

SATURDAY, SEPTEMBER 27, 1902.

PUBLISHED WEEKLY BY
THE STREET RAILWAY PUBLISHING COMPANY

MAIN OFFICE:
NEW YORK, ENGINEERING BUILDING, 114 LIBERTY STREET.

BRANCH OFFICES:
CHICAGOMonadnock Block
PHILADELPHIA929 Chestnut Street
LONDONHastings House, Norfolk Street, Strand

Correspondents in other Principal Cities of the World.

Long Distance Telephone, "New York, 4044 Cortlandt."
Cable Address, "Stryjourn, New York,"—Lieber's Code used.

TERMS OF SUBSCRIPTION.

In the United States and Canada.....\$4.00 per annum
Single copies, first issue of each month, 35 cents; other issues, 5 cents.

In all Foreign Countries, per annum..... } \$6.00
25¢
31¢

Subscriptions payable always in advance, by check (preferred), money order or postal note, to order of C. E. WHITTLESEY, Treasurer.

Entered as second-class matter at the New York Post Office.
Copyright, 1902, The Street Railway Publishing Co.

Contents of this Issue

Danger on Running Board..... 411
The Promoter in Politics..... 411
The Street Railway Situation in Chicago..... 412
Package Freight Business..... 413
Municipal Socialism 413
Interurban Road Through Ohio Oil Field..... 414
Annual Report of the Union Traction Company, of Philadelphia 419
The Strike on the Hudson Valley Railway..... 419
Third Annual Report of the American Railways Company..... 419
American Car Company's Works, of St. Louis, Purchased by the J. G. Brill Company..... 420
Proceedings of the New York State Street Railway Convention—II. 421
The Terre Haute Boycott Declared Off..... 426
Report of Committee on Standard Code of Rules for the Government of Conductors and Motormen..... 426
The Philadelphia, Bristol & Trenton Passenger Railway..... 429
Meeting of the Massachusetts Street Railway Association..... 429
Investigating Brakes, Jacks and Fenders in Massachusetts.... 429
New Transfer System at Birmingham..... 429
Brill Cars for West Virginia..... 430
Census Report of Electrical Manufactures..... 430
I-T-E Switchboard Practice..... 430
Ballast Car for Street and Interurban Railways..... 430
New Interurban Line in Indiana..... 431
Location Controversies in Massachusetts..... 431
Widener-Elkins and Pomeroy-Mandelbaum Alliance..... 431
The Detroit & Toledo Shore Line Sold..... 432
Pennsylvania Tunnel Conference..... 432
Conditions Under Which Street Railway Locations Will Be Granted in Massachusetts..... 432
Employees of the Stanley Company to Organize for Mutual Benefit 432
Labor Troubles Arbitrated in Chicago..... 432
Power Station Equipment for Auburn-Syracuse Interurban Road 432
Work on the Boston Tunnel..... 432
Street Railway Patents..... 433
Personal Mention 433
Financial Intelligence 434

Danger on Running Board

The Board of Aldermen of Waterbury have under consideration a proposed ordinance prohibiting passengers from riding on the running board or steps of trolley cars, and providing for the infliction of a fine upon both passenger and company whenever violation is proven. No doubt there is great danger in the practice aimed at, especially in crowded thoroughfares and on streets where cars pass in close proximity to shade trees or a pole line, and in going through tunnels. In New York passengers are strictly prohibited from standing in exposed places of this kind, and in other cities a similar rule is enforced by the local companies, but in many places it has been the practice for years to permit passengers during the rush hours to crowd onto the cars wherever they could secure a foothold. Of course there are occasional accidents, and some of them are serious; and when, as a consequence, the operating companies are mulcted for damages, they lose more than they could possibly make up in extra fares collected on the running board in many months. But the fault does not rest entirely with the company. During the discussion at Waterbury one Alderman suggested that the proposed rule be suspended during the noon hour, when the workmen patronized the cars; otherwise, he explained, many of them would be unable to go home to their midday meal, as the company hadn't enough cars to carry them without crowding. Of course such an exception as that proposed would defeat the object of the measure, and it is hardly to be expected that it will be admitted, but the proposal reveals the true condition of affairs. The frantic haste of the people to reach their destination is the cause of the trouble.

The Promoter in Politics

Yankee ingenuity is manifested in many ways, in politics as well as in business, and occasionally it is exercised in securing an advantageous mixture of these elements; but we know of no better example of this characteristic than appears in a plausible and convincing argument addressed to the people of New Hampshire on the subject of electric railway development, coupled with an appeal to the pride and jealousy of the community. It is worthy of Sam Slick, but aside from this it has real merit. The promoter and constructor of several electric railways in the southern part of New Hampshire published full-page advertisements in influential newspapers, in which he called attention to the work which his syndicate was doing toward the development of the Granite State, and asked that the citizens consider the question of electric roads in selecting candidates for the Legislature, nominating and electing only such men as favored the granting of charters for proposed lines wherever there might be a good field for their construction.

The issue thus raised is worthy of serious consideration, and the method employed in urging the claims of the trolley upon the community might well be adopted in other localities where the people are equally desirous of improvements. The cities of southern New Hampshire have enjoyed many advantages because of the progress that has been made there in building trolley lines, and in this respect they have been very much ahead of other parts of the State. It is expected that before the end of the year all of the cities as far north as Concord will be connected by trolley lines, and that they will also enjoy direct communication with beach resorts and the larger cities of Massachusetts. This particular locality, it should be remembered, depends largely upon the summer visitors, and, therefore, the establishment of a comprehensive system of electric roads cannot fail to be of great advantage to the natives. There are no large cities in that section to make railroading profitable the entire year, and, therefore, it will be necessary to depend largely upon visitors for support. Other parts of the State are equally interested in securing improved transportation facilities, particularly in the lake and mountain regions, which also depend almost entirely upon the summer business. Of course anything that makes these charming resorts accessible will add to the value of property and the earning capacity of the residents; therefore, the proposition to build an

extensive system of trolley lines appeals directly to the people, and, as the projects depend upon the action of the Legislature, the wisdom of the course pursued by the promoters in the plan we have outlined is at once apparent.

The people of New Hampshire and elsewhere are not particularly interested in the personnel of the promoters of electric railway projects. The question with them is how can they best secure improved transportation facilities, which is a matter of vital importance to them, and one that will have to be recognized. The steam railroad lines have persistently refused to extend their lines unless they were assured of profitable business from the start. They were not willing to build lines and develop traffic by encouraging these smaller resorts. The electric railway companies, on the other hand, have shown that it is possible to create a profitable business in this neglected territory, and they are taking advantage of the shortsightedness of the steam railway companies in this respect. But if the steam railway companies fail to recognize the possibilities in this line for themselves, they have been quick to recognize and obstruct every movement having for its object the extension of the electric railway. The newspapers throughout New England, and particularly New Hampshire, have taken up this subject, and they have encouraged the idea, so that in all probability the electric railway managers will find a much more favorable Legislature in New Hampshire this winter than formerly.

The Street Railway Situation in Chicago

This subject seems to be attracting a great deal of attention just at present from political economists as well as street railway men in general, and an extended article on the subject by H. A. Millis appears in the current number of the *Annals of the American Academy of Political and Social Science*. This of itself is a very healthful sign, as the more attention given to street railways by professors and students of political economy the better. It will help the public to appreciate that the street railway systems in our large cities are not only most important factors in the public welfare, but also that politicians cannot play fast and loose with large companies, as they often have in the past, and threaten their investment in all sorts of ways without fear of the consequences. We do not mean to say that we agree with all of the theories held or advanced in regard to street railway operation by some of the economical writers who have within recent years taken up this subject with great elaboration, particularly the systems of New York, Philadelphia and Chicago, but, as a rule, these gentlemen are not ardent advocates of municipal operation, or certainly not of municipal ownership, nor the imposition of impossible conditions which is usually part of the propaganda of the average politician. They recognize the fact that in most cities the limit of municipal indebtedness is so near the constitutional limit which has been most wisely provided that the cities could not take over the railways if they would, and are generally unanimous that the political conditions in most cities are not such as to guarantee even a fair amount of efficiency in the service, or such as to make it desirable to add to the existing municipal problems the care of an immense transportation system.

Mr. Millis confines himself principally to a short history of the present controversy over franchises in Chicago, quotes from Dr. Maltbie's extended report on the financial history of the companies, describes the formation of the committee on local transportation, and outlines the problem which the City Council and expert engineer are now investigating. In conclusion, he states that if the demands made by the city government are too urgent the companies will undoubtedly make the most of any rights which they may be found to have under the ninety-nine-year act of Feb. 6, 1865. If, however, the situation is not complicated by rights under this act, he believes that franchise extensions will be awarded to the corporations now in possession of the streets; but that period for which they will be run will be shorter than before; that the right of purchase after a comparatively short term

of years will be reserved, and that the municipality will secure a right of control greater than that ever before exercised in Chicago over private corporations. He also believes that with expenditures involved in improving the service, and the short period for which franchises can be granted, larger payments of gross receipts as compensation or a considerable reduction of fares cannot be effected.

It is unfortunate for Chicago that under the present conditions long-term franchises cannot be granted. The maximum period for which a franchise can now be given is twenty years, which is certainly too short to warrant any very large investment in permanent construction or reconstruction without some satisfactory guarantee that the investment made will be protected when the franchise expires. We do not mean by this that there is any possibility of confiscation or practical confiscation of the street railway properties either in Chicago or elsewhere when their franchises expire. The courts in every State, we believe, will uphold the company in demanding a fair price from its successor to its franchise for material in the street which cannot be removed, whether there is any provision in the franchise for such purchase or not. But an appraisement can be made on so many bases that it is useless to expect a company to sink any considerable amount of money in irremovable property unless it either has an opportunity to recover the value of this investment by use through a long term of years or else that it shall be properly compensated if it has to abandon its plant within a shorter time. We are confident, however, that so far as Chicago is concerned a fair course will be taken. The most urgent need in that city is for a subway, which all evidence goes to show can be built. The companies have indicated a willingness to meet the city authorities on any reasonable basis, and they, on their part, have given every indication of a purpose to treat the subject in a broad way.

It might be said in this connection that much evil often results from a thoughtless comparison of what is done in the direction of franchise payments and in other ways between street railway companies in one city and in another. It is often assumed by city authorities that the railway company which uses the streets in that city should be willing to do anything, or almost anything, in this direction which any company in any other city happens to do; and as New York is the metropolis of the country it is often assumed that what is good enough for New York is not too good for any other city of the country. This is unfair, however, because there is probably no other city in the country with which, for many reasons, a comparison is less suitable than with New York. In the first place, the earnings on the system of the Metropolitan Street Railway Company, of New York, per mile of track, owing to the topography of the city and other local conditions, is vastly in excess of that in any city at home or abroad with which we are acquainted. In actual figures they amount, including the horse car lines, to about \$73,000 per mile of track, and not including the horse car lines to about \$90,000 per mile of track, as compared with \$26,600 in Boston, practically the same in Chicago and \$23,200 in Brooklyn. These figures by themselves indicate immediately the immense difference in traffic conditions, but do not tell the whole story. The reason for this is that the New York surface system is relieved of a large amount of its long haul, or unprofitable traffic, which goes to the elevated, so that in addition to having a large income per mile of track this sum is derived from what is almost entirely a short-haul business, so that the transportation expenses for doing the same business are considerably less than on a road which has to care for both a long and a short haul traffic. If we carry the comparison of gross receipts per mile of track to the cases of railways in cities of the second class we will find an even greater difference than that cited above. There are many other practical operating points which differentiate the New York situation from that of any other city in the country and which make it useless as a criterion in many respects for comparison. We have not space here to point out all of these points, but direct attention to the item of gross receipts per

mile of track as one which often escapes the theorist on the subject of political and municipal economy, and which, if unconsidered, deprive the results derived from his theories of any practical value.

