY DR. ING. WILHELM MATTERSdorFF  
 Operating Manager Rapid Transit Lines,  
 Hamburger Hochbahn Aktiengesellschaft

Many Changes of an Economic Nature Have Occurred to This Property Since It Was Put in Operation in 1912 — In the Accompanying Article General Statistics Are Given, Together with an Account of Improvements Which Have Been Made to the Physical Property



GENERAL VIEW OF CARHOUSES, REPAIR SHOPS AND POWER STATION

THE ELECTRIC RAILWAY JOURNAL of March 8 and 15, July 5 and Aug. 2, 1913, contained a detailed description of the routes and installations of the Hamburg Subway & Elevated Railway. The operating company, called "Hamburger Hochbahn Aktiengesellschaft," was organized in 1911 and service on the first section was begun March 1, 1912. During the ten years which have passed the form of the company has changed, its line has been extended and its traffic has grown immensely, but the war and the resulting changes in economic and technical conditions have greatly affected the property. Originally an entirely private undertaking, with a capital of 15,000,000 marks, the company was consolidated in 1918 with the Hamburg Street Railway and the entire enterprise was then changed to a combined state and private undertaking. By this change the field of the consolidated

company was extended to include nearly all existing transportation lines in Hamburg. Today the company operates not only a subway and elevated railway but also the adjoining rapid transit lines within a radius of about 20 miles from the center of the city, all surface street railway lines of Hamburg and environs, steamboats on Lake Alster and a bus line.

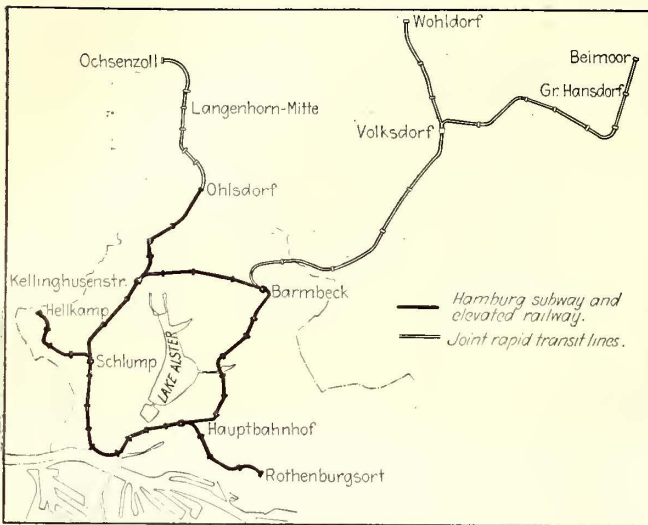
These changes required a complete reorganization and expansion of the executive force over that given on page 415 of the ELECTRIC RAILWAY JOURNAL for March 8, 1913. The board of directors is now made up as follows: In charge of general affairs, Mr. Stein; of financial affairs, Mr. Liez; of operation of the elevated railway and Lake Alster steamboats, Dr. Mattersdorff; of operation of the surface bus lines, Mr. Walther; of legal affairs, Dr. Mumssen.

The following article will describe the origin in

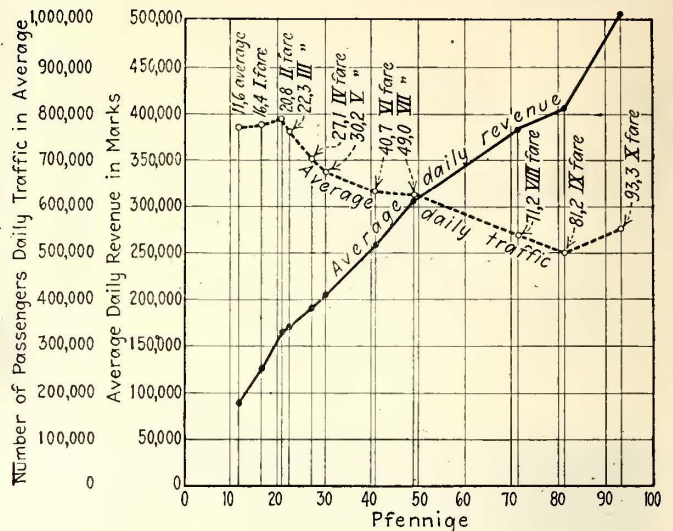
TABLE I. STATISTICAL REPORT OF ALL BRANCHES OF THE HAMBURGER HOCHBAHN AKTIENGESELLSCHAFT

|  | Kilometers of Route | Kilometers of Track | Number of Cars Operated | Car-Kilometers or Boat-Kilometers | Number of Cash Fare Passengers | Number of Commutation Ticket Passengers | Total Number of Passengers | Passengers per Car-Km. or Boat-Km. | Operating Revenue in Marks | Revenue per Car-Km. in Pfennige | Revenue per Passenger in Pfennige |
|--|---------------------|---------------------|-------------------------|-----------------------------------|--------------------------------|---|----------------------------|------------------------------------|----------------------------|---------------------------------|-----------------------------------|
| <i>For First Six Months of 1921</i>              |                     |                     |                         |                                   |                                |   |                            |                                    |                            |                                 |                                   |
| Subway and elevated (with connecting lines)..... | .....               | .....               | .....                   | 3,288,477                         | 17,901,772                     | 3,838,097                               | 21,739,869                 | 6.6                                | 19,690,700                 | 598.8                           | 90.6                              |
| Waldsdorfer Railway.....                         | .....               | .....               | .....                   | 207,395                           | 481,068                        | 239,895                                 | 720,963                    | 3.5                                | 665,025                    | 320.6                           | 92.                               |
| Surface lines.....                               | .....               | .....               | .....                   | 15,424,747                        | 71,533,111                     | 5,346,968                               | 76,880,079                 | 5.0                                | 69,695,053                 | 451.8                           | 90.7                              |
| Lake Alster boats.....                           | .....               | .....               | .....                   | 87,791                            | 832,144                        | 247,787                                 | 1,079,931                  | 12.3                               | 971,275                    | 1,106.3                         | 89.9                              |
| Total.....                                       | .....               | .....               | .....                   | .....                             | 90,748,095                     | 9,672,747                               | 100,420,842                | .....                              | 91,022,053                 | .....                           | .....                             |
| <i>For August, 1921</i>                          |                     |                     |                         |                                   |                                |   |                            |                                    |                            |                                 |                                   |
| Subway and elevated (with connecting lines)..... | .....               | .....               | .....                   | .....                             | 3,248,009                      | 826,723                                 | 4,074,732                  | 6.9                                | 3,744,491                  | 629.7                           | 91.9                              |
| Subway and elevated (alone).....                 | 28.0                | 64.0                | 147                     | 594,601                           | 3,021,536                      | 742,058                                 | 3,763,594                  | 6.3                                | 3,456,788                  | 581.4                           | 91.8                              |
| Waldsdorfer Railway.....                         | 12.5                | 12.5                | 12                      | 64,100                            | 153,321                        | 60,393                                  | 213,714                    | 3.3                                | 204,690                    | 319.3                           | .....                             |
| Langenhorn Railway.....                          | 7.7                 | 15.47               | 16                      | 55,738                            | 188,516                        | 73,052                                  | 261,568                    | 4.7                                | 109,972                    | 197.3                           | .....                             |
| Surface lines.....                               | 189.985             | 377.89              | 1,149                   | 2,643,598                         | 13,441,789                     | 929,537                                 | 14,371,326                 | 5.4                                | 13,469,189                 | 509.5                           | 93.7                              |
| Lake Alster Shipping.....                        | 27.5                | .....               | 8.5                     | 22,971                            | 240,287                        | 54,755                                  | 295,042                    | 12.8                               | 289,715                    | 1,251.5                         | 92.7                              |





MAP SHOWING ROUTE OF SYSTEM, INCLUDING CONNECTING LINES



RELATION BETWEEN DAILY TRAFFIC AND AVERAGE FARE IN PF.

Germany of the term "gemischt wirtschaftliche unternehmungen," literally "mixed commercial undertaking"; why that term is applied to the Hamburg Elevated Railway, and all important developments during the last ten years on the company's elevated and subway system, relating to traffic, rates of fares, routes, service, management and technical equipment.

A COMBINED PUBLIC AND PRIVATE ENTERPRISE

In Germany many street railway companies during the past few years have passed into the hands of the municipal authorities. In the case of some of these the municipality has taken over a part, in many cases 50 per cent, of the capital stock of the company. In such cases the company is called by the German expression already mentioned to signify that it is a combined public and private enterprise. It is the hope, by this kind of organization to obtain at the same time (1) administration in public interest, (2) economical management, and (3) the enterprise and initiative characteristic of the private business man.

Originally the Hamburger Hochbahn Aktiengesellschaft was a stock company which leased the Hamburg subway and elevated railway system from the State of Hamburg for a proportion of the gross earnings.

Beginning July 1, 1918, a new arrangement went

into force by which the state of Hamburg became an actual stockholder. Under this agreement the state exchanged its interest then existing in the property for 56,130,000 marks in Form B shares. The franchise has no expiration date; i.e., it is perpetual. The elevated railway company was also required to buy up the stock of the Strassen Eisenbahn Gesellschaft (the surface line company) and to operate the surface

TABLE II. FARES CHARGED AT FOUR PERIODS ON SUBWAY AND ELEVATED RAILWAY (all figures in pfennige)

|                                    | From Beginning to June 30, 1918 | From June 14, 1919, to Nov. 20, 1919 | From April 20, 1920, to Dec. 16, 1920 | From Feb. 14, 1921, to Date of Writing |
|------------------------------------|---------------------------------|--------------------------------------|---------------------------------------|--|
| <i>Cash fares</i>                  |                                 |                                      |                                       |  |
| For five or less stations.....     | 10                              | 25                                   | 60                                    | 80 <sub>a</sub>                        |
| For five to ten stations.....      | 15                              | 30                                   | 80                                    | 100 <sub>a</sub>                       |
| Full length of line.....           | 20                              | 35                                   | 100                                   | 120 <sub>a</sub>                       |
| Weekly ticket (twelve rides).....  | 110                             | 300                                  | 900                                   | 1,000                                  |
| <i>Monthly commutation tickets</i> |                                 |                                      |                                       |  |
| For eight or less stations.....    |                                 | 2,200                                | *                                     | b                                      |
| For more than eight stations.....  |                                 | 3,200                                | *                                     | *                                      |
| <i>Yearly commutation tickets</i>  |                                 |                                      |                                       |  |
| For eight or less stations.....    | 8,200                           | 24,000                               | *                                     | *                                      |
| For more than eight stations.....  | 14,700                          | 36,000                               | *                                     | *                                      |

\* Abandoned.  
 (a) Double this fare after 9:30 p.m.  
 (b) 75 marks for minimum distance, 20 marks for each additional station.

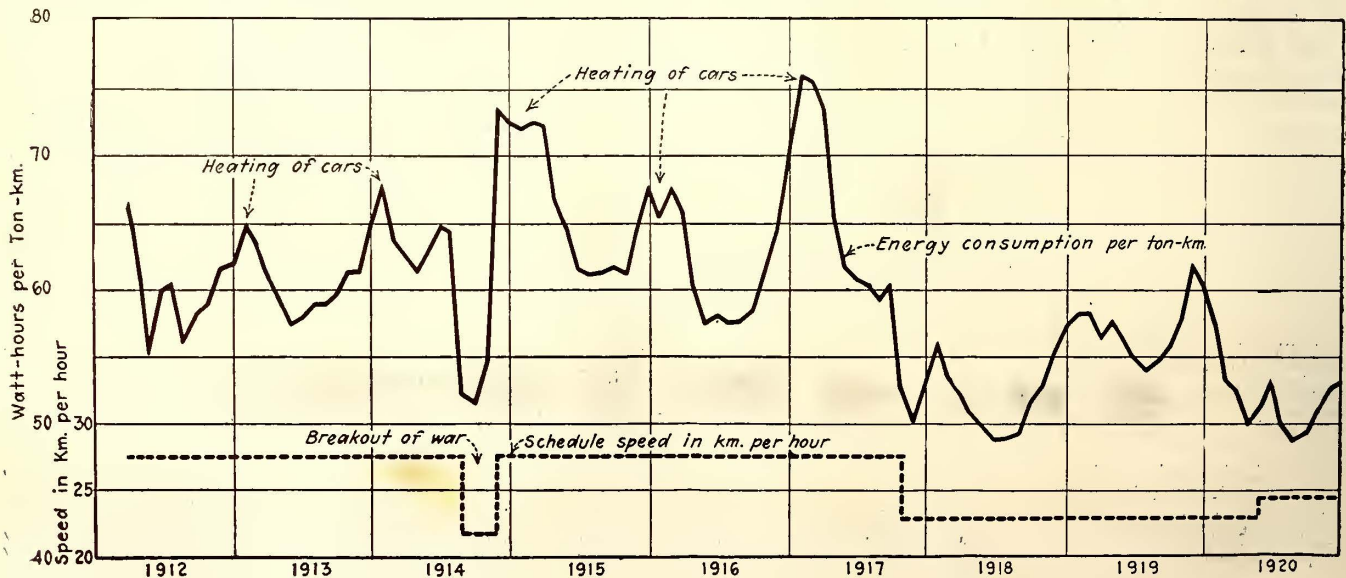
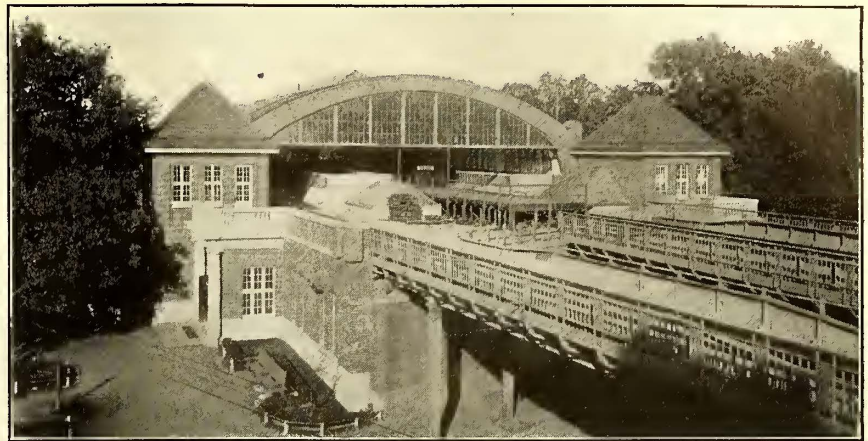


CHART SHOWING RELATION BETWEEN SCHEDULE SPEED AND ENERGY CONSUMPTION



street railways and also the steam-boats and the steam ferry of Lake Alster. The elevated railway company paid for the stock of the old Strassen-eisenbahngesellschaft 31,500,000 marks in Form A shares and for the boat line 900,000 marks in Form A shares. The total capital of the company (A and B shares taken together) amounts now to 103,530,000 of marks. Except the Prussian State Railway system from Blankensee to Ohlsdorf, which is today part of the new "Reichseisenbahnen" system, all transit lines of Hamburg and environs, including the Prussian surface lines to Altona, Wandsbek, Harburg, etc., are now consolidated in the "Hamburger Hochbahn Atkien-gesellschaft." The franchise of the Hamburger Hochbahngesellschaft declares that the fares shall be such that a dividend of 6 per cent on Form A shares may be paid, and the state guarantees that the dividend shall be at least 5 per cent. The dividends on Form B shares, according to the franchise, are to be 1 per cent less than on Form A shares. The dividends on Form A shares during the past three years have been as follows: In 1918, 6 per cent; in 1919, 1½ per cent from earnings and 3½ per cent from the state; in 1920, 2 per cent from earnings and 3 per cent from the state.



PASSENGER STATION AT VOLKSDORF

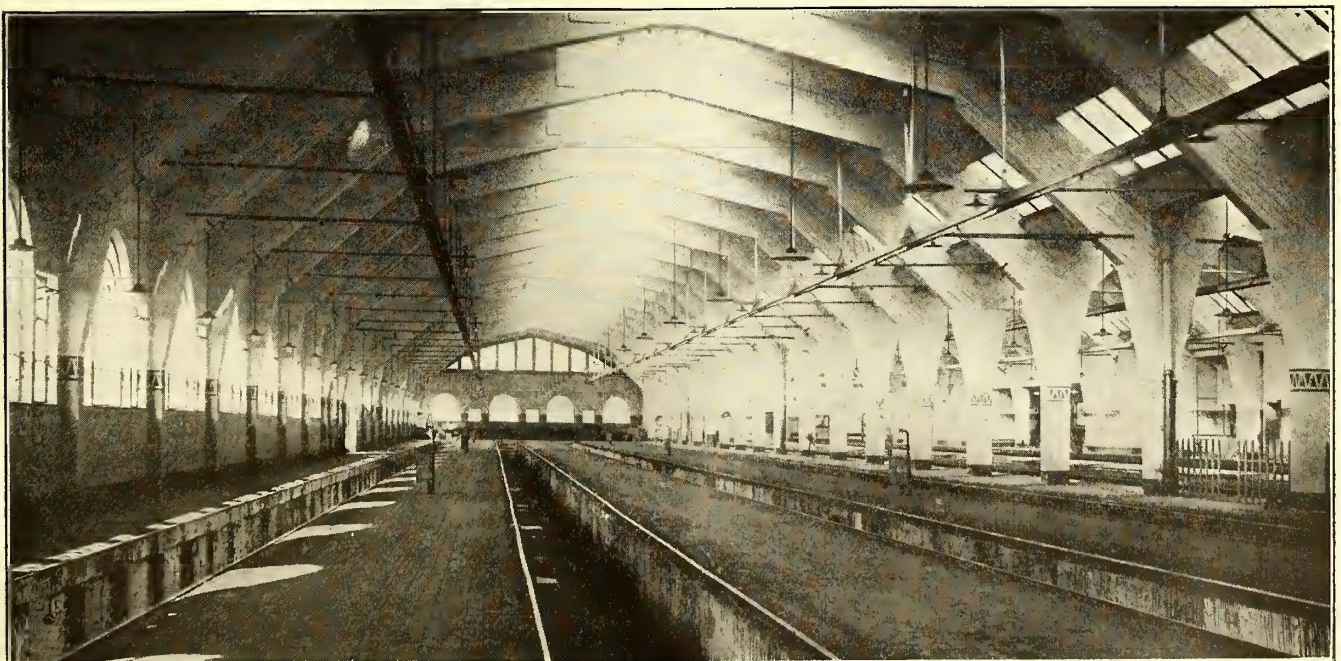
While most of the German municipal railways have done badly in these turbulent times with fluctuating exchange, it is a matter for congratulation that results so satisfactory as those mentioned above have been obtained in Hamburg, for at least it has been possible to avoid deficits and a receivership. A summary of the reports of all branches of the company for the six months ended June 30, 1921, and for August, 1921, is given in Table I.

FARES AND TRAFFIC

According to the new arrangement the company is obliged to consider the transit problems of Hamburg from the point of view of the traffic requirements, so competition was eliminated. As there is now no fundamental need to attract traffic, it has been possible as well as desirable to equalize proportionally the rates of fares for the different kinds of transit and to let time determine which of the various means of transport passengers would prefer. A diagram showing the number of passengers in three-month intervals on the subway and elevated railway from the beginning of the service to the year 1921 is presented. It will be seen that the number of passengers decreased con-

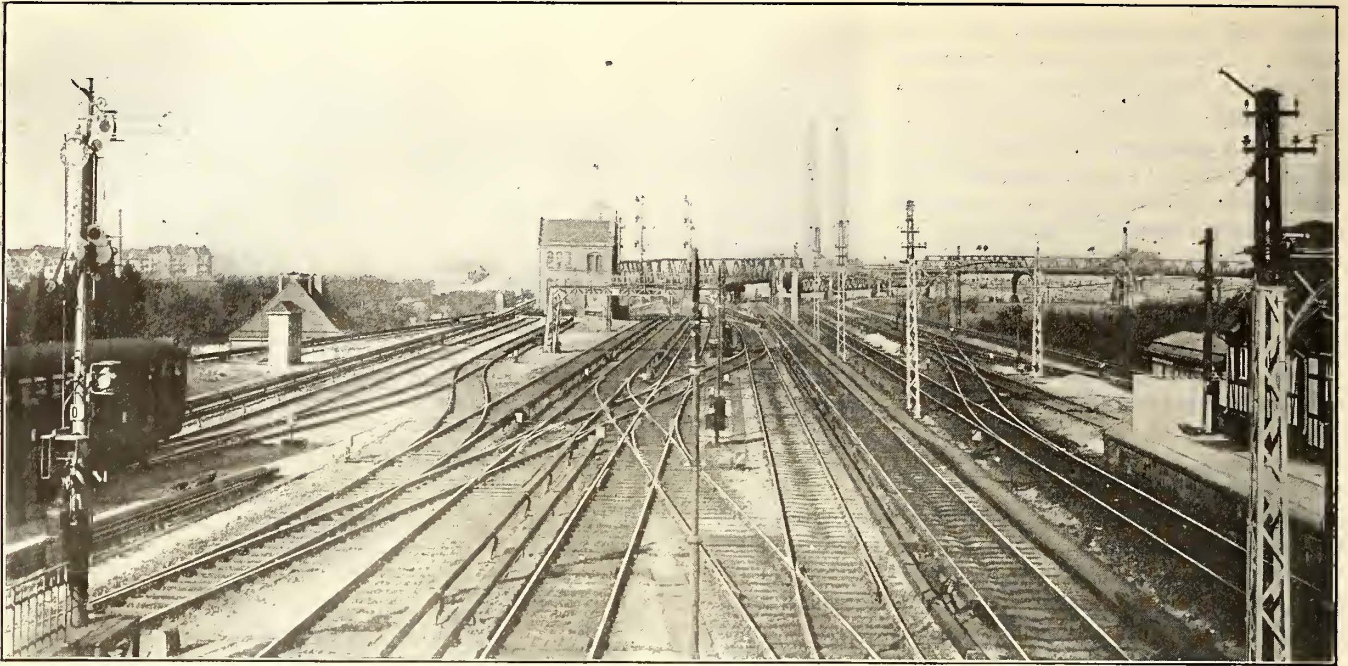
TABLE III. BASIC SCHEDULE OF THE SUBWAY AND ELEVATED RAILWAY LOOP

| Beginning          | Time for Running Around Loop | Headway of Trains in Minutes | Speed per Hour | Speed  |          |
|--------------------|------------------------------|------------------------------|----------------|--------|----------|
|                    |                              |                              |                | In Km. | In Miles |
| March 1, 1912..... | 38                           | 5                            | 10             | 27.6   | 17.2     |
| Aug. 6, 1914.....  | 48                           | 5                            | 10             | 21.8   | 13.6     |
| Dec. 1, 1914.....  | 38                           | 5                            | 10             | 27.6   | 17.2     |
| Nov. 3, 1917.....  | 46                           | 48                           | 12             | 22.8   | 14.2     |
| May 19, 1920.....  | 43                           | 45                           | 7½             | 24.4   | 15.2     |
| Oct. 1, 1921.....  | 43                           | 45                           | 5              | 24.4   | 15.2     |

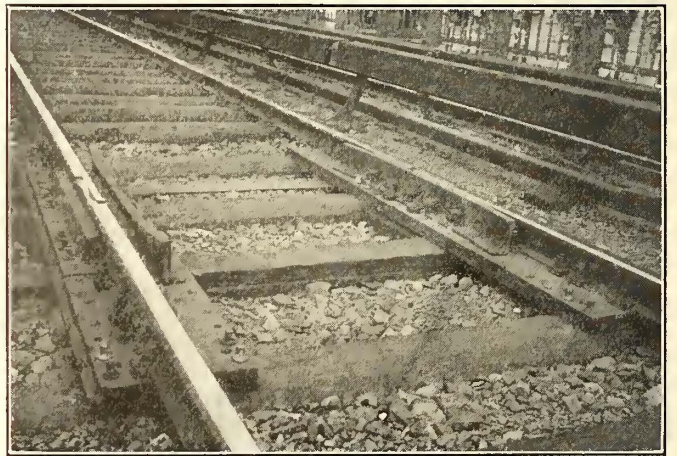


LATEST CARHOUSE TO BE BUILT





TRACKAGE AT BARMBECK JUNCTION



FORMER AND PRESENT METHOD OF MAKING EXPANSION JOINT

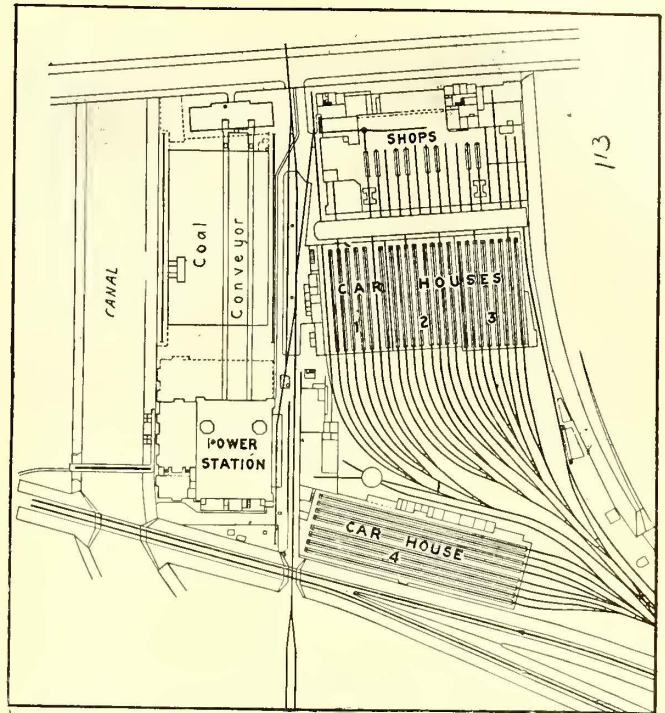


SECTION OF ELEVATED RAILWAY THROUGH RESIDENTIAL SECTION

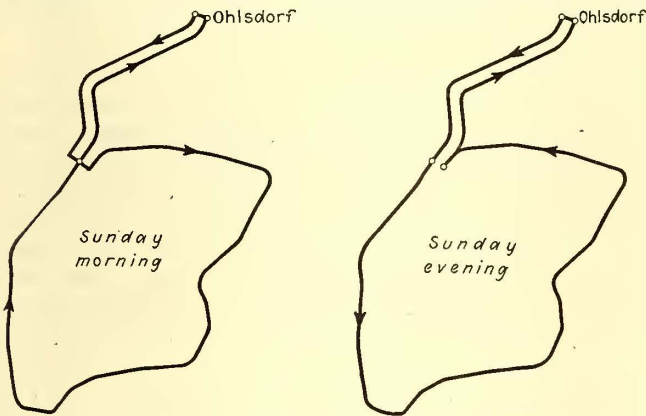


siderably after the outbreak of the war, but that later on it began to increase again, at first slowly, afterward at a faster rate, during the further course of the war, until 1918.

In 1919 wages began to rise and German exchange to decline; therefore fares rose, at first slowly, soon much more rapidly. In 1914, before the war, wages for unskilled workmen in Hamburg were 45 pfennig per hour. In October, 1921, they were 7.55 marks, an increase of approximately 1,600 per cent. In 1920 salaries and wages on the system amount to 62.7 per cent of all operating expenses and during the first half of 1921 to 64.2 per cent. Several steps in the rise of the rates of fares of the Hamburg Elevated during the same time will be seen in Table II. There were various intervening steps, making about ten changes in all. A comparison in the chart of traffic with Table II shows the disastrous effect which the increase in the rates has had on the total number of passengers. This effect was the greater because of the fact that the Reichseisenbahn or Government road did not raise its rates sufficiently to accord with the fall in value of German currency. The competition of this road was therefore severe, and much of the traffic went over to the parallel route, Blankenese-Ohlsdorf.



GENERAL PLAN OF CARHOUSE, SHOPS AND POWER STATION



SUNDAY TRAIN RUNNING PLAN FOR OHLSDORF EXCURSION TRAFFIC

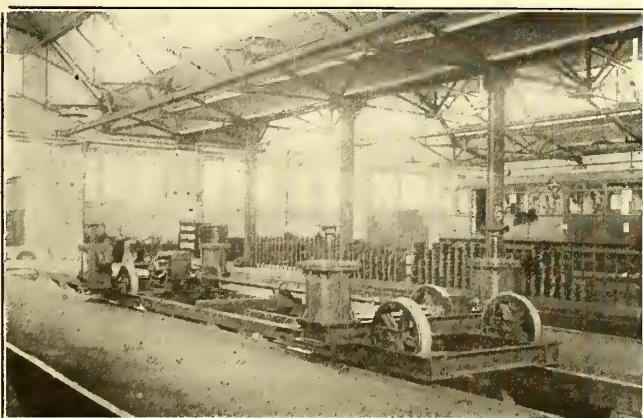
The consequence was that trains had to be run at longer intervals and the public got used to patronizing the surface street railway lines. Between November, 1920, and April, 1921, a flat fare, first of 30 pfennige, then of 40 pfennige and then of 50 pfennige, was tried, but on April 20, 1921, there was a return to the former zone fare. The second class service was abolished in December, 1920. This change was damaging to the finances of the company, but for political reasons it

seemed to be necessary. One of the accompanying diagrams shows how the average daily traffic in all branches declined in consequence of the increased fares.

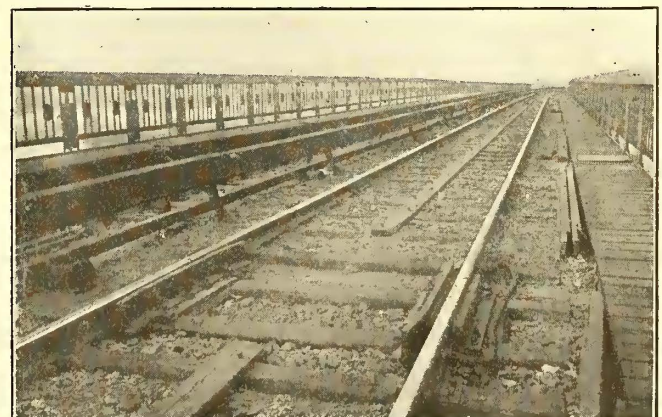
NEW ROUTES

The main lines of the Hamburg Subway and Elevated Railway, described in the ELECTRIC RAILWAY JOURNAL of 1913, were completed in 1915 and consist of 17.2 miles (27.5 km.) of route, all double track. Between the beginning of the war in 1914 and October, 1921, the length of lines increased from 12.8 miles (20.5 km.) to about 37.5 miles (60.0 km.), i.e., about three times. The length measured as single track in October, 1921, was 95.5 km., or about 60 miles.

The extensions were built by the state of Hamburg according to plans made before the war, and fortunately much of the work was finished before high prices set in. Views showing some interesting constructional features on these extensions accompany this article. Owing to the enormous rise in prices for all materials after the war, the service could not be opened on all routes to the extent originally planned. Therefore, some sections are working only with one provisional track, instead of two tracks, and all arrangements for

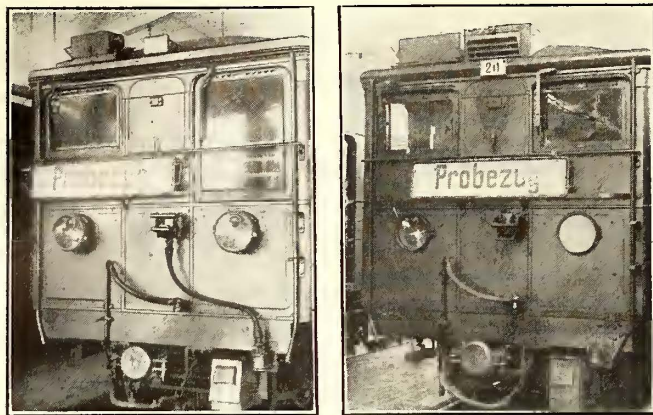


TRAVELING CAR HOIST



WOODEN GIRDER SPIKED TO TIES TO PREVENT CREEPAGE





FRONT VIEW OF OLD AND NEW TYPES OF CAR

the service were simplified as much as possible, especially as the receipts of these outer lines do not cover the operating expenses. The under-running third rail is used on all these lines.

The route from Volksdorf to Wohldorf is not yet in operation, because a surface electric railway owned by the same interests that are associated in the elevated railway runs along this route and satisfies all existing transportation needs.

As shown in the map, the main line of the subway and elevated railway is a loop or belt line, hence the headway on each branch line must be some multiple of that on the loop. Table II shows the headways and speeds used. At the beginning of the war material lowering of the speed had to be made because many of the motormen and signalmen were called to the army immediately after the mobilization. Moreover, the service had to be continued largely without signals. As the table shows, this inconvenience was overcome on Dec. 1, 1914. In 1917 the great demand for coal by the manufacturing industries made it necessary to economize with fuel and again to lower the speed. It is notable that for the lower speed of 14.2 miles (22.8 km.) per hour the energy consumption was 10 to 20 per cent less than at the higher speed. This result is shown in the chart of energy consumption. In 1920 another feature influenced the schedules; at that time the fares jumped up in consequence of a sudden declining tendency of the German money. After the fares had been raised, a greater competition of the Prussian State Suburban Railway set in. The traffic sank so rapidly that the number of trains had to be reduced.

On Sundays, during the hours of the summer excursion traffic to Ohlsdorf, through trains are run over the loop line in one direction in the morning and in the other direction in the evening, as shown in an accom-

panying small diagram. These through trains consist of four or five cars. In the opposite direction on the loop two-car trains are run.

The following figures show the average number of passengers carried per car-mile and car-kilometer:

|      | Average Number of Passengers per |               |
|------|----------------------------------|---------------|
|      | Car-Mile                         | Car-Kilometer |
| 1912 | 8.16                             | 5.10          |
| 1913 | 8.38                             | 5.24          |
| 1914 | 8.40                             | 5.25          |
| 1915 | 8.09                             | 5.06          |
| 1916 | 8.72                             | 5.45          |
| 1917 | 10.93                            | 6.83          |
| 1918 | 11.89                            | 7.43          |
| 1919 | 12.53                            | 7.83          |
| 1920 | 11.02                            | 6.89          |

Recently changes in personnel have been made to effect economy. The attendants at stations have been reduced in number, and the starting signal is given now by a train guard instead of by a station starter. The signal system has been simplified, and an automatic relay has been installed in the lighting circuit in the tunnels. The tunnel circuit is on a storage battery and formerly the lamps were kept continuously on this circuit. Now, by means of this relay, the circuit is on only when the third rail circuit fails or there is other special need for light.

NEW WORK IN BUILDINGS AND PERMANENT WAY

The proposed extension of shops and carhouses, mentioned in the ELECTRIC RAILWAY JOURNAL, Vol. XLI, page 468, has now been accomplished and a fourth carhouse of reinforced concrete has been erected. Other improvements made include measures for preventing track creepage on the elevated structure. As a preventive of this trouble a wooden stringer was laid midway between the rails and is screw-spiked to the ties. Expansion and contraction of rails in exposed

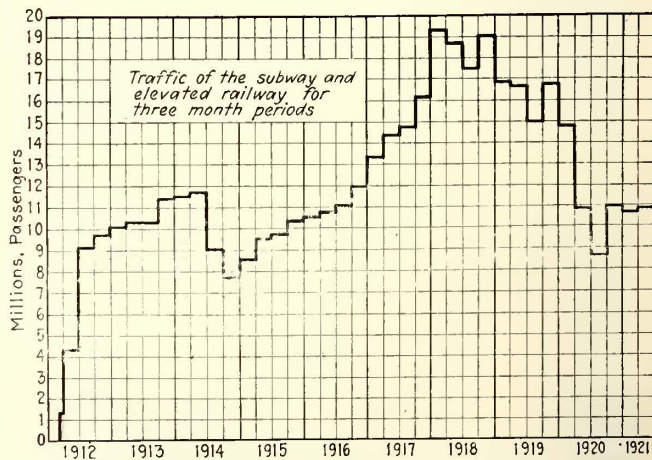


CHART SHOWING PASSENGERS CARRIED IN THREE-MONTH INTERVALS FROM BEGINNING OF OPERATIONS OF THE SUBWAY AND ELEVATED RAILWAY

TABLE IV. NUMBER OF DEFECTS IN THE ELECTRICAL CAR EQUIPMENTS

| Year  | I. Damages of the kind which affect the unit equipment. |                | II. Damages of other kinds. |     | Reverser | Controller | Contactors |
|-------|---|----------------|-----------------------------|-----|----------|------------|------------|
|       | Motor Flash-over  | Motor Air Pump | I.                          | II. |          |            |            |
| 1912  | 13  | 1              | 4                           | 13  | 10       | 7          | 33         |
| 1913  | 20  | 38             | 15                          | 40  | 50       | 75         | 24         |
| 1914  | 79  | 406            | 8                           | 9   | 44       | 80         | 21         |
| 1915  | 15  | 215            | ..                          | ..  | 39       | 71         | 26         |
| 1916  | 17  | 274            | 4                           | 26  | 23       | 65         | 26         |
| 1917  | 5   | 998            | 20                          | 66  | 20       | 85         | 15         |
| 1918  | 18  | 611            | 22                          | 71  | 20       | 98         | 26         |
| 1919  | 14  | 187            | 39                          | 50  | 20       | 59         | 21         |
| 1920  | 4   | 90             | 31                          | 49  | 15       | 50         | 18         |
| Total | 158   | 2,645          | 101                         | 262 | 210      | 537        | 166        |
| 1:11  | 1:  | 16½            | 1:                          | 2½  | 1:       | 2½         | 1:         |
|       |   |                |                             |     |          |            | 4½         |
|       |   |                |                             |     |          |            | 1,276      |
|       |   |                |                             |     |          |            | 2,005      |
|       |   |                |                             |     |          |            | 1: 1½      |

track is cared for at intervals by the expansion joint illustrated. The views show the former and the present way of making this joint, the later form having a much longer base plate. Copper bands proved liable to loss by theft and have now been replaced by steel cables. They are attached to the rail web.

The twenty cars which have been delivered recently have been built in the company's own shops and embody some new features. As they have an arch roof, ventilation in addition to that supplied by the windows was necessary, and an opening of 17½ in. x 6½ in.



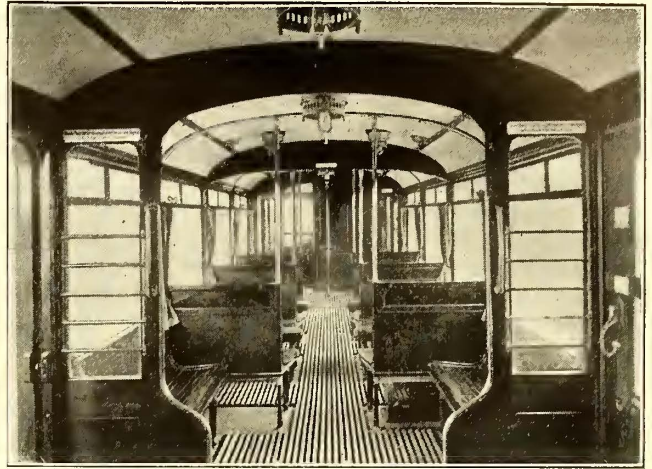
(45 cm. x 17 cm.) with louvres was provided in the hood. The marker lights are sunk into the ends of the car below the windows instead of being attached to the outside so as to provide better protection against damage. In consequence, the motorman's window has to be made smaller.

The truck construction was brought up to date; all bolt-holes are provided with renewable steel bushings; the brake shoes on two opposite wheels are connected by distance-bars to hold them accurately in place and are suspended so they can be removed by unscrewing a single bolt.

When the electrical equipment was first supplied two types of each part were delivered for test. It soon became evident that the type adopted was much more suitable for the Hamburg service than the other. This is further borne out by the small number of troubles that have occurred, as shown in Table IV.

The principal changes which have been made have been the addition of contact shoe fuses to protect all apparatus and wiring and an iron catch on each shoe so that in emergency the contact shoe can be quickly removed from the third rail.

For the shops an electro-mechanically operated hoisting car was supplied to supplement the two existing fixed electrically operated car hoists. After a car body is lifted by the fixed hoist (as described in the



CAR INTERIOR SHOWING POSTS FOR HAND-HOLD, CURTAINS ON RINGS AT WINDOWS AND OTHER INTERESTING FEATURES

ELECTRIC RAILWAY JOURNAL for March 15, 1913, page 473) the hoisting car illustrated is rolled under the body and by use of its own electrically operated hoisting device it lifts the body and rolls it to another part of the shop for any additional work. By the use of the movable hoist the fixed hoist can be used continually for hoisting and work can be done on a large number of car bodies at one time.

## How Can Salesmanship Be Applied in the Street Railway Business?

How Salesmanship Is Applied in Other Businesses Is Analyzed and Methods Applicable to Electric Railways Are Discussed—Peculiarities of the Product the Railway Has to Sell—Service to the Public

BY FRANK H. WARREN

Claim Agent Chicago, South Bend & Northern Indiana Railway,  
South Bend, Ind.

**A**N EXAMINATION of this question will disclose in the beginning some general likenesses and differences between this business and others. Railways like other businesses have something to sell, but their sales unit has the lowest price of anything except that of the post office or the chewing gum unit. The article sold does not lend itself readily to quantity sales in such a way that both seller and buyer are benefited. The street railway, along with the telephone, electric, gas and water companies and retail stores, has a market limited to the immediate territory through which its lines run. The article sold, like that of telephone companies and banks, is not a material thing that can be weighed or handled or resold; it is a service only. Electric and gas companies sell a more tangible thing which vanishes as fast as delivered, so that they really sell service too.

Retail stores, banks, wholesalers and almost all business enterprises have a considerable variety of goods to sell. The street railway and telephone companies alone have a single and invariable article to sell. Also these two businesses give a strictly personal service. A very important distinction is the fact that both street railway and telephone services are intermediary services. The thing they sell is not a desirable object in itself, but only a means to some other object.

The function of a sales organization is to sell, to increase not the output, but the sales. Practically sales are made and increased in the following ways:

1. By the personal efforts of the salesman applied to the customer.
2. By increasing stock and adding greater variety.
3. By advertising.
4. By special bargain sales.
5. By advantageous locations.
6. By the personal efficiency of salesforce.
7. By the attractive appearance of stock and sales room.
8. By service rendered customers.
9. By quality of stock.
10. By the extension of credit.
11. By increasing places of business.

Now to get to the definite and practical, which of these is adaptable to the street railway business? It would not seem possible to increase the stock. All that could be done would be to find other uses for our article, and except the telephone, none permits so little variety of use. Advertising primarily seeks to create a desire, and then tells where it can be gratified. Can advertising create a desire for more street car riding? More of this later.

Special sales dispose of old or slow-moving stocks,



create a temporary increase of receipts, bring people to your place of business, and advertise. If a street railway could put on a special sale, it could not dispose of any old stock; it might, however, create a temporary increase of receipts, it might bring people to its place of business, and it would advertise itself. If special sales are conducted at a loss on the particular articles on sale, which loss is made up by sales of other articles, how would a street railway make up the losses on bargain sales? Did you ever hear of Uncle Sam having a bargain sale on stamps? Or the Standard Oil Company on gasoline? Or the United States Steel Corporation on rails? Or Armour & Company on bacon? Or Ford on Lizzies?

The only special sale possible for a street railway is one that decreases the cost per ride but increases the cost per month or year. It must be something that will fool the buyer or stimulate him to increased

Would any company consider for a minute the extension of credit as a means of increasing sales? Hardly. Increasing places of business, which is in trade terms building new lines or extending old ones, is a natural act when a business is making money, but he is a bold man indeed who contemplates such a course with a losing venture. The use of buses might come in here, though it has more the appearance of transition than of extension. Perhaps if it were considered as an extension, it would meet with less antagonism and resistance among street railway men than it now does.

SUMMARY

To face this sales proposition squarely, it appears that three of the above elements are absolutely unusable with street railways—increase of sales stock, more advantageous locations and extensions of credit; that there are three of them positively and certainly usable—efficiency of salesforce, attractive appearance of salesroom and service rendered (quality of stock); in the realm of doubt are advertising, special sales and extension of business.

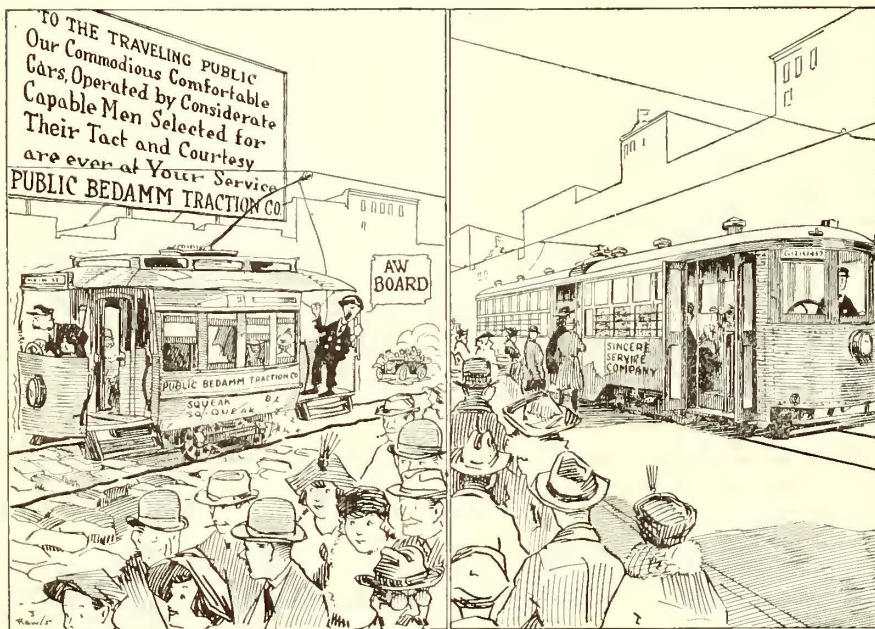
As to those classed as usable, even private business depends on them largely and almost exclusively for the development of good will, with its indirect sales value. It would seem that a street railway must make even a larger use of them in this way. But it certainly is true that the so-called salesforce are only collectors, factory workmen and delivery men, all in one. They contribute to future sales just what these factors do and no more. They are not salesmen in any true sense of the word, and from the very nature of their duties and the business itself they never can be.

Bus operation viewed as an extension of plant and service for the purpose of building up receipts and profits has received much consideration and probably deserves more. No

new business was ever developed intentionally by its enemies, and the bus will be no exception.

Special sales certainly form a limited field in this business. The efforts named above, excursions, etc., are about all that have been tried. Tickets, tokens, commutation books and weekly tickets are not properly bargain sales, because they can be bought at any time. They are rather quantity sales. Excursions are about the only real bargains offered, and their value seems to be a moot question.

To get right down to brass tacks on this advertising business, just what can advertising do to increase rid-



OUR SERVICE WILL DO WHAT ANY AMOUNT OF ADVERTISING WILL NOT DO AND ALL THE ADVERTISING IN THE WORLD WILL NOT BE EFFECTUAL UNLESS OUR SERVICE SUSTAINS THE ADVERTISING

use of service. Along these lines are quantity sales of tickets and tokens, excursions, commutation tickets, and the unlimited-rides cards or passes.

Advantageous locations are hardly in point, since changing locations is practically impossible; and, anyway, the locations are nearly always the best. The business itself has made the location good. The nearest practical approach to this factor is car rerouting.

The salespeople of a street railway are admittedly its platform men. Now practically what can the conductor or motorman do to sell rides? He can't go out on the street and solicit business. He can't make a house-to-house canvass. He never has a chance to use sales arguments. His first point of contact with the customer is after the latter has been sold. He isn't a salesman; he is a collector who makes delivery of the article as soon as he has been paid for it. The very best this man can do is to transact his part of the deal in such a way that he creates a willingness in the customer to patronize the business again, should he again want the article purchased. This so-called salesman never has a chance to create a desire for the article sold, because the sale is always made before he has any contact with the customer.

|  | American | Tribune |
|--|----------|---------|
| Price reductions, saving money or making money . . . . . | 8        | 19      |
| Quality, value or usefulness of article . . . . .        | 46       | 31      |
| Location of business and description of stock . . . . .  | 7        | 53      |
| Curiosity . . . . .                                      | 0        | 1       |
| Sentiment . . . . .                                      | 3        | 0       |
| General discussion . . . . .                             | 1        | 0       |
| Historical and imitative . . . . .                       | 1        | 0       |
| Self-improvement . . . . .                               | 6        | 0       |

ing? An examination of the advertising of the South Bend *Tribune* of Nov. 5 and of fifty-four pages of the *American Magazine* for November showed that the advertising appeal was made as above.



There were two public utility ads among the above. The classifications were not sharply drawn as given. Most ads included two or more of the above and were classified on the apparently predominating appeal.

If the proper use of advertising is to create a desire and tell where it can be gratified, street railways surely could get no benefit in the latter respect from advertising. All we can do is to seek to create a desire for something that only we can provide. Since our product is an intermediary service, it does not seem possible to create a desire for it directly. People will no longer ride street cars for the sake of the ride. The desire created must therefore be in something else, in the gratifying of which our service is a necessary or valuable element. If you can increase the show-going desire, or the picnic, or the carnival, or the visiting, or the shopping, or baseball or football, or numerous others, you will indirectly increase the riding.

But nearly all these are separate commercial enterprises already widely advertised under highly-paid and competent specialists. What could street car advertising add to this? Practically, if it could add anything, the company could derive additional revenue from what it could do.

Advertising of service is certainly limited because the only effectual advertising is the service itself. Service is soon standardized and is well known. A few short notices are all that are necessary for new or changed service. We may advertise the quality of our service without accomplishing a thing that the service itself will not accomplish. Our patrons patronize us from one to four times a day. Our service will do what any amount of advertising will not do, and all the advertising in the world will be ineffectual unless our service sustains the advertising.

How does commercial advertising attract business? One important way is through the price. Can we cut the price? Or will we advertise that tomorrow a street car ride may be bought for 5 cents? Another is through the quality, value or usefulness of the article. Are these factors in street railway business attractive in themselves? Another is mere location and description. How can we use that?

#### CONCLUSIONS

To what extent can this salesmanship idea be adopted practically?

There is sometimes a very narrow margin between success and failure. A little bigger income, a little smaller outgo, a little larger effort turns failure into success. Commercial and other history must be full of instances of organizations and individuals that have fallen just short of success.

I believe that 90 per cent or more of what we have done has been well done, and that operation from the standpoint of sales would have made not a single change in these efforts. It is only in the other 10 per cent that the errors, and the possibilities, lie. If it be granted that *all* we have done has been done from the viewpoint of operation, it is still true that 90 per cent of this has been good from the standpoint of sales. It surely must be so in any business that has been able to exist for twenty years.

There should be a change in the point of view, so as to make the most of this other 10 per cent. It is very doubtful if any material change can be made in the actual working viewpoint of the operating heads. You may get an apparent change, acquiescence that

sales must be considered, but down in their hearts these men will all believe they have always had this point of view and will see nothing more that they can do. There isn't one of them that won't really hoot at the idea that they have ever had any other viewpoint.

Therefore it seems to me that a special department must look after this feature. It must see the passenger's point of view and force consideration of that point of view. Such a department must be independent of the operating departments, and it might just as well face at the outset the fact that some of its proposals will be nullified by the operating departments. This is exactly the experience of sales departments in manufacturing enterprises.

It seems fairly obvious that the very nature of the street railway business precludes the use of some of the soundest methods of increasing revenue in private business. The conditions due to public control alone limit the activities of the industry. There may be a place in the industry for a sales organization, but just where it is and what it can accomplish are not very clear. All this discussion should bear some fruit, but it is certainly important to have in mind the very limited field of possible efforts, and not fool ourselves by expecting that a sales department will demonstrate all we have done to be utterly wrong, turn our methods topsy-turvy, and build up in a day a rejuvenated business.

### Auto Safety Circular

THE accompanying circular, entitled "To the Man at the Wheel," was got out in April, 1920, by the Binghamton Railway. It was drafted by H. H. Sneek, claim agent of the company, but was sent out under the name of the Binghamton Underwriters' Association, as indicated on the circular. A copy was sent to every

#### To the Man at the Wheel

##### A Few Hints to Avoid Accidents With Trolley Cars

- DON'T pull away from curb in front of trolley car.
- DON'T try to pass between standing vehicle and moving trolley car.
- DON'T follow car too closely as motorman may have to stop on short notice.
- DON'T cut in sharply in front of moving trolley car.
- DON'T stop suddenly on track in front of car.
- DON'T pass standing trolley car while said car is discharging or receiving passengers.
- DON'T cross tracks unless you are sure you are right.
- DON'T park auto near tracks.
- DON'T pass auto on wrong side of car; there may be another car coming in an opposite direction.
- REMEMBER trolley cars cannot turn out for you.
- HELP the insurance man to keep down your premiums, by doing your bit. It is estimated that 90 per cent of the collisions between automobiles and street cars result from the negligence of careless automobile drivers.

BINGHAMTON UNDERWRITERS' ASSOCIATION.  
BY WILLIAM H. HECOX, *President*.

SAFETY CIRCULAR FROM BINGHAMTON

automobile owner in Broome County, New York. Copies of the circular were also left in garages and given to dealers of automobile accessories, etc.

Whether due to the circular or not, there has been a large reduction in accidents on the Binghamton Railway, namely, 40 per cent from April, 1920, to April, 1921.

The company plans to send out the same circular again very shortly.

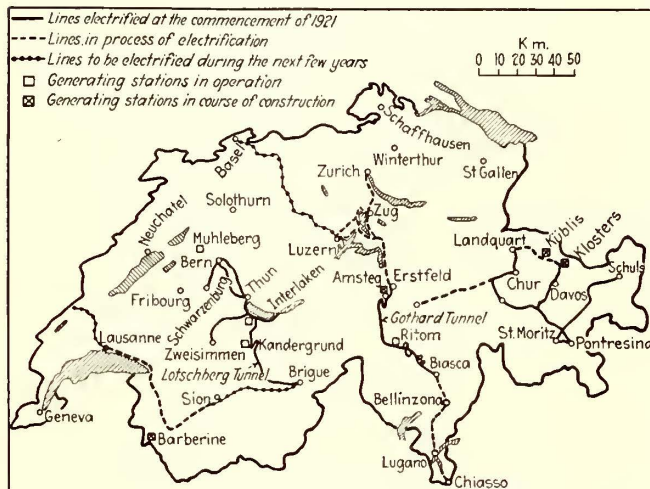


## Electrification in Holland and Switzerland

Two Advance Reports to Be Presented at the International Railway Congress in Rome Next Year Give Interesting Facts Regarding Conversion to Electrical Operation

THE bulletin of the International Railway Association for October, 1921, just issued, contains two of the advance papers on the question of electrification of steam railroads to be presented at the meeting of that association in Rome next April. One of these is presented by J. J. W. Van Loenen Martinet, chief of electric traction, Netherlands State Railways, and relates to the situation in Holland and Great Britain. The other is on Switzerland and has been prepared by Dr. E. Huber, Ing. Dipl., permanent consulting engineer to the general management of the Swiss Federal Railways and acting chief engineer for the electrification.

Mr. Martinet's discussion of the Holland electrification gives the reasons for the recommendations by this commission of a standard of 1,500 volts direct current in its report of last February. Among these reasons



MAP OF SWITZERLAND SHOWING THE ELECTRIFIED LINES AND THOSE SOON TO BE ELECTRIFIED OF THE FEDERAL RAILWAY SYSTEM

was the fact that the country is a compact one so that the distances that energy has to be transmitted are not great, the grades are light, there are many telephone and telegraph circuits close to the right-of-way so that it is desirable to reduce the chance of interference, and it is expected that multiple-unit operation will be very extensively used.

The first line to be electrically equipped is a well-traveled route between Amsterdam and Rotterdam by way of Haarlem and The Hague. In 1908 the government electrified a section of track with the single-phase system between Rotterdam, The Hague and Scheveningen, a route length of 35 km. (22 miles) and the part of this line between The Hague and Rotterdam is on the direct line of the proposed direct-current electrification. It has been decided, however, to electrify another route between these two cities by direct current so as to avoid, for the present, disturbing the existing single-phase system. The current supply will be by the overhead system as third rail construction has never been in favor in Holland, owing to the numerous private crossings and the bad soil which necessitates very frequent work on the track. With an overhead construction there would have been some advantages in favor of voltage higher

than 1,500, but the committee kept to that figure in view of the expected great use of multiple-unit trains. It is expected that the 2,000 amp. required at a speed of 100 km. (62 miles) per hour for the heaviest trains can easily be collected by two pantographs.

Mr. Martinet also gives the particulars of existing and proposed English electrifications and sees a number of points of likeness in the problems of the two countries, such as in the general tendency to centralize the generation of electrical energy, and he sees for the conditions as they exist in England and in Holland no reason for the selection of the single-phase system.

### SITUATION IN SWITZERLAND

In his article on Swiss electrification Dr. Huber declares that on the Swiss electric railways practically every system of current supply, voltage, transmission, locomotives and general arrangement can be found. The question of electrification is a very important one in Switzerland as that country has practically no coal but possesses considerable amounts of water power. In 1912 a commission appointed for the study of electric traction reported in favor of the single-phase system. This system has been employed on the recent important electrification and it has been found satisfactory. Where care is used to provide compensation, the effect of induction on both telephone and telegraph wires is slight if they are at a distance of 5 meters (16 ft.) from the track, but all other protective devices are superfluous if the low-tension currents are carried in lead sheathed cables.

Statistics have been carefully kept of the consumption of energy by trains and it has been found to vary between 43.1 and 61.7 watt-hours per ton-kilometer, depending on the season, the extent to which electric heaters are used and other conditions. The accompanying map of existing Swiss trunk-line electrifications is contained in the report, and extensive statistics are given of the various installations.

### Tribute to Business Papers

ONTARIO'S Lieutenant-Governor, Col. Henry Cockshutt, president of the Cockshutt Plough Company, director of the Bank of Montreal, etc., in an address at the annual meeting of the Canadian National Newspapers and Periodicals Association at the King Edward Hotel, Toronto, on Thursday, Nov. 10, said in part:

I believe that the influence of the business press will be one of the most important factors in re-establishing business conditions in Canada on a safe and sane basis. I make a distinction between the business newspapers and the daily press because I believe that your papers—the business newspapers of Canada—exert a greater influence than the daily press because of the greater confidence your readers have in them. People read the daily newspapers to satisfy their desire for excitement or interest or entertainment. But this is not the case with the business newspaper. Business men need the service of these papers in the conduct of their everyday business life.

In these days when there is disorganization, dissension, disruption in all walks, business, politics and religion, there is a great place for the business paper to bring out more complete information, to assist in making us all realize we must work for a common cause, the upbuilding of our country. The business men of this country need your assistance. They are looking to you for information and advice, and are expecting it. On your shoulders therefore, perhaps more than on the shoulders of any other single agency, rests the obligation to meet the needs of these trying days, with a sane and sound presentation of the case as it exists at the present time, a presentation free from private bias, or the desire to serve a popular demand.



## Valuation and Renewal Fund Considered

Evidence Presented by the Chicago Surface Lines in Fare Case Recently Closed Shows Valuation and Renewal Allowance to Be Low

IN CONNECTION with its case to show cause to the Illinois Commerce Commission why the rate of fare should not be reduced, the Chicago Surface Lines had A. L. Drum, consulting engineer, Chicago, present evidence as to the value of the property and as to the adequacy or inadequacy of the present 8 per cent maintenance, renewal and depreciation fund. One of the contentions of the city in trying to bring about a reduction in fare was that decreased cost of labor and materials was one of the reasons for a reduction in the rate of fare. Mr. Drum therefore endeavored to show the effect of the changing material and labor prices upon the value of the property. He submitted new valuations based on an inventory made during the early part of 1919 to which was applied prices to show the cost to reproduce new as of Oct. 1, 1921, and the average cost for the eight-year period 1914 to 1921. These values were compared with those he had determined in connection with the Surface Lines' case for an increase in fare in 1919. This comparison of reproduction values follows:

|   |               |
|---|---------------|
| As of April 1, 1919.....                      | \$200,371,689 |
| As of April 1, 1920.....                      | 247,246,637   |
| Average for six-year period, 1914-1919.....   | 164,812,046   |
| Average for seven-year period, 1914-1920..... | 176,588,415   |
| As of Oct. 1, 1921.....                       | 220,468,432   |
| Average for eight-year period, 1914-1921..... | 181,615,357   |

From this it is seen that the cost to reproduce new as of Oct. 1, 1921, is more than 110 per cent of the cost to reproduce new April 1, 1919, and that the average cost for the seven-year period ending in 1920 is 88 per cent of the 1919 figure, while the average for the eight-

MAINTENANCE, RENEWALS AND DEPRECIATION (VARIOUS COMPANIES) SHOWN IN PER CENT OF GROSS REVENUE OR OF OPERATING REVENUE

| Company                                      | Period Covered    | Per Cent  |
|--|-------------------|-----------|
| Chicago Surface Lines.....                   | Year 1-31-21      | 20.57 (a) |
|  | Year 1-31-21      | 20.78 (b) |
|  | Year 1-31-20      | 19.01 (a) |
|  | Year 1-31-19      | 18.98 (a) |
|  | Year 1-31-18      | 17.23 (a) |
| New York Railways (Surface).....             | Year 6-30-21      | 33.92 (b) |
|  | Year 6-30-20      | 35.45 (b) |
|  | Year 6-30-19      | 25.38 (b) |
| St. Louis.....                               | Nine months, 1921 | 23.13 (b) |
|  | Year 1920         | 22.51 (b) |
| Kansas City.....                             | Year 6-30-21      | 19.16 (a) |
|  | Year 6-30-20      | 20.98 (a) |
|  | Year 6-30-19      | 21.92 (a) |
| Milwaukee.....                               | 1-1-20 to date    | 20.00 (b) |
| Philadelphia (4 per cent Rapid Transit)..... | Year 1920         | 14.42 (c) |
|  | Year 1919         | 13.31 (c) |
|  | Year 1918         | 12.16 (c) |
| Boston (8 per cent Rapid Transit).....       | Year 1920         | 21.51 (b) |
|  | Year 1919         | 27.45 (b) |
| Third Avenue (New York).....                 | Year 6-30-20      | 25.00 (b) |
|  | Year 6-30-19      | 21.18 (b) |
|  | Year 6-30-18      | 20.00 (b) |
| Twin City (Minneapolis).....                 | Year 1920         | 21.71 (a) |
|  | Year 1919         | 20.51 (b) |
|  | Year 1918         | 18.86 (b) |
| Buffalo.....                                 | Year 1920         | 22.89 (a) |
| San Francisco (Municipal).....               | Year 6-30-21      | 17.60 (b) |
|  | Year 6-30-20      | 24.60 (b) |
|  | Year 6-30-19      | 22.72 (b) |
|  | Year 6-30-18      | 20.01 (b) |
| Cleveland.....                               | Year 1920         | 26.29 (a) |
|  | Year 1919         | 23.41 (a) |

(a) Per cent of gross revenue.  
 (b) Per cent of operating revenue.  
 (c) Per cent of gross revenue, but not including power maintenance.

year period ending 1921 is 90.46 per cent of the 1919 figure.