Package Freight Business

Many interurban and suburban lines have found the carrying of packages a profitable branch to cultivate, especially where the road extends from a large city to numerous nearby towns which depend upon it for the bulk of its supplies. In the case of the Ohio road, which forms the subject of the leading article in this issue, it is pointed out that the electric line has not only secured the greater part of the passenger traffic in the territory covered, but that it is also gradually gaining control of the freight business. In the handling of light freight packages, which is in reality express matter, the electric company has been particularly favored, as it has been able to give much better service than the old steam lines. The latter have been hampered by the conservative class of management that disapproves of all departures from long-established methods, and refuses to admit that the changed conditions of to-day may materially affect the efficiency of an organization that was formed for meeting the requirements of the last generation. With the constant diminution of business, however, a realization of the necessity for reorganization has dawned upon some of the old roads—not all of them, however—and those that have seen the light are now preparing to furnish frequent service along the lines followed by modern electric railways. The electric lines have greatly simplified the methods of handling this class of business, and while their plan may be considered crude by those familiar with the organization of the steam railroads, it seems to lend itself readily to the limited requirements of this class of business, the chief requisite of which is prompt and frequent delivery. It is in this very important feature that the steam lines have failed, and, consequently, it behooves the management of such enterprises as may be threatened with electric competition, as well as those who are already enjoying that distinction, to make a careful study of the situation and consider whether, after all, a modification of their entire system for package and light freight business is not desirable.

Municipal Socialism

We earnestly hope that every one of our readers will study carefully the paper concluded in our issue of Sept. 6 on the failure of municipal undertakings in England. It is a most interesting examination of a very pertinent topic. We do not in the least usually class England as a socialistic country, yet when an Industrial Freedom League has to be formed to combat municipal interference with private business it would seem that our British cousins were really in the clutches of a socialistic "octopus" at least as ferocious as the far-famed American species. Every municipality, as a matter of course, has to undertake certain work of construction and supply, which might in whole or in part be relegated to private enterprise. For years economists have been struggling to work out the logical theory of municipal ownership, but on the whole their struggles have only served to involve them in deeper uncertainty. Without desiring to plunge ourselves into the intricacies of what has been wittily called "the dismal science," we desire, apropos of Mr. Porter's paper, to record our conviction that the failure to evolve a consistent theory arises from the very simple fact that there is none. It is a case of dealing with conditions, not theories; of practical compromises and shrewd restraint. Only in a few cases can any general rules be laid down, and even these are mostly of local applicability. For instance, we recently pointed out the practical distinction between municipal waterworks and municipal tramways, under existing American conditions, and showed how, with the present state of practical politics, any enterprise requiring a large amount of skilled labor must suffer when conducted by the municipality. Obviously this is a question of degree, not of kind, and while we can conceive of a civic government so constituted that it could safely undertake even a tramway, we can lay our finger without difficulty on cities in which even street cleaning

and construction could be better and more cheaply done by private enterprise.

Now, our British friends have gone into all sorts of municipal trading, and instead of contenting themselves with doing merely work of general necessity have tried to wring a profit from undertakings which are in direct competition with the natural course of private industry. That such socialistic enterprise has often met with disaster is not to be wondered at, for human nature is about the same the world over, and the political factors, notoriously operative here, are not confined to this side of the Atlantic. There is current here a somewhat exaggerated idea of the purity of English politics, and we do not fully realize that municipal enterprise abroad may be tainted with the same venal element with which we are all too familiar. It may not be manifested by exactly the same symptoms, but the results are similar. The fact that English municipal ownership has led to conspicuously bad results implies a record of at least mismanagement and probably corruption to boot. The fundamental difference between private and public management is that in the former the active managers have a permanent and acute personal pecuniary interest in the success of the enterprise, while in the latter the moving power is a temporary and often perfunctory sense of partisan responsibility. This difference cannot be disposed of by resorting to high-sounding platitudes. The president of an American street railway, for instance, is usually a very heavy stockholder, with a long and varied business training—a man of affairs, with large personal interests at stake. His superintendent is a trained tramway manager, held directly responsible for results, who stands or falls with the enterprise he is conducting. The Mayor of an American city is generally a lawyer, whose practice has run to politics, very likely an able man of high personal integrity, but with an eye for Congress, and no private interests at stake in the success of particular branches of municipal enterprise. If one such branch were a tramway its manager, however able, would keep his place only by the most adroit trimming, and would be kicked out without ceremony if his course crossed the path of party supremacy.

Analogous conditions hold abroad, and Mr. Porter has very clearly shown that the taxpayers suffer from the necessary results. We think that if the public could clearly comprehend the real sources of failure in municipal ownership there would be very little danger of our following England's bad example. It is a very difficult thing to compare with precision the details of public and private management. We customarily judge the two only by their general results. The very searching basis of comparison of costs laid down in Mr. Porter's last article is very difficult to apply, but would disclose some very unpleasant conditions if it were rigorously enforced. Truth to tell, it would damn plenty of private enterprises. The most efficient comparison which could be made, we think, would involve the investigation of two plants in neighboring and similar communities—the one under municipal ownership, the other under private ownership. If such a pair could be found the next step would be to tabulate the detailed expenses of each, so as to show plainly just what prices were paid by each for the separate items of material and labor, management and general expense. We have seen comparisons without number, but they have rarely been searching enough to show the full weakness of the municipal case. This lies, we think, not so much in the treatment of depreciation and sinking fund, which are seldom adequately provided for, as in the suppressed items of general expense and in the details which generally escape comparison entirely. We have not yet in this country to deal with the stagnation produced by municipal competition, which has shown itself so seriously in England. It is a logical result of the conditions there existing, and we earnestly hope that such an example will preserve us from entering upon a policy so short-sighted. England is in the main a wonderfully free country, but in freedom of enterprise and labor it has little to be proud of. And singularly enough this failure is not one which can be charged up against the English form of government so much as against misguided popular sentiment.

Interurban Road Through Ohio Oil Field

One of the most promising of the interurban lines of Ohio is the Toledo, Fostoria & Findlay Railway, connecting the prosperous cities of Fostoria and Findlay. Right of way has been secured to extend the road to Toledo, and it was the original intention to build the line this year, but the great scarcity of material, together with the general depression of traction matters in Ohio, resulting from the Everett-Moore embarrassment, prevented the completion of these plans for the time being.

The accompanying map (Fig. 1) shows the route traversed by the road, and the proposed extension from Fostoria to Toledo. Broken lines on this map show the Tiffin, Fostoria & Eastern Railway, an independent line operating between Fostoria and Tiffin. The population of the towns in this section is indicated on the map. It will be noticed that there are a number of small settlements along the line in addition to the towns from which the road takes its name.

Fostoria has a population of 8000 and Findlay about 18,000. The tributary population of the present road is about 40,000. The country traversed is the heart of the great oil fields of Northwestern Ohio, so that for its country traffic the road not only draws from the thriving farms but from the hundreds of oil wells and numerous pumping stations along the line. Oil men are desirable patrons; they make frequent trips to the cities, and supplies for the wells form a very important item in the package freight business of the road. So numerous are the oil wells in this district and so fierce is the competition for available ground that the company has accepted two or three propositions for the lease of unoccupied land along its right of way. Wells have been drilled and derricks erected, and in places the cars almost graze the latter in passing. Oil leases form a considerable item in the earnings of the road. A trip over this road at night is an interesting sight for one who is unfamiliar with the oil districts. The country for miles around is illuminated by hundreds of small flames from escaping oil and gas, and the clank of the pumping machines, mingled with the steady hammer of the drills, makes a fitting accompaniment to a scene which is weird in the extreme.

Between Fostoria and Findlay the road is built on 35-ft. private right of way adjoining the highway, and separated from it by a ditch. The country traversed is extremely level, there is only one grade on the line, and that is something less than 1 per cent. There is one 12-ft. fill, and there are three curves requiring guard rails, but all of them can be taken at full speed. The extension to Toledo will be even better adapted for high speed, as there will be no grades over 1 per cent; only one railroad crossing outside the cities, and but two curves requiring guard rails.

The track is laid with 60-lb. T rails, 30-ft. lengths with Atlas joints. Ties are white oak and cedar, 6 ins. x 8 ins. x 8 ft. on 2-ft. centers. Eight inches of crushed stone is used for ballast, and the road bed is drained by a ditch at each side, with crock piping where necessary. The poles are 30-ft. and 35-ft. cedar, 100 ft.

apart. Direct current distribution is used, and there are two 250,000 cm aluminum feeders. Double trolley wires of the No. 00 figure-8 type are used. Hangers and insulators were supplied by

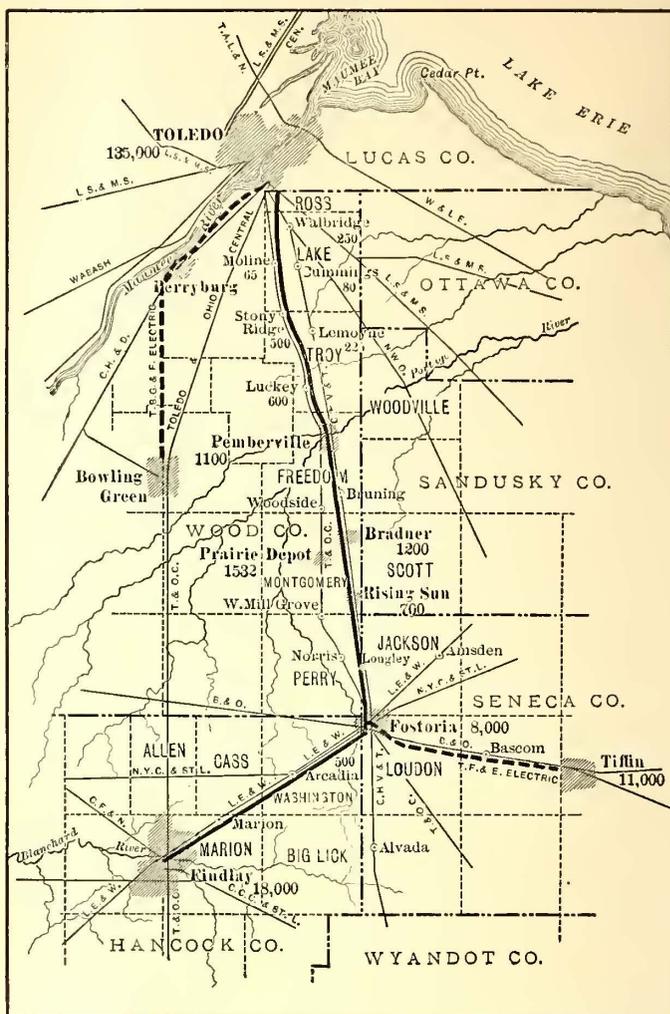


FIG. 1.—ROUTE OF THE TOLEDO, FOSTORIA & FINDLAY RAILWAY

the Ohio Brass Company. Stops and fare limits are designated by signs, the former being about half a mile apart. Cattle guards are placed at all crossings.

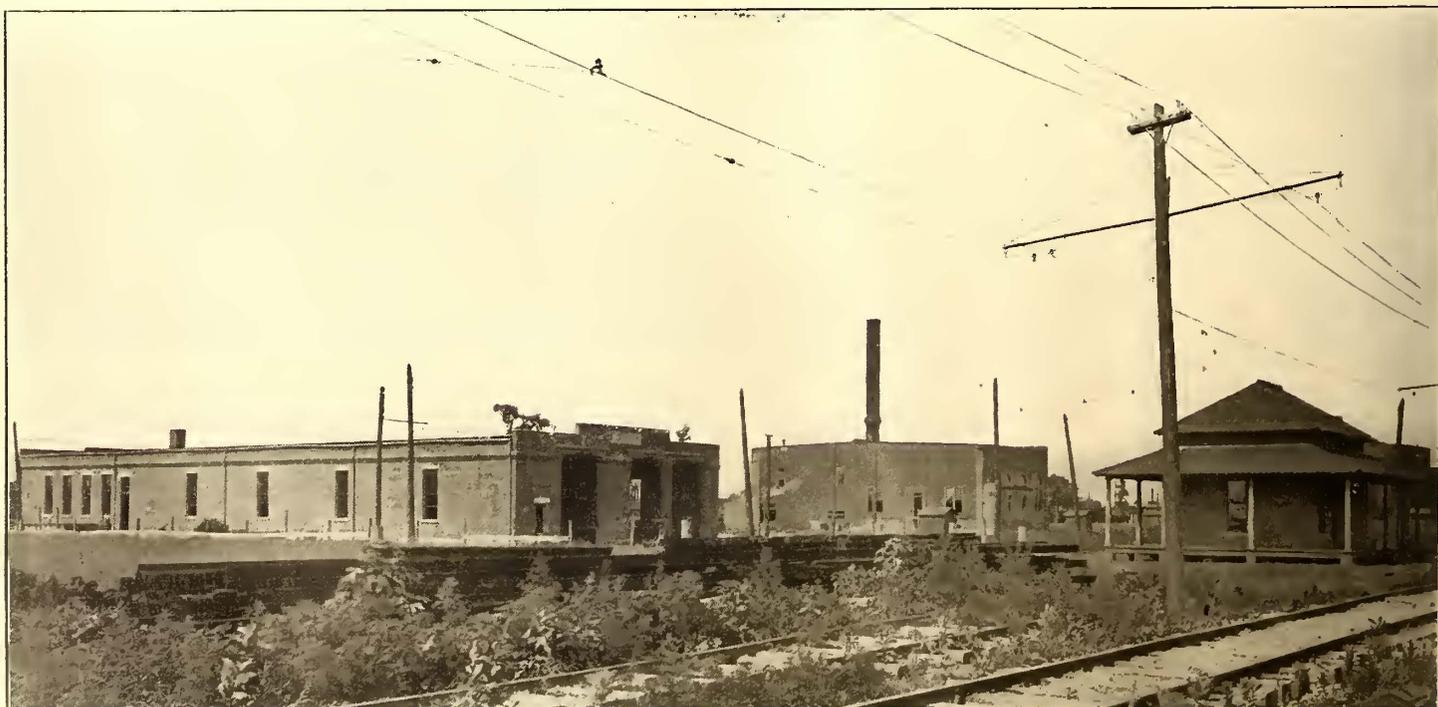


FIG. 2.—CAR SHED, POWER HOUSE AND PASSENGER STATION OF TOLEDO, FOSTORIA & FINDLAY RAILWAY

The headquarters, power house and car houses are at Fostoria. The buildings, which are shown in Fig. 2, are of brick and structural steel and very substantial. The car houses have space for the storage of double the present equipment. The building also includes a small repair shop, equipped with lathes, drill presses, emery wheels, blacksmith's forge, etc. There are facilities for rewinding armatures, but although the road has been in operation for more than a year, there has been no demand whatever for this class of work, as the management has yet to experience the burning out of an armature.

The power house (Fig. 3) is designed with a view to extensions when the Fostoria-Toledo line is built. The power equipment consists of two 250-kw 650-volt Westinghouse railway generators (Fig. 4), direct-connected to two 300-hp 4-valve tandem compound Russel engines; two 400-hp Sterling boilers, and a 75-kw motor-driven booster, used for extra service.

A general view of the engine room, showing the switchboard, is presented in Fig. 5. The auxiliary equipment consists of Dean feed-water pumps, and Stilwell-Bierce water heaters. Rain water, taken from an artificial pond, and city water are mixed for the water supply. At present the engines are operated non-condensing, but they will shortly be changed to condensing, when the power generated will be increased to 375 hp each. The electrical equipment was installed by the Westinghouse Electric & Manufacturing Company; the engines and boilers by Arbuckle-Ryan Company, of Toledo; the piping by the Best Manufacturing Company, of Pittsburgh; the line work by the Star Electric Company, of Toledo; while the general construction work was done by the Dover Construction Company, which is composed of men interested in the road. The consulting engineers were E. P. Roberts & Company, of Cleveland, from whom the plans of the piping and general layout of the power house, presented in Figs. 6 and 7, were secured.

The rolling stock of the road consists of eight 45-ft. Jewett cars

and two 15-bench Brill open cars. Two of the former are combination cars, with baggage compartments, and five are standard coaches with smoking compartments, water coolers, closets and other improvements. The other car of this lot is a magnificently