The city contended that because a reserve of \$11,254,215 had accumulated in the renewal and depreciation fund in thirteen years, the rate of 8 per cent of the gross earnings specified in the ordinance should be reduced, as one factor in making possible a reduction in the 8-cent fare. To answer this contention, an exhibit was submitted by Mr. Drum giving a comparison of the actual charges and credits to the fund for the ten-year period Feb. 1, 1911, to Jan. 31, 1921, with what these

TABLE OF ANNUAL RENEWAL AND DEPRECIATION ALLOWANCES PRESCRIBED BY PUBLIC AUTHORITIES

| State Commission          | Railway Company                                  | Annual Depreciation and Renewal Charge in per Cent | Computed on  |
|---------------------------|--|--|--|
| Arkansas.....             | Fort Smith Light & Traction Co.....              | 4.5  | Value of property.   |
| Connecticut.....          | Connecticut Company.....                         | 5.0  | Investment.  |
| California.....           | San Diego Electric Railway                       | 3.79   | Reproduction cost of property.                                   |
| District of Columbia..... | Capital Traction Company                         | 4.0  | On cost of property.   |
| District of Columbia..... | East Washington Heights Traction Co.....         | 2.86   | On way and structures.   |
| District of Columbia..... | Washington & Maryland Railway.....               | 3.34   | On equipment.  |
| District of Columbia..... | Washington & Maryland Railway.....               | 4.25   | On structures cost new.  |
| Georgia.....              | Georgia Railway & Power Co.....                  | 2.5  | On power plant equipment cost new.                               |
| Illinois.....             | Chicago Railways Company, et al.....             | 8.0  | Estimated value of property.                                     |
| Illinois.....             | Springfield Consolidated Railway.....            | 3.56   | Of gross receipts.   |
| Illinois.....             | Quincy Railway.....                              | 2.43   | Cost of property new.  |
| Illinois.....             | Tri-City Railway of Illinois.....                | 2.14   | Cost of property new.  |
| Illinois.....             | East St. Louis Railway.....                      | 2.24   | Value of property.   |
| Illinois.....             | Rockford City Traction Company.....              | 4.11   | Value of property.   |
| Illinois.....             | Chicago, North Shore & Milwaukee Railroad.....   | 12.00  | Of gross for first five years.                                   |
| Illinois.....             | Chicago, North Shore & Milwaukee Railroad.....   | 14.00  | Of gross for second five yrs.                                    |
| Illinois.....             | Chicago, North Shore & Milwaukee Railroad.....   | 3.5  | Of cost of additions.  |
| Massachusetts.....        | Holyoke Street Railway.....                      | 5.00   | Rolling stock—investment.  |
| Massachusetts.....        | Bay State Street Railway.....                    | 6.00   | Roadway investment.  |
| Massachusetts.....        | Bay State Street Railway.....                    | 2.64   | Based half on straight line and half on 4 per cent sinking fund. |
| Massachusetts.....        | Springfield Street Railway.....                  | 2.67   | Based half on straight line and half on 4 per cent sinking fund. |
| Michigan.....             | Houghton County Traction Company.....            | 2.0  | Cash investment.   |
| Missouri.....             | Kansas City, Clay County & St. Joseph Ry.....    | 3.0  | Value of the property.   |
| Missouri.....             | United Railways Company, St. Louis.....          | 10   | Of gross receipts.   |
| Montana.....              | Helena Light & Railway.....                      | 3.0  | Physical property.   |
| Nebraska.....             | Omaha & Lincoln Railway & Light Company.....     | 7.0  | Entire outstanding liabilities.                                  |
| New York.....             | New York & Stamford Ry.....                      | 2.0  | Track, roadway and electrical construction.                      |
| New York.....             | New York State Railways.....                     | 3.0  | Rolling stock, power house and other equipment.                  |
| Pennsylvania.....         | Erie & Buffalo & Lake Erie Traction Company..... | 3.49   | Value of the property.   |
| Pennsylvania.....         | Wilkes-Barre Railway.....                        | 3.00   | Value of the property.   |
| Pennsylvania.....         | Valley Railways Company                          | 1.57   | Value of the property.   |
| Tennessee.....            | Nashville Railway & Light Company.....           | 3.5  | Of depreciable property.   |
| Tennessee.....            | Memphis Street Railway.....                      | 3.0  | Of cost of renewable property.                                   |
| Texas.....                | Houston Electric Company                         | 4.5  | Value of the property.   |
| Wisconsin.....            | Rockford & Interurban Ry.....                    | 3.0  | Value of the property.   |
| Wisconsin.....            | Milwaukee Electric Railway & Light Company.....  | 2.82   | Value of the property.   |
| Wisconsin.....            | Waupaca Electric Light & Railway Company.....    | 3.0-4.0  | Depreciable property.  |
| Wisconsin.....            | Waupaca Electric Light & Railway Company.....    | 3.0  | Of cost new.   |
| Wisconsin.....            | Waupaca Electric Light & Railway Company.....    | 2.0  | Actual cost of depreciable tangible property.                    |

should have been on a higher estimated basis which it was held should have been allowed. Mr. Drum was of the opinion that a combined maintenance and renewal fund based on 9 per cent of the gross earnings for maintenance and 2½ per cent of the capital value of the property for renewals would be necessary to maintain and renew the property of the Chicago Surface Lines and provide sufficient funds to replace the physical property during an estimated actual service life under Chicago conditions of thirty-two and one-half years. This basis would permit of expending approximately 60 per cent of the annual renewal appropriation during the



first ten years of the life of the property. The comparison under the actual and estimated bases follows:

|  | Actual Basis  | Estimated Basis |
|--|---------------|-----------------|
| Average capital for ten years.....   | \$145,398,665 | \$145,398,665   |
| Average annual gross earnings.....   | 35,963,865    | 35,963,865      |
| Total maintenance expenditures ten years.....                                    | 34,659,289    | 32,367,479      |
| Maintenance, per cent of gross.....  | 9.64 per cent | 9.00 per cent   |
| Total appropriation for renewals, ten years.....                                 | 27,994,299    | 36,349,666      |
| Renewals, per cent of capital.....   | 1.93 per cent | 2.50 per cent   |
| Renewals, per cent of gross.....   | 7.78 per cent | 10.11 per cent  |
| Total appropriation for maintenance and renewals.....                            | 62,653,588    | 68,717,145      |
| Total appropriation for maintenance and renewals, plus interest and salvage..... | 67,456,525    | 70,828,897      |
| Total actual renewal expenditures \$21,543,021                                   | 56,202,310    | 56,202,310      |
| Total actual maintenance exp. 34,659,289   | 11,254,215    | 14,626,587      |
| Balance in fund at end of ten years.....   |               |                 |
| Shortage of maintenance and renewal appropriations and funds.....                | 3,372,371     |                 |

Mr. Drum said that when the ordinance was drawn, in 1907, few valuations of electric railway properties had been established and that the rate of 8 per cent decided upon then as the basis for computing renewals and depreciation had since been found to be low, in the light of later experience and study. As evidence of this, he introduced the accompanying table showing the annual renewal and depreciation allowances prescribed by various state commissions. Further evidence was submitted in the form of a table, also reproduced, comparing the amount set aside for maintenance renewals and depreciation by various companies and shown in per cent of gross or operating revenue.

## Prosperity a Co-operative Game

The Mutual Interests of the Public and the Public Utility Should Be Capitalized by Utility Managements to Establish Certain Facts

BY H. M. ATKINSON

Chairman of the Board,  
Georgia Railway & Power Company, Atlanta, Ga.

WHEN the public understands the reasons for the present unfortunate condition of public utilities it will insist on businesslike regulation of them. The public has most at stake in this problem and is losing most at present. The trouble is mainly due to lack of co-operation between labor, rate regulation and capital, as shown by the following facts:

Labor has an idea that it can produce less and get more. So production has diminished and there is both less for wages and less employment.

The public, acting through its rate regulating commissions, has not recognized that as prices rise the amount of service that a dollar will produce diminishes, nor that in fixing rates the decreased purchasing power of the dollar must be equalized in the fair valuation of the property or in the reasonable rate of return or in both. Capital, as a consequence, is difficult to obtain for investment in public utilities when it does not feel assured of a permanent return and adequate security.

The conditions just described have largely destroyed the purchasing power of the public utilities (including steam railroads) and is one of the main causes of the present business depression. Purchasing power is a vital factor in general prosperity. The purchasing power of the public utilities (including steam railroads) is the backbone of the country's business, because their estimated invested capital totals about thirty-five billion dollars, and it is also estimated that one person in every eight of the entire population of the country is directly dependent upon them for a living. They have been impoverished and have no purchasing power because they have been paying higher wages per man for less production per man and have been forced to furnish

service at inadequate rates. They are now unable to raise sufficient new capital to make necessary improvements. Prosperity is a co-operative game and can only be realized when there is team play.

Neither the public nor public service commissions are alone responsible for the present unfortunate condition of public utilities; owners and managers of public utilities must share the blame. Fundamental mistakes of owners and managers of certain classes of public utilities have contributed a large part of the present troubles.

The 5-cent street car fare, regardless of length of ride and difference in cost of haul, and the flat dollar rate for gas, regardless of conditions and difference in cost under which service is rendered, have contributed greatly to the present difficult position of public utilities. After a generation of these flat rates it is not strange that the public mind became crystallized on the idea that a flat 5-cent street car fare and a flat dollar rate for gas were fixtures, and that any higher rates are exorbitant and an imposition on the public. These flat rates became a part of the family budget and car fare came to mean 5 cents, neither more nor less. The fact that the public has benefited enormously for a generation from these flat rates makes the problem of changing them all the harder. This difficulty is enhanced by the fact that the public feels that it is asked to part with a valuable vested right which was inaugurated by the companies themselves.

The public and the public utilities do not understand each other's point of view and have been viewing each other's problems in a different state of mind. They have been looking at each other through glasses of different colors. Mutual understanding and confidence must be the basis for mutual co-operation. This statement is not intended to suggest a new idea, but a new spirit which gets away from partisan company argument and substitutes facts which affect the public interest. The public must be convinced of what is to its own true interest from a cold business standpoint and it must not be stated as a company matter. As evidence of a new spirit a frank admission of past mistakes by the public utilities would tend to create a more friendly and co-operative frame of mind on the part of the public, which at last is the controlling factor. This new spirit based on hope, optimism and confidence in the fairness of the public should avoid controversy and stick to facts. A few such facts may be expressed as follows:

Prove to the public that in its own interest it must provide rates sufficient to preserve its own service.

Prove to the public that a losing business will die and cease to exist.

Prove to the public that it suffers most from rates that merely keep the utilities "one lap ahead of the sheriff."

Prove to the public that it is dependent on the service of the utilities—transportation, electric power and light, and gas—in every phase of its life, even for the existence of human life itself.

Prove to the public that the war has changed all conditions permanently and adjustment to these new world conditions is necessary.

Prove to the public that prices and costs are now fairly stabilized on the basis of at least 75 per cent over pre-war costs and prices.

The public will finally admit that two and two cannot make five, and that it has lost heavily by adhering to that idea.



## Chile Starts on Extensive Electrification Program

**First Zone of State Railways, Comprising 144 Miles, Which Includes Valparaiso-Santiago Line, to Be Completely Electrified at 3,000 Volts Direct Current—Equipment Includes Thirty-nine Locomotives and Five Substations**

CHILE, the South American republic covering an area of nearly 290,000 sq.mi. and with a population of nearly 4,000,000, has decided to electrify her steam railroads, and, moreover, to electrify them according to American standards. The \$7,000,000 contract for the electrification of the first zone of the Chilean State Railways was awarded to the Westinghouse International Company, through its South American representatives, Errazuriz Simpson & Company. This project is the most important railroad electrification undertaking in 1921 and is the largest single order for electrification equipment ever received in this country.

Chile is a long, narrow country located between the Andes Mountains and the Pacific Ocean, on the west coast of South America. It is 2,629 miles long north and south and varies from 100 to 250 miles in width. The extreme length of the country results in a variety

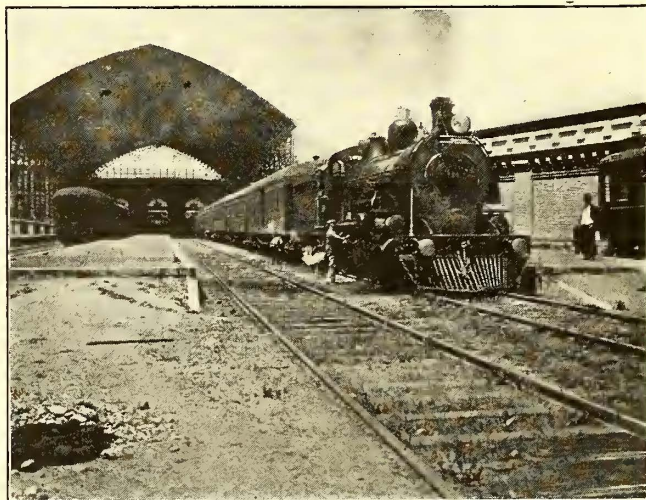
therefore considerable coal is imported. The present output of coal in Chile is 1,800,000 tons annually, while the consumption is about 2,700,000 tons, of which the railroads use 550,000 tons. Copper is also a very important mineral deposit as between 4 and 5 per cent of the world's supply comes from Chile. Iron, sulphur and gold are also mined. Other industries in Chile are farming and some fishing. The variety of climate permits the growth of a great diversity of food plants. What Chile exports to the United States is as varied in character as its imports from this country.

In import trade to Chile the United States now ranks first and Great Britain second. Published statistics of Chilean foreign trade for 1920 show imports of about \$166,100,000 and exports of about \$284,300,000, a total of about \$450,400,000. The total wealth of Chile is estimated at \$3,200,000 or almost \$800 per capita.

The total railroad mileage of Chile is 5,200, of which



THE SANTIAGO STATION OF THE CHILEAN STATE RAILWAYS



THE TRAIN SHED OF THE SANTIAGO STATION

of climatic conditions. However, in the section to be electrified at present the variation between maximum and minimum temperatures conforms to normal conditions existing in the temperate zones. The maximum temperature in the shade in the summer is from 100 to 110 deg. F. and in the sun as high as 130 to 140 deg. F., while in the winter the temperature goes as low as 20 to 25 deg. F. The rainfall in this district is relatively small. In the central and southern sections the Andes receive a heavy snowfall, making extensive water power available.

The chief products of Chile are minerals, agricultural products, live stock and lumber. Many of these products are exported and move north over the railroads. In return, coal, merchandise, machinery and food products are imported and form the bulk of the southward railroad movement. In Chile the nitrate deposits in the north rank first among the mineral deposits and supply 75 per cent of the exports. In 1913 3,000,000 tons were exported. Coal deposits rank second to those of nitrates, but in spite of this fact there is not enough coal to supply the country, and

about 30 per cent is privately owned, mainly for mining and industrial enterprises. The remainder of the mileage is divided into two general classes, the broad-gage lines and the narrow-gage lines. The former lines, with numerous branches, extend south from Valparaiso by way of Santiago to Paerto Montt, while the latter comprise most of the northern roads, with a few branch lines in the south.

The conditions that arose during the World War brought very forcefully to the attention of the railroad management the necessity for electrifying the broad-gage lines, especially the Valparaiso-Santiago line with the Los Andes branch, where traffic was rapidly approaching the track capacity. In addition, fuel costs were excessive, while the almost limitless water power was going to waste.

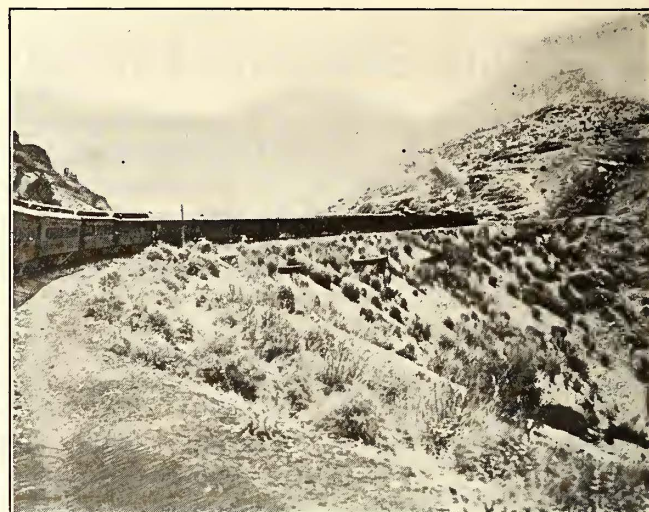
In 1918 a commission was appointed to study the problem of electrifying the broad-gage lines. This commission, consisting of Rafel S. Edwards and Ricardo P. Solar, made a careful analysis of electrifications all over the world. As a result of the possible economies shown in the report of this commission, it was decided imme-



diately to electrify the broad-gage lines beginning with the Valparaiso-Santiago and Los Andes branches, or the first zone. A loan of \$10,500,000 for this purpose was authorized and was heavily oversubscribed a few hours after offering.

The contract as awarded to the Westinghouse company includes all substation, distribution and overhead equipment. It will also do the construction work.

The initial electrification will include 116 miles from Valparaiso to Santiago and 28 miles from Las Vegas to Los Andes, as shown on the accompanying map. Los Andes is the terminus of the Transandine Railroad, a narrow-gage line, while the narrow-gage Longitudinal Railroad runs north from Calera, an important station on the line to be electrified. The maximum grade in this zone is 2.25 per cent, encountered in approaching La Cumbre (the Summit) from the West. The line contains a relatively large number of curves, the maximum being 10 deg. The track gage is 5 ft. 6 in. There are six tunnels on the main line. The longest, at San Pedro, is 1,600 ft. in length. Three of the tunnels are located on the most severe grade approaching the Summit.



TWO STEAM LOCOMOTIVES ARE NOW REQUIRED FOR A THIRTEEN-CAR PASSENGER TRAIN

The 3,000-volt, direct-current system was decided upon as best suited to the conditions. Hydro-electric power will be generated at the Maitines Station of the Chilean Electric Tramway & Light Company, Ltd. This station is already under construction and will utilize the waters of the Rio Colorado. The station will contain three 8,125-kva. generators and will have an ultimate capacity of 30,000 kw. This power, which is to be generated at 50 cycles, three-phase, will be transmitted 37 miles to Santiago by a twin-circuit, 110,000-volt transmission line. This transmission line will be connected at Santiago with the system fed by the Florida hydro-electric station and the Mapocho steam station, both of which were constructed some years ago by the Germans and were designed for 50-cycle, three-phase power. The total capacity of the three generating systems at present proposed will be, when completed, approximately 120,000 kw.

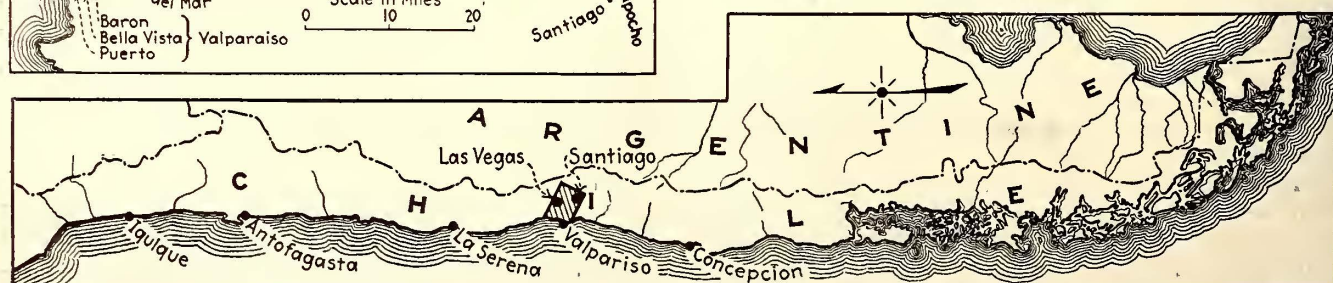
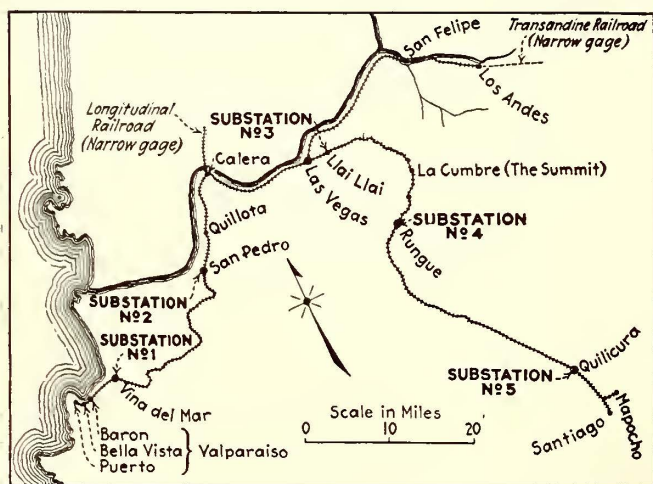
Substations Nos. 1 and 5 will receive power at 12,000 volts, while Nos. 2, 3 and 4 will receive power at 44,000 volts. Transformers and switching equipment will be of the latest design. Developed-power indicating and limiting equipment will be installed.

Thirty-nine electric locomotives are required for the initial electrification. This number includes six express passenger, eleven local passenger, fifteen road freight and seven switching locomotives. The main points of interest about these locomotives are given in the following table:

| Type of Locomotive | Weight Tons | Length Ft. In. | Wheel Arrangement | No. of Motors | Total HP. | Max. Speed M.p.h. |
|--------------------|-------------|----------------|-------------------|---------------|-----------|-------------------|
| Express passenger  | 127         | 58 ft. 6 in.   | 2-6-0 — 0-6-2     | 6             | 2,250     | 62½               |
| Local passenger    | 80          | 40 ft. 6 in.   | 0-4-0 — 0-4-0     | 4             | 1,500     | 56                |
| Road freight       | 113         | 49ft. 10in.    | 0-6-0 — 0-6-0     | 6             | 1,680     | 40                |
| Switching          | 65          | 40ft.          | 0-4-0 — 0-4-0     | 4             | 480       | 34                |

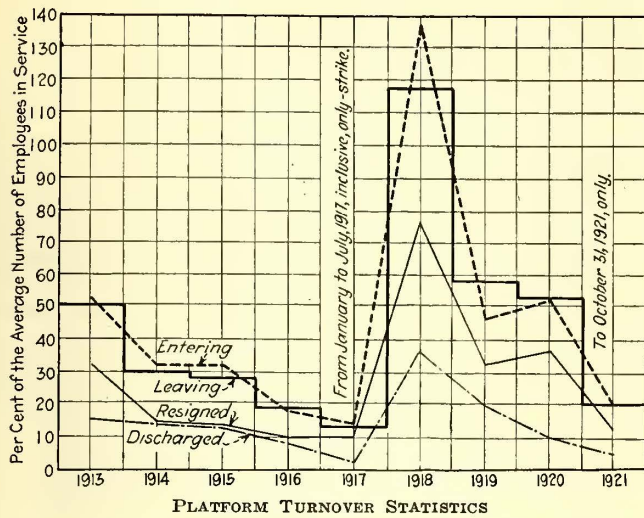
The express passenger and road freight locomotives will be equipped with regenerative braking. The service in which the local passenger locomotives will operate will not require this feature.

The fact that this contract includes only the first railroad zone indicates the magnitude of the electrification project which Chile has undertaken.



MAP OF THE FIRST ZONE OF THE CHILEAN STATE RAILWAYS TO BE ELECTRIFIED





### Another "Human Nature Study"

FINDING the right men to operate the cars and, when found, keeping them contented are railway operating problems to which the Market Street Railway, San Francisco, has given careful attention for years. So much importance has been placed on the human element that the records of every resignation or discharge are analyzed and company committees having charge of "social service" are constantly planning means of decreasing labor turnover and doing all that a company can properly do to keep the men contented. When the data on page 731 of the Oct. 22, 1921, ELECTRIC RAILWAY JOURNAL appeared the Market Street Railway supplied corresponding figures covering its system, which are given in the accompanying table and chart.

The table shows that, except for the strike period, the company has been approaching a normal labor turnover of 25 to 30 per cent of the total

employed. This is believed to be an exceptionally good record. At least in part it is ascribed to the effectiveness of the company's social service activities. This work is carefully planned to avoid coddling or paternalism.

Its total cost is about \$75,000 to \$100,000 a year and includes hospital service, pension system, insurance up to \$1,000 per employee, club rooms, low interest loans and, in general, regard for the personal welfare of employees. The men pay 50 cents per month hospital fee, but the total collections fall short of the hospital expense by \$25,000 per annum, which the company pays.

The fact that the lowest labor turnover occurred just previous to the big strike of 1917 is cited by the company as proof of the fact that the strike was incited wholly by outside influences. The company does not recognize any union and the carmen are not organized as a union. Although San Francisco is a labor union stronghold, attempts that have several times been made to organize the platform men have been without any effect.

An interesting feature of this company's employment record is that the United States Army alpha tests have not proved very helpful in selecting platform men. After using these tests for a year they were discontinued largely because some of the applicants who turned out to be the very best platform men did so after failing utterly in the alpha tests. The company's records also show that the best men often break in slowly. Seven days, the average length of time for breaking in, sometimes has to be lengthened to fifteen days for the instruction of men who ultimately turn out to be the best motormen or conductors.

CAUSES OF MEN LEAVING SERVICE 1913 to 1921 (Oct. 31, Inclusive)

|   | 1913         | 1914         | 1915         | 1916         | 1917         | 1918         | 1919         | 1920         | 1921         | Total        |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| <b>Resigned</b>                             |              |              |              |              |              |              |              |              |              |              |
| Allowed to resign.....                      | 9            | 7            | 1            | 5            | 5            | 15           | 3            | 0            | 5            | 50           |
| On account of accident.....                 | 8            | 2            | 2            | 1            | 1            | 7            | 3            |              | 1            | 25           |
| Dissatisfied.....                           | 22           | 2            | 15           | 14           | 34           | 47           | 17           | 64           | 14           | 229          |
| Family trouble.....                         | 7            | 4            | 4            | 1            | 1            | 7            | 4            | 2            | 4            | 34           |
| Leaving city.....                           | 65           | 46           | 43           | 32           | 22           | 191          | 140          | 45           | 21           | 605          |
| Could not learn.....                        | 31           | 17           | 12           | 13           | 4            | 21           |              | 8            | 3            | 109          |
| Mental trouble.....                         | 8            |              |              |              |              | 4            |              |              |              | 13           |
| Other work.....                             | 230          | 101          | 102          | 70           | 88           | 293          | 148          | 345          | 109          | 1,486        |
| On account of reprimand.....                |              |              |              |              | 1            | 7            | 1            | 2            | 3            | 14           |
| Sickness.....                               | 24           | 9            | 9            | 12           | 9            | 61           | 37           | 64           | 27           | 252          |
| Students.....                               | 104          | 45           | 44           | 18           | 14           | 366          | 104          | 103          | 24           | 822          |
| While suspended.....                        | 25           | 11           | 8            | 8            | 2            | 33           | 17           | 14           | 6            | 124          |
| Work too hard.....                          |              |              |              |              |              | 10           | 3            |              |              | 16           |
| Did not like extra list.....                |              |              |              |              |              | 2            |              |              |              | 2            |
| While on leave of absence.....              | 20           | 3            | 7            | 8            | 2            | 23           | 12           |              |              | 75           |
| No reason given.....                        | 85           | 33           | 27           | 21           | 6            | 265          | 90           | 19           |              | 546          |
| Did not like work.....                      | 3            | 2            | 1            |              |              | 25           | 4            |              |              | 36           |
| Tired of the work.....                      | 1            |              |              |              |              | 4            | 2            |              |              | 7            |
| By request.....                             | 1            | 2            |              |              |              | 1            |              |              |              | 4            |
| Miscellaneous.....                          |              |              |              |              |              | 1            |              |              |              | 2            |
| <b>Dropped</b>                              |              |              |              |              |              |              |              |              |              |              |
| For not reporting for work.....             | 18           | 23           | 24           | 18           | 6            | 211          | 105          | 92           | 18           | 515          |
| For working elsewhere.....                  | 2            | 8            | 5            | 2            |              | 14           | 21           | 13           | 7            | 72           |
| <b>Deceased.....</b>                        |              |              |              |              |              |              |              |              |              |              |
|   | 9            | 17           | 7            | 14           |              | 24           | 23           | 16           | 11           | 121          |
| <b>Discharged</b>                           |              |              |              |              |              |              |              |              |              |              |
| Too many accidents.....                     | 5            | 5            | 5            | 3            | 2            | 5            | 8            |              | 5            | 38           |
| Collision with car.....                     | 28           | 21           | 27           | 9            | 3            | 27           | 39           | 20           | 14           | 188          |
| Convicted of felony.....                    |              |              | 2            |              |              | 2            | 2            | 1            | 3            | 10           |
| Carrying concealed weapons.....             |              |              |              |              |              |              |              |              |              | 1            |
| Drinking.....                               | 31           | 44           | 39           | 21           | 11           | 64           | 23           | 10           | 15           | 258          |
| Failing to register fares.....              | 82           | 62           | 36           | 31           | 12           | 154          | 32           | 14           | 11           | 434          |
| Fighting.....                               | 1            | 2            | 4            | 1            |              | 6            | 10           | 4            | 2            | 30           |
| Insolence to company official.....          | 3            |              | 1            |              |              | 4            | 1            | 4            | 1            | 14           |
| Incompetent.....                            | 30           | 8            | 12           | 10           | 3            | 19           | 8            | 4            | 1            | 95           |
| Oversleeping.....                           | 18           | 19           | 9            | 12           | 4            | 83           | 48           | 32           | 16           | 241          |
| Reckless running.....                       | 1            | 4            | 2            | 2            | 2            | 12           | 13           | 5            | 5            | 46           |
| Rear end collisions.....                    | 28           | 13           | 2            | 3            | 3            | 17           | 17           | 6            | 8            | 97           |
| Tampering with fare boxes.....              |              | 2            |              |              |              |              | 1            | 1            | 1            | 5            |
| Trouble with passengers.....                | 1            | 2            |              |              |              | 3            | 3            | 5            | 6            | 20           |
| Unsatisfactory references.....              | 5            | 3            | 1            | 3            | 2            | 3            | 5            | 3            | 1            | 26           |
| Refusing to work.....                       | 7            | 9            | 2            | 3            | 1            | 21           | 18           | 12           | 6            | 79           |
| Concealing past record.....                 | 11           | 3            | 7            | 1            |              | 3            |              | 1            | 1            | 27           |
| Good of the service.....                    | 7            | 6            | 53           | 9            | 5            | 37           | 52           | 3            |              | 172          |
| Services unsatisfactory.....                | 15           | 10           | 7            | 4            | 3            |              | 16           | 19           | 7            | 81           |
| Missing fares.....                          | 3            |              |              |              |              |              |              |              |              | 4            |
| Insubordination.....                        | 6            | 2            | 3            | 1            | 1            | 17           | 3            | 3            |              | 36           |
| Not reporting accidents.....                | 12           | 9            | 5            |              |              | 1            | 3            | 7            | 1            | 38           |
| Falsifying day card.....                    | 1            |              | 1            |              |              |              |              |              |              | 2            |
| False report against supt.....              | 1            |              |              |              |              |              |              |              |              | 1            |
| Splitting switch.....                       | 1            | 2            |              |              |              |              |              |              |              | 1            |
| Turning car over.....                       | 1            |              |              |              |              |              |              |              |              | 1            |
| Assaulting passenger.....                   | 2            |              |              |              |              |              |              |              |              | 4            |
| Discourtesy to passengers.....              | 2            | 7            | 6            | 3            |              |              |              | 1            |              | 19           |
| Holding out receipts.....                   | 4            | 3            | 2            | 3            |              |              | 2            |              |              | 19           |
| Losing control of car.....                  | 1            | 2            |              |              |              | 3            | 4            |              |              | 10           |
| Operating car without authority.....        | 1            | 1            |              |              |              | 1            | 3            | 1            |              | 7            |
| Running into bumper.....                    | 1            |              | 2            |              |              |              | 1            |              |              | 4            |
| Unsatisfactory collections.....             | 1            |              |              |              |              |              |              |              |              | 1            |
| Morally unfit.....                          | 1            |              |              |              |              |              |              |              |              | 1            |
| Cutting cable.....                          | 1            |              | 1            |              |              | 1            |              | 1            |              | 4            |
| Smoking on duty.....                        | 1            | 5            | 1            | 1            |              |              |              |              |              | 8            |
| Tampering with register.....                | 2            |              |              |              |              |              |              |              |              | 2            |
| Selling badge.....                          |              | 2            |              |              |              |              |              |              |              | 1            |
| Carrying persons free.....                  |              | 1            | 1            |              |              |              |              |              | 1            | 4            |
| Allowing conductor to run car.....          |              | 1            |              |              |              | 4            | 1            | 1            |              | 7            |
| Running away from passengers.....           |              | 1            |              |              |              |              | 6            | 2            |              | 9            |
| Gambling on company's premises.....         |              | 1            |              |              |              | 3            | 8            |              | 1            | 13           |
| Not turning in lost articles.....           |              | 2            | 1            | 1            |              | 2            | 1            | 1            |              | 8            |
| Falsifying application.....                 |              |              | 1            |              |              | 6            | 1            |              |              | 8            |
| Derailing car.....                          |              |              |              | 2            | 1            |              |              | 2            |              | 5            |
| Abusing equipment.....                      |              |              |              |              |              |              |              | 1            |              | 1            |
| <b>Total leaving.....</b>                   | <b>988</b>   | <b>586</b>   | <b>544</b>   | <b>361</b>   | <b>254</b>   | <b>2,129</b> | <b>1,064</b> | <b>952</b>   | <b>363</b>   | <b>7,243</b> |
| <b>Total number employed.....</b>           | <b>1,026</b> | <b>559</b>   | <b>629</b>   | <b>344</b>   | <b>264</b>   | <b>2,499</b> | <b>847</b>   | <b>933</b>   | <b>348</b>   | <b>.....</b> |
| <b>Average number regular employes.....</b> | <b>1,906</b> | <b>1,911</b> | <b>1,966</b> | <b>1,875</b> | <b>1,856</b> | <b>1,820</b> | <b>1,809</b> | <b>1,786</b> | <b>1,764</b> | <b>.....</b> |
| <b>SUMMARY</b>                              |              |              |              |              |              |              |              |              |              |              |
| Resigned.....                               | 644          | 285          | 275          | 204          | 189          | 1,385        | 586          | 666          | 219          | .....        |
| Dropped.....                                | 20           | 31           | 29           | 20           | 6            | 225          | 126          | 105          | 25           | .....        |
| Deceased.....                               | 9            | 17           | 7            | 14           |              | 24           | 23           | 16           | 11           | .....        |
| Discharged.....                             | 315          | 253          | 233          | 123          | 59           | 497          | 329          | 165          | 108          | .....        |

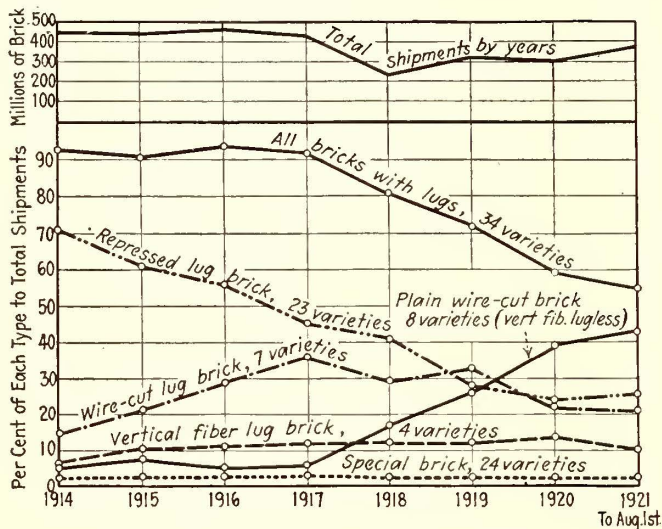


## Paving Brick Varieties Simplified

Number of Type Has Been Reduced from Sixty-six to Eleven Made in Four Standard Sizes —  
Electric Railway Types Have Been Classified as Specials

THE final conference on the elimination of the excess varieties of paving brick was held in Washington on Nov. 15 under the auspices of the Department of Commerce. A preliminary conference had been held on Aug. 30. Those in attendance at the recent conference were the representatives of more than forty manufacturers, as well as many public works officials and engineers representing all interested engineering societies and users of paving brick.

The National Paving Brick Manufacturers' Association presented a report of a variety survey in the vitrified paving brick industry. This report, covering a period of eight years, represented statistics gathered from 90 per cent of the plants in the United States



PERCENTAGE OF TOTAL SHIPMENTS FORMED BY EACH OF THE FIVE GROUPS OR CLASSIFICATIONS

which produced paving brick. After discussing each variety of brick in great detail, the conference decided to eliminate all but eleven of the sixty-six varieties tabulated in the report. There have been sixty-six different sizes more or less current since 1914, which are divided into five major groups as follows: Plain wire-cut brick (vertical fiber lugless), repressed-lug brick, vertical-fiber lug brick, wire-cut lug brick and special brick. The latter group has been divided into the following classes: (a) Wire-cut lug Hillside brick, (b) repressed-lug Hillside brick, (c) electric railway track brick, (d) miscellaneous special brick.

The chart reproduced herewith indicates a steady fall from favor of the repressed-lug brick and a rapid gain for the plain wire-cut brick. It will also be noted that all varieties of special brick, including electric railway track brick, have never exceeded 3 per cent of the total of all kinds shipped annually. Today the percentage of electric railway brick is about 9½ per cent of all types of special brick and about 1 per cent of all brick made, which indicates the relative unimportance from the production standpoint of these latter types. Electric railway specials are those sometimes called "nose," "hump," "flangeway," and "stretcher" brick, being used at the gage lines only to form a groove or flangeway for the wheel flanges.

The conference eliminated all such special bricks from

the standard list and retained only the special type known as "Hillside," which is coming into extensive use on heavy grades to provide a better foothold for horses. This size has been retained since in recent years over 95 per cent of the eight varieties of electric railway track brick used have been of the 3 x 4 x 8½-in. size. Manufacturers will continue to supply these special bricks as heretofore, but at a small premium over the standard sizes, and it will be possible for years to come to obtain by special order any of the eliminated odd sizes which may be needed for repairs. In the past the extra cost of special sizes has been loaded on to the buyers generally, but now it will be properly assessed against those who find it necessary to depart from the standard.

The standard sizes henceforth to be carried are:

| Width  | Depth | Length | Varieties |        |   |
|--------|-------|--------|-----------|--------|---|
| 3½ in. | x     | 4 in.  | x         | 8½ in. | 6 |
| 3½     | x     | 4      | x         | 8½     | 2 |
| 3½     | x     | 3½     | x         | 8½     | 2 |
| 3½     | x     | 3      | x         | 8½     | 1 |

A permissible variation in length, width and depth was decided upon as follows: ½ in. in width or depth and ½ in. in length.

The American Electric Railway Engineering Association was represented at the conference by Francis Tingley of the way committee, who was designated by President C. S. Kimball.

## Street Cars Crossing the Delaware

PRIMARILY for the accommodation of traffic that may be considered as local, a suspension bridge is about to be constructed over the Delaware River connecting Philadelphia and Camden. This will be of national interest and importance, since one of its chief purposes will be to accommodate vehicular traffic, and taken in connection with the projected vehicular tunnel, which will more closely unite points in New Jersey with New York, the Delaware River bridge will form a very important link in the system of highways from the Pacific to the Atlantic.

The eastern bank of the Delaware is to Philadelphia what eastern New Jersey is to New York City, for many thousands of persons who are employed in Philadelphia reside in Camden and its suburbs. Camden's thrifty factories also draw many workers from Philadelphia who go back and forth daily. As the only facilities for the heavy daily movement are the ferries, it is evident that the Delaware bridge is needed.

The Philadelphia-Camden structure will have, according to the engineers, the longest span of any bridge in the world, its length being 1,750 ft. center to center of the main piers. It has an overhead clearance about high water of about 135 ft. and in the center of the span an unobstructed opening for navigation is provided over a width of 800 ft. The bridge and approaches will provide a single deck carrying an unobstructed roadway for six lines of vehicles, two lines of surface cars, and two lines for rapid transit, with two 10-ft. sidewalks above the roadway.

The total cost of the structure and approaches is estimated at \$28,871,000, which is divided as follows: State of Pennsylvania, \$8,221,000; State of New Jersey, \$12,429,000, and city of Philadelphia, \$8,221,000. The financing of the project has been arranged and it is expected that the work will be rushed to completion and will be finished by 1926, in time for the sesquicentennial exposition which is in contemplation.



## Reasonable Value Defined

Court of Appeals of the District of Columbia Holds that Changes in Values by the World War Must Be Considered in Rate Cases

THE obligation of a commission in a rate case to take into consideration changes in reproduction cost due to war inflation is upheld in a case recently decided by the Court of Appeals of the District of Columbia. The case was that of the Potomac Electric Power Company and the Washington Railway & Electric Company vs. the Public Utilities Commission of the District of Columbia. The valuation in question was that of the Potomac Electric Company, which the commission valued in 1914 at \$10,250,000, and when it was called upon in 1917 to fix rates on the value of the property it took this figure and added to it only the actual cost of the subsequent additions. The company contended that the commission should also have taken into consideration in this rate valuation the increased value of the property, owing to the general sharp rise in general prices, but this the commission declined to do. The lower court decided in favor of the commission, but the company appealed. In the meantime, the difference between the lower and the higher rate per kilowatt-hour has been impounded by the court and amounts at the present time to approximately \$2,500,000.

### COURT REMANDS CASE

The Court of Appeals in its opinion first decides it has jurisdiction under the act creating the public utilities commission. It then considers the question of valuation and says, in part:

The principal object of valuation, of course, is to provide a rate base, and the statute clearly contemplates that the commission shall ascertain the value as of "the time of said valuation," and not as of some anterior date. It has been ruled many times that there must be a fair return to a public utility "upon the reasonable value of the property at the time it is being used for the public," *San Diego Land and Town Co. vs National City*, 174 U. S. 739, 757; *Minnesota Rate Cases*, 230 U. S. 352, 434. In the present case the commission, in effect, declined to find the present value of the property because not satisfied as to how long existing conditions would continue. In assuming this position the commission must have overlooked paragraph 9 of the statute, authorizing it at any time, of its own initiative, to make a revaluation of the property of any public utility. In our view, it was the duty of the commission to have considered and given due weight to the evidence as to the then value of the property. As conditions changed and values were substantially affected, it would have been the further duty of the commission to exercise its discretion and revalue the property. The conditions existing were worldwide, and while their duration and future effect were problematical there was no immediate prospect of a return to normal conditions. It may be suggested, although the point was not raised in the opinion of the commission, that practical difficulties would have been encountered in an attempt to ascertain the increase in value of the property between July 1, 1914, and December 31, 1916. But there was substantial evidence before the commission as to the rise in values and a brief investigation would have enabled the commission to determine, with substantial accuracy, how much in fairness should be added to the earlier valuation.

Much reliance was placed by the trial court upon the language of former Justice Hughes, as referee, in the case of the Brooklyn Borough Gas Company vs. Public Service Commission (July 24, 1918), but we find nothing in the report, as we read it, justifying the action of the commission here in entirely ignoring the evidence as to value at the time the finding actually was made. The contention there was that the rates should be based "upon a plant valuation simply representing a hypothetical cost of reproduction" at a time of abnormally high prices due to exceptional conditions. There is a very substantial difference between considering the present cost of reproduction as one of the essential and important elements in the determination

of present value and the acceptance, as conclusive evidence of such value, of mere expert estimates of present cost of reproduction.

We are of the view, therefore, that the present cost of reproduction is one of the necessary elements for consideration, along with other relevant facts, in fixing the fair and reasonable value of the property. The law deals with existing conditions and not with abstract theories.

In consequence the court held that the case must be reversed and the cause remanded for further proceedings.

A dissenting opinion was filed by Chief Justice Smyth, who declares, first, that the opinion just quoted should have instructed the commission as to how much should be added to the value of the property. He continues that in his opinion nothing more should be added, for the following reasons, among others: The increase was not due to any investment by the company, but purely from the World War; such a conclusion is more in harmony with the Brooklyn and Minnesota rate cases; finally, he considers the valuation allowed a liberal one.

## Wage Reductions Average 15 per Cent

WAGE reductions during August and September of from 3 per cent to 50 per cent and averaging 14.9 per cent for over 400,000 additional workers in 259 industrial groups and establishments are shown in a special digest made by the J. L. Jacobs Company, engineers and statisticians, of Chicago. This average of 14.9 per cent compares with the average reduction of 15.9 per cent in wages for over 4,540,000 employees in 693 other establishments and group industries throughout the country reported during the first seven months.

Among the public utilities, wage reductions were reported during the last sixty days by forty-five additional organizations, most of the reductions being for street railway employees. Of these organizations,

WAGE REDUCTIONS BY INDUSTRIES FROM JANUARY TO OCTOBER, 1921

|  | Number Establishments or Groups | Estimated Number Employees Affected | Average Wage Reduction, per Cent |
|--|---------------------------------|-------------------------------------|----------------------------------|
| Cotton manufacturing.....                | 23                              | 213,000                             | 25.7                             |
| Hosiery and underwear manufacturing..... | 8                               | 7,000                               | 24.3                             |
| Leather manufacturing.....               | 7                               | 14,500                              | 23.6                             |
| Woolen manufacturing.....                | 26                              | 100,200                             | 20.0                             |
| Car building and repairing.....          | 12                              | 15,600                              | 19.6                             |
| Iron and steel manufacturing.....        | 99*                             | 412,800                             | 19.2                             |
| Mining.....                              | 24                              | 128,500                             | 19.0                             |
| Packing industry.....                    | 1*                              | 200,000                             | 19.0                             |
| Boot and shoe manufacturing.....         | 30                              | 49,000                              | 18.8                             |
| Building materials manufacturing.....    | 16                              | 6,800                               | 18.3                             |
| Electrical manufacturing.....            | 6                               | 75,500                              | 18.2                             |
| Rubber goods manufacturing.....          | 13                              | 12,500                              | 17.9                             |
| Silk manufacturing.....                  | 22                              | 30,500                              | 17.5                             |
| Building trades (cities).....            | 176                             | 477,500                             | 17.3                             |
| Public employment.....                   | 54                              | 108,000                             | 16.8                             |
| Men's clothing manufacturing.....        | 7*                              | 100,000                             | 16.7                             |
| Paper manufacturing.....                 | 22                              | 24,000                              | 16.6                             |
| Public utilities.....                    | 152                             | 137,000                             | 15.0                             |
| Shipbuilding.....                        | 20                              | 109,300                             | 14.8                             |
| Express employees (railroads).....       | 1*                              | 50,000                              | 12.5                             |
| Railroad employees.....                  | 1*                              | 1,829,000                           | 12.5                             |
| Miscellaneous.....                       | 232                             | 847,000                             | 17.0                             |
| Totals and average.....                  | 952                             | 4,947,700                           | 16.0                             |

\* Entire group of industry included.

twelve reduced wages 5 per cent to 9 per cent, twenty reported reductions of from 10 per cent to 14 per cent, eight from 15 per cent to 19 per cent and five from 20 per cent to 24 per cent. Some of the larger street railways reporting reductions were in New York, Brooklyn, Boston, Denver, San Francisco, Los Angeles, Seattle, Omaha, Topeka, Council Bluffs, Mobile, Ala., Fort Wayne, and Newark, N. J.

A tabulation of average wage reductions by industries is given above.



## Subway Construction Proposed to Aid Unemployment

Unification of London's Transportation Facilities Outlined by Lord Ashfield, in Which Planned Subway Extensions Would Give Work to 20,000—Government Asked to Guarantee Interest on New Capital

**L**ORD ASHFIELD, chairman of the London Traffic Combine, has outlined an extensive scheme for unifying London's transportation facilities and at the same time helping the unemployment problem. He estimates that the subway extensions planned for London will take two years to complete at a cost of £6,000,000. About 20,000 men will be employed who will receive from 70 to 75 per cent of the expenditure as wages. The scheme has already been submitted to the government in connection with the policy under which the government offers to guarantee the interest on capital issues, amounting in all to £25,000,000, to be devoted to works for the purpose of providing employment for British labor.

The London subways have made these proposals to the government:

1. The government to guarantee the payment of interest on the new capital issue to the subscribers, so as to make the new stock a gilt-edged security, and enable the company to obtain the money required at a lower rate of interest than it would otherwise be able.

2. The company to give an undertaking to the government that interest on the new issue would rank as a first charge on the net earnings of the underground combine, and thus guarantee the government against any liability in respect to the undertaking.

3. The government to agree to pass a bill in the present session of Parliament prohibiting other people for ten years from placing motor-omnibus services on the roads of Greater London in competition with the omnibuses of the combine (*i.e.*, London subways, buses and tramways, which are administered by one authority.

Questioned on proposal (3), Lord Ashfield says "The London General Omnibus Company operates buses on what may be termed a yearly tenure. It is free to anybody, within the police regulations, to bring omnibuses into service in London. That is really the crux of the whole position. Unless there is more security given to the company so that it may be able to earn money upon which to meet the additional burden which we are prepared to take, it will be quite impossible for us to commence these improvements."

As the traffic legislation now stands, there is always the possibility of small concerns putting buses into operation. These concerns, as Lord Ashfield puts it, "run their buses along the most select routes at the most select hours, in any fashion they like, solely with the purpose of seeing how much they can make out of it. They take no part in the transport problem. They leave it to the big company to provide services which are not remunerative and take to themselves just those services which offer the best chance of making a living. They come in feeling sure that sooner or later the big company must buy them out. It is not only the buses which are harmed by this system, the subways and tramways feel it too. The whole London transport system could be very easily upset by the introduction of a very small number of these buses."

The London Traffic Combine now has to set aside certain sums of money in order to cope with the "pirates" which, if preventive legislation were introduced, could

be devoted to the furtherance of their schemes. Such legislation would not, of course, affect those motor-coach concerns that run services over long distances between London and other towns. Parliamentary powers for the subway extensions are possessed by the combine, and the schemes have already been approved by a Parliamentary committee, which is urging immediate government action.

At a full meeting of London members of the House of Commons, held chiefly for the purpose of considering the unemployment problem, Lord Ashfield attended and explained the proposals outlined above. A discussion ensued, after which the following resolution was adopted:

"That this meeting of London members recognizes the importance of proceeding forthwith with the works already authorized by Parliament for the improvement and development of the underground railway system, as adding to the traffic facilities of London, relieving the present congestion, and, more especially at this time, as providing employment for several thousands of work-people. It, therefore, approves in general the proposals which have been put before it by Lord Ashfield for this purpose, and strongly urges upon the government the need for taking immediate steps to investigate them on the distinct understanding that capital and interest are properly secured, and subject to the tramway undertakings of the various local authorities affected being protected."

### Can Any One Equal This Record?

**O**N THE seven divisions of the Louisville & Interurban Railroad 1,440,000 cans of milk have been handled in the last three years with the loss of only one 5-gal. can and with no claims whatever. An average of 200,000 gal. of milk is handled per month, with an average haul of about 15 miles and a monthly revenue of approximately \$3,000. The general claims covering all freight handled by the company during the year 1920 and thus far in 1921 have amounted to less than one-twentieth of 1 per cent of the gross revenue from freight. R. H. Wyatt, general superintendent, is credited with this fine showing.

### Waiting Station as an Advertisement



ATTRACTIVE WAITING STATION

**T**HE accompanying illustration shows a waiting station which was built by the Standard Oil Company and donated to the Pacific Electric Railway. It is located near the Standard Oil plant at San Pedro, Cal.



## Kentucky Utility Men Get Together

Great Emphasis Laid on Service and on United Effort of Utilities to Inform Public and to Protect Each Other in Unfair Legislation and Court Action

UTILITY men of Kentucky gathered in Louisville on the evening of Nov. 21 to join in a memorable dinner and party as the guests of James P. Barnes, president of the Louisville Railway. This was given at Safety Hall, a unique and attractive place roughly finished off in an old shop building to serve as the meeting place of the employees of the Louisville Railway. The turkey dinner was prepared and served on the premises by employees. This was followed by a program of entertainment by trainmen which because of its originality and excellence proved to be of great interest to the 106 guests. Mr. Barnes received many congratulations upon the spirit with which the employees entered into this occasion. The party afforded a splendid opportunity for the utility operators to get better acquainted and in this respect was a most valuable contribution to the annual convention of the Kentucky Association of Public Utilities which convened the following day at the Seelbach Hotel.

President P. S. Pogue, president and general manager of the Louisville Home Telephone Company, presided. In his address he urged greater attention on the part of utility men to the work of informing the public on public utility matters, of doing the utmost to give excellence of service and in other respects to give first consideration to matters of public relations. He hoped that the association might be made a stronger instrumentality in looking after the welfare of the members and suggested that it be made a clearing house for information through the appointment of certain committees to which questions might be addressed by the member companies. He also urged the re-establishment of the association bulletin.

### A UNITED FRONT NEEDED

Donald McDonald, vice-president and general manager of the Louisville Gas & Electric Company, prefaced his paper on "The Outlook for Power and Light Companies" by emphasizing the great importance of the utility business. He said that measured by service rendered, number of employees, amount of capital invested or number of security holders, it was the largest business in the country with the one exception of farming. He laid great stress upon the need for co-operation among utility companies in self-protection, commenting that any adverse decision affecting any one company should be fought by all utility companies, for any unfair decision against one would affect all sooner or later. He urged that steps be taken to inform all employees and all security holders of utilities, as well as those of manufacturers serving the utility companies, of the effect that attacks upon the public utilities have on them. He lamented the fact that the utility companies seemed to be lacking in the herd instinct to present a united front to protect themselves, and thought that if all persons directly or indirectly connected with the business were properly informed a very formidable support of what is right in the business could be mustered upon occasion.

He spoke briefly of the hardships

brought upon the companies as a result of war, but said also that there had been gains resulting from the war. The service rendered by utilities has been proved to be more reliable than any other necessity. The public has learned to depend confidently upon these services. It has learned to use them more freely. The public is less antagonistic and the desire for government management has largely passed. The increasing use of the utilities brings to the fore the difficulty of financing extension of the service. He said, however, that while there is general difficulty in marketing utility securities, many shrewd people are taking advantage of the fears of others for these securities and buying them at the present low prices, feeling certain that the business is sound and that the value of these securities will enhance.

A paper on the outlook for the electric railway industry presented by Mr. Barnes appears elsewhere in abstract. Mr. Barnes was followed by M. F. Hosea, treasurer and auditor of the Indiana Telephone Association, who discussed the outlook in the telephone industry.

Harry Reid, president of the Interstate Public Service Company, Indianapolis, Ind., presided at the luncheon, at which Martin J. Insull, president of the Middle West Utilities Company and past president of the National Electric Light Association, and M. H. Aylesworth, executive secretary of the National Electric Light Association, were the speakers. Mr. Insull's talk was largely directed to the fundamental interest which the public has in the public utilities and to urging the utility men to take advantage of every possibility of placing these facts before the public. He said that for every dollar the utility companies invest in supplying their services the public spends \$2 for appliances, so that it has an even greater investment in the business than do the utilities, which would be worthless if the latter ceased to function. He referred to the great work which the utilities are doing in the "back-to-the-farm movement," believing that the interurban, the telephone and electric light are rapidly making farm life more attractive and less laborious. He pointed out that the public is protected in the matter of rates by utilities commissions in most states, or, in the absence of a commission, by the business sense of the utility manager, who would only naturally reduce rates if he were making more than he was justly entitled to, because this would be simply sound business judgment. Good service is the basis of good public relations. The public only thinks of the service when it is bad, and bad service is synonymous with bad public relations. He urged the giving of good service and of letting the public know that it is getting good service.

In connection with the thought of educating the employees as one effective means of improving public relations, he urged that the education of women employees should not be overlooked. They are a good source of contact with the public, particularly with the feminine public, and they should be properly informed for this contact.

Referring to the personal reward for employment in the utility business, Mr. Insull said that this was less, for the brains and effort required, than could be secured in many other lines of business. A high rate of remuneration cannot be had in a business where all that is allowed is a fair return on the investment. The satisfaction derived from the spirit of service must form a part of the remuneration, and if one cannot get this satisfaction he should not be in the utility business.

Mr. Aylesworth urged the utility men to have faith in their own business and to get out and tell their story to the public and cease complaining. Instead of singing "Rock of Ages" we should sing "Revive Us Again" and "Bringing in the Sheaves." We must tell the story of the utilities and keep telling it, so that people will be so thoroughly informed on utility matters that no politician will dare to take a stand against the service companies. While realizing the value of the holding company in financial and engineering matters, Mr. Aylesworth took a very emphatic stand against foreign management.

### SAFETY WORK A COMMON GROUND FOR EXECUTIVES AND EMPLOYEES

At the afternoon session A. Bliss McCrum, secretary of the Public Utilities Association of West Virginia, presented a paper dealing with the functions of a public utility association and also treating upon the inter-relations of companies, public and commissions. A paper on "Public Safety" was read by George H. McClain, manager of the Louisville Safety Council, in which he laid emphasis on the necessity for the whole-hearted support of the chief executive of a public utility if its accident prevention work is to meet with success and permanency. He was convinced, also, that the safety work and safety organization of a utility company afford a common ground for the executives and employees to meet on, such as cannot be gained through any other avenue. In this connection, he praised the work that is being done by the Louisville Railway, saying that he had never had the pleasure of observing a more congenial and thorough understanding between the men and the big boss than exists between Mr. Barnes and his employees, and that this is never more in evidence than at one of their safety meetings.

Richard M. Bean, president of the Louisville National Bank, spoke on the financial outlook, and significant among his remarks was the statement that he now feels just as apprehensive of large inventories of stocks as he did a year ago. He felt that deflation was by no means completed yet. One of the most encouraging signs of improvement in business conditions is the extension of credit to firms being organized in foreign countries which will sell products manufactured in the United States.

### ELECTION OF OFFICERS

The following officers were elected by the association for the ensuing year: President, L. B. Herrington, vice-president Kentucky Utilities Company, Louisville, Ky.; first vice-president, John Stoll, Lexington; second vice-president, W. H. Harton, general manager Cincinnati, Newport & Covington Railway, Newport, Ky.; treasurer, P. S. Pogue, Louisville; secretary, E. F. Kelly, secretary to president Louisville



Railway. Executive Committee: Donald McDonald, J. P. Pope, A. S. Nichols and J. P. Barnes.

The members of the association were the guests of the Tafel Electric Company, for a buffet lunch and theater party in the evening after adjournment of the convention.

## The Outlook for the Electric Railway Industry\*

BY JAMES P. BARNES  
President Louisville Railway

THE utilities—by their service ye shall know them, and beyond doubt as they serve they shall be rewarded, and, as they fail to serve, condemned.

A new spirit is abroad—born of the world throes of warfare, and today the true measure of service is the Golden Rule. The service is the thing and we must seek, not so intently remuneration for, but opportunity to serve. This is not to intimate that we can serve at unremunerative rates, but rather that if we ask and grasp our opportunities for service of the broadest kind, remuneration will follow as a matter of course.

Well and comfortably to transport from home to factory, store and office an urban population is no small service to a community, but it is not the only opportunity for service. The shopper, the theater-goer, the pleasure seeker have each their claim upon the transportation service, and upon these elements, together with the units which go to make up the peak requirements of a system, will the base and rush-hour schedules be built. The obligations of courtesy and convenience in service are too well accepted to require comment.

### THE BUGBEAR OF TRAFFIC CONGESTION

But is this all the city railway can do for its patrons? Is there no element of service as yet undemanded because unforeseen? Is there no means by which the plant may be made more widely useful to the community and its burdens thus incidentally distributed over a wider field of uses?