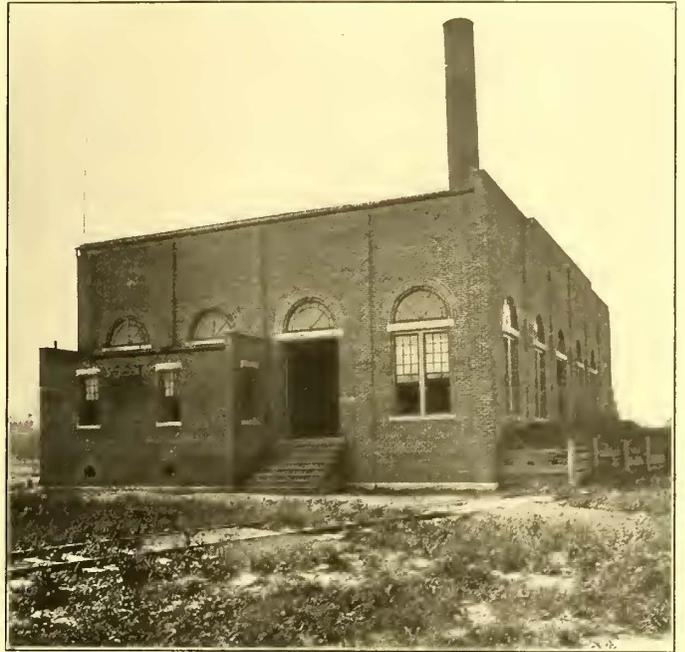


FIG. 3. - POWER HOUSE AT FOSTORIA

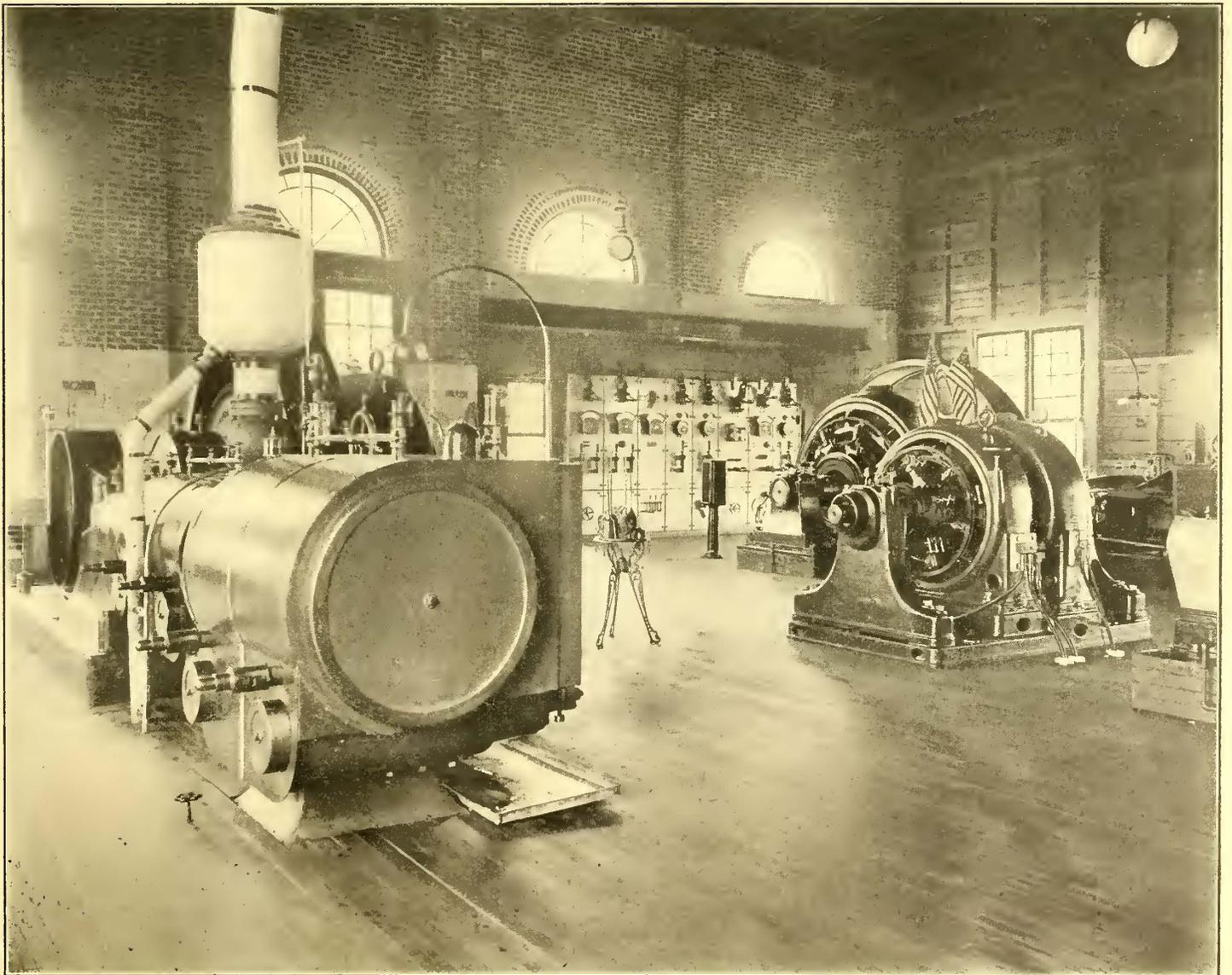


FIG. 5.—ENGINE ROOM IN POWER STATION, SHOWING SWITCHBOARD

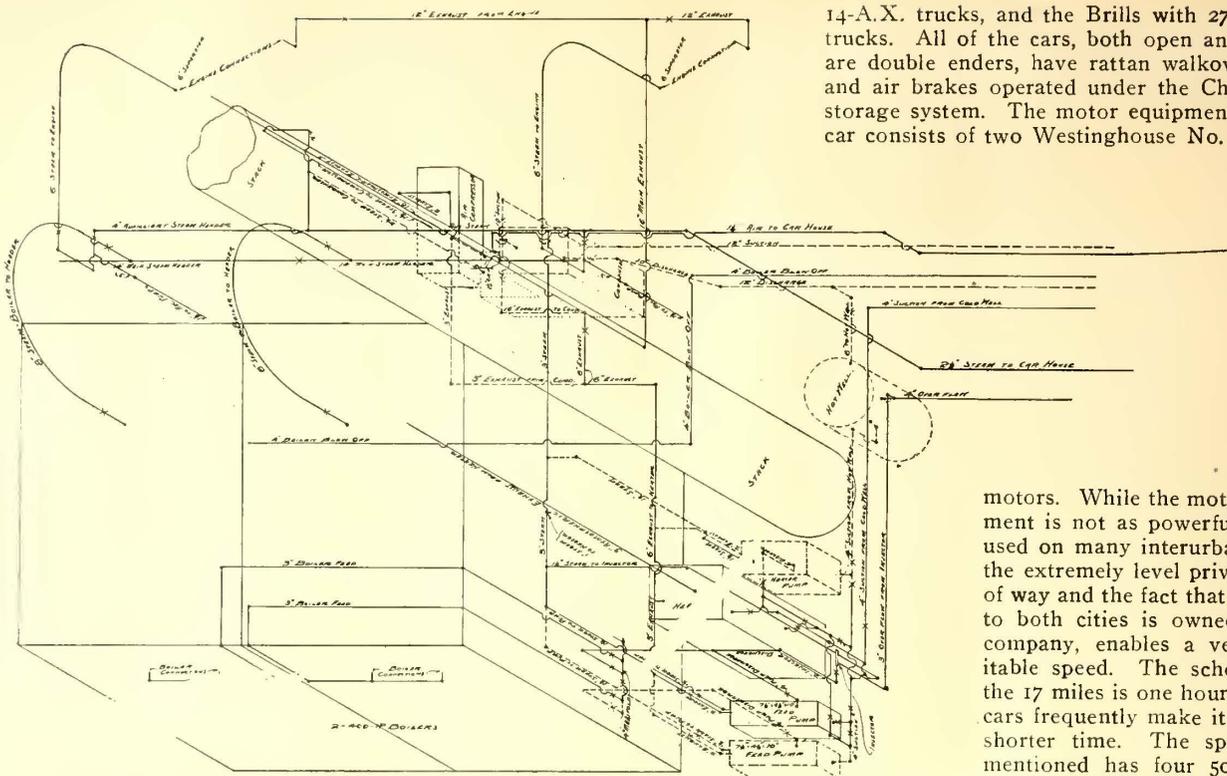


FIG. 6.—ISOMETRIC DRAWING OF PIPING, TOLEDO, FOSTORIA & FINDLAY RAILWAY

14-A.X. trucks, and the Brills with 27-G. Brill trucks. All of the cars, both open and closed, are double enders, have rattan walkover seats, and air brakes operated under the Christensen storage system. The motor equipment of each car consists of two Westinghouse No. 56 50-hp

motors. While the motor equipment is not as powerful as that used on many interurban roads, the extremely level private right of way and the fact that entrance to both cities is owned by the company, enables a very creditable speed. The schedule for the 17 miles is one hour, but late cars frequently make it in much shorter time. The special car mentioned has four 50-hp motors, and is geared to 60 miles an hour. On several occasions this car has made the run be-

equipped private chair car, which is used for special trips and trolley parties. The Jewett cars are equipped with Peckham

tween the two cities in 30 minutes, and on one occasion Manager Wentz, of the company, took a party from

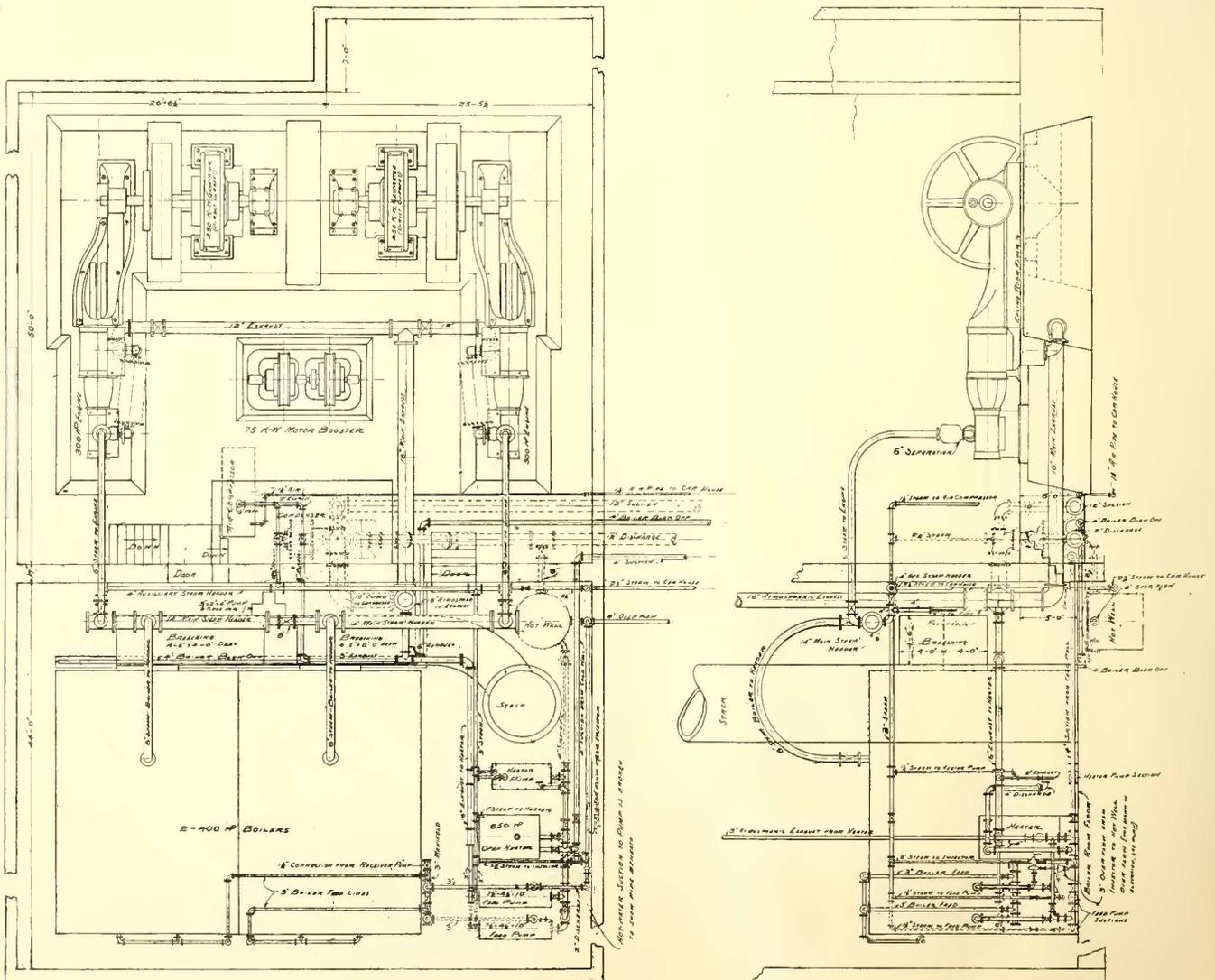


FIG. 7.—GENERAL DRAWING OF POWER STATION, TOLEDO, FOSTORIA & FINDLAY RAILWAY

Fostoria to attend a baseball game in Findlay, in 25 minutes.

An hourly service is maintained between the cities, but on Sundays, holidays and on numerous summer evenings, a half-hour

In handling the package freight business the standard railway classification is used, and packages are carried at either 7 cents or 8 cents per cwt. At present no agents are maintained, and all goods are handled in combination cars. The business is growing so rapidly, however, that a special freight car will be installed in the near future. The conductors and motormen handle all the freight. Instead of voluminous blanks, the conductors are provided with tickets similar to transfer slips, and in receiving freight the kind and amount, whether collected or not, is punched in duplicate, one slip being handed to the consignor as a receipt. Coal cars are frequently received from the steam roads at Findlay and Fostoria and delivered to the gas and pumping stations on the line. Thirty cents per ton is charged for the 6 miles which it is usually hauled.



FIG. 4.—ONE OF THE 250 KW. UNITS IN THE POWER HOUSE AT FOSTORIA

Probably the heaviest earnings of this road come from the excursion business to and from Sam Reeves' Park. It might be truthfully said that without this business, which it handles exclusively, the present road could not make a living in competition with the steam road. The park, consisting of 55 acres, is owned and was laid out by the company at a very reasonable figure, in view of its earning powers. It draws from both cities, as well as the entire surrounding country, being one of the most attractive little resorts in that section of the State, and the only one of its kind in the immediate vicinity. It lacks somewhat from the fact that it has no body of water, but the other appointments seem to make up for this deficiency. Unlike numerous similar resorts, the park draws good crowds all the year around. The theater and pavilion,

headway is maintained. The through fare is 25 cents, the road being divided into 5-cent limits. Sam Reeves' Park lies about half-way between the two towns, and only to this point are tickets sold. Ohmer car registers are used, and these indicate the fare paid, so that no cash receipts are given.

shown in Fig. 8, is designed so that it can be thrown open during the summer months and closed tight during the cold weather. Two large furnaces supply ample heat

The company derives a very considerable income from package freight, and, as before intimated, much of this comes from supplies for the numerous oil wells. Considerable farm produce is handled, and the through business is also very heavy. The company has the mail contract between the two towns, having wrested it from the steam road which it parallels. It is also claimed that the steam road has lost practically all its passenger business, and much of the freight between the two points. Indication of the fact that the competition is a serious matter, is shown by a recent report that the Lake Erie & Western will entirely rebuild its lines between Fostoria and Findlay. More trains are to be operated and a strenuous effort will be made to regain the lost ground.