I think there is, and that the way to solution of the problem lies in the study of what is today the most troublesome of every city's problems, and which, so far from being met, is actually daily becoming more aggravated. I refer to traffic congestion.

The downtown city streets of today are no more adequate for the requirements they are called upon to meet than were the cowpaths of Colonial days adequate to become the downtown streets of New York and Boston. Relief is imperatively demanded, but by what means?

Widening of thoroughfares is impracticable because of the enormous expense involved. Yet what else will suffice?

For the sake of the practical let us for the moment be visionary. Suppose the sidewalks where now inadequate were to be widened by extension into the street, and the street to be at the same time widened by the elimination of the long line of parked vehicles which is a daily sight in every city. In every city a judicious elimination of vehicle parking would leave a maximum walk of

say three blocks to any store or office building. How much real hardship would this entail to the average shopper?

The real congestion of our streets arises not from the commercial delivery vehicle so much as from the private conveyance. But is there not a way by which we of the electric railways might assist even in the elimination of the commercial vehicle from street parking?

Surely it is false economy from the viewpoint of a community that delivery facilities for its merchandise distribution be needlessly extended and complicated. Why should not all merchandise, with a possible few exceptions, be delivered from one vehicle? Mass distribution from business or shopping center to outlying substations and thence door delivery by suitable ve-

hicles would save alike the streets, the machinery wear and tear and the temper of the housewife, who would receive at one delivery all the merchandising that now requires many answers to the doorbell. Visionary? Perhaps, but there is a service which the city railway with its tracks laid and its cheapest per ton-mile facilities at hand could render to the profit of itself and the economy of the community.

The future of the electric railway industry is vast and opens before us like a fairyland of opportunity. New means of transportation are within our grasp as feeders and auxiliaries. The auto truck, the auto bus and the trolley bus are all tools to our hands. Dream, visualize, anticipate and fearlessly adopt the worth-while innovations, and the future of the industry is vast indeed!

## The Relation of Rates to Service\*

Commissions Should Give More Weight to the Value of the Service to the Customer When Establishing Rates

C. L. S. TINGLEY

Second Vice-president the American Railways, Philadelphia, Pa.

AFTER mature reflection on this title, I have concluded that it should be amended to read, "The Relation Between Rates and Service," and I believe the reasons for this will be obvious.

Many years ago this relation was somewhat cynically expressed by a remark attributed to a prominent railroad man as "all the traffic will bear," which was at that time interpreted by the public press as meaning the limit of extortion. But this expression, if read aright, contains the fundamental truth of the relation between rates and service, for I interpret it to mean that rate or system of rates which will produce the maximum amount of business at a profit to the service company. In this interpretation I am supported by W. C. Noyes, in his book "American Railroad Rates," where he says:

It means charging what the shipper can afford to pay. It is rather an excuse for low rates upon cheap goods than for high rates upon dear goods. The traffic manager adopts no fixed standard but endeavors to ascertain what different classes of goods cost to produce, the demand for them and the prices at different places in order to determine what they are able to pay and whether lowering the rates will increase traffic.

This has also received judicial recognition, for in *Steenserson vs. Great Northern Railroad*, 69 Minn., the court says:

No better rule for the government of a public commission or a court when investigating rates can be adopted than one applied by the railroads themselves; a rule which will adjust rates so as to secure the largest interchange of commodities; a rule which will stimulate and encourage and induce the movement of any commodity which can be produced in any section of the country in large quantities. Of course, such rates should not be established so low as to impose an unreasonable burden on other traffic, but should be fixed so as to have reasonable relation to the cost of production and the value of the transportation service to the purchaser and shipper.

The law of the State of New Jersey provides that the Board of Public Utility Commissioners shall have power, after hearing, upon notice, by order

in writing, to fix just and reasonable rates, and after similar hearing, to fix reasonable standards, regulations, measurements or service to be furnished, and further that no public utility shall withhold or refuse any service which can reasonably be demanded and furnished, and that the board shall have power to require a public utility to establish, construct, maintain and operate any reasonable extension of its existing facilities where in the judgment of said board such extension is reasonable and practicable and will furnish sufficient business to justify the construction and maintenance of the same and where the financial condition of the said public utility reasonably warrants the original expenditure required in making and operating such extension. This principle was early recognized by the Board of Public Utility Commissioners of New Jersey, for in a decision rendered Jan. 13, 1913, in the matter of the application of Alfred Reed and Sydney L. Wright, receivers, etc., the board said:

The Board of Public Utility Commissioners finds and determines that the present rates of fare upon the Princeton Division operated by the traction company are insufficient and do not afford a fair and reasonable return. It should be emphasized that the fares to be established by the board's order are largely experimental. Experience may demonstrate their sufficiency or insufficiency. It is, however, both in the interest of the traction company as well as of the traveling public that the advance in fare should not be so heavy as to tend to drive passengers to other avenues of travel.

It is the established practice of the board in passing upon the question of the extension of gas, water and electric facilities to ascertain and make a determination of the cost of rendering the service, plus a return upon the capital invested, and where the figure so ascertained is in excess of the estimated income from the established tariffs of the company to require the prospective customer to guarantee for a period of five years an income which will be adequate to meet not only the cost of the service but a reasonable return on the estimated plant investment necessary to furnish the service. It seems to me that this is a clear recognition of the fact that there is a relation between

\*Abstract of paper presented at meeting of Kentucky Association of Public Utilities held at Louisville, Ky., Nov. 22, 1921.

\*Abstract of paper presented at a meeting of the New Jersey Utilities Association, held at Atlantic City, N. J., Nov. 18-19, 1921.



the rate and the service, for if the filed tariff rates are just and reasonable and are producing a lawful return to the company upon its investment and the business offered on the proposed extension will impair such return, the question is put squarely up to the prospective customer: Is this service that you are seeking worth more than the established rates to you so that you are willing to pay an increased rate in order that you may be served?

A study of the decisions of the commissions and courts will show that almost invariably there has been an application of this rule, although it is true that such application has been in many cases a one-sided one; that is to say, an effort on the part of the commission or court to prevent the rates becoming so high that service will be materially curtailed or diminished, rather than permit the trying out of a rate which will, theoretically at least, produce that fair rate of return to which the service company is entitled.

#### MANY BASIS FOR RATES

There are many relationships between rates and service. The rate on a steam road is proportional to the distance traveled, with extra charges for additional comforts; for freight, it is not only proportional to the distance hauled but also to the care required to guard and protect the property to its destination; for gas and water, it is more or less proportional to the amount consumed; for the telephone, it is proportional to the distance the message is transmitted; for electricity, it bears a relation not only to the quantity consumed but also to the number of hours it is consumed and sometimes to the hours of the day in which it is consumed.

It seems to me that this question has a very vital bearing upon many rate-making cases. It is well established, I think, that in the making of rates consideration must be given to the value of the property, its original cost, its capitalization, and all other relevant matters, and it seems to me that the value of the service to the customer is a relevant matter. If a layman may be permitted to say a word of criticism with respect to our higher courts, I would venture the suggestion that in one of the fundamental principles of rate cases they have erred, and that is in the stress which they have placed upon the reproduction new value of the property. It seems to me—with all respect—that the vital thing in cases of this character is not wholly the reproduction value of the used and useful property but the value of the reproduced service.

We are, of course, all familiar with the formula usually followed in the fixation of a rate. We ascertain the cost of producing the service (that is to say, the operating expenses), then, in great elaboration in many cases, an effort is made to ascertain the value of the property used and useful in the production of that service—almost always a contested question, and always a question upon which there can be honest difference of opinion. Then that value, so called, having been arrived at largely by compromise, a hypothetical rate of return is allowed and that is added to the operating expenses. Then that sum total is divided by the number of passengers carried, or by the kilowatt-hours sold, or the thousand cubic feet

of gas sold, or the million gallons of water sold, and a figure is arrived at upon which the rate is based; and no consideration whatever is given to the value of the service to the consumer, except to see that his rate is not too high. A utility furnishing service which is vital to the life of the community (and which possibly could not be reproduced for a sum very much larger than that being charged) in many instances for a sum much smaller than the public could and would willingly pay rather than be deprived of the service, is held down to a rate based upon a theoretical cost of production. In this connection I would quote from the decision of the Supreme Court of the United States in *Knoxville vs. Water Company*:

Regulation of utilities which perform their duties under conditions of necessary monopoly will occur with greater and greater frequency as time goes on. It is a delicate and dangerous function and ought to be exercised with a keen sense of justice on the part of the regulating body met by a frank disclosure on the part of the utility to be regulated. The courts ought not to bear the whole burden of saving property from confiscation, although they will not be found wanting when the proof is clear. The legislatures and subordinate bodies to whom the legislative power has been delegated ought to do their part. Our social system rests largely upon the sanctity of private property, and that state or community which seeks to invade it will soon discover the error in the disaster which follows. The slight gain to the consumer which he would gain from a reduction in the rates charged by the utility is as nothing compared with his share in the ruin which would be brought about by denying private property its just award, thus unsettling values and destroying confidence. On the other hand, utilities to be regulated will find it to their lasting interest to furnish freely the information upon which a just regulation can be based.

And further in this connection, I quote from a decision recently handed down by the United States District Court for the Southern District of Texas, where the learned judge says:

It is not amiss for me to say that the council occupies a somewhat different position from that of a court, in that the council is not required to simply declare its judgment on the evidence before it, but has the right and power, as representing the public, and it should be its aim and purpose not merely to pronounce a legal judgment as to what rate would be short of confiscatory, but to arrive at and agree upon a fair rate, though said rate should be considerably in excess of the lowest rates which the courts would sustain and allow. In other words, if the company exhibits a spirit of fairness and concession, with the view of agreeing upon a fair and reasonable rate, it is clear that the council is not only authorized, but should endeavor, to meet them in that spirit.

To the litigants and their council in this and similar cases before me I commend these expressions, not because of the wisdom of the author, but because they bear the sanction of the authority of the Supreme Court of the United States. . . .

There is a long line of decisions bearing on this same point. They are too numerous to quote, but I invite your attention to a few: *In Re California-Oregon Power Co.* U. F. 26, 97, 99, 150; *In Re Western State Gas & E. Co.* Appl. No. 1998, *Falk vs. Western State Gas & E. Co.* Case No. 906, Decision No. 3852, Nov. 6, 1916, California Commission; *In Re Plymouth Electric Light Co.* (N. H.) D-388, June 30, 1917; *In Re Creswell Water Co.* U-F-235, P.S.C. Or. Order No. 486, Jan. 28, 1919, Oregon Commission; *Campbell vs. Hood River Gas & E. Co.* (Or.) P.U.R. 1915D, 855; *Duluth Street R. Co. vs. Railroad Commission*, P.U.R. 1915D, 192; *Grafton County Electric Light & P. Co. vs. State*, P.U.R. 1915C, 1064; *Re Bound Brook Water Co.* (N. J.), P.U.R. 1915F, 1040; *Greer vs. Baltimore & O. R. Co.* (W. Va.), P.U.R. 1916D, 286; *Re Atchi-*

*son, T. & S. F. R. Co.* (Mo.), P.U.R. 1916A, 594; *Re Colorado Springs Light, Heat & P. Co.* (Colo.), P.U.R. 1916E, 650; *Re San Diego & S. E. R. Co.* (Cal.), P.U.R. 1916C, 1; *Oklahoma Gin Co. vs. State*, P.U.R. 1916C, 22; *Bogart vs. Wisconsin Teleph. Co.* (Wis.), P.U.R. 1916C, 1020; *Re Kansas City Electric Light Co.* (Mo.), P.U.R. 1917C, 728; *Merriman vs. Luse Co.* (Or.) P.U.R. 1917F, 244; *Re Lake Hemet Water Co.* (Cal.), P.U.R. 1917A, 458; *Re Kent Water & Light Co.* (Ohio), P.U.R. 1917D, 394; *Murchie vs. St. Croix Gaslight Co.* (Me.), P.U.R. 1917B, 384; *Re New York Transfer Co.* (N. Y.), P.U.R. 1919B, 590; *Re Central Illinois Pub. Service Co.* (Ill.) P.U.R. 1919E, 910; *Buck vs. Judge* (N. Y.), P.U.R. 1919F, 458; *Re Portland R. Light & P. Co.* (Or.), P.U.R. 1919A, 513; *Re Springfield Gas & E. Co.* (Mo.), P.U.R. 1919E, 973; *Springfield City Water Co. vs. Springfield* (Mo.), P.U.R. 1919D, 853; *Moore vs. Valley R. Co.* (Pa.), P.U.R. 1919F, 493; *Wayne Title & Trust Co. vs. Wayne Sewerage Co.* (Pa.), P.U.R. 1919D, 404.

I would conclude my discussion of this question with a quotation from a paper entitled "Rate of Return," presented before the American Academy of Political and Social Science in 1914 by James E. Allison, former commissioner and chief engineer of the St. Louis Public Service Commission:

In most of the published reports of judicial decisions or opinions and of findings of commissions there is no very clear process of mind shown by which these bodies have arrived at their conclusions as to a reasonable rate of return. In some of the court decisions and even in those of able commissions the legal rate of interest seems to have entered as a factor in determining a reasonable rate of return. There is of course no reason for this other than that it was grasped as a prop for lack of better reasoning. Because the legal rate of return in some states is 6 per cent is no reason for supposing that this circumstance would have any effect upon investors in inducing them to enter a hazardous enterprise. Generally to the legal rate of return there has been added what is called profit as a reward for risk or for exertions of the managers and creators. This process does not consider economic laws, but no doubt in many cases by such rule of thumbs an approximately correct result has been obtained.

One of the most curious features in the decisions of the courts has been in assuming that while a rate of return may be too low, it is yet not confiscatory of property. This conclusion, and it seems rather well established as a principle, is to the "illegal" mind a curiosity in logic.

It can hardly be disputed that the returns create the value of the property and if the returns are admitted to be, we will say, 25 per cent below what they should be, it seems difficult to avoid a conclusion that 25 per cent of the value of the property has been destroyed to the investors, and if the ruling is the result of a rate case, 25 per cent has been confiscated to the benefit of the consumer.

Throughout the whole mass of decisions of the courts on valuation and on rate of return there has been such a profound disregard for economic laws and there is such a great reverence by both the courts and the commissions for precedent even if it is a patently wrong precedent, that it is difficult to prophesy the results which will follow for the next few years. In the end the true economic laws will of course prevail but before that time there will probably be a considerable period during which new capital will hesitate to place itself under control of public regulation. Capital already in the public service will of course be injured by adherence to false precedent but it will suffer much greater injury because of the stoppage of new capital. Public service enterprises constantly need new capital because in most places the public demand for public services is constantly increasing. Whether or no the regulating bodies or the public itself will feel the curtailment of service soon enough to realize, before any great harm is done, that capital is free to stay out of public service remains yet to be seen.



## Recent Happenings in Great Britain

### Electrification of Suburban London Trunk Lines Probable Through Trade Facilities Act Passed to Aid Business and Unemployment

(From Our Regular Correspondent)

During part of October and November, Parliament was engaged, in a special session called for the purpose, in dealing with the problem of unemployment. The ranks of unemployed in this country at the time of writing, number in round figures about two millions. Several Acts were passed for the purpose of giving relief, for financing public works, and for encouraging the development of trade which is in a stagnant condition. One of the Acts which was passed promises to have a considerable bearing on the development of electric traction. This is the Trade Facilities Act.

ONE of the provisions of the measure is to the effect that if the Treasury is satisfied, the proceeds of any loan proposed to be raised by any Government, any public authority, or any corporation or other body of persons are to be applied towards the carrying out of any capital undertaking; that the application of the loan is calculated to promote employment in the United Kingdom; and that the Treasury may guarantee the payment of the interest and principal of the loan, provided that the aggregate capital amount of loans shall not exceed £25,000,000.

#### GOVERNMENT GUARANTEES MAY SPEED WORK

No guarantee will be given after the expiration of twelve months from the commencement of the Act. Sir Robert Horne, Chancellor of the Exchequer, stated in reply to a question that schemes for the electrification of the suburban portions of the trunk railways leading out of London would come within the scope of the Act. As is well known, various schemes of this kind have been held back because of the present high cost of everything. Railway companies may be induced to take advantage of the guarantee, because the Act does not specify any limit of duration of guarantees, though they must be given within twelve months.

On Oct. 27, only a day or two after Sir Robert Horne's statement, it was publicly announced that on the invitation of the Government the London underground railway companies had submitted a scheme of railway developments in connection with the relief of unemployment. The developments in question have in past years been authorized by Parliament but have not been carried out owing to the difficulty of raising additional capital and to the high cost of construction as compared with pre-war figures.

The authorized works which have been hanging fire for several years include the enlargement of the tunnels of the City & South London Railway so as to make them of about the same diameter as those of the other "tube" railways; the construction of a connection between the City & South London Railway at Euston and the Charing Cross & Hampstead Railway at Camden Town; the extension of the latter railway by a surface line in the open country  $4\frac{1}{2}$  miles long, from Golden's Green terminus to Edgware; and the construction of a connecting line between the Central London Railway at Shepherd's Bush and the London & South Western Railway at Hammer-smith. At present prices these works are estimated to cost £6,000,000.

All extensions will be electric railways, and they will not only improve traveling facilities, but develop areas

at present lacking proper means of communication. Lord Ashfield, chairman of the underground railway companies, is of opinion that for some years the additional traffic will not warrant the investment, but that there is need for the improvements and for giving work to the unemployed. About 20,000 men will be engaged directly and a good many more indirectly. To carry the project out, the Government must guarantee the new capital—outlines proposed by the Act of Parliament—so that the required money may be raised at a lower rate of interest than if the railway companies had to do it on their own security. Lord Ashfield thinks that the scheme will not cost the Government a penny, from which it is to be inferred that the companies hope to be able to meet the lower rate of interest which the Government guarantee will make possible.

#### ASK LONG-TERM PROTECTION FROM OMNIBUSES

As part of their scheme, the underground railway companies asked the Government to secure their associated company (London General Omnibus Company) against "piratical" omnibus competition for ten years. In this way the buses would help to carry the cost of the railway improvements.

The underground railways scheme encountered a set-back on Nov. 7 when the Prime Minister (Mr. Lloyd George) stated, in reply to a question in the House of Commons, that the Government could not promote legislation to give protection against competition with the London General Omnibus Company's buses. Thereafter Lord Ashfield, while expressing regret at the decision, announced that he would try to work out a new scheme.

The announcement of the proposal by the London underground companies was immediately followed by speculation as to the carrying out of electrification schemes by other railway companies, especially those which already possess the legislative powers and have been waiting for better times in order to carry them out.

In accordance with his previously announced intention, Sir Eric Geddes, Minister of Transport, has resigned the office. Mr. S. Baldwin, President of the Board of Trade, stated in the House of Commons on Oct. 24 that arrangements for the future conduct of the business of the Ministry were under the consideration of the Government. Meanwhile the Ministry had been placed in charge of Mr. Arthur Neal, its Parliamentary Secretary.

The reorganization of the Ministry has been made possible by the end of the period of State control of the railways and by the passing of the Railways Act.

The original idea of the Government that the Ministry should regulate, control, and develop every means of public transportation has been largely, if tacitly, abandoned, as the public have had more than enough of bureaucratic control. A number of the highly paid expert officers of the Ministry have already resigned, but it was understood all along that their work was only temporary. The Ministry has erected its great monument in the shape of the recently passed Railways Act, and the war period of control of the railways being over, it seems likely either that the Ministry will be continued on a much reduced scale or that its functions will be transferred to another department.

#### TRANSPORT MINISTRY CHANGE

The Prime Minister, early in November, expressed a doubt whether if there was to be a transfer, the Board of Trade would be the most suitable department to entrust with the duties. This view is notable, because before the Ministry of Transport came into existence the Board of Trade exercised such powers of the State as then existed in regard to railways and tramways. On Nov. 8 it was officially announced that Viscount Peel had been appointed Minister of Transport. The arrangement is temporary pending the Government decision on the future of the Ministry. Viscount Peel has held various political offices and is at present Chancellor of the Duchy of Lancaster—a post which is something of a sinecure. He will not draw the salary of Minister of Transport.

Tramway undertakings are suffering from the great slump in trade in the way of a falling off in the number of passengers. Even where gross receipts show an increase, it arises from the higher fares, not from a larger number of passengers. The undertakings, however, should get a little further relief in the matter of working expense. In view of the further fall in the official index figure of the cost of living, tramway men's wages are under the sliding scale reduced a further 2s. per week as from the first full pay period in November. This makes a total reduction of 5s. per week since the sliding scale came into operation.

#### INSTITUTE OF TRANSPORT SATISFACTORY

Though the Institute of Transport has not been very long in existence, it has developed rapidly and has already done good work. The report of the council for the year 1920-21 shows that at the end of September last, the membership numbered 1,081, of whom 998 are resident within the United Kingdom. Special attention is being given to the educating and training of graduates and students.

At the second annual meeting of the Institute of Transport held on Oct. 17, Sir Henry Maybury, the new president, dealt with the subject of highway improvement and maintenance and with the development of railways and tramways to meet increasing needs. An era, he said, of intense activity was evidently opening in the railway world, where there was a plain determination to provide the public with facilities and attractions from which they had been weaned for several years. At the annual dinner of the Institute, Lord Ashfield and Mr. A. Neal, M.P., were principal speakers. The former forecast great developments of railway and highway transport.



# News of the Electric Railways

FINANCIAL AND CORPORATE :: TRAFFIC AND TRANSPORTATION  
PERSONAL MENTION

## Ouster Ordinance Not in Effect

**Detroit City Council Suspends Ordinance—Further Negotiations With Company Planned**

The ouster ordinance which would have gone into effect on Nov. 25, forcing the Detroit (Mich.) United Railway to stop service on Fort Street and Woodward Avenue and to proceed to remove its tracks, was suspended indefinitely by the City Council and the service on Woodward and Fort lines will continue regardless of the end of the time limit. The ordinance was suspended to allow further negotiations between the company and the city.

### DETAILS UNDER DISCUSSION

Details of a proposed agreement are being worked out between the Detroit United Railway and the city, and at a second conference of the members of the Street Railway Commission with company officials further steps were taken leading to an exchange of running rights over certain lines owned by the company and certain lines owned by the city.

According to Corporation Counsel Wilcox the Detroit United Railway will not be in contempt of court by the continued operation over the lines mentioned in the ouster ordinance, as the final step has not been taken by the city to compel the cessation of service. Under the Supreme Court decision, in case the company refused to comply with the city counsel's order in the ouster action, recourse might be had to a court ruling enforcing the order. No such application for a court ruling has been made by the city. The company will be allowed to operate as previous to the passage of the ouster ordinance while negotiations for the proposed agreement as to running rights are being worked out.

It has not been definitely announced as to what provisions the company and the city wish to have incorporated in the agreement, and E. J. Burdick, general manager of the Detroit United Railway, and Joseph S. Goodwin, general manager of the Detroit Municipal Railway, are preparing figures to be submitted at the next conference indicating what each party in the pact is willing to pay for operating cars over the other's lines. As soon as studies of traffic conditions on the lines involved can be made, an agreement will probably be drawn up jointly by Elliott G. Stevenson, counsel for the Detroit United Railway, and Corporation Counsel Wilcox.

### MR. DOW ACTIVELY INTERESTED

The agreement for one party to compensate the other for the privilege of operating cars over the other's lines will probably be made only in event that one party finds it necessary to operate over a greater number of miles of the other party's lines than the other operates over the first party's lines.

Alex Dow was with the officials repre-

senting the Detroit United Railway at the conference. Since his becoming a director of the company Mr. Dow has sought to bring about a peaceful settlement of the differences involved in the street car question in Detroit and existing between the city and the company. The city has been represented by members of the Street Railway Commission since the temporary absence of Mayor Couzens. The Mayor will be present at the next conference but it is not generally believed that any great change will be made in the negotiations since the Mayor announced that the Commission had been given full power to deal with the company in this case.

While both parties believe that considerable progress has been made, there still remains a number of details to work out. An agreement is hoped for which will result in better and more complete service on both company and city lines than could be given without the exchange of running rights, especially after the day-to-day lines are taken over by the city. Among the details to be decided are the question of transfers between the two systems and the basis upon which charges for operating cars over the other party's lines will be made.

## New Bridge Interrupts "L" Service

Replacement of the present double-deck swing bridge across the Chicago River at Wells Street, with a new double-deck bridge of the bascule type, will require interruption of the regular north-south elevated service in Chicago from 8 o'clock on the evening of Dec. 3 until the morning of Dec. 6. During these two days and three nights the old bridge will be removed and the new one, construction of which is completed except for the last steps in placing it in service, lowered into position. Heretofore, the construction of the new bridge over and around the old one, has been accompanied by only a few short delays to traffic and the complete interruption of through service for four Sundays.

All of the through north and south trains operate over this bridge, and during the interruption all north side trains will operate in and out of the stub terminal at Kinzie Street. South side trains will operate around the loop and through passengers will be transferred north or south upon walking across the Clark Street bridge, which makes a direct connection between the Clark and Lake station on the loop and the Kinzie Street stub, entrance to which is on Clark Street. The problem of handling all of the northbound traffic during a business day, augmented by the Christmas shopping already heavily under way, presents one of the most difficult traffic problems that the Elevated Lines have ever undertaken. Surface cars using the Wells Street bridge will be rerouted over other bridges or through the tunnels.

## Des Moines Franchise Carried

**Last-Minute Injunction Against Election Fails, but Leaves Railway Issue Beclouded**

Des Moines voted overwhelmingly in favor of the new railway franchise at the election held on Nov. 23. In spite of a spirited campaign made against the measure on the part of former Corporation Counsel Byers and his cohorts, the franchise carried by vote of 16,808 to 8,877. Women played an important part in rallying to the cause of safe transportation.

In spite of this outstanding approval of the franchise by voters, the measure is still clouded by legal obstacles which must be overcome before it can become a binding contract and the Des Moines City Railway is enabled to secure financial backing to restore normal service. On Saturday, previous to the franchise vote, Judge Hume of the District Court, granted an injunction in the suit brought by Grant Van Horn, who sought to prevent the election.

The court held that the publication clause of the franchise was faulty and that proper notice had not been given in accordance with the Iowa election laws. He further ruled that the Des Moines City Council had no authority to repeal the present franchise. Judge Hume ruled that not only did the Iowa law fail to give councils authority to grant a franchise previous to the publication of the notice of the election for four weeks prior, but that such authority is expressly forbidden by law.

### HOSTILE DISTRICT APPROVES GRANT

Upon the issuance of Judge Hume's order a writ of supersedeas was brought before the Iowa Supreme Court and at an informal session of the court held on Nov. 27 a stay of execution was granted from Judge Hume's order only in so far as permitting the holding of the election. The ruling was made a matter of court record on Nov. 28 so that sufficient time was given for general knowledge that the election was to be held.

The vote was approximately as large as had been forecasted previous to the issuance of the injunction. In only two precincts of forty-eight was there a majority against the franchise and in North Des Moines, the home of the leaders of the campaign against franchise, the margin in favor of the new grant was comfortably large.

On Nov. 29 F. C. Chambers, receiver of the Des Moines City Railway, issued a statement to the effect that while legal questions would not permit the railway to proceed immediately with the rehabilitation of the plant as arranged he felt that the company had a moral obligation to do everything in its power to increase service and on Nov. 30 he made further announcement that within the next fifteen days he hoped to have sufficient power equipment restored to permit of placing twenty additional cars in the service.

Acting upon the advice of three



prominent business men the City Council on Nov. 30 passed a resolution agreeing to ban buses from streets where the railway now operates, the ban to become effective as soon as the railway had placed thirty additional cars in service. At the present time there are not over thirty buses in operation.

Just what the next step will be in the legal phase of the controversy is not yet decided, but there is likelihood that the city will appeal to the Supreme Court from Judge Hume's injunction ruling.

### Chicago Elevated Roads Before Commission

On its own motion, the Illinois Commerce Commission has cited the Chicago Elevated Railways to show cause why the rate of fare should not be reduced. One hearing has been held at which the companies presented a complete operating statement, as requested by the commission, for the nine months of 1921 ending Sept. 30. The statement was presented in a tabulation by months, the nine months' summary total of which is given herewith. Of the total number of ticket and cash fare passengers within Chicago, it will be noted that 67.4 per cent are ticket passengers and 32.6 per cent, cash fare passengers. The ticket rate is 8.75c. while the cash fare is 10c. After receiving the operating figures of the lines, the commission continued the

#### SUMMARY — CHICAGO ELEVATED RAILWAYS INCOME ACCOUNT FOR NINE MONTHS ENDED SEPT. 30, 1921

|  |              |
|--|--------------|
| Passenger revenue.....                 | \$12,396,481 |
| Other transportation revenue.....      | 564,954      |
| Gross operating revenue.....           | \$12,961,435 |
| Maintenance of way and structures..... | 1,487,527    |
| Maintenance of equipment.....          | 1,266,224    |
| Power.....                             | 1,178,514    |
| Cond. transportation.....              | 5,429,364    |
| Traffic.....                           | 28,128       |
| General and miscellaneous.....         | 628,677      |
| Operating expenses.....                | \$10,018,434 |
| Net operating revenue.....             | 2,943,001    |
| Taxes (estimated accruals).....        | 951,683      |
| Operating income.....                  | \$1,991,317  |
| Non-operating income.....              | 75,860       |
| Gross income.....                      | \$2,067,177  |
| Less rentals.....                      | 293,227      |
| Balance for interest, etc.....         | \$1,773,949  |
| Interest charges.....                  | 1,862,099    |
| Net income or loss*.....               | \$88,149     |
| * Deficit.                             |              |

#### REVENUE PASSENGER TRAFFIC FOR NINE MONTHS ENDED SEPT. 30, 1921

|                                |             |
|--------------------------------|-------------|
| 8½c. Ticket fare.....          | 86,584,202  |
| 10c. Cash fare.....            | 41,705,954  |
| 13c. Evanston ticket fare..... | 4,203,507   |
| 17c. Evanston cash fare.....   | 289,705     |
| 7c. Evanston local fare.....   | 665,466     |
| Miscellaneous.....             | 64,415      |
| Total.....                     | 133,513,249 |

case until Dec. 2, to give its accountants an opportunity to go over the company's books and check the figures presented by the company officials.

The figure for the total operating expenses as presented herewith includes a monthly charge of \$40,318 for replacement reserve which is distributed, \$15,894 for way and structures, \$15,831 for car equipment and \$8,593 for power. In explaining the item entered for the monthly estimated accruals of taxes which averaged about \$106,000, it was explained that the amount specified each month is \$18,000 more than the tax accruals placed upon the books,

which accruals were based on the taxes for 1920 but it is now evident that there will be an increase of 40 per cent or more in the rate for general taxes for 1921, and that if there should be no increase in assessed value, the general taxes for 1921 will be about \$309,000 more than for 1920, necessitating the addition of \$216,000 to the book accruals for this year.

### \$700,000 Project Suggested

#### Interests Connected with Cincinnati-Lawrenceburg Line Plan Six-Mile Extension

Plans for organizing the West End Terminal Railway, Cincinnati, Ohio, which will operate the proposed extension of the Cincinnati, Lawrenceburg & Aurora Electric Street Railroad from Anderson's Ferry to the Dixie Terminal on East Third Street have been completed by C. E. Hooven and Edgar Stark, receivers of the Cincinnati, Lawrenceburg & Aurora Electric Street Railroad and L. G. Van Ness, general manager of the company.

The extension will be approximately 6½ miles. It will provide adequate railway transportation for residents of towns along the route of the Cincinnati, Lawrenceburg & Aurora Electric Street Railroad. The plans for financing the project which were devised by C. A. Hirsch, president of the Fifth-Third National Bank, provide that property holders who will be benefited by the improvement shall be given the opportunity to become stockholders in the West End Terminal Railway when it is organized by purchasing stock or bonds.

According to present estimates the cost of building the extension will be approximately \$700,000.

It is proposed at the present time to build a single track railroad of standard gage using T rails and following essentially the same route as that of the West End Rapid Transit Company proposed some time ago which parallels the Big Four Railroad to State Avenue on the surface. From this point the line will be operated on an elevated steel structure across Millcreek bottoms to Mill and Third Streets, thence with surface line to the Dixie Terminal, at Third and Walnut Streets. The West End Terminal Railway will acquire and use without cost all rights-of-way contracts and arrangements heretofore made with the Big Four Railroad and with others now held by the West End Rapid Transit Company.

The Union Gas & Electric Company has already agreed to furnish the necessary electric current to operate all cars on the extension upon the same terms and conditions as it now furnishes power to the Cincinnati, Lawrenceburg & Aurora Electric Street Railroad Company. No additional subscriptions will be required.

The construction estimate of \$700,000 does not include any cars or equipment for the new line. The necessary equipment will be provided by the Cincinnati, Lawrenceburg & Aurora Electric Street Railroad and will be of the same standard as its present cars, but equipped with multiple unit control, so as to permit the cars to be operated singly or in trains.

As soon as possible after the organization of the West End Terminal &

Railway Company, it is proposed to apply to the Cincinnati City Council for a franchise authorizing it to construct a line essentially as specified in the franchise granted to the West End Rapid Transit Company in 1914.

L. G. Van Ness, general manager of the Cincinnati, Lawrenceburg & Aurora Electric Street Railroad, said that the railway contemplates obtaining a building adjoining or close to the Dixie Terminal for the Cincinnati terminus of the West End Terminal-&-Railway Company.

If the Cincinnati Traction Company abandons its Sedamsville line from Sedamsville to Anderson's Ferry as has been suggested, provision will have to be made for the terminal company to handle the people in that territory. No agreement has been reached with the traction company for this service, but it is believed a plan can be worked out that will be satisfactory to all concerned.

Mr. Van Ness has submitted a statement showing the number of passengers carried and the revenue therefrom of the Cincinnati, Lawrenceburg & Aurora Electric Street Railroad during the past three years, together with estimate of the number of passengers and revenues on the proposed extension. The statement follows:

| Year Ended<br>June 30   | Number<br>Passengers | Total<br>Revenue    | Net<br>Revenue     |
|---|----------------------|---------------------|--------------------|
| 1919.....   | 1,458,154            | \$141,054           | \$37,161           |
| 1920.....   | 1,681,539            | 156,172             | 51,534             |
| 1921.....   | 1,555,411            | 190,394             | 33,219             |
| Average per year.<br>For increased traffic.<br>Estimated for the<br>West End Terminal<br>Company..... | 1,565,031<br>500,000 | \$162,540<br>35,000 | \$40,638<br>11,500 |
|   | 1,900,000@6½         | \$123,500           | \$58,500           |

The estimate made by Mr. Van Ness is based on the present number of passengers carried into the city from Sedamsville by the Cincinnati Traction Company and the Big Four, no account being taken of the freight revenue nor of the increase in business that will follow from the improved service.

The requirements for interest and dividends and sinking fund on the preferred stock and bonds, assuming the improvement costs \$700,000, is \$49,000 annually. Thus the actual net revenue from both properties as above estimated would be fully sufficient to meet the requirements of the proposed terminal company.

The plan has been received favorable by the residents of the lower river towns and the work of carrying out the different provisions will be started immediately, Mr. Van Ness said.

### Manistee Railway Forfeits Franchise

Owing to the fact that the Manistee (Mich.) Railway failed to resume operation of its cars within a stipulated period the franchise has been forfeited. The city attorney has been authorized to take the necessary legal steps to see that the action is sanctioned by the States Public Utilities Commission.

C. S. Kressler, manager of the property, who was present when the City Council authorized the forfeiture, said that the tracks would not be taken up, but they might eventually be used for transportation, "possibly a different system."

Railway service was discontinued in Manistee on Sept. 1. This suspension has been referred to previously in the ELECTRIC RAILWAY JOURNAL.



## Subpoenas Resorted To in New York

Directors of Interborough, Facing Threat of Suit to Recover \$10,000,000, Decline to Appear Voluntarily in Present Transit Investigation

Directors of the Interborough Rapid Transit Company, New York, N. Y., who served on the board in the fiscal years 1917 to 1919 declined through counsel on Nov. 30 to appear voluntarily before the New York Transit Commission, in the present inquiry into the affairs of the transit companies in New York. They will be subpoenaed to appear. James L. Quackenbush, counsel for the company, made plain their reasons for declining the invitation of the commission. This was the outstanding event of the hearings held on Nov. 28, 29 and 30.

ON NOV. 28 Mr. Hedley, president and general manager of the company, was recalled by the counsel of the commission for further examination, more particularly about the company's contracts for coal. Mr. Fisher, secretary of the company, was a witness the same day. On Nov. 29 Mr. Samuelson, auditor of the New York Railways, was called and a sub-hearing was held having to do with the checking of certain vouchers of that company. Another witness on Nov. 29 was Fred W. Lindars, accountant for the commission, who testified about the range of prices of traction securities, more particularly the price movements in the Interborough-Consolidated stocks and bonds. On Nov. 30 came the dénouement over the appearance of the directors. This resulted in an adjournment until Thursday.

At the opening of the session on Nov. 30 Mr. Quackenbush said:

The invitation of the Transit Commission to appear in person for examination has been conveyed to the gentlemen who as directors voted for the dividends declared by the Interborough Rapid Transit Company in the fiscal years 1917 to 1919.

In response they beg to state that they have no disposition to question the motives of the commission or of its counsel, but they respectfully submit that the practical result of the investigation as it is now being conducted is to encourage the hostile attacks of Clarence H. Venner, a notorious speculator in law-suits and professional litigant who masquerades under the name of the Continental Securities Company, the General Investment Company and other aliases, upon the credit of the company and indirectly to aid in his efforts to bring about a receivership and wreck the company.

Venner now has, in his campaign of litigation against the company, six suits pending for this purpose, and to gain advantage over other noteholders, and he threatens to commence a new one on Dec. 1, 1921 (tomorrow) against these very directors to recover \$10,000,000 because of the declaration of the dividends in question. This makes it necessary for them in the interest of the properties which they are administering for themselves and others to decline to appear voluntarily as witnesses at the hearings now being conducted by the Transit Commission.

The directors feel that the effort to create sentiment against the company, to minimize the value of its properties which have been honestly and efficiently managed against great obstacles and difficulties created by war conditions, particularly in the prices of labor and materials, and the unjust attacks upon the management require in justice to themselves and to the properties, that they should not voluntarily assist in rendering such efforts successful.

Mr. Quackenbush explained that none of the directors, if forced to appear, would sign any waivers of immunity.

It had, in fact, been originally planned to examine the directors on Nov. 29, and counsel for the commission had so arranged his case, but Mr. Quackenbush at the opening of that session entered a plea for the postponement of their appearance until the following day. He urged that he had been general counsel only since the death of President Theodore P. Shonts, and said the directors were entitled to have the advice of their own private counsel for any corporate ac-

tion they had ordered prior to that time. In asking the postponement, Mr. Quackenbush referred to the directors as parties "who might be subject to civil liability arising out of their transactions, or might not."

Mr. Shearn, counsel for the commission, supported the plea of Mr. Quackenbush and Chairman McAneny forthwith gave the Interborough directors twenty-four hours' grace. Mr. Shearn said:

It seems to me that in view of the situation in which these directors find themselves it is only fair that they should have the opportunity to consult with their own counsel before being examined and it is not an unreasonable request to give them the opportunity to have that consultation today and take up the examination tomorrow morning. Therefore, I interpose no objection to the adjournment, although it does disarrange my plans considerably for the day.

After Mr. Quackenbush had stated on Nov. 30 why the directors declined to appear voluntarily before the commission, Chairman McAneny explained that the commission had no knowledge prior to the present inquiry of things that had gone on in the past, and that it had no desire to embarrass the administration of the company, but that the commission was determined to use all the powers conferred in it by the State to carry out the purposes of the act creating it, purposes that had for their sole object obtaining the necessary facts and data upon which to premise an agreement for the future which would put an end to the intolerable conditions now existing upon the transit lines and make impossible the repetition of the mistakes of the past. In conclusion he said that he thought the directors of the company could less afford to suffer from the onus of not appearing than to take the consequences of any action by Mr. Venner.

### COUNSEL NOT GREATLY CONCERNED

Mr. Shearn regarded the matter as a gross breach of faith. Still the action was immaterial. The inquiry was dictated solely by the desire to acquire the facts necessary to put through the commission's plan. Many of these facts had already been elicited, and the only additional facts that might be brought out were whether the directors were speculating in the securities of the various companies at the time the mergers and changes in corporate structure were taking place. At his behest the commission decided to compel the directors to attend for examination.

Mr. Lindars, at the session on Nov. 29, was placed on the stand and questioned in regard to the range of prices of the Interborough-Metropolitan Corporation, and its successor, the Interborough-Consolidated Corporation. He testified that the preferred stock had begun at 87 in 1906, and had dropped to 20 in the latter part of 1907. After this it rose steadily, and then made a

sharp advance from 46 to 59, when the Interborough Rapid Transit changed its dividend policy in 1912.

In January, 1915, Mr. Lindars said, when the first talk of reorganization was heard the preferred rose from 55 to 85. When it was replaced by Interborough-Consolidated preferred, it started at 77 and, after fluctuations, it ended at 6.

The witness also traced the course of the common stock, showing that consolidation had raised the price but that it has since declined until the present price was a nominal one.

Meanwhile Mr. Samuelson, auditor for the receiver of the New York Railways, produced all his vouchers for April, 1921, before a sub-hearing in the board room adjoining.

Unless there is a great snowstorm this winter the New York Railways Company will be able to pay operating costs, maintenance expenses and taxes on a nickel-fare basis, Frederick T. Wood, assistant to the general manager for the receiver, testified. A big snowstorm, he said, would cut down revenue and increase expenses. Mr. Wood admitted that the service rendered by the company was not such as it should be, but charged the fault to a hand-to-mouth system made necessary by the condition of the company.

### PRESIDENT HEDLEY RECALLED

Mr. Hedley when recalled on Nov. 28 said that the coal bills of the company amount to more than \$5,000,000 a year. Only a few companies had the facilities for furnishing coal in the quantities demanded. Coal was purchased from the Consolidation Coal Company, the Berwind-White Coal Company and the Logan Coal Company. Only about 10 per cent of the coal used was purchased in the open market.

Contracts for coal were made by the year on a sliding scale under which the company stood to gain if costs of production and distribution were reduced. The contract price for coal has been stepped down for the coming year from \$7.70 to \$6.95 a ton. About 770,000 tons a year are used. The fact that another similar company might be purchasing coal for less was explained by the statement by Mr. Hedley that some of the circumstances were plainly evident while he had no knowledge of others not being familiar with the particular specifications.

He next testified as to the cost of power. Mr. Hedley said that the company had the free use of his patents without the payment of a dollar for royalty, but that the directors had voted him an average of about \$5,000 or \$6,000 a year for the last ten or fifteen years. The use of the coasting time recorder, one of Mr. Hedley's patents, reduced expenses of the company more than \$1,500,000 a year.

Mr. Hedley was asked what he meant by his previous expression to the effect that he would try to make the nickel go 'round. His answer was that inasmuch as he was reconciled to the fact that the nickel fare was all he would have to work with for some time he would continue the struggle with his assistants as aids to render the public the very best service that could be rendered under the 5-cent fare.

According to Mr. Hedley one of the most serious things that could happen to the transportation situation in the city would be a receivership for the Interborough. This would mean a separ-



ration of the elevated from the subway and the payment of thousands of 10-cent fares by the public where the present fare is 5 cents. In the event of the separation of the two lines the elevated would probably not pay the \$17,000,000 spent by the Interborough for extending the elevated and would not operate cars over the extensions, but probably would pay the reasonable value of third-tracking the elevated after a period of years of litigation. In the meantime "the subway would have to carry the load, interest and sinking fund."

Mr. Fisher, the next witness, testified to the effect that although at a meeting of the board of directors of the Interborough on Dec. 26, 1917, a quarterly dividend of 5 per cent was declared calling for the payment of \$1,750,000, seven days before that the company borrowed \$1,000,000 from the Interborough-Consolidated Company, to which the dividend of \$1,750,000 was mainly payable. Similarly twelve days before the dividend of \$1,750,000 declared payable in April, 1918, had been sanctioned the company borrowed \$2,500,000. During April, 1918, the company borrowed \$4,000,000 and on May 28 the directors declared a quarterly dividend of 2½ per cent calling for \$875,000, which was paid out July 1.

On July 16 the directors renewed the bank loans of \$4,000,000 and on Aug. 27 declared another dividend of \$875,000 payable on Oct. 1. Later the company arranged for short-time financing through J. P. Morgan & Company and the bankers stipulated that so long as any of the notes were outstanding the company was not to pay any dividend in excess of 10 per cent per annum unless its surplus after the payment of dividends exceeded the surplus earnings as of Sept. 1.

Mr. Fisher here explained that the dividends were all declared from surplus at a time when the surplus was considered ample. On March 20, 1919, \$800,000 was borrowed from the Interborough-Consolidated by the Interborough Rapid Transit. The following day a receiver was appointed for the Interborough-Consolidated. At the demand of the receiver this money was returned. The late Mr. Shonts, then president of the Interborough, wrote Mr. Sheffield, the receiver of the Interborough-Consolidated, that the loan was legal, but Mr. Fisher understood the money was returned in deference to the wishes of the receiver.

Mr. Fisher explained that as the Interborough Rapid Transit was owned by the Interborough-Consolidated, it was to the interest of the one to see that the obligations of the other were paid. Mr. Fisher stuck to this point although Mr. Shearn for the commission sought to prove that the effect of taking \$800,000 away from the Interborough-Consolidated while it was insolvent was to prevent, to that extent, the holders of the collateral trust bonds of the Interborough-Consolidated from getting any interest and to enable the holders of the Interborough bonds to get interest out of the Interborough-Consolidated money.

Mr. Shearn next questioned Mr. Fisher at length about the financial structures and the intercorporate relations of the Interborough-Metropolitan Company and the Interborough-Consolidated, the successor to the Interborough-Metropolitan Company. Mr. Fisher replied in the affirmative to the

question: Then after this company which could not declare dividends unless it declared them out of capital, which was also against the law, after this company reduced its capital stock by this device below its liabilities, as it was prohibited by law, it began to distribute dividends to the holders of the preferred stock of the Interborough-Consolidated, didn't it?

Mr. Shearn declared after reading a statement dated April 26, 1915, addressed to the holders of the common stock voting trust certificates of the Interborough-Metropolitan Company by Messrs. Berwind, Belmont, Freedman, Shonts and Vanderbilt that "it would seem that the bold, admitted and declared purpose of this consolidation was to permit the declaration of dividends upon the then Interborough-Metropolitan preferred stock which afterward became Interborough-Consolidated Corporation preferred stock; and as that could not be done without reducing the capital stock of the Interborough-Metropolitan Company, the plan was adopted of accomplishing the same thing, by, in effect, changing its name and then reducing its capital stock and declaring the dividends; which it seems perfectly obvious amounted to declaring dividends out of capital at a time when the capital of the company was recognized to be some \$80,000,000 to \$82,000,000 impaired."

#### MR. BELMONT ON THE STAND

At the hearing on the morning of Dec. 1 several directors of the company were in attendance.

Mr. Belmont first took the stand and was asked if he would sign a waiver of immunity. At this point, in behalf of Mr. Belmont, Mr. Nicoll read a statement in which he declared that the practice which seems to have come up recently of asking witnesses to waive immunity was vicious and had no justification in law and that the directors were opposed in signing any such waiver, but they were prepared to answer any relevant questions.

Mr. Belmont then explained that while he personally might have no objection to answering questions which might be put to him he had also the interests of his company, as well as his own, to consider. He declared that nothing new had been disclosed so far and that all details were matters of public record. In his opinion, much of the loss of credit of the company in the past had been due to attacks upon it, and the directors individually have suffered heavy losses. While there may have been speculation in the stock market on securities of the company, there has been no more, he believed, than in the case of many other companies. While not intending to do so the commission had an opportunity to put the property in the worst light possible in order to carry out its announced plans to include it in the proposed reorganization.

Mr. McAneny said that the purpose of the hearing was not to injure the company, but it was essential for a proper understanding of the situation to have full knowledge of all the facts, and many facts had already been brought out affecting not only the valuation of the property but the adequacy of the revenue and the sufficiency of the service.

Moreover, knowledge about the defects in the old methods of financing were necessary to determine what to

avoid in future. He thought that the directors should welcome the opportunity of explaining the reasons for following certain methods whose existence had been brought out in the hearings. The waiver requested was practically a technicality, he said, but as explained by the counsel was for his protection in asking questions.

At this point Counsel Shearn of the Commission said that no evidence had been presented at the hearings of criminal misconduct and that there was no objection to the witnesses having personal counsel present if they desired. He expressed the hope that the directors would reconsider their unwillingness to testify.

As the directors declined to sign a waiver if required to testify, Mr. McAneny dismissed them from attendance, with a statement that the commission would take some action in the matter but had not decided what course it would follow. Mr. Fisher, secretary of the company, then took the stand, and was giving testimony when this paper went to press.

## Informal Vote at Saginaw

### Conference on Railway Franchise Will Resume After Public Decides Between Auto and Railway

After a conference between the members of the City Council of Saginaw, Mich., and representatives of the bondholders and other creditors of the Saginaw-Bay City Railway lasting more than ten days it was agreed on Nov. 30 to submit to an informal vote, the question of whether the citizens want electric railway or motor bus service. Should the people decide in favor of the restoration of railway service, which has been suspended since early in August, the conference will be resumed.

The thirty-year franchise asked by John C. Weadock, New York, in behalf of the bondholders and other creditors, did not meet with favor by the Council. Objection was made to the length of the term of the grant, and to the provision which had been suggested that that value of the property on which to figure a return should be determined after the proposal was submitted. Minor changes were suggested by the Council, but the suggestions just noted were the rocks on which the conferees split.

Mr. Weadock insisted that appraisal by disinterested parties would be the more satisfactory way of reaching a decision on the property valuation and said that a reduction in the length of the grant to twenty-five years was the limit to which the company could go and retain power to attract new money for investment in the property. He proposed to start the operation of cars as soon as the Council would agree to eliminate the jitneys and decide on the terms of a franchise to be submitted.

After the adjournment of the conference on Nov. 30, both sides felt that something had been accomplished and when the conference reconvenes the city will have a franchise prepared on the theory of fixing the rate of fare for two years and submit this question and all others with the respect to operation, etc., to the Michigan Public Utilities Commission. Mr. Weadock has agreed to modify his franchise suggestions in some respects before the next meeting.



### Wage Reduction Argument Concluded

Arguments have recently been concluded before a board of conciliation at Vancouver, B. C., as to a reduction in wages and modification of working conditions for employees of the British Columbia Electric Railway. The company notified its employees some time ago of its intention to reopen the agreement with the union and later the board of conciliation was appointed under the Canadian regulations. W. C. Ditmars was appointed chairman; A. C. McCandless represented the company and R. P. Pettipiece the men. The main objectives of the company were:

- Reduction of 15 per cent in wages. The present maximum rate of 65 cents. This would be reduced to 55 cents.
- Abolition of extra pay for Sunday work. Time and a half is now paid motormen and conductors herein.
- Substitution of monthly minimum for daily minimum. At present the company guarantees six hours work a day. It proposed a minimum of \$70 a month.
- Abolition of spread over time. The company now pays 25 cents an hour when the spread-over exceeds ten hours.
- Abolition of payment for ten minutes time when making relief on the road.
- Abolition of double time for overtime in shops and track department barns and substitution of time-and-a-half.

The award of the conciliation is not binding on either party. It is expected to be submitted in a few days.

### More Than 50 per Cent of Each Fare for Wages Alone

Bearing in mind the recent 5-cent fare order issued by the Illinois Commerce Commission, the following statement of the Chicago Surface Lines for the eight months' period ending Sept. 30, 1921, is of particular interest:

#### AVERAGE REVENUE PER PASSENGER AND ITS DISPOSITION

|  |              |
|--|--------------|
| Passenger revenue.....                       | \$39,505,777 |
| Revenue passengers carried.....              | 496,615,714  |
| Total passengers carried.....                | 886,565,990  |
| Average fare per revenue passenger, cents    | 7.955        |
| Disposition of the average fare              |              |
| Wages.....                                   | 51.77 4.118  |
| Material, power and other expenses           | 18.77 1.493  |
| Taxes.....                                   | 3.26 0.259   |
| Damages.....                                 | 3.58 0.285   |
| 55 per cent to city.....                     | 5.11 0.407   |
| Interest on bond indebtedness and loans..... | 11.57 0.920  |
| Sinking fund.....                            | 0.42 0.034   |
| Residue for companies.....                   | 5.52 0.439   |
|  | 100.00 7.955 |

### Albany Strike Costs \$3,000,000

According to the *Knickerbocker Press*, Albany, N. Y., the United Traction Company, has suffered a loss of \$1,799,490 in passenger revenue from Jan. 1 to Sept. 30, 1921, and the men a wage loss of \$1,000,000 due to the Albany-Troy strike which began on Jan. 29 and terminated on Nov. 22. The formal calling off of the strike was referred to in the *ELECTRIC RAILWAY JOURNAL*, issue of Nov. 26. The statement from the *Press* of Nov. 27 is based on quarterly reports made to the Public Service Commission. In part it is as follows:

In 1920 the United Traction Company earned approximately \$2,402,469 for the first nine months of the year, and this year, for the first nine months, all of which were during the strike period except in January, the company earned only \$575,569, a decrease of \$1,402,469 for 1921 period. Transportation expenses have increased greatly, the greatest increase being in the early months of the strike. For the nine months the transportation expenses increased \$223,006.

The company lost between January and

March \$507,060 in passenger revenue, and in the same period its transporting expenses jumped \$266,449. In the same period it suffered a loss of 7,842,565 passengers carried, compared with the number the year before. This is about 65 per cent.

Between April and June the passenger revenue dropped \$744,406 from 1920 figures, and the number of passengers carried dropped approximately the same as in the first three months under the 1920 figures. Transportation expenses increased \$110,970 from last year. The revenue from July to September was \$548,022 less than last year.

### Wage Cut Proposed

Proposals have been made for a cut in wages for employees of the United Railways & Electric Company, Baltimore, Md. The company is not making the surplus of from \$1,000,000 to \$1,500,000 to which the Public Service Commission has held it is entitled. In fact, this year the balance will hardly be one-half of the \$1,050,000 last year.

The proposal is to cut wages and leave the rate of fare at 7 cents, it being felt that any further advance in rates would only tend to diminish traffic. The plan to be presented to the employees will include an approximate reduction of 2 cents an hour for men on an hourly basis. It will be put up to the men, and will not go into effect until the company and the employees have conferred. Motormen, conductors, shopmen and laborers will be represented in the consultations. Officials hold that with a 30 per cent decrease in living costs, they are justified in making a 5 per cent cut in wages.

The cut of put into effect, would include officials and clerks and would save the company about \$360,000 a year. The company must file application before Nov. 30, for a continuation of the 7-cent fare after this year. This provision was contained in the order granting the 7-cent rate.

### Utility Owners Score Municipal Railway

The Puget Sound Light & Power Company, Seattle, Wash., has filed a petition with Judge E. E. Cushman of the Federal Court for an order compelling specific performance of the purchase contract by which the city of Seattle took over the municipal railway lines, formerly owned by the Puget Sound Traction, Light & Power Company. The attorneys for the Power Company characterize the municipal street railway as a "political football," and express doubt over payments of interest and principal on the \$15,000,000 purchase price being made.

Corporation Counsel Walter F. Mejer, representing the city, asked that the suit be dismissed on the ground that the city is determined to meet its obligations in good faith. The next installment of \$1,500,000 is due Feb. 1, 1922. Judge Cushman took the matter under advisement, allowing ten days for the company to file a brief, and a similar period for the city to answer. A decree is not expected until late in December.

James H. Powell, appearing as attorney for the company, summed up his argument as follows:

The public has an interest in seeing that this case is settled and the plaintiff does not want the bonds being made the football of politics any longer. Such will be the case until the matter is put to rest. While we believe that the Corporation Counsel is sincere in assuring us of the city's good faith, what is to hinder the City Council from repealing its ordinances and again resurrecting the controversy?

### New Equipment Is Needed for Interurban Service

An interesting development of interurban railways as a result of motor bus competition, the ever-increasing number of patrons who ride their own automobiles and the increasing density of suburban population, is seen in Toledo in the application of J. Frank Johnson and Harry Dunn, receivers for the Toledo & Western Railroad, to the federal court here for permission to buy three new light passenger cars for use on the Toledo-Sylvania section of the interurban line.

When the road was built more than twenty years ago 30-ton cars were purchased and thirteen of these are still in service. The master mechanic has estimated that it will cost more than \$10,000 to keep these operating for another year.

J. F. Johnson, who is in charge of operation, wants to purchase three light cars for a trial. He estimates the cost at about \$32,000. He wants double-enders with lower steps and doors operated like city cars. He estimates that these cars would save \$2,268 a year in power alone. The statement of condition indicates that the road is making most of its money by distribution of electric power to general consumers of electricity for commercial and private use rather than through the conduct of its passenger carrying business.

Through the adoption of lighter equipment Mr. Johnson hopes to be able to compete more effectively against motor buses and increase passenger revenue on that portion of the line.

### Jitney and Franchise Matters Drag in Richmond

Events in Richmond, Va., make it appear unlikely that any action will be taken at this time by the City Council in regard to the jitney problem. The jitneys go through a large fan-shaped section of the west end where the householders have for years opposed the construction of an electric railway and the jitneys in reaching the business center come down Broad Street, paralleling the railway line of the Virginia Railway & Power Company from Belvidere to Ninth Street, a distance of nearly a mile. Several ordinances have been introduced in the City Council proposing some other route, including removal to Grace Street, the next thoroughfare to Broad, but no action has been taken. One of these is expected to come up in substitute form at the meeting of the Council on Dec. 15.

To meet jitney competition the Virginia Railway & Power Company has asked permission to operate a trackless trolley line over substantially the route the jitneys are now serving, but the ordinance has been referred to the street committee to be considered along with the new franchise for the company.

That committee has just now, after months of delay, secured an appropriation by the City Council of \$10,000 with which to employ attorneys, engineers and accountants to advise as to valuations, etc., as a preliminary to the new franchise.

A valuation for the company of all its own property was made some time ago by Stone & Webster.



## Financial and Corporate

### Bondholders to Advance \$1,000,000

#### New Orleans Company Will Purchase Additional Unit to Relieve Shortage

The junior security bondholders of the New Orleans Railway & Light Company, despite the pending litigation in the city and state courts, will advance the receiver of the company \$1,000,000, according to the statement of G. M. Dahl, vice-president of the Chase National Bank, on the eve of his departure from New Orleans for New York. The money is intended for the purchase and installation of a new 20,000 kw. unit and appurtenances.

It was the intention of the security holders, upon the settlement of the company's troubles, to provide the necessary funds with which to purchase the equipment needed to relieve the present shortage of power and furnish an adequate reserve. The output of electricity, however, has nearly reached capacity with no reserve in sight, making the danger of a breakdown greater if a further connected load were taken on. With the prospect of a new unit Mr. Dahl states the receiver feels he can take the chance of increasing the load, though it is realized this relief is only partial and temporary.

The money is to be obtained from the junior security holder upon receiver's certificates, formal announcement of the issue of which is to be made by the receiver soon.

As the next step in the New Orleans situation the injunction secured by the state of Louisiana in the Civil District Court before Judge King will come up on its merits in view of the recall order of the State Supreme Court. The preliminary hearing was fixed to be held in Judge Porter Parker's division, to determine whether to dismiss the preliminary injunction and the state's application, or to make the injunction permanent.

The resolution introduced by Representative Arras in the Legislature calling for an investigation of the affairs of the New Orleans Railway & Light Company failed of passage and action upon it has been indefinitely postponed.

### Commonwealth Property Makes Splendid Showing

The statement of earnings of the Commonwealth Power, Railway & Light Company, Grand Rapids, Mich., and its subsidiary companies for twelve months ended Oct. 31 shows a net income available for dividends, replacements and depreciation of \$2,750,838 and a balance of \$1,673,658. The balance in 1920 amounted to \$832,271.

In regard to the foregoing, B. C. Cobb, vice-president and operating executive, said:

This excellent showing is remarkable because it was made during a period when the volume of business done by the light, power and railway departments was less than that of the preceding twelve months. It is due largely to the success of the management in obtaining a stronger grip upon the operating expenses of most of the subsidiary companies and to increases in the

sales of electricity and gas for commercial and domestic purposes, the additional revenue from which offset that lost by the decline in sales of industrial power.

Earnings of some of the railways have not been satisfactory. The Saginaw-Bay City Railway property has not been in operation since Aug. 10. This because of the Commonwealth Company's determination that the railways operated by it must at least be self-supporting. There are signs of a more favorable sentiment on the part of local authorities and the public generally toward street railways. This is perhaps due to the experience of those cities where street railways were forced to suspend operations and to the consequent realization that if these utilities are expected to serve, they must be allowed to earn enough to pay their way. We are hopeful that the Saginaw-Bay City situation will be worked out to the satisfaction of all concerned, and I believe it will be. It is unthinkable that growing and prosperous communities like Saginaw and Bay City should be without street railway service.

Favorable progress is being made by certain of Commonwealth's subsidiaries in the sale of their preferred stock to customers. More shares were sold during the month of October than in any previous month of 1921.

The 1921 construction program is about finished. These expenditures have added to the operating efficiency of the properties and benefited the service rendered to the public.