FIG. 9.—DESPATCHER'S STATION AND CAR AT ENTRANCE TO SAM REEVES' PARK

in the coldest weather, and, if desired, during moderately severe weather, the heat can be regulated by operating only one furnace at a time. The round-trip ticket from either city admits the

Report	Report	Report	Report	Report	Report	Report	Report	Report	Report
○	○	○	○	11	○	○	○	○	○
○	○	○	○	○	12	○	○	○	○
Meet	Meet	Meet	Meet	Meet	Meet	Meet	Meet	Meet	Meet
○	○	○	○	13	○	○	○	○	○
Loop	Power House	Baars	PARK	Greit	Findlay Hill	McNees	Centre St.	Y	
Report	Report	Report	Report	Report	Report	Report	Report	Report	Report
○	○	○	○	10	10	○	○	○	○
○	○	○	○	○	○	○	○	○	○
Meet	Meet	Meet	Meet	Meet	Meet	Meet	Meet	Meet	Meet
○	○	○	○	○	○	○	○	○	○
○	○	○	○	○	○	○	○	○	○

FIG. 10.—PLAN OF DESPATCHER'S BOARD

holder to the grounds and theater. Reserved seats are 5 cents and 10 cents extra, according to location. There is a balcony, and, with the auditorium, there is a seating capacity of about 1200 in the house. High-class vaudeville is given each evening, and on certain nights the floor is cleared for dancing. On the ground floor of the pavilion there are a shooting gallery, billiard and pool tables, bowling alleys, and toilet and dressing-rooms. No liquors are sold on the grounds, and George C. Richards, who manages the park for the company, has been entirely successful in his efforts to cater to the very best class of people in both cities. One portion of the pavilion is leased to a popular caterer, and refreshments of all kinds are served. Frequently the dancing privileges are let to private parties, and this includes the

board, plan of which is presented in Fig. 10. The board was planned by Manager Wentz and improved by George Fink, the train despatcher. It is about 6 ft. in length, divided into spaces representing the switches or passing points. The board is divided transversely for east-bound and west-bound trains, and at each passing point represented are eight holes, into which are inserted pegs numbered on the heads to correspond with the numbers of the cars. In each section two holes are provided for the order "report" and two for "passing." For example, car No. 10, east-bound, reports from Findlay Hill; No. 11, west-bound, has orders to report at Creightons, but has not arrived; No. 13 has just left the Park, after No. 10 had reported from Findlay Hill, with orders to pass No. 10 at Creightons, and report at



FIG. 8.—PAVILION AT SAM REEVES' PARK

use of the private car already mentioned. Among other attractions are a merry-go-round and a small but promising Zoo. Other features are to be added. One section of the enclosure is divided off for a baseball ground. During the season there are games between well-known teams on regular dates, and on these dates admission to the grand-stand seats is 10 cents and 15 cents. On account of the park business, the travel on the road is heaviest in the evenings and on holidays. July 4 of this year was the heaviest ever known.

The despatching system of the road is handled from an office at the park entrance, which is shown in Fig. 9. The line is covered by a telephone system, which is connected with the exchanges of the Bell Telephone Company in both Findlay and Fostoria. Each car is provided with a standard Bell telephone, and connection with the telephone wire can be made at any point. In despatching, the operator uses, in connection with the ordinary train sheet showing schedule and passing points, a despatching

board, plan of which is presented in Fig. 10. For this order, the operator inserts plug No. 13 in "meeting" hole at Creightons, and "report" hole at Findlay Hill. When No. 10 reports at Findlay he gives her orders to report at Creightons, and inserts plug in "report" hole at Creightons for east-bound car. No. 10 arrives and reports, and the operator looks at the board and finds she is to pass No. 11 and No. 13, and so advises the conductor. About the same time a car reports from the Y, after the orders have been given to No. 13, and the operator looks at the board and finds he can not send a car east of Findlay Hill, and gives orders accordingly. The board is found to be very useful, and at times eight cars are operated with very little delay at switches.

The Toledo, Fostoria & Findlay Railway Company is incorporated for \$1,500,000 authorized capital stock, but this has in view the extension of the road to Toledo. The bonded indebtedness at present is \$450,000. The stock and bonds are held almost wholly by the men who built the road, consequently they

are well satisfied to have it pay all fixed charges, leaving the surplus for improvements and extensions. The extension of the road to Toledo will bring it into active competition for Findlay-Toledo business with the Toledo, Bowling Green & Southern Traction Company, operating to Findlay over the shorter route by way of Bowling Green. The Toledo, Findlay & Fostoria officials, however, claim they will be well able to compete with the other road, because of their advantages in possessing the private right of way, and the absence of seven grades and curves. This discussion hinges on something even more important than the Findlay-Toledo business, since it is an open question in the minds of the general public of that section as to which road will form an alliance with the powerful Pomeroy-Mandelbaum syndicate in the through line from Cincinnati to Toledo. This syndicate is completing its system into Findlay from Lima, and it is generally accepted as a foregone conclusion that it will not attempt to build a third line from the latter point to Toledo. There is, therefore, much speculation as to which of the present roads will be chosen.

The officers of the company are S. W. Croxton, Cleveland, president; E. C. Deardorff, Toledo, vice-president; Theodore Wentz, secretary-treasurer and manager.

The Strike on the Hudson Valley Railway

The strike of the employees of the Hudson Valley Railway Company assumed such a serious aspect on Sept. 17 that the sheriff of Warren County, deeming his force insufficient to guard the company's property, had the militia called out. On the day mentioned a car, guarded by several deputy sheriffs, took a number of non-union motormen and conductors from Fort Edward to Glens Falls. This seemed to be a signal for a demonstration by the strikers and their sympathizers, for they lined the track and so hampered the work of replacing the car that several hours were consumed in completing the job.

However, it was not until Sept. 18, when the company made strenuous efforts to resume passenger traffic, and was to a limited extent successful, that the strike assumed a very serious aspect. Extra companies of militia were then called out, and details were sent to protect the company's power house near Saratoga. Troops were also sent to Whitehall and Mechanicsville, where there had been riotous demonstrations. A boy was shot by a deputy sheriff in Waterford late on the afternoon of Sept. 18, but the injury was slight.

The most severe riot since the strike was begun occurred on Sept. 20 at Waterford. A freight train of the Delaware & Hudson was wrecked at the crossing where the trolley tracks intersect. The locomotive was overturned and the engineer and fireman were injured. A mob of strike sympathizers had gathered at that point and it is thought that the cross-over was tampered with to wreck a trolley car.

Since Sept. 18 the company has each day succeeded in operating more cars, and the strikers are less demonstrative. Armed guards are sent out with each car that leaves the car house, however, and those who would interfere keep at a distance when the cars are operated through the towns where most of the violence was displayed last week. The lawless element, it would seem, has come to realize that the company proposes to maintain its determined stand. The company's property is still being tampered with at isolated points, and many obstacles are found at different points along the line.

The old practice of declaring a boycott has been resorted to, and committees from the unions have threatened business men who have any dealings with the railway, its officers or present employees, or with the National Guard. An instance of the extreme to which this boycott practice is carried is furnished at Glens Falls, where one of the operatives in a shirt and waist factory who rode to work on a car was jeered and hooted at by her fellow employees. A committee, representing the employees of the factory in which the girl worked, waited on the local manager of the company owning the plant, and demanded the girl's discharge under a threat of striking. The company owning the plant, which has had considerable trouble with its employees, declares that the plant will be removed before it will submit to such tyranny.

Later, when the men found that their original demand would not be granted, they modified it somewhat, asking an explanation and apology and a promise that the operatives would not patronize the cars. The company refused positively to exact any such conditions and the committee did not press the demand.

Annual Report of the Union Traction Company, of Philadelphia

Twelve directors were elected to the directorate of the Union Traction Company, at the annual meeting of the stockholders of the company held last week. The receipts of the company from operation for the year just ended were \$14,118,158, cost of operation, licenses, taxes and fixed charges, \$13,040,120, showing a profit of \$1,078,039. The operating expenses were 52.30 per cent, as against 51.74 per cent last year, an increase of .56 per cent.

The board of directors elected for the ensuing year, 497,764 shares being voted, was: William L. Elkins, Alexander M. Fox, John B. Parsons, William H. Shelmerdine, J. J. Sullivan, P. A. B. Widener, George D. Widener, George W. Elkins, Alexander Balfour, Charles O. Kruger, John M. Mack, George H. Earle, Jr. The personnel of the board is the same as that of last year, with the exception of Mr. Earle, who was elected to the place vacated by the death of Alfred Smith, and Mr. Mack, who recently succeeded Mr. Dolan.

P. A. B. Widener and William L. Elkins were the only stockholders of prominence absent when President Parsons made his report. He said:

"As this is the last operating report which will be issued by your company, I thought it might be of interest to give the subjoined information. On June 30 the trackage of your company was 475.45 miles, divided as follows: Operated track on street, 453.25 miles; track in car houses, 22.20 miles." The car equipment included 1698 closed cars and 1234 open cars.

The annual report of the company for the year ended June 30, presented at the annual meeting, shows:

	1902	1901
Gross receipts	\$13,969,232	\$13,269,465
Operating expenses	6,402,338	5,836,186
Earnings from operation	\$7,566,894	\$7,433,279
Receipts from other sources	148,925	162,215
Gross income	\$7,715,819	\$7,595,494
Taxes, licenses and fixed charges	6,637,781	6,734,328
Net earnings	\$1,078,038	\$861,266
Number of passengers carried	325,801,963	302,225,286

The balance sheet as of June 30 compares as follows:

ASSETS		
	1902	1901
Cash		\$194,607
Cash in agent's hands	\$230,463	20,000
Fire insurance fund	242,995	242,995
Advertised leased lines	6,659,555	5,880,572
Supplies	259,938	190,709
Construction and equipment	4,728,885	3,847,867
Real estate	617,837	432,274
Accounts received	30,426	27,273
Stocks and bonds	5,225,703	5,584,091
Franchise account	90,248	90,248
Total	\$18,086,055	\$16,510,640
LIABILITIES		
Capital stock	\$10,500,000	\$10,499,512
Income fire insurance fund	31,418	12,400
Accounts payable	204,191	111,465
Accrued maintenance account	218,819	382,265
Fixed charges and taxes not due	1,332,496	1,450,203
Open accounts	1,560,000	800,000
Operating account due company's 999 years	902,568	1,004,101
Deposits underlying companies	239,012	215,790
Trustees' accounts	120	120
Profit and loss	3,097,429	2,034,381
Total	\$18,086,055	\$16,510,640

Third Annual Report of the American Railways Company

The third annual report of the American Railways Company, being that for the fiscal year ending June 30, 1902, was submitted at the annual meeting of the company, held last week.

The net income for the year is, in round figures, 8 per cent upon the capital stock of the company. The gross earnings of the subsidiary companies for the year 1902 were \$1,009,496, as compared with those for the year 1901 of \$844,297, an increase of \$165,199.

During the year there were issued \$2,500,000 of the American Railways Company 5 per cent collateral trust convertible gold

bonds, dated Dec. 2, 1901, and payable Dec. 1, 1911. These bonds are redeemable at the option of the company at any time after Nov. 1, 1904, at 105, together with accrued interest on the principal of the bond to the date of redemption; they are also convertible, at the option of the holder at any time prior to Nov. 1, 1904, but not thereafter, into the capital stock of the American Railways Company at par; the holder receiving at time of conversion the accrued interest upon the bond. Of these bonds there have been sold at this date \$1,590,000, and the accrued interest on said sales has been included in the statement of fixed charges.

The collateral deposited with the trustee, the Provident Life & Trust Company, of Philadelphia, as security for said convertible bonds, consists of \$1,600,000 of the first consolidated mortgage 5 per cent bonds of the Chicago & Joliet Electric Railway Company, being the whole issue thereof except \$400,000 reserved to pay a like amount of bonds secured upon parts of the company's system; \$500,000 of the first mortgage 6 per cent bonds of the Springfield Railway Company, of Springfield, Ohio, being the whole issue thereof; and 10,500 shares of the capital stock of the People's Railway Company, of Dayton, Ohio, out of a total issue of 11,000 shares now outstanding.

There have been acquired by purchase during the year the following securities: twenty shares of the Springfield Railway Company, thirty-nine shares of the People's Railway Company, nine shares of the Altoona & Logan Valley Electric Railway Company, 583 shares of the City Passenger Railway Company, of Altoona, Pa.

No new properties were purchased during the year, but extensions and improvements to properties already owned have been made, and satisfactory returns for the expenditures incurred are being received.

The treasurer's report for fiscal year ended June 30, 1902, shows:

INCOME

Interest on bonds owned by the company	\$35,009.16
Dividends on stocks owned by the company.....	172,599.00
*Miscellaneous income	162,776.11
Gross income	\$370,384.27

DEDUCTIONS FROM INCOME

General expenses	\$31,146.08
Printing and registration of stocks and bonds, stamp tax, etc.	5,534.30
Legal expense	1,765.76
Taxes	3,386.75
Interest on funded debt	25,427.06
Depreciation of office furniture and fixtures, and of engineering department instruments	393.00
Total deductions from income	\$67,652.95
Net income	\$302,731.32
Dividends paid	178,178.52
Surplus	\$124,552.80
Profit and loss account, balance June 30, 1901.....	206,313.03
Surplus June 30, 1902	\$330,965.83

* Principally interest on advances made to sub-companies and deducted from their earnings before dividends were declared.

The general balance sheet, dated June 30, shows:

Total cost of stocks and bonds	\$3,468,196.19
Bills receivable, accounts receivable, etc.	2,830,460.94
Tax on capital stock paid from July 1 to December 31, 1902.....	1,687.25
Office furniture and fixtures	2,792.77
Engineering department instruments	744.30
Discounts on loans, paid but not due	3,492.70
Interest on bonds owned, due July 1, 1902.....	15,000.00
Port Norris extension, Bridgeton and Millville Traction Company..	†234,586.73
Collateral trust gold five per cent bonds in treasury.....	910,000.00
Cash on hand	67,303.34
	\$7,534,264.22

LIABILITIES

Capital stock	\$3,751,000.00
Collateral trust convertible gold 5 per cent bonds	2,500,000.00
Bills payable	875,000.00
Bills audited but not paid	11,036.25
Accident insurance fund	29,442.02
Interest accrued but not due on funded debt	6,625.00
Interest accrued but not due on floating debt	3,730.21
Balances due sub-companies	26,564.91
Profit and loss, surplus as per operating report.	330,865.83
	\$7,534,264.22

†\$150,000 Bridgeton and Millville Traction Company first mortgage 5 per cent gold bonds will be issued in part settlement of this amount.

American Car Company's Works at St. Louis Purchased by the J. G. Brill Company

The J. G. Brill Company, of Philadelphia, which has recently received so many orders for new work that there were indications of the inability of its plant at Philadelphia to cope successfully with the sudden demand, has purchased the plant of the American Car Company, of St. Louis, which company has been endeavoring, since March, 1901, to make sale of its property to the Brill Company. The plant of the American Car Company is, of course, very much smaller than that of the J. G. Brill Company, but as its capacity is about one-half that of the Brill plant, the facilities for providing for the additional amount of work that the Brill Company has on hand, are provided at once, while these facilities could not have been made ready at the Brill works in less than six months' time. The property of the American Car Company was held by trustees for a St. Louis Bank, which represented the creditors. The sale was negotiated on Sept. 12.

Topics of the Week

Of the many articles that have appeared in the magazines and newspapers tending to show the growing importance of the electric railway the article by Albert Bigelow Paine in the current issue of *Word's Work*, describing a June journey from New York to Chicago, is one of the most interesting on the subject. The entire trip consumed nine days of leisurely going and involved fifty-seven changes of cars, costing about \$50. "Without views, interviews and fishing," Mr. Paine remarks, "it could have been done in a week" and also for less money. "Steam for speed; trolley for a good time," is his general conclusion.

A curious condition of affairs exists near Rochester, N. Y., where an electric railway is making an effort to condemn the land of a farmer. The electric railway wants to run its line between the barn and the house of the farmer, and to this the farmer objects. It would seem that instead of stepping from his stoop out beneath the gracious shade of the ewe trees, the farmer would, as the Rochester Post-Express puts it, butt into the firm end of a trolley car. "He does not," says the Post-Express, "wish to oppose the advance of civilization and is willing for the new road to muss up the rear end of his farm to almost any extent, but he does object to hunting eggs with a basket in one hand and his life in the other." There are others who would object to doing this, too.

Commenting upon the general denunciation of trolley lines that has characterized the daily newspaper accounts of the accident at Pittsfield the Buffalo "Commercial" declares that these criticisms do not apply to the company which serves Buffalo and its vicinity. "We only note the exception," says the "Commercial," "to show that a trolley line may be managed safely and successfully on railroad, not horse-car, principles. With the appliances and safeguards used on the big electrics in Buffalo, supplemented by a system of bonuses to employees who are responsible for no accidents in a given time, and by good discipline, an electric railway can be run in a large city, on 'railroad principles,' with fewer accidents than the horse-car system. Local experience proves it." As a matter of fact, the experience of most communities proves it, but the habit of denouncing public-service corporations has taken possession of many newspapers, and their desire to create a sensation is too strong to resist temptation.

The Interurban Street Railway Company has been sued for \$10,000 damages, alleged to have been sustained by Simon Kurtz, as a result of an accident. On Sept. 8 he was stepping on a car on Clinton Street when, as he alleged, having only one foot on the steps of car No. 80, it started up, threw him down, and dragged him for some distance. His body was bruised, but the injury of which he complains principally he described as follows: "The plaintiff, by profession a cantor in a synagogue, avers that, by reason of the injuries aforesaid, deponent was compelled to have his beard shaved off, in consequence whereof he has been refused employment in the capacity as cantor, and sustained damage thereby." It appears that to sew up the wound in Kurtz's chin it became necessary to shave off the beard in spots. That ruined it, and made it appear scraggy. The scriptural injunction, "neither shalt thou mar the corners of thy beard," was violated, and now Cantor Kurtz swears "by my beard I'll have the law on the railway company."

Proceedings of the New York State Street Railway Convention—II

In the last issue of the *STREET RAILWAY JOURNAL* a full report was given of the proceedings of the New York State Street Railway Association at Caldwell on Sept. 9. The convention closed Sept. 10, and the proceedings of that day were as follows:

The convention convened Wednesday morning pursuant to adjournment.

The President: We will open with the discussion of the rules and the suggested amendments. In the temporary absence of Mr. Connette, the chairman of the committee, I will ask Mr. Fassett to proceed with that subject.

Mr. Fassett then read rules Nos. 1 and 2. These rules in full are published elsewhere in this paper.

A Member: I find it necessary in carrying out the provisions of Rule 2 that the notice sent by the trainmen to the station should be a written notice, and should reach the station ten minutes before the man is due to report, the reason for that being that if it is a verbal communication it may have been given to some of the man's fellows and neglected to have been turned in; and then I have known at times a man to be under the influence of liquor and get somebody else to telephone for him. I would suggest a change that that notice be made a written one.

The President: Any objection to that?

Mr. Fassett: I have no objection to it.

Mr. Clark: Does not the rule as it now stands leave it either written or verbal?

Mr. Fassett: I think, perhaps, under some conditions, it is just as well to leave the rule as it is. Let there be a special rule for such companies as desire a written communication. Take for instance this Hudson Valley road, where a man may live 10 or 15 miles away from where he is to report, and it might be impossible for him to get his written notice in, and yet he could get his ten minutes' notice in before the time arrived to take his car out. If the rule is left as it is it can be made written notice for such companies as desire. I think, as a basic rule, it is all right as it is.

Mr. Fassett then read Rules Nos. 3, 4 and 5.

A Member: Rule 5 might be interpreted in such a way as to mean that an employee should not take a drink at any time. It would seem the way the rule stands it would prohibit a man from taking a drink at all. I think we will all agree that a man should not go into a saloon or drink while in uniform. I suggest that the rule be reconstructed in such a way as to make a misunderstanding of it impossible.

Mr. Fassett: That rule is pretty well covered by the State law. The superintendent is responsible for any man whom he employs whom he knows uses intoxicants.

Mr. Lord: The rules can only be held to apply to men while they are on duty.

Mr. Fassett: I would suggest then that Rule 5 be changed so as to start with "during hours of duty," then continue right down to where the words "during hours of duty" are now in italics, and then there will be a period, and the next paragraph can start "when off duty."

The President: If there are no other suggestions we will pass on to the next.

Mr. Fassett then read Rules Nos. 6 and 7.

Mr. Fassett: I do not agree with Rule No. 7, and I never have. I know it is the recommendation of the State Board of Railroad Commissioners, and, as a general thing, I look upon their recommendations as law, but I think if the rule is observed, that the motorman comes to a full stop and looks and listens before going over railroad crossings, there will never be an accident. The fact that the conductor goes ahead and signals simply means that the car for a certain time is in charge of the motorman alone, and I think more accidents are apt to happen from passengers being thrown in getting on or getting out of a car in places of that kind, than by having the motorman stop and the conductor listen from the proper place on the rear end.

A Member: I note that the rule says "at a safe distance." It should be a distance sufficient that if the motorman starts and finds anything is about to happen he will have room enough to stop his car.

Mr. Barnes: I hope that that rule will not be modified. It might be added to and made stronger. It is certain, and the experience of the Railroad Commission has proved, that it is necessary that every precaution should be taken at steam road crossings that is possible, and Mr. Cooper's suggestion that an arbitrary distance should be fixed is impracticable, for the reason that the cars and other conditions vary the safe distance at which a car can be stopped from the crossing. The local conditions govern. It is necessary that the car be stopped far enough from the crossing

so that it can get headway enough to drift over in case the power is not on.

Mr. Robinson: I should be glad to see that rule broadened in some way so there will be a distinct enunciation of the principle of the method of procedure as to what should be done in cities where there are right-angle crossings of electric roads. It should be laid down as a rule, or else the operating men should agree that it should not be enforced, that cars must absolutely come to a stop before crossing at right angles, or it may be said to be sufficient if they slow down. I think these rules should be broadened so that they should do either one of those two things and not leave it to the motorman.

Mr. Barnes: This rule applies only to steam railroad crossings.

Mr. Fassett: I think if any electric railroad has a crossing which is dangerous enough to require the conductor to go ahead the company should protect it by flagmen. More accidents happen from the car being started by the motorman after he is signaled by the conductor than any other cause. The worst accidents that ever happened on the United Traction Company's road happened when this rule was supposed to be in force. The conductor went ahead in a perfunctory sort of way, and the car started and was struck by a train which the conductor failed to see. The fact was that the electric car never stopped at all; the car simply slowed down and the conductor ran ahead. The car continued slowly, and when the conductor started the car the train was on him and the accident happened. It seems to me that where there is any crossing that is so dangerous that it requires a man to inspect the crossing there should be a man placed there all the time. This is also one of the positions you can fill with the older men of the road who have outgrown their usefulness; put them at crossings of that kind and let them protect the crossings in that way and not have the conductor leave his position on the car.

Mr. Barnes: The accident to which Mr. Fassett refers was at a crossing which was protected by a flagman who had a lantern in his hand. The fact that the accident occurred through the failure of the conductor to go ahead simply emphasizes the necessity of the rule. If the rule had been lived up to the accident would not have occurred.