### Chicago "L" Earnings Unsatisfactory

For the first eight months of 1921 the Chicago Elevated Railways realized a gross revenue of \$11,660,809 and net earnings of \$1,611,068. This is at the rate of only 2.8 per cent on the valuation of \$86,250,000 allowed by the Illinois Public Utilities Commission last year, whereas the commission held that the companies were entitled to earn a rate of 7½ per cent on this value. After deducting interest charges from the net earnings for the eight month period, there remained a deficit of \$47,002. In spite of this showing, the companies have been cited to appear before the Illinois Commerce Commission to show cause why the present rates of fare should not be reduced, and the case comes up for hearing during November.

### West Penn Purchases Kingwood Company

The West Penn Railways has purchased the West Virginia & Maryland Power Company of Kingwood, W. Va. This company was recently organized to supply electric service from Grafton, W. Va., eastward through Taylor and Preston counties of the state, and Garrett county, Md., and into the coal field along the upper Potomac. The sale included the plant at Grafton. To extend the service of the generating plants at Springdale and Connellsville, Pa., of the West Penn company, and the one at Windsor, W. Va., a power transmission line has been started which will run south through the Cheat River basin to Tunnelton, Rowlesburg and Newburg on the main line of the Baltimore & Ohio Railroad. A direct power transmission line is to be built from Grafton to Riversville on the Monongahela River, just below Fairmont. The power plant of the Monongahela Power & Railroad Company is located there.

### New Valuations of Toronto Railway Submitted

#### Cooley and Drum Figure the System in 82 and 74 Per Cent Condition

Dean Cooley of Michigan University, giving evidence before the Toronto Railway arbitration board during the week ended Nov. 26, estimated the value of the system at \$22,154,952, compared with the estimate of W. G. Hagenah some weeks ago at \$20,032,837. He also gave a reproduction cost of \$26,998,250 based on average prices of 1918, 1919 and 1920. Mr. Hagenah's estimate of reproduction was \$26,110,044.

A. L. Drum, consulting engineer, Chicago, valued the system, on the basis of prevailing prices during the years 1918, 1919 and 1920, at \$20,602,766. He figured that the system, when turned over to the city in September last, was in 74.75 per cent condition, compared with Mr. Hagenah's 72 per cent and Dean Cooley's 82 per cent. A second similar appraisal was submitted by Mr. Drum, on the basis of unit prices prevailing Sept. 1, 1921. This appraisal figure was \$20,029,290.

The board ruled that it would be improper and useless to allow inspection of the books and records of the Toronto Railway for the purpose of ascertaining original costs save when such purchases have been of so recent a date as to bring the cost to bear on the present value. For these purposes books and records of the company since Jan. 1, 1913, are to be produced for inspection. Counsel for the company took exception to this ruling, and, after hearing argument, the board agreed to grant a stated case to be submitted to the Appellate Court in accordance with a memorandum prepared by the company's counsel, N. W. Rowell, covering the following points:

Is the evidence of the cost of the properties turned over to the city corporation relevant to the issue?

Should inspection of the books of the company be granted?

Should the city be entitled to inspection of the records with regard to maintenance repairs?

So far the arbitrators have not indicated when they will bring in their finding on the basis of "actual cost plus appreciation, minus depreciation," as advocated by counsel for the city, or on the basis of "reproduction cost" which is the stand taken by counsel for the company. The chairman of the board asked counsel for both sides to waive objection to the evidence being given, but counsel would not agree to this suggestion. The board then officially changed the date upon which they would bring in their finding until March 1 next.

### W. Va. Property Has Surplus

The statement of earnings of Appalachian Power Company, Princeton, W. Va., for the twelve months ended Oct. 31, 1921, shows a surplus of \$77,007, against \$22,638 in 1920. It was stated that this improvement was due to operating economies and substantial increases in rates. Recent financing has assisted the company in reducing its debt by \$544,600. The company has already started on enlarging its power capacity. This activity is referred to elsewhere in this issue.



**Tax Bill Signed**

President Harding on Nov. 23 signed the bill revising the tax and revenue laws. The measure is entitled "An act to reduce and equalize taxation, to provide revenue, and for other purposes," but is generally referred to as the Tax Revision Law of 1921.

While the tax bill is admitted by its authors to be an imperfect measure, it does provide for a substantial reduction in the tax burden and greatly simplifies the administration of the law. The bill in its final form will require the payment of some \$725,000,000 during the first fiscal year that it is in full operation, less than would have been raised had the law it supersedes remained in effect. The reduction will be greater when collections from the excess profits tax cease altogether.

The repeal of the transportation and so-called nuisance taxes means a reduction of \$326,630,266 during the fiscal year beginning July 1, 1921. That feature of the bill alone is held by many to justify its enactment. It was stated officially at the White House and by the chairman of the finance committee that the bill is intended as a temporary measure only. The great disappointment to business is that the recommendations of the Secretary of the Treasury were not carried into effect in the matter of transferring some of the higher brackets of the income tax to the estate tax title.

In its final form the bill is expected to yield \$3,216,100,000 in the fiscal year beginning July 1, 1922, and \$2,611,100,000 in the fiscal year beginning July 1, 1923. For the fiscal year of 1922, the bill is expected to raise some \$16,000,000 in excess of the Government's requirements.

The Senate accepted the House rate of 12½ per cent applicable to the corporation income tax. This reduction of 2½ per cent from the rate proposed by the Senate will reduce by \$110,000,000 the annual tax burden on business. The lower rate is particularly advantageous to public utility companies and other corporations now earning small returns on their invested capital.

**Valuation Refuted**

F. D. Burpee, manager of the Ottawa (Ont.) Electric Railway, answered the Fairlie valuation of \$4,119,992 of the property of the company with the following statement:

Mr. Fairlie's report can only be considered as his opinion of the value of the Ottawa Electric Railway property, based on what he and his staff could observe on the street without access to the premises or inventories of the company. His report values all the assets without the water power at \$4,580,446. The condition percentage of the rolling stock in his report is much too low. This, together with the many items that must have been assessed in a valuation made from the sidewalk, would bring his total approximately to that arrived at by Dr. Herdt and his staff in 1919. Dr. Herdt's figures were \$5,211,000, without the water power.

**Michigan Property Unable to Meet Expenses**

Residents of Marquette, Mich., may lose the railway service furnished by the Marquette City & Presque Isle Railway. Because of lack of patronage with a corresponding decrease in revenues the possibility of suspending service becomes more probable each month.

The railway, since doing business

under a court receivership, has cut down its overhead expense and has spent no money on improvements. According to a local paper, the daily minimum expense in operation of this system is \$73, with revenue falling to \$60.

**San Francisco Purchase Near**

San Francisco, Cal., may hold a special election sometime in March to decide upon the proposed purchase of the Market Street Railway properties. The Public Utilities Committee of the Board of Supervisors has recommended such action. A committee was appointed to negotiate with officials of the company.

The purchase of the properties, if made, will be on the pay-as-you-go policy, according to an amendment to the city charter, approved by the voters at the election on Nov. 2, 1920. The amendment is an enabling act, giving the city the power to purchase public utilities when necessary, and when the purchase is confirmed by the electorate, and paying for the utility out of its own revenue.

The plan of the city, should the purchase be confirmed by the voters, is to establish branch lines throughout the city where needed, and make a universal 5-cent fare with transfers, from one end of San Francisco to the other.

**Segregation of Properties Is a Problem in Reorganization**

Two important issues with respect to Key System reorganization are brought to a head in letters of the advisory committees representing Oakland Traction Company and Oakland Traction Consolidated security holders and Key Route second mortgage bondholders to individuals of the groups they represent. The questions are:

Shall the note holders of Oakland Terminal (Tidelands) Company and the Oakland Railways foreclose on their holdings, thereby cutting the tidelands and the company from the reorganization plan?

Shall the reorganization plan be revised to separate into two companies the Key traction system proper and the Oakland and Eastbay street railways?

Regarding the first it is the opinion of the advisory committees representing the Oakland Traction Company and the Oakland Traction Consolidated security holders, and also the Key Route second mortgage bondholders, that it would be to the interest of these security holders to have the Oakland Railways and the Oakland Terminal (tidelands) notes foreclose.

The committee's letters ask whether or not it is wished to request the organization committee to retain or eliminate the two issues. Proposal by the reorganization committee to pay the interest on the Oakland Railway notes for fifteen years at 6 per cent and on the Oakland Terminal (tidelands) notes of seven years at 6 per cent means fixed charges of \$215,000 a year and is one of the reasons for the conclusion recommending foreclosure.

The decision of the advisory committees is the first to bring into the open

intimations of legal action in connection with reorganization. Respecting the proposal to segregate the traction and the street railway properties the San Francisco News says that holders of some securities of the traction lines are understood to be of the opinion that the step would divorce these forthcoming issues from the problems of competition and franchise which may confront the street railway lines and consequently tend to stabilize the traction securities.

An extension of time has been granted for the making of deposits under the reorganization agreement.

**Exchange Completes Purchase**

The Interstate Public Service Company now completely owns the Hydro-Electric Light & Power Company at Connersville, Ind. The Interstate company received authority from the Public Service Commission to exchange its 7 per cent prior lien stock at equal value for \$325,000 of the first preferred cumulative 6 per cent stock and \$54,800 second preferred cumulative 7 per cent stock of the Hydro-Electric Light & Power Company. This gave the Interstate company entire ownership. A few days before the Interstate company received authority from the commission to take over \$335,000 of common stock of the Hydro-Electric company owned by E. D. Johnston with \$210,000 of its 7 per cent prior lien stock.

**Zurich Reports Gain in Earnings, but Loss in Traffic**

The report of the Zurich Municipal Street Railway for the calendar year of 1920 shows a falling off of traffic and reduction in car kilometers run, but owing to the higher fares charged, the receipts increased about 16 per cent. The accompanying table shows the main operations of the system.

The falling off in traffic was attributed in part to the increase in fares, but the management points out that there had been a decrease in traffic before the schedule of increased fares went into effect. The present scale, given in American money, appears in the next paragraph, the exchange being assumed for convenience as one franc equaling 20 cents; the market rate on Nov. 30, was 19 cents. The unit fare was given up after about a year's trial and the zone system was in use during the greater part of the twelve months covered by this report.

The fare for a ride in one zone was 4 cents, in two zones 6 cents and in three or more zones 8 cents. For \$1 a passenger could purchase a package of eighteen tickets good for a continuous trip between any two points on the line. For the same amount he could purchase twenty-eight single zone tickets, or thirty-three workmen's tickets good between any two points on the line, but valid for transportation only before 7:45 a.m. All of these tickets are transferable. In addition, yearly passes were sold for \$61, six-month passes for \$31 and monthly passes, for the first month \$6.40 and for each succeeding month \$5.40.

STATISTICS OF ZURICH MUNICIPAL TRAMWAYS FOR 1919 AND 1920

|   | 1919           | 1920           |
|---|----------------|----------------|
| Car kilometers.....                             | 13,248,782     | 11,772,189     |
| Passengers carried (total).....                 | 57,658,905     | 47,562,187     |
| Passengers carried per car kilometer.....       | 4.31           | 4.04           |
| Receipts from passengers (total).....           | Fr. 10,246,629 | Fr. 11,806,147 |
| Receipts from passengers per person.....        | Fr. 0.1796     | Fr. 0.2482     |
| Receipts from passengers per car kilometer..... | Fr. 77.34      | Fr. 100.29     |



### Wants to Abandon Local Lines

Because of its inability to meet expenses on its local lines the Trinidad Electric Transmission, Railway & Gas Company, Trinidad, Col., has filed an application with the State Public Utilities Commission for permission to abandon a part of its local service lines.

The plan offered by the company provides for service to the business district and the new paved district of the northside by the interurban cars. This partial abandonment plan was submitted to the City Council recently with the request that no protest be made, but no action was taken by the Council.

### Shore Line Property on Paying Basis

R. W. Perkins, receiver of the Shore Line Electric Railway, Norwich, Conn., in a report to the Superior Court covering the nine months from Jan. 1 to Sept. 30, shows a net profit of \$679.

The receiver also reports that under the general order to dismantle and sell the lines west of Flanders Corner, this work is proceeding and the rails are being taken up and delivered on cars about as fast as taken from the roadbed. There will be about 450 tons of the 70-lb. rails and from 1,200 to 1,300 tons of the 80 lb. rails. The rails are paid for as removed.

### What a Valuation Is Not

William G. Woolfolk, a well known Chicago consulting engineer and rate expert, says:

The lawyer has injected himself into the apparently simple matter of utility rate adjustment and brought complexity in his trail. He tries to play all over the piano. Originally he made our mortgages and other corporate papers so complicated that not even he could understand them and now he does the same thing with our rate cases. The economist revels in voluminous tables and obscure terminology in his long dissertation and monograph upon "value" before the flood, while the engineer and accountant are so immersed in the difficulties of their occupations and their conversation is so cluttered with mysterious technical expressions, nobody understands what in the world they are talking about. But for confounding the confusion the rate expert is the genius.

Mr. Woolfolk tells the story of Prof. Edward W. Bemis, for many years utility rate expert for the city, who was once requested during a rate case to explain his "fair value," and testified: "There is no precise definition, I think, or any agreed on statement to represent it, but there is a very clear conception of what it is not."—*Barron's*.

### A Deficit of \$408,428 in Louisville

For the first nine months of the present year the Louisville (Ky.) Railway has incurred a deficit of \$408,428 against a deficit of \$105,856 for the same period of 1920. The gross income for this period from January-September amounted \$577,290 and with deductions, interest on indebtedness etc., amounting to \$479,906 there remained a net income available for dividends of \$97,384. The total dividend requirements of the company for this period stand at \$505,812.

If the company receives an unfavorable decision from the courts in its fight for the 7-cent fare the liability up to Dec. 31, 1921, based on ticket sales from March 24 to Oct. 24 is estimated at \$335,000. If this refund to

the holders of the 7-cent fare receipts should be ordered the deficit of the company for 1921 will be increased to about \$850,000.

### Revenue of Ohio Property Improves

Employment increase at Toledo has probably helped in bettering the revenue of the Community Traction Company, Toledo, Ohio, for the month of November.

Figures for the first twenty-two days of the month indicated that November would run considerably ahead of October and furnish nearly \$26,000 for the stabilizing fund and the usual payment of \$17,708.33 for the sinking fund or municipal ownership fund. The gross receipts for the first twenty-two days of November as reported to Commissioner Wilfred E. Cann were \$199,613, or an increase of \$6,417 compared with the same days of October.

On Jan. 1, 1922 the city ownership in the lines will amount to \$232,000. Interest on this amount of bonds purchased by the sinking fund commissioners will amount to \$13,300 a year thereafter.

The Street Railway Commissioner has been officially notified that the \$1,900,000 mortgage on the underlying property of the railway has been cancelled by the Doherty interests through their recent financing of the Toledo Edison Company.

### Railway Investigation Completed

Investigation of the property and earnings of Birmingham Railway, Light & Power Company, Birmingham, Ala., by experts of the Electric Bond & Share Company has just been completed and the last of the experts has returned to New York to prepare a report on the property. According to information in Birmingham this report will form the basis of reported negotiations of the Electric Bond & Share Company for the purchase of the holdings of the American Cities Company, which now controls the stock of the Birmingham Railway, Light & Power Company, and the companies operating railway and electric lighting plants in Memphis, Little Rock, Knoxville, and Houston.

### Texas Property Exceeds Authorized Return

The Dallas (Tex.) Railway during October exceeded its authorized return of 7 per cent, as provided in the franchise granted by the city in 1917 to the Strickland-Hobson interests, according to a report covering the operation of its lines for this month just filed with J. W. Everman, the Supervisor of Public Utilities. The report shows gross earnings for the month of \$301,594 and total operating expenses of \$213,768, leaving a total of \$87,826 for authorized return and reserves.

On the present valuation of the property, the authorized return of 7 per cent amounts to \$54,964 a month, and after this amount was deducted from the amount of earnings, a balance of \$32,861 was left. This was passed to the reserve fund to be used in discharging the accumulated deficit in the authorized return, which amounts to nearly \$1,000,000.

## Financial News Notes

**Baltimore Property Will Pay.**—It has been officially announced that coupons No. 45 on the income bonds of the United Railways & Electric Company, Baltimore, Md., will be paid on and after Dec. 1 upon proper presentation at the office of Alexander Brown & Sons, Baltimore.

**Bus Line Wants to Issue Stock.**—The Mark Smith Bus Line which offers a passenger service between Aurora and Elgin, Ill., has filed an application with the State Commerce Commission for permission to sell stock. This bus project is being fought by the Aurora, Elgin & Chicago Railroad.

**Realizes a Net of \$535,537.**—In its seven months of operation from April, 1921, the Market Street Railway, San Francisco, Cal., shows a total operating revenue of \$5,502,455. Operating expenses totaled \$4,173,574 and net revenue \$1,328,881. The gross income of \$998,104 is reduced to a net of \$535,537 after subtracting bond interest and other deductions.

**Revenues Fail to Cover Expenses.**—The report of the city comptroller of Tacoma, Wash., on the operation of the Tacoma Municipal Street Railway during September, showed that the operating receipts failed to cover operating expenses by \$1,411 and that the total deficit, including interest and other charges, was \$4,675. Revenues were \$6,976 and expenses \$8,399.

**Interborough Again Reports Deficit.**—For the month of September, 1921, the Interborough Rapid Transit Company, New York, N. Y., shows a corporate deficit of \$398,204 which makes the cumulative deficit for the quarter ended Sept. 30, 1921, \$1,742,960 against a deficit a year ago of \$1,712,135. The total income for the three months period amounted to \$3,675,270 against \$3,465,497 for the same period a year ago.

**Sapulpa Railway to Sell Assets.**—The Sapulpa (Okla.) Electric Railway has received permission from the Corporation Commission to sell its entire assets to the Oklahoma Union Railway. The operation of the road, which extends between Sapulpa and Kiefer, a distance of 8.78 miles, has not been profitable and the company is in debt. This purchase will extend the lines of the Oklahoma Union Railway, which operates an interurban line between Sapulpa and Tulsa.

**Appointment of Receiver Asked.**—Appointment of a receiver for the Western Ohio Railway, operating an interurban line between Findlay and Troy, has been asked in Common Pleas Court at Lima, Ohio. The suit in foreclosure was filed by the Union Trust Company, Cleveland, on account of the inability of the traction company to meet interest or principal payments on its \$2,500,000 first mortgage bonds now due. The line operates through Hancock, Allen, Mercer, Auglaize, Shelby and Miami Counties. It is not believed the suit will interfere with its operation.



## Traffic and Transportation

### Five-Cent Fare Order Restrained

Ruling of Illinois Commission Against Chicago Surface Lines Protested on the Ground that the Decision Is Confiscatory

The Chicago Surface Lines almost had a 5-cent fare on Nov. 25. As indicated briefly in the *ELECTRIC RAILWAY JOURNAL* for Nov. 26 an order of the Illinois Commerce Commission fixing this rate was announced on Thanksgiving eve, allowing twenty-eight hours to prepare for the change from an 8-cent fare. The courts were closed, no federal judge was in the city and it was not until the following noon that a temporary restraining order was issued by Judge George A. Carpenter of the United States District Court. No trouble was caused by passengers on Nov. 25, and before noon of that day another order had been secured from Federal Judge Francis E. Baker requiring the companies to give a receipt for the 3 cents difference until further notice.

**FURTHER** developments are expected on Dec. 2 when Federal Judges Carpenter, Baker and Geiger will hear from both sides on the petition for a temporary injunction. The surface companies meanwhile are issuing ordinary transfers as rebate slips. The order from the state commission was not unexpected, and it followed within two days after the United States Supreme Court had taken a stand which meant that the contract provisions of the 1907 ordinances were not binding on the companies as to fares or service.

#### COMMISSION SUGGESTS BEELER PLAN OF RE-ROUTING

To make a 5-cent fare financially possible the commission suggested adoption of the John A. Beeler plan for re-routing of cars in the downtown district; other re-routing and "turn backs" outside of this territory; cutting the accident expense of the companies in half; reduction of the permissible rate of return from 7½ to 6 per cent; trimming of the salaries of officials of the companies; discontinuance of payments into the renewal fund as required by ordinance, and opening of negotiations with the city to obtain relief from the expense of street sweeping, sprinkling and paving.

The commission refrained from mentioning a reduction in wages although this was admittedly one of the high items in the cost of operation. The only reference on this point was a statement that "it would seem the companies should take cognizance of the trend of the times in the control of the operation costs particularly in the large salaries paid to their executive staff."

The opinion declared the service rendered by the surface lines to be "grossly inadequate, inefficient, and inconvenient and in many cases dangerous," and, therefore, in the opinion of the commission, not worth more than 5 cents. The commission concluded that if the companies would "exercise reasonable diligence, prudence, efficiency and economy" a 5-cent fare would "enable them to meet their legitimate and proper operating expenses and earn a fair return upon the fair value of their property employed in the public service."

Although no evidence was introduced in the case showing comparative cost of damages in various cities, the commission expressed the opinion that this expense should be cut in half, the companies having paid out for accidents

\$1,844,634 during the year ended July 31, 1921. Touching on the question of rate of return, the commission found that the allowance of 7½ per cent by their predecessors was "unreasonably and unjustly high," especially as the companies had actually paid an average rate of 5.014 per cent in securing its capital. The rate was therefore fixed at 6 per cent.

An interesting question is raised by the disallowance of money for renewals because the ordinances under which the companies are operating require them to set aside 8 per cent of gross receipts for this purpose, and the bonds of some of the companies are issued under mortgages containing such provisions. Besides the amounts actually expended from this fund in the past fourteen years, there has been accumulated \$11,672,599 which cannot be used except for renewal purposes. The commission says this fund can be drawn on to take care of renewals from time to time and that there shall be no further accumulations until further order of the commission. It is expected the companies would have difficulty in securing the approval of the Board of Supervising Engineers to withdraw money from this fund for current renewals, and it is likely that bondholders would threaten foreclosure.

The statement is made in the order that under modern methods the purpose of the City Council in requiring street sweeping and sprinkling has ceased to exist. As to paving of streets it says that "under the decisions of the courts in relation to municipally-owned companies and the reasoning therein evolved, it would seem that the pavement of streets was a matter of local taxation rather than a burden to be placed upon the patrons of public utilities." It was, therefore, suggested that these matters should become the subject of negotiations between the city and the companies.

By agreement with the city the question of valuation was not gone into in this proceeding, but the commission intimated that it might later on make a re-valuation and possibly discard allowances for franchise value and "going value" which were included by the previous commission.

In its petition for a restraining order the Chicago Surface Lines sets forth that the hearing before the commission was not for rate-making purposes but on the assumption that the 5-cent fare

provisions of the 1907 ordinances were in full effect and binding on the companies. The basis for this claim was removed by rulings of the state and federal Supreme courts. It was also pointed out that the city based its demand for a reduction in rate of fare on the allegation that conditions which justified the 8-cent fare had changed, although no evidence in support of this was introduced.

It was shown that under present traffic conditions in Chicago a 5-cent fare would produce only \$38,000,000 annually, whereas the operating expenses alone would amount to \$44,000,000. The authority of the courts was invoked to prevent confiscation of the properties. Upon issuing a temporary restraining order Judge Carpenter required a \$50,000 bond.

Before the city's legal representatives could make a move the following day, an attorney, Jacob L. Tenney, went before Federal Judge Baker as a fare-payer and demanded the issuance of rebate slips by the companies. Attorneys for the companies explained that such slips could not be distributed for several days. It was finally agreed that transfer slips be accepted as receipts immediately.

### United Traction Asks Eight-Cent Fare

Objections to the United Traction Company, Albany, N. Y., charging an 8-cent fare in Rensselaer, Watervliet, Waterford, Cohoes, Green Island and Troy, making a uniform 8-cent fare on all of the company's lines were made on Nov. 28 on the company's application recently filed before the Public Service Commission.

In general the objections centered upon an implied question of the constitutionality of the new public service commissions law, that asking for increases in fare had become a habit with the United Traction Company and that the company had failed to live up to its franchise and service agreements.

In the application the company sets forth that it will be "unable to continue the operation of its system and pay its operating expenses and taxes," unless granted relief through the establishment of a uniform rate of fare.

Albany patrons have been paying 8 cents since late in January, when the Public Service Commission ordered an 8-cent fare in the city, a graduated rate of fare in Rensselaer and a 6-cent fare in Troy.

The proposed uniform rate would result as follows:

Albany—8-cent fare; unchanged.  
Troy—Increase from 6 to 8 cents.  
Albany to Troy—Increase from 14 to 16 cents.  
Rensselaer—Increase within the city from 5 to 8 cents; increase from points within the city to the Plaza, Albany, from 6 to 8 cents; increase from points within the city to lines in Albany, from 7 to 8 cents.  
Watervliet—Increase from 6 to 8 cents.  
Cohoes—Increase from 6 to 8 cents.

The proposed increased rates of fare also contemplate the sale by the applicant for use in said zones of tickets or tokens of 8 cents transportation value, at the rate of four for 30 cents.

The applicant also asks for the establishment of a through fare of 16 cents applying between the Plaza, Albany and the terminal of its through zones in the city of Cohoes, with the privilege to passengers of using said tickets or tokens and the provision of proper transfer regulations.



## Hearings Resumed in Los Angeles

Railway Estimates Increased Fare  
Would Increase Revenue by  
\$1,380,000

Resumed hearings before the California Railroad Commission on the interurban service and the proposed increase in rates on lines of the Pacific Electric Railway, Los Angeles, Cal., took place on Nov. 14, 15 and 16. At the close of the hearing on Nov. 16 all the evidence and reports bearing on the Pacific Electric lines within Los Angeles were in the hands of the commission, but the status of the local lines in smaller cities will be determined according to the order of the commission by conferences between the cities, engineers of the commission and officials of the railway.

These meetings will determine the question of jitney service being eliminated in these cities and the question of abandonment by the company of certain non-paying lines in the small towns outside of Los Angeles. Reports as to the results of these meetings will be filed before the commission. The matter of the 20 per cent increase in passenger rates first came before the commission at a hearing at Los Angeles on Oct. 11, 12 and 13 and was reviewed in the *ELECTRIC RAILWAY JOURNAL*, issue of Oct. 22, page 756. After the three-day hearing the matter was then put over until Nov. 14 to give protestants of the increase in rates sufficient time to prepare their briefs and studies of the report of the affairs of the company as filed by Chief Engineer Richard Sachse of the commission.

The commission granted an emergency increase in rates to the company in July, 1920, to tide the company over the abnormal period of high prices of material and labor. The company now finds this increase insufficient and requests 20 per cent increase, which it is claimed is required to give an 8 per cent return on its valuation as fixed by the commission.

The company filed an estimate of additional revenue to be derived from the requested fare increase. This statement in part is as follows:

Estimated net increase in passenger revenue \$510,000, on local street car fares from the company's Los Angeles operated lines by establishing two 6-cent zones in Los Angeles, the rate to be 6 cents in each zone.

Also, the estimate would realize a net increase of \$50,000 by discontinuing transfers in Pasadena except that two forms of sixty-ride commutation tickets be provided for the Los Angeles-Pasadena interurban lines, one good to Colorado Street and Fair Oaks Avenue only and the other to include transfers to and from local lines. Under past arrangement, the company be allowed transfer privileges between its local lines and interurban lines in Pasadena regardless of distance of travel within the city of Pasadena.

The total net increase would be \$1,380,000, and in a majority of these estimated increases allowance is made for deflection in travel due to increase proposed.

The Motor Transit Company, the largest motor bus operating concern in the state, then entered the hearing and filed a brief, stating that while it offered considerable competition with the Pacific Electric, it did not see why it should be dragged into the hearing. Its statement pointed out that the lowest commutation fare was 1½c. a mile, while the lowest offered by the Pacific Electric is 0.9 of a cent. On one-way fares the motor bus line offers a fare

of 2½c. a mile, while the fare of the Pacific Electric is 3½c.

The motor carriers objected virtually to all points in Engineer Sachse's report bearing on their service, especially regarding Mr. Sachse's idea of a fair rate of taxation. It has been pointed out that some of the motor bus lines are taking away from \$200 to \$300 worth of business a day from the railway. The motor companies wanted Mr. Sachse to define the idea outlined in his report of what he termed unfair competition, and he finally put it fairly clearly that he would not recommend shutting down long distance bus service, but jitney competition in small towns was unfair to the railway line.

One of the main contestants in the hearing was the city of Los Angeles opposing the proposed zone system and increase of fares on local city lines operated by the Pacific Electric. The city's brief especially covered the Hollywood district service and demanded faster service to this locality, stipulating that the number of cars operated be greatly augmented; that 2 and 3 car trains be run at frequent intervals, instead of the present single cars operated; that new cars be modern, for multiple operation and latest safety devices; that quick-loading platforms be provided at terminals; that a tunnel be constructed westerly out of the company's present Hill Street terminal in the city, the tunnel requiring a capital expenditure of \$2,300,000, and that the district served by this improvement should bear its proportionate share of the cost of the tunnel, which will offer more rapid service and a short cut to the Hollywood territory.

It is recommended by the Board of Public Utilities that a policy be established by the State Railroad Commission looking to the establishment of motor bus or trackless trolley "feeders" with transfer privileges for such sections of Los Angeles as can support such service, where, from financial considerations, car line extensions are not possible. This recommendation will also be made by the board in connection with the rehearing of the Los Angeles Railway Corporation's application for an increase in fares, which hearing is fixed for Jan. 17, 1922.

### City Withdraws Objection to Fare Increase

The City of Raleigh, N. C., has withdrawn its objections to the petition of the Carolina Power & Light Company for increased fares. By a unanimous vote the Board of City Commissioners decided this issue on Nov. 23, "to the end that the matter may be decided on its merits by the Corporation Commission uninfluenced by the views of the members of this board."

The petition of the company for an 8-cent fare has been before the Corporation Commission for more than a year. The city successfully opposed the increase last December. In June of this year the company renewed its request, but some weeks ago the commission indefinitely postponed the issuance of an order. Recently the company requested the city to withdraw its objections.

The company in its petition has provided for tickets at the rate of 7½ cents. This fare controversy in Raleigh has been referred to previously in the *ELECTRIC RAILWAY JOURNAL*.

### Wants Court to Pass Lawfulness of State Department

The action of the State Department of Public Works at Olympia in requiring the Sound Transit Company, operating stages between Seattle and Roosevelt Heights, to abide by the city ordinances after the buses pass inside the corporate limits, was attacked at Olympia recently by the company in the Superior Court of Thurston County. Morris B. Sachs, associated with W. B. Crawford as counsel for the company, obtained an order from Superior Judge John M. Wilson, citing Director E. V. Kuykendall and other members of the State Department of Public Works to certify fully its records and files in the case of the Sound Transit Company's application for a review by the court on Dec. 6, or show cause why it declines to do so.

In its application for the writ of review, the company asks the court to pass upon reasonableness and lawfulness of the department's limitation which puts the jitney operation under the city ordinances inside the corporate limits. This action will carry the jitney legislation from the office of the city legal department to the office of the state attorney general, who will be required to represent the State Department of Public Works.