Mr. Connette: I suppose for the size of the place Syracuse has more steam railroad crossings at grade than any other city in the State, and I would not assume the responsibility of operating cars over those crossings without taking every possible precaution to avoid accidents. So far we have been fortunate in not having any accidents at the steam railroad crossings, but we pursue every possible recourse of safety. We require the conductors to go ahead and go to the center of the steam railroad track and then flag the car ahead. I do not believe that we can place too many safeguards around places of danger. One accident will cost a great deal more than the expense of providing for the different means of safeguarding the dangerous places.

Mr. Lord: Why should it not be well to have something in the rule which would guide the conductor. It may be that trolley cars cannot be stopped at any given distance; but this places the whole responsibility on the conductor of judging whether there is sufficient room and time for the car to pass, and he is merely doing then exactly what every motorman does under all circumstances of vehicles or cars proceeding in an opposite direction. Why could not there be some provision requiring the conductor to have the car wait the passing of any train that was then an approximate distance away or within sight, because a train proceeding at any fast rate of speed will soon pass the spot, even if it is in sight when the conductor first observes it.

Mr. Cooper: Notwithstanding what Mr. Barnes says in regard to that distance from the track, I think that you will find it will be absolutely necessary to provide that the car shall stop a minimum distance from the track. I have had some little experience in that in Schenectady, where we cross the tracks of the New York Central and Delaware & Hudson. We finally put a mark virtually thirty feet away from the track, for the reasons that if the motorman had started the car and then found he had to stop he had space to do it.

Mr. Clark: In the orders we have issued in relation to the motorman bringing cars to a stop at steam railroad crossings it is required that motormen should bring the car to a full stop not nearer than ten feet nor farther than thirty feet from the nearest rail, placing a maximum and minimum distance. That covers the conditions and gives definite instructions.

Mr. Root: I think the statements made by Mr. Cooper and Mr. Clark are all right; but you cannot embody in any one rule any statement which will relate to all. I think every individual company should make a special rule covering its particular case.

The President: The Railroad Commissioners have adopted a rule, haven't they?

Mr. Barnes: Yes, or generally by agreement between the

roads that are crossed; but on this subject I would like to say this, which, of course, everybody knows, that the law requires the Railroad Commission to examine into the condition of each crossing in the State of New York and to recommend such protection at that crossing as in their judgment is necessary. This rule, if left as it is, in my opinion would cover the case, and as Mr. Cooper suggests and as Mr. Root has said, each individual crossing must be treated by a sub-division of this rule or addition to it, marked A, B or C, covering the distance at which each car shall come to a stop at that particular point.

Mr. Fassett: Every crossing we have is protected by our own flagmen, so that the conductor can stay on the back of the car; and I think that any street railway can well afford to pay the amount of \$1,200 a year for the expense of a flagman to protect the crossings and let the conductor stay where he belongs and take care of his passengers that are on his car.

Mr. Byrne: One great danger that I do not think has been mentioned is that the trolley pole has often slipped while the car is in the middle of the railroad track, and had the conductor been in his position at the time he might have adjusted it and thereby averted a very great calamity.

Mr. Clark: In small villages and towns where steam railroad crossings are frequent and only a few cars are operated I do not think that the expense of flagging crossings would be practicable. I know we have several outlying crossings which are in a measure dangerous and should be carefully protected and guarded, but which would not warrant, from the standpoint of the infrequency of the service and the expense of operation, the stationing of a flagman at those points. Neither do I think it necessary upon those remote crossings where the conductor has ample time to go ahead, and we have been operating ten or twelve years. I think the placing of a flagman on those street crossings would be an objection to Mr. Fassett's suggestion.

Mr. Seixas: We have a crossing at grade where our line takes a curve and the steam line takes a curve. It has always been protected by flagmen, but a Michigan Central train almost caught us while our flagman was there. We used to leave the conductor on the platform for the purpose of looking after the trolley and for the purpose of looking after the people who get off before they get to the crossing. Passengers get on and off on either side of that crossing, because we come to a full stop on either side. We decided, however, that the only further safeguard we could have was to have the conductor go forward and flag. We have never had any trouble since then. We have further arranged our trolley framework so that it is almost impossible for the trolley to come off. At the same time we are up against that situation of having two places where passengers get on and off of a 50-ft. car, so it is impossible for the motorman to see whether passengers are getting on or off. We cannot use a distance clause. The only thing we can do is the best we can do, and that is to have a flagman there all the time and have our own conductor go ahead and the motorman do the best he can in starting, whether the passengers are getting on or off. If the motorman turns around to see whether passengers are getting on or off the train might come up after he had the signal to cross the crossing.

Mr. Mitten: We have very many dangerous crossings. We are endeavoring to protect them by the use of towers. There is no doubt that the practice of having the conductor get off the car and flag brings about many accidents. The modification of this rule exempting in some way such crossings as are protected by tower devices is the only suggestion I have to make.

Mr. Fassett: I think if we should use the words "unprotected crossings" they would cover the case.

Mr. Connette: The word "unprotected" means a great deal in connection with this rule. As I said before, the worst accident that ever occurred in this State at a railroad crossing, where fifteen people were killed outright and sixteen injured, happened at a protected crossing. If the exception is going to be made it should be made as to crossings which are protected by derailing devices operated from a tower.

Mr. Ely: In that connection it seems to me that the best form the matter can take is to leave the rule standing as it is now and adding at the bottom thereof, parenthetically, a provision something of this kind: The provisions of this rule (excepting requirements for a full stop) shall not apply to grade crossings which are provided with derailing devices operated from towers or from a tower.

Mr. Barnes: I hope you will excuse me for taking up so much time, but I consider that this is a very important matter. This convention puts itself on record as intimating to the managers of all railroads throughout this State that a crossing that is protected by a flagman is sufficient protection. Gentlemen, I want to say that that is a dangerous procedure. A crossing cannot be

too well protected. The most dangerous point in the operation of any street railway is the point where you cross a steam road, and you cannot put too much protection at that point; and the best protection that can be had is a derailing switch interlocked with home and distance signals on the steam railroad, to be operated from the tower. My experience and the experience of all managers, perhaps not on their own railroads, is to the effect that a flagman is not sufficient protection at a crossing, and the fact that he is employed by the electric road or the steam road does not add to his efficiency. It enables you to discharge him after the accident has occurred, but I do not think it leads to efficiency before the accident occurs. I do not think the idea will be enforced by this convention that a flagman is sufficient protection at a crossing of a steam and electric road if you insert there the words "crossings protected by flagmen."

Mr. Connette: I do not believe that this convention can afford to make any exception to this rule. If there are any companies that have crossings to which they do not wish to have this rule apply they can make an exception to it and make it specific that this rule does not apply to crossings at certain points; that is, if they want to assume the responsibility.

Mr. Allen: I agree with Mr. Barnes. Speaking of our own road, we are equipping every steam railroad crossing with derailing switches, to be operated by the conductor. We are equipping our cars with an extra arrangement to enable the trolley to stay on under all conditions. It seems to me that his convention should not take action in any way except to put the strictest rules on steam railroad crossings. As I understand this book of rules, the rules are general to a great extent, each road taking these rules and applying them as they fit the conditions under their operation. It may be that some steam railroad crossings that are operated by means of derailing switches are operated by men in the towers. The rule as it now stands would certainly not fit those conditions, but every one of those crossings that are operated by derailing switches by a man in the tower has been installed under the direction of the Railroad Commissioners. It seems to me that every precaution that can be taken this convention ought to provide for.

The President: I think this one rule has taken up all the time we can devote to it and that the committee now understands the wishes or ideas of the convention. I think we ought to proceed. Mr. Ely's suggestion has been added. Mr. Robinson states he would like to hear from somebody on his point, that there is no other rule relating to crossings of street railroads.

Mr. Mitten: Our practice has been to issue special rules covering each timetable as regards the crossing of electric lines, for the reason that conditions govern. We do not in our practice require cars going in both directions to stop. We give one the right of way, requiring the other to stop. Conditions will govern in this case as there may be a grade or something of that kind. That I do not think would be proper to insert in our general book of rules. I would suggest that this rule be passed, offering as a suggestion to the committee on rules that they amend it in such a way as to exempt the crossings protected by tower and derailing devices from the general conditions governing other crossings.

Mr. Lord: I want to say a word with reference to Mr. Robinson's suggestion. The question is constantly arising in the courts where cars slow down or stop before the crossing of an intersecting street railway and passengers attempt to alight. The question is constantly arising whether the passenger is entitled to assume that that stopping is an invitation. It seems to me that if the street railway companies could point to a rule which requires them to stop for a specific purpose then any presumption that that stopping was an invitation to passengers would be overcome. In the city of New York large verdicts have been obtained in some cases of this kind. The company's witnesses say the car stopped to let another car go by; the witnesses for the plaintiff say it stopped to let a passenger off. If there is a rule we can point to we can overcome that presumption. We can say "We are complying with the rule." It seems to me, for that reason, it is just as necessary to make this rule apply to street railways as it is to steam railroad crossings.

Mr. Fassett: Our practice is that the cars shall be brought to a full stop before passing any intersecting track, and cars going in any direction should be brought to a full stop, and then the car which has the right of way proceed. If we do not do that then a man is not liable to stop his car if he has the right of way, and some green motorman on the other car, or a man who has lost control of his car, is liable to go on. I think we might add to the rule that cars should be brought to a full stop at all electric railway crossings.

Mr. Mitten: In congested districts that would retard moving

the cars too much. We found it was not practicable, and as to whether the men would obey rules or not, it is a matter of discipline.

The President: I think we had better leave this to the committee and proceed.

Mr. Fassett then read Rules Nos. 8 and 9.

Mr. Robinson: In reference to Rule No. 8, I think the paragraph on page 6 is more a matter of argument than a matter of rules, and I suggest that it be stricken out. It is only a statement of the reasons for the rule; it is not the rule itself.

Mr. Fassett: I don't think it is objectionable.

Mr. Mitten: I like the rule.

Mr. Fassett then read Rules 10 and 11.

Mr. Ely: What does the word "awaits" mean in Rule 10? If it means an agreement to give a hearing, why not say so. "A hearing will be given" is a plain statement of a fact. The word "awaits" might mean a long time.

Mr. Clark: I think the phraseology should be changed to conform to the idea that Mr. Ely has suggested—"A hearing will be given by the superintendent to every employee who has any grievance to state."

Mr. Allen: I would like to ask how many roads belonging to this convention propose to adopt this code of rules as a standard?

Mr. Connette: The idea, as I understand it, is that when this convention is satisfied that a code of rules has been compiled which is satisfactory it will be adopted by all of the roads of our members of this association, and where local conditions are such as to require some changes or some of the rules to be supplemented that can be done by adding a sub-section, for instance designated as Section A of Rule No. 13 or Section B of Rule No. 13, but not to change the fundamental principles of the rule; only add such things as are necessary to provide for the local conditions. I cannot speak for the State Railroad Commission, but from what I learned during the discussion of Mr. Barnes' paper yesterday it seems that the Railroad Commission is very anxious for this association to adopt a standard code, and it is quite likely, when we have reached that point where the rules are ready to be applied to the different lines, the State Railroad Commission may possibly approve them, the same as they have the standard accounts of the Street Railway Accountants' Association of America. It took the steam railroads several years to compile a standard code of rules. Perhaps the committee was at work over five or six years before it reached a conclusion. Now all steam railroads operate under the same system of rules for the government of employees as well as for the movement of trains, and that is the object to which we are aspiring. There is no use of our wasting our time in discussing these rules unless the members of the association propose to adopt them when it has finished with the work.