The disputed clause in the Sound Transit Company's certificate of public necessity and convenience was that upon which Superior Judge A. W. Frater of King County recently denied the jitney interests a temporary injunction brought to restrain the city from arresting Seattle jitney drivers of the company who operate without permits from the City Council.

This certificate recited that it "is subject to the ordinances of the said city now in effect, or which may hereafter become effective, governing the operation of motor vehicles on the streets of said city."

The Thurston County court action, according to city officials, will decide whether the State Department of Public Works has the right under the law of 1921 affecting motor transportation companies to grant permits to jitney lines in conflict with the laws of municipalities. Officials of the city also state that the pending litigation will have no effect on the status of the Cowen Park jitney buses.

### Houston to Try 5-Cent Fare

Twenty tickets will be sold for \$1 in Houston, Tex., by the Houston Electric Company, after Jan. 1, and children between the ages of five and twelve years will be carried for 3 cents. These prices will prevail for a test period of four months, to be changed thereafter if the company proves it operated at a loss. Municipal authorities forced this settlement of the traction difficulties there. Where tickets are not purchased the fare will be 6 cents.

### Asks Elimination of Fare Zone

Elimination of one of the four fares now charged on cars operating between Wilmington, Del., and Chester, Pa., on the Wilmington & Philadelphia Traction Company, is asked in a petition to the company which was signed by 700 residents along the route. The fare now collected at the state line is the one the passengers wish dropped.



## No More Reduced Fares Likely in Connecticut

Municipalities desiring to have the 5-cent fare tried in their respective communities will get no relief from the Connecticut Public Utilities before next January, if at that time, it is reported.

The Commission has let it be known that it was most essential that the present tests or experiments now being carried out in Bridgeport and Norwalk be allowed to proceed without risking new complications. This decision will curtail the cities of Hartford and New Haven in any plans they have at present seeking a fare reduction. Petitions had already been drawn up and were to be presented to the Public Utilities Commission for an assignment for a hearing.

The Commission in its recent Bridgeport decision declared emphatically for the district system, indicating that it was for the best interests of the respective population centers to have the Connecticut Company lines handled by districts as far as fares and accounting were concerned and the Commission has gone on record in favor of the district system which would provide a reasonable fare for the short haul rider. Furthermore, the Commission has declared that each district would be decided on its merits.

Following the Commission's decision ordering a 5-cent fare trial period in Bridgeport, Waterbury, New Haven and Hartford officials let it be known that they would petition for a trial of the 5-cent fare. New Haven's Corporation Counsel, however, decided to ascertain the Commission's attitude as to the desirability of instituting a test of the 5-cent fare in that city and wrote the Commission. In reply the Commission, through Secretary H. S. Billings, sent the following to Corporation Counsel Bennett:

"While very sympathetic to the present desire and needs of the public of New Haven and other localities with regard to lower trolley fares, this Commission is of the opinion at the present time that in view of the limited revenues now being received by the street railway company it would be unwise to inaugurate reduced fares in New Haven or elsewhere pending the outcome of the Bridgeport and Norwalk experiments. While probably not controlling, the results of those tests would naturally have a material bearing on any decision of this commission with reference to reductions in other territories."

The Common Council of the City of Hartford at a meeting on Nov. 23 voted to present such a petition to the Commission. No date has yet been set for a hearing.

The Norwalk test period went into effect November 6 and the Bridgeport trial became effective Nov. 20. Each test is to last 90 days.

## Settlement Near in San Antonio

An amicable fare reduction from 8 cents to 6 cents in San Antonio, Tex., seems indicated in the action of W. B. Tuttle, vice-president and general manager of the Public Service Company, who has presented the matter to the board of directors in New York. The ordinance establishing 6-cent fares, which was to have been introduced for consideration of the commission, has been withheld, pending the judgment of the board.

Negotiations have been carried on for some time past for a 6-cent fare. On this point the city was insistent. It

refused recently to accept a 7-cent cash fare with a three-for-20-cent ticket system, and has stood ready to enforce the 6-cent fare by municipal ordinance. A considerable reduction in gas and electric rates has already been agreed upon by city officials and the heads of the company.

The first concerted action was taken on Nov. 7, when a petition asking for a reduction was presented to the City Commission. Since then the Public Service Company, in an endeavor to inform the public of its stand and to settle the question of reduction peacefully, has issued a formal statement in which it emphasizes the 7 per cent agreement with the city. This, it points out, was for one year only, and was lived up to by the company, in spite of the company's protest at the time that 7 per cent was not a fair rate of return.

## Authorization for Thirty Buses Given

On recommendation of Carl H. Reeves, Superintendent of Utilities, the Seattle City Council has issued a permit for thirty jitney buses to operate on the Tenth Avenue Northeast and Cowen Park routes as feeders to the Eastlake Avenue car lines. In granting the permit, the Council acted under the terms of a recent ordinance which authorizes jitney service by permit from the Council to feeder lines doing business on a fifty-fifty basis with the city railway system. The fare on both routes will be 10 cents, of which half goes to the bus operator, and half to the railway fund, exchange of transfer to be made only at East Fortieth Street and Tenth Avenue Northeast.

In the meantime, Mayor Hugh M. Caldwell has authorized full service on these routes by jitney operators whose applications for permits have not as yet been acted upon by the City Council. He reiterated his belief that the people of North Cowen Park should not be deprived of the transportation they have had for years until the city gives them an adequate substitute therefor.

## Safety Car Ordinance Contested

In reply to the city ordinance against the use of one-man cars in Syracuse, N. Y., the New York State Railways has petitioned the Public Service Commission for authority to continue their operation. The city must now prove, at a hearing which will probably soon be ordered, that one-man cars are unsafe and uncomfortable.

In the ordinance which prohibited their use the danger and discomfort of passengers were emphasized, and the city will maintain that the cars used in Syracuse are incapable of being safely operated by one man, though one-man cars elsewhere are in safe use. The Syracuse cars are of the double-control type, and the city contends that two men are required to watch the traffic and to care for passengers and the controller. The company may claim that the city ordinance is a breach of faith, inasmuch as the city agreed to one-man car operation when the fare was placed at the present level. To operate at the present level, the company said it would have to practise certain economies, and cutting the operators by the use of these cars was such an economy.

# Transportation News Notes

**Ordinance Repeal Before Voters.**—Sacramento, Cal., will vote on the question of repealing the ordinance forbidding the operation of one-man cars, on Dec. 21.

**Bus License Is \$200 Yearly.**—Bus operators in Ironwood, Mich., will continue to pay \$100 every six months as a license fee. An ordinance reducing the fee to \$100 a year failed of passage by the City Council recently.

**Akron Bus Service Postponed.**—The Northern Ohio Traction & Light Company, Akron, Ohio, will not begin operation of buses until after the first of the year. The buses will run from the end of car lines on a transfer system.

**New Bus Extensions Planned.**—Further extension of motorbus lines into the lower counties of New Jersey is now being planned by companies that already have lines running to the principal towns in Gloucester and Camden counties. One of the proposed new routes will be between Camden and Bridgeton.

**Wants to Extend Suspension Order.**—The San Francisco-Oakland Terminal Railways, Oakland, Cal., has applied for a ten-year extension of the order suspending operation and maintenance of certain track at El Cerrito. The track extends for  $\frac{3}{4}$  of a mile. Permission to suspend operation for five years was granted by the Commission in 1916.

**Needs Ten-Cent Fare.**—The Missoula (Mont.) Street Railway recently filed a petition with the State Railroad Commission asking for a 10-cent fare with tickets at 6 $\frac{1}{2}$  cents. The present cash fare is 8 cents. The city of Helena, Mont., recently went to a 10-cent fare and authorization was given a few months ago for a 10-cent fare in Butte.

**Bus Line Authorized.**—The California Railroad Commission recently granted permission to J. B. Stimson to operate an automobile passenger service between Maywood and Huntington Park. The Pacific Electric Railway, Los Angeles, Cal., opposed the permit. The applicants succeeded in satisfying the commission that by making connection with the Los Angeles Railway the joint fare would be 11 cents, with transfer privileges to any part of the city, while the Pacific Electric Railway fare from Maywood without transfer is 13 cents.

**Municipalities May Run Buses.**—West Orange and South Orange may co-operate to provide bus service through the two cities if the request to the Public Service Railway for more cars on the Montrose trolley line is unsuccessful. The matter will then be taken up with the Utilities Board. The company, in answer to a previous petition for more cars on the line, said that traffic was not heavy enough to demand more trips. The two municipalities will also petition that one-man cars built for that purpose be placed in operation instead of the converted two-man car now in use.



## Personal Mention

### M. S. Raush, Claim Agent in Milwaukee, Retires

M. S. Raush, for the past twenty-three years claim agent for the Milwaukee Electric Railway & Light Company, Milwaukee, Wis., has announced his retirement from the service of the company. Mr. Raush came to the company in 1898, when the claim department was a one-man affair. Now it is a matter of some twenty men in Milwaukee with a branch office in Racine. During this period traffic on the streets of Milwaukee and the suburban communities served by the company has increased manifold, increasing the risks of street travel and liability of accident in proportion. In 1898 the automobile was scarcely known, whereas now it is the greatest factor in street traffic and street accidents.

The company has announced the appointment of C. L. Young as successor to Mr. Raush. Mr. Young was for twenty years associated with the Chicago & Northwestern Line, a steam road. He brings to his new position a wide experience in claim adjustment work and is well known among claim adjusters throughout the West.

### Newspaper Man Heads Iowa Committee on Utility Publicity

Joe Carmichael, veteran Davenport, Iowa, newspaper man, city editor of the *Daily Times* for the past eighteen years and for the last eight months advertising manager of that publication, has been selected to head the Iowa Committee on Public Utility Information, with headquarters at Des Moines. This newly organized bureau will cooperate with the Iowa Section of the American Electric Railway Association, the American Gas Association and the American Electric Light Association. It will collect authoritative data on the industry and will disseminate it impartially. By this means, it is believed, the public will secure an adequate idea of the fundamentals and economics of the utility industry. It will give both the public and the utility industry unbiased information in regard to the great industry.

### Camden Editor Once a Conductor

Once a conductor—now an editor. This is the change in the life of Frank Sheridan, now the editor of the Camden (N. J.) *Daily Courier*, a large and successful paper. According to Mr. Sheridan, conductor-ing is the best possible training for the editorial chair.

Mr. Sheridan maintains that the situations he had to handle while a conductor in Camden on the Public Service Railway fitted him to handle the unexpected happenings of a newspaper office. Meeting the public daily, he came to know it in its every mood, and caring for hundreds of men and women in good humor or in bad gave Mr. Sheridan a rigorous training in divining what the public wants. Speed for the grouchy, friendliness for the

affable, silence for the austere, and service for all were offered by the conductor. These things he has translated into newspaper terms, with the result that he appeals successfully to an increasing number of subscribers, gives the public the service it demands and keeps the paper moving forward.

The uncanny ability to judge with almost certain precision what each subscriber wants is not, as the public seems to believe, a heaven-bestowed gift, according to Mr. Sheridan, but is the result of the very prosaic and constant work of seeing that the passenger paid a fare and was satisfied with his ride.

M. W. Birkenbach, auditor of the Jackson (Miss.) Public Service Company, has recently accepted the appointment as head of the accounting section of the Mississippi Division of the National Electric Light Association. Mr. Birkenbach is known as one of the best accountants in that state and the honor is well placed.

Harry C. Abell, formerly vice-president and engineer of the American Light & Traction Company, New York, and a member of the banking firm of Emerson McMillin & Company, New York, has been elected a vice-president of the Electric Bond & Share Company. Mr. Abell is at present treasurer of the National Electric Light Association, in the activities of which he has taken an active interest for a number of years.

Preston W. Arkwright, president of the Georgia Railway & Power Company, Atlanta, Ga., urged merchants to create a favorable public attitude toward public utilities, in a speech made recently in Atlanta. Public influence on the Railroad Commission would result in a more lenient attitude toward the utility companies, which could then more readily expand to meet the needs of developing industries, according to Mr. Arkwright. The result would be great municipal growth. Mr. Arkwright urged merchants to attend hearings of the commission as representatives of the people.

R. D. Jarvis has succeeded Harold Bailey-Stokes as chief accountant to Commissioner Wilfred E. Cann at Toledo, Ohio. Mr. Jarvis has been an accountant in Toledo for some time. Mr. Bailey-Stokes, who received his appointment to the Community Traction Company in February of this year, at the time it took over the operation of the Toledo Railways & Light Company, is an engineer and an expert street railway accountant. Although not a native Englishman, Mr. Bailey-Stokes has returned to England, the country where he was educated and where he lived for a number of years. He is a veteran of the Boer war and enlisted in the British army at the beginning of the late war, in which he was wounded.

Frank J. Lonergan for fifteen years chief trial lawyer of the Portland Railway, Light & Power Company in damage actions, and Lou Wagner, twelve years associated with the street railway as special agent and attorney, have broken their connections with the

company and engaged in private law practice in Portland. Mr. Lonergan, who has gained an enviable reputation as a trial lawyer, is a graduate of Notre Dame. He practiced law in Oregon City with Franklin T. Griffith, president of the Portland Railway, Light & Power Company, and since coming to Portland has been associated with the firm of Griffith, Leiter & Allen. Mr. Lonergan was the author of the paper "Genteel Faker" which was abstracted on page 874 of the *ELECTRIC RAILWAY JOURNAL* for Nov. 12.

Harry Reid, president of the Interstate Public Service Company, Indianapolis, Ind., is one of the incorporators of the Indiana Hydro-Electric Power Company by means of which it is planned to establish five electric power plants along the Tippecanoe River in northern Indiana. The plans which were filed with the Public Service Commission ask authority to issue \$1,250,000 in gold bonds and to issue \$1,125,000 of common stock. The first power plant and dam of the company is to be erected at Norway, White County. When completed the plant will be operated by the Interstate Public Service Company, one of the largest operating companies of railway and electric properties in Indiana. Mr. Reid will be vice-president and general manager of the new company. The other two incorporators are Ira E. Guthrie and John A. Shafer.

## Obituary

Charles E. Lenhart, fifty-three years old, superintendent of the London, Ontario & Port Stanley Electric Railway, Ont., is dead in London. He formerly was a trolley conductor in Reading, Pa., and study in night schools brought him rapid promotions on railways in England and Canada. At one time he was master mechanic at Allentown for the Lehigh Valley Transit Company.

Frank C. Peck, aged forty-three, who has for fifteen years been connected with the Philadelphia sales department of the Electric Service Supplies Company, died on Nov. 12. Mr. Peck was well known among electric railway men and others connected with the industry in the Eastern section and was greatly admired by all of his customers and business associates. In his earlier days he was a partner in the firm of Peck & Stiles, contractors in Scranton, Pa., and later was connected with the Delaware & Hudson Railroad, which position he left to become connected with the Electric Service Supplies Company.

James M. Dickie, thirty-five years old, auditor of the American Public Service Companies at Abilene, Tex., which included the street railway lines of that city, died at Dallas last week. Mr. Dickie was born in Aberdeen, Scotland, and was educated at the Aberdeen University. He was a public accountant of Scotland and served various British syndicates in Africa, India, Egypt and other British possessions. At the time of his death he was chairman of the accounting section of Southwestern division of the National Electric Light Association and was also treasurer for some time of the Southwestern Electrical & Gas Association.



# Manufactures and the Markets

DISCUSSIONS OF MARKET AND TRADE CONDITIONS FOR THE MANUFACTURER, SALESMAN AND PURCHASING AGENT

ROLLING STOCK PURCHASES

BUSINESS ANNOUNCEMENTS

## Electric Railway Equipment in India

**Business Still Largely Controlled by British—American Equipment Is Considered Most Satisfactory**

Some comments on market conditions for electric railway equipment in India are given in *Commerce Reports* for Nov. 21. Statistics given indicate that there are several important electric systems in India and Ceylon. These are owned in the majority of cases by private companies and operated in connection with the electric lighting systems. In most instances they were promoted and backed in their earlier days by British manufacturers of electric railway equipment, and as a result the British have naturally retained

culties in the larger cities are bringing about the gradual elimination of the latter type of construction.

The Brush Company and Dick-Kerr of England, British manufacturers most active in promoting and backing the installation of electric systems in India, have naturally taken the bulk of business in past years. As the holdings of these manufacturers decreased and buying became less restricted American companies began to take many of the car equipment orders and are now regularly receiving a considerable portion of this class of business. The International General Electric Company has sales organizations in both Calcutta and Bombay. An interesting commentary on the performance of American equipment is shown by the opinions of the men about the

tion, and hardware, seat fittings and electric accessories are from England in most instances. Owing to the exigencies of the war period many of these parts were made up in the tramway shops, the native mechanics being now accustomed to turn their hand to making a great variety of appliances. Trolley poles and stands are secured from England, but trolley wheels are now made in the local shops.

### OVERHEAD CONSTRUCTION

Heavy sectional tubular-steel poles are used practically everywhere in India for trolley supports. These are usually of British manufacture, American poles being little used in this field. The trolley wire is usually round, hard-drawn copper, phosphor bronze being used to a small extent. With the exception of small amounts imported from the United States during the war period, this copper has invariably come from England.

There does not seem to be much immediate chance for American manufacturers of overhead construction materials in the Indian field, as the operators in most instances show a strong preference for British goods wherever

SOME STATISTICS OF ELECTRIC RAILWAYS OPERATING IN INDIA AND CEYLON

| City          | Population | Operating Company                               | Track                               |              | Line Voltage | Rolling Stock  |
|---------------|------------|---|-------------------------------------|--------------|--------------|--|
|               |            |   | Length Miles, d = double s = single | Gage         |              |  |
| Bombay.....   | 979,000    | Bombay Electric Supply & Tramways Company..     | 21.3 s.<br>42.6 d.                  | 4 ft. 8½ in. | 550          | S.T. = Single truck<br>D.T. = double truck<br>T = trailers<br>M = motor cars<br>50 S.T.M.<br>100 D.T.M.<br>71 T.<br>267 M.<br>245 T. |
| Calcutta..... | 1,222,000  | Calcutta Tramways Company.....                  | 35 d.                               | 4 ft. 8½ in. | 500          | 44 M.<br>24 M.<br>33 S.T.M.<br>48 D.T.M.<br>16 T.  |
| Colombo.....  | 211,000    | Colombo Electric Tramways & Light Company...    | 8 d.                                | 3 ft. 6 in.  | 550          | 24 M.  |
| Delhi.....    | 233,000    | Delhi Electric Tramways & Light Company.....    | 9.46 s.                             | 3 ft. 3½ in. | 500          | 24 M.  |
| Madras.....   | 518,600    | Madras Electric Tramway, Ltd.....               | 10 s.<br>5 d.                       | 3 ft. 3½ in. | 500          | 33 S.T.M.<br>48 D.T.M.<br>16 T.  |
| Mandalay..... | 138,000    | Burmah Electric Tramway & Light Company....     | 7 d.                                | 3 ft. 6 in.  | 500          | 24 M.  |
| Rangoon.....  | 293,300    | Rangoon Electric Tramway & Supply Company, Ltd. | 10.63 d.<br>3.30 s                  | 4 ft. 8½ in. | 550          | 58 S.T.M.<br>19 D.T.M.   |

much of the business from these systems even to the present day. The fact that many of the operating men in India are former employees of British manufacturers tends strongly to hold the business in England.

The accompanying table gives some statistics concerning the electric railways of India and Ceylon. The cities of Calcutta, Bombay and Rangoon have standard-gage tracks, but other cities have narrow gage. The trolley voltage is 500 volts generally, with three systems operating at 550 volts. The cars are largely open, single-truck, two-motor types, though double-truck cars are common on the larger systems and are generally replacing the smaller cars throughout the country as these are worn out. No double-deck cars are used in India. Control is partly single end and partly double end, with electric brakes in addition to band-brake control in most cases. The use of trailers is common, even during the non-rush hours.

According to the usual British practice, car wheels are in nearly every case equipped with tires, the few solid wheels having been brought in during the war when it was not possible to get the other type. The overhead system is mainly cross-span construction with steel poles and round trolley wire. Some figure-eight section trolley is used and there is a fair amount of center-pole construction in some of the cities, although increasing traffic diffi-

carhouses of the various tramways. They stated that American motors are operating more satisfactorily under the high-temperature conditions of India than those of British make. The ventilation of the former is superior, and they are in general more rugged, which results in lower maintenance costs. The satisfactory performance of these railway motors under such operating conditions will no doubt strengthen their position in India, and it may be expected that an increasing amount of business will be done in this class of apparatus.

The native motormen who are employed in India are not very careful or efficient in handling their cars. Many do not understand much about the operation of a car beyond the ordinary routine of working the controller handle and brake.

With the decrease in the financial interests of British manufacturers in Indian electric railway systems has come also the greater use of American-made trucks. These have generally been able to compete both in price and quality with trucks of any other nationality, and there is no reason why they should not continue to participate in such business as is open without restrictions.

Car bodies were originally shipped out from England to the Indian market, but for some years it has been the practice to have these built locally. Teak is used mainly for their construc-

possible and much of the buying is done in London by requisition on the headquarters of the company.

In the construction of trolley lines special protection must be given wherever telephone and telegraph leads run above or across these lines. This is done by using poles about 3 ft. longer than otherwise, dropping the trolley span wire down that distance from the top of the pole and stringing another span wire across from the two pole tops, from which two guard wires are suspended over each trolley wire, these being 16-in. centers at a distance of 24 in. from the trolley wire and, of course, grounded.

### Electrical Sheet Prices Firm in Unsteady Steel Market

Pipe and tubular goods seem to be the most favored of iron and steel products at the present time, and they are barely holding their own. Steel sheets are sagging consistently, though it was only a little over a month ago that a number of independent sheet makers notified their customers of a five-dollar-per-ton increase in sheet prices which brought quotations to 3.25 cents on black, 2.75 cents on blue annealed and 4.25 cents on galvanized on Oct. 15. These quotations endured for some time, but in the last two weeks weakness has developed, and sheets may now be obtained from several sources for



2.75, 2.25 and 3.75 cents for black, blue annealed and galvanized respectively.

Production of sheets is still fairly high, some mills running as high as 80 to 85 per cent of capacity, though the general average for steel products is only around 50 per cent. The output of electrical sheet still remains low, however, and producers have their stocks well ahead of demand. Buying is considerably better than a month ago. Then even inquiries were somewhat scarce. Transformer manufacturers are coming into the market more boldly, and one producer is said to have obtained several good orders for electrical sheet from this source. Motor manufacturers apparently are out of the electrical sheet market, though it is felt that the movement of popular-size motors will encourage them to come into the market for raw materials soon. The prices of electrical sheet have not been affected either by the recent increases in ordinary sheets.

### Swiss Railway Electrification Pushes Hydro-Electric Development

The development of water power, in spite of the present high cost of installation, according to a commercial and industrial handbook on Switzerland issued by the Bureau of Foreign and Domestic Commerce, Department of Commerce, is being pushed as never before in Switzerland. The most important part of this work is being carried on by the government in connection with the electrification of the federal railways, and a number of important installations are now under construction or contract. The first important stage of the general electrification program was nearing completion at the end of 1920. For furnishing the electrical energy two large installations are being made. The first is the Ritom works on the south side of the Gotthard tunnel in the Canton Tessin, which utilizes the water of the Ritom Lake.

The program of electrification on which the government is now launched foresees the electrification of practically the entire federal system of some 1,750 miles within a period of twenty years, and the total cost of the work is estimated at more than a billion francs. The average amount of power required for the entire system is estimated at 200,000 hp., with a maximum of 600,000 hp. Considerable progress has been made on the electrification of the so-called secondary lines, which are for the most part privately owned, but further development is being impeded by the lack of financial resources, which the federal railways are better able to command.

One of the articles which the railway authorities have had the greatest difficulty in obtaining in satisfactory quality and quantity for electrification purposes is heavy porcelain insulators for high-tension use. Insulators of the kind specified by the railway engineers are not obtainable in Switzerland. Switches for outdoor use in high-tension transmission lines along the right-of-way are also in demand, as difficulty has been experienced in obtaining proper apparatus of this kind from the domestic market. Inquiries for information in connection with this work should be made to the management at Berne (Direction des Chemins de Fer Federaux).

### Rolling Stock

**Hydro-Electric Power Commission, Ontario, Canada,** has ordered twenty-five safety cars, eighteen of which are for the Hydro-Electric Railways, Essex division, and seven for the Guelph Radial Railway. A motor of higher rating than the standard safety-car motor will be used to meet more severe operating conditions than prevail elsewhere.

**Toledo & Western Railroad, Toledo, Ohio,** will buy three light passenger cars if the federal court grants the necessary permission to J. Frank Johnson and Harry Dunn, receivers for the property. These cars are intended to be used on the Toledo-Sylvania section of the interurban line. The cars will be double-enders with low steps and doors operated like those of cars in urban service.

### Track and Roadway

**Indiana Service Corporation, Fort Wayne, Ind.,** has just placed in operation its new line on Third Street. It will be operated in connection with the Pontiac Street line.

**Pine Bluff (Ark.) Company** will start at once rebuilding its East Second Avenue car line. This work will cost approximately \$10,000. New ties and new 70 or 80 lb. rails will be laid from State Street to the terminus at the Cotton Belt shop, a distance of 1 mile.

**Interborough Rapid Transit Company, New York, N. Y.,** will complete its Queens subway extension in about four years. The Transit Commission recently announced the awarding of the contract for \$3,867,138 to the Powers-Kennedy Company, the successful bidder.

**Dallas (Tex.) Railway** will not extend its line just now out Haskell Avenue to serve the new North Dallas High School. This extension was recently requested by the Board of Education. Mr. Meriwether said that all extensions and improvements have been suspended pending settlement of the St. Paul Street cut-off question. He said further that the extension would add materially to the cost of operation.

**Buffalo, N. Y.** Reports are in circulation in traction circles that an attempt is being made in Buffalo to organize a company to provide traction facilities between Buffalo and Wellsville via the abandoned route of the Buffalo & Susquehanna Railway. The line was abandoned during the war and the tracks and equipment were sold to the French government. The right-of-way is owned by Charles A. Finnegan of Buffalo. The proposed line would reach a large section between Buffalo and Wellsville not now served by any railroad.

**Olympia Light & Power Company, Olympia, Wash.,** within the next two months will replace the present fishplates on 3 miles of open track with continuous rail joints made by the Rail Joint Company, New York, N. Y. The cost of this improvement will be approximately \$2,000. The six-hole 25-in. plates, which were especially made to the template of the rails in place, have already been received. With the replacement of the old plates the existing low joints will be raised and the track put in first-class condition.

**Terrell, Tex.**—Citizens of Terrell recently celebrated the breaking of dirt on that end of the line in the construction of the Dallas-Terrell Interurban line which is being built by the Strickland interests of Dallas. This is one of the interurban lines of 30 miles or more in length which the Strickland interests were committed to build under the terms of the franchise covering the operation of the street car lines in Dallas granted to Messrs. Strickland and Hobson in 1917. J. B. Moreland of Terrell has been granted the contract for grading the line from Terrell to Lawrence and is going forward with the work as fast as possible. He reports that the hardness of the ground tends to delay work, as not sufficient rain to soften the ground has fallen since June. The entire line is expected to be completed and in operation by the end of 1922.

**Northwestern Elevated Railroad, Chicago,** plans to improve the northwest corner of Wilson Avenue and Broadway, Chicago, partly underneath the structure, with a fine new station for the joint use of the elevated line and the Chicago, North Shore & Milwaukee Railroad. The property is now occupied by a stucco frame building arranged for the use of a number of small

shops. This will be replaced with a permanent structure extending the entire block along Broadway and providing a new entrance at the north end of the block to the elevated platform known as Wilson Avenue station. The cost of the improvement will be roughly \$100,000. The Wilson Avenue district is the largest outlying business center in Chicago.

### Power Houses, Shops and Buildings

**Appalachian Power Company, Princeton, W. Va.,** has started the construction of an addition to its steam plant at Glen Lyn, Va. The work will be completed about June 1, 1922, and will increase the kw. capacity to 38,750, the present capacity being 25,000 kw.

**Southern Power Company, Charlotte, N. C.,** has announced plans for two new hydro-electric plants. This undertaking will cost more than \$10,000,000. The plants will have a maximum capacity of 80,000 hp. and 60,000 hp. respectively.

### Trade Notes

**National Street Car Corporation, Ltd., Toronto, Can.,** in its report for the eighteen months ended June 30, 1921, shows a gross manufacturing profit of \$602,927 and net profits of \$422,674. The company was organized in 1919.

**Square D Company, Detroit, Mich.,** manufacturers of inclosed safety switches, has opened a district sales office at St. Louis in the International Life Building. J. D. Utley is the office manager and W. S. Hermann is the district sales manager.

**P. G. McConnell,** formerly a department manager of the Belden Manufacturing Company, resigned on Oct. 31, 1921, to enter the manufacturing field for himself. He will specialize in the manufacture of automobile timer sets, attachments and special cords and connectors at 426 South Clinton Street, Chicago, doing business as the McConnell Cable & Specialties Company.

**Rail Welding & Bonding Company** is now located in its new factory and office building at 1615-20 Collamer Road, East Cleveland, Ohio. The building is a modern one-story structure which provides abundant natural light in all parts. In addition to the factory and offices, a metallurgical laboratory occupies a section of the building, which is well equipped for development work. Every means have been employed to make the new plant modern in every respect.

**R. W. Levenhagen,** vice-president of the Glidden Company, Chicago, has recently assumed direct charge of the sales policies and sales activities of the organization which now includes the two new products, Ripolin and Anaconda white lead. Mr. Levenhagen has for many years directed sales work for the Sherwin-Williams Company, the Detroit White Lead Works and the Martin Senour Company. He is well qualified to take these new responsibilities in addition to the duties he assumed when he was appointed vice-president of the company.

**T. Charles Brown,** formerly with the Electric Service Supplies Company, New York, and recently with the National Conduit & Cable Company, is now associated with the American Jobbers' Supply Company, Woolworth Building, New York, and will specialize on the product of the Porcelain Insulator Corporation, Lima, N. Y. This company manufactures "Pincos" insulators, a new development in the insulator field by men who have been associated in the manufacture of wet process porcelain insulators for about twenty years. The American Jobbers' Supply Company has the sale of "Pincos" insulators in the East. Mr. Brown is to be engaged in the sale of material to which he had devoted practically all his time since 1910.

### New Advertising Literature

**Allis-Chalmers Manufacturing Company, Milwaukee, Wis.,** now has available for distribution its new bulletin No. 1119 on "Steam Turbine and Alternator Units." This publication, however, covers only high-pressure, single-cylinder units ranging in size from 5,000 kw. to 15,000 kw., operating at speeds of 1,500 or 1,800 r.p.m.