The President: Is that so understood by the convention?

Mr. Fassett: I think as Mr. Connette does, that we are not going to adopt at this meeting a set of rules, but that the discussion that is going on here is indicating to the committee what it shall suggest in making a set of rules which will be brought before the next convention.

Mr. Lord: I make a formal motion that the committee on rules be continued for the following year, and that the suggestions made by the members to-day be taken under consideration by such committee and the rules altered or amended as they see fit and the report handed in at the next convention.

The President: Mr. Mitten is on the committee on rules in the national convention, and I would like to have him added as one of that committee here.

Motion seconded.

Mr. Barnes: Mr. Chairman, I do not want to suggest anything that will interfere with the order of business of the convention, but I want to say this, that there are a number of roads in this State that are operating to-day without any rules; they are waiting for this convention to adopt a set of rules. Such managers as Mr. Fassett, Mr. Mitten and others, and the gentlemen on this committee, have no idea of the manner in which some of the roads are operating. Mr. Fassett, with his perfect discipline in his methods of operation, can get along without any rules. There are roads in this State that are operated with practically no head to them, without any rules governing the employees or without any perfect system of operation. Those managers with whom we have talked say they are waiting for this convention to take action on a set of rules which they can enforce on their roads, modified to suit their requirements. This committee reported at this convention a set of rules; in fact, it was reported at Rochester last year. I do not see what stands in the way of the adoption of these rules, continuing the committee during the year and suggesting during the year such changes as may be deemed necessary.

The President: If we adopt this as an association all over the State of course a great many legal complications will arise which I am unable to explain; but I make this suggestion, that this committee, after taking the suggestions of the convention, meet as soon as possible or practicable and have another book of rules printed, with the suggested changes, and send them to all of the roads, and then those roads which have no rules may adopt them or not, as they see fit; then next year they will come here better prepared to work out a solution.

Mr. O'Connor: It seems to me that the suggestion made by Mr. Barnes covers the need of the railroad people much more than further delay. If we went ahead and adopted those rules as far as we can, and put them in operation it would be better for the association and better for the railroads to come here next year with such amendments as would be suggested.

Mr. Ely: Gentlemen, the State board is very anxious that we should act in some manner. It seems to be up to us to act, because the frequent occurrence of those horrifying accidents is the worst criticism and the most dangerous thing that we have to face to-day. It condemns alike in public opinion all those who make mistakes and those who do not. We all suffer in the public estimation, and the danger is that if we do not act in some way some drastic measures may be taken by some public authorities which might affect us all. It would therefore seem to me to be a fair way to dispose of the question in some way like this. I will put it in the form of a motion, in order that it may come properly before you: "Resolved, that the committee on rules be continued; that the report of the committee on rules be referred back to the committee; that each company be given thirty days to file any objections, suggestions or amendments to the rules with the committee; that within thirty days after the expiration of such time the committee formulate and make its final report, in printed form, to the executive committee, and the executive committee be, and the same hereby is, thereupon authorized to promulgate and make effective these rules." To show you what may be the great danger of hasty action here, and I know Mr. Barnes would not suggest any ill-advised action or think of suggesting any, I call your attention to Rule 11 for just a moment. If you should leave it as it is it would be most dangerous to us all. It says, when not collecting fares, conductors must remain on the rear platform to keep a vigilant lookout for passengers on both sides of the street. They must also keep careful watch of passengers in the car to note requests to stop for those desiring to leave car, and must be careful to remember requests of passengers to stop at points ahead. Now, you come back again to mandatory language. When you use the word "stopping" it relates back to the mandatory part of the clause, and it reads the same as if he must stop, "stopping car and notifying such passengers when the point is reached." That is impossible for a man to do in every case, and we all know it. It would open the door to a great flood of lawsuits and claims against us on the part of people who were carried past their point of destination, they having announced their point of destination to the conductor. That would rid us of the class of cases of the woman who, having told the conductor that she wished to stop at A Street, when the car ran past that street simply rushed right out and jumped off. They cannot recover now, but they could recover then. The language should be very carefully scrutinized before the rules are adopted.

The President: Mr. Lord's motion is now in order. It is that one member be added to this committee—Mr. Mitten.

Motion seconded and carried.

Mr. Ely's resolution was then put and carried.

Mr. Clark: Inasmuch as opportunity has been afforded to all the roads to make written suggestions, I move that we proceed with the next order of business.

Mr. Connette: I would like to call the attention of the convention to two suggestions in the report of the committee. They ask for a discussion on two subjects on which they have not acted, and it seems to me that the association ought to at least discuss those two propositions; they ought to be settled. The first is a rule restricting the carrying of large packages or bundles on the cars. What should a passenger be allowed to carry on a car as personal baggage? Second, the advisability of a rule prohibiting conductors from changing bills of a higher denomination than two dollars and defining their duties when bills of a higher denomination are presented. The committee would like the association to give them some light on those two subjects.

Mr. Robinson: One of the companies connected with the Metropolitan system was sued by a young man who went out in evening dress and had nothing less than a five-dollar bill, which he presented to the conductor of a horse car, which the conductor refused to accept and put him off the car. I believe he subsequently borrowed 5 cents and proceeded to his destination, where he arrived on time; but he sued the company. His complaint

was dismissed below, and the case was carried all the way up to the Court of Appeals, which court wrote an opinion. It was in the case of Benjamin Barker against the Central Park, North and East River Railroad Company. The court wrote a general opinion, in which it said that it was a harassing thing to require the conductor to change a five-dollar bill. As I recollect the testimony in that case, the court was led to make that statement from the circumstances surrounding the particular situation. It seems to me to be a situation to be governed by the surrounding circumstances in each particular case and impossible to fix the amount by a fixed rule.

Mr. Connette: Isn't there a rule of that kind among the rules of the Metropolitan Street Railway Company in New York?

Mr. Root: We instruct the conductors that they are not required to change anything over a two-dollar bill. They do it in many instances, but in our experience it is very unwise. It takes a conductor anywhere from half a minute to three minutes' time to make the change. He should be attending to matters which are much more important, and whatever the legal proposition is I think it would be very unwise to allow a conductor, with the congestion of traffic on the larger roads, such as we have in New York, to change a bill of more than the denomination of two dollars. I would like to say in connection with this discussion that the committee would like very much to have some suggestions as to Rules 63 and 64 as to ejections. I consider that one of the most important, if not the most important, rule in any standard code of rules. That rule is subject to a difference of opinion in the committee itself. We do not agree upon the present wording, and there is so much that may grow out of the action taken under ejection that I think it deserves special thought and consideration of all the members of this convention. The committee would like very much to have full suggestion upon this subject, because the action of this committee is to be final upon these rules. We would like the opinion of all roads stated to the committee so their action may not be unwise on this point.

Mr. Connette: We can leave it out entirely.

The President: That is in the committee's hands. Now as to bundles.

Mr. Connette: The next proposition is restricting the carrying of large packages or bundles on cars. What should a passenger be allowed to carry on a car as personal baggage?

Mr. Byrnes: That reminds me of a case tried in Kings County of a man who came into a car with a couple of cases, and the court seemed inclined to hold that a package that could not be conveniently carried on the lap of the passenger should not be permitted and that the conductor of the car must exercise discretion as to what size package should be carried.

Mr. Lord: It seems to me that the main difficulty might be overcome as well as possible by providing that no packages shall be carried in a car which shall in any way obstruct the aisle of the car. Any rule that attempts to define what can be carried must be either so indefinite as to mean nothing or must be so specific that it will not cover all cases that will arise. If it should say anything that can be carried in the lap it opens the door to a great many things being carried which might be extremely obnoxious, and it is extremely indefinite. A man might carry a bundle six feet high; he might carry glass; he might carry a great many things in his lap; and if the rule was simply that a man might carry what he could in his lap it would open the door to such articles being carried. It seems to me the only thing that can be done is to pass some rule which would provide for free egress and ingress of the passengers or freedom from obstructions in the aisle.

Mr. Cooper: It is not so much the obstruction as that it occupies the place of a passenger, and anything that takes more space than the place occupied by a standing passenger should not be permitted.

Mr. Seixas: As I understand it, all of the rules are to be general rules, such as can be adopted by large city roads and by small village roads and by the interurban roads, and let each road add to those rules special rules made necessary by the locality. As to this question of bundles, I do not see how any general rule can be made that will apply to all roads, because I can very easily see how a rule of that kind on some roads would be quite necessary, whereas on a small road in the country, or an interurban road, the rules adopted by steam roads applies more nearly, and larger packages are allowed. In fact, the manager of an interurban road permits passengers to carry almost every kind of thing that is not obnoxious, and it would seem to me that this is a rule which should be adopted by each road separately, and that no rule could be formed that would apply to interurban, small roads and city roads alike.

Mr. Lord: It seems to me that a rule which merely refers to obstructions would do that very thing. What would be an ob-

struction under some circumstances would not be under others. If a car is empty a man might have a large dress suit case; it might be on the floor of the car and it would not obstruct the aisle. On the other hand, if that car was crowded and people were standing up and he had a large valise in the center of the aisle it would not only be inconvenient, but dangerous. It is a rule that should be capable of very liberal construction. If the car is crowded something very much smaller than a valise might be an obstruction.

Mr. Clark: It seems to me that anything that applies purely to a local condition or local situation ought not to be embodied in the code, for the reason that I assume that it is proposed by most of the different roads to supply their respective motormen and conductors with copies of these rules, and why burden them with a number of rules that are in no way applicable and which tend to confuse them? I would suggest that, in submitting suggestions, anything that is thought to be purely of a local character which is adopted as the standard be made as brief and as concise as possible and as generally applicable as possible. I quite agree with one speaker in relation to the matter of bundles and parcels being a matter of local consideration. There are roads where the travel is very sparse where you would not object to a passenger carrying in the car a parcel which would be objectionable upon a large city road. It seems to me that rules of that character are matters which should be left to the discretion of the managers of the respective roads.

Mr. Byrne: I entirely agree with the suggestion made by Mr. Clark, and I think that, in view of the fact that there is a motion before the house, we should discontinue further discussion on this subject.

Mr. Lord: Mr. Root suggested discussion of Rules Nos. 63 and 64. They are very important rules.

Mr. Clark: I am perfectly willing to give way.

Mr. Root: I meant that the committee would like to have written suggestions on the question of ejections when the suggestions are submitted, but not now.

Mr. Clark's motion was then put and carried.

Mr. Connette: Mr. President, will you impress upon the members the importance of sending in their suggestions within the next ten days?

The President: I think it is our duty to do that. I know that the various members of the Railroad Commission, as well as Mr. Barnes, are very anxious that we should establish a code of rules. I hope you will all take an interest in this matter and attend to it promptly.

The President: Certainly. We will now proceed with the reading of papers. The next paper is on the subject of "Car Despaching," by Mr. Mitten.

This was published last week.

Mr. Seixas: I would like to ask Mr. Mitten if our rule in running extras could not apply to this road, and if not, why not? We have almost an absolute rule against sending out an extra car or extra cars except as second and third sections of a regular car. We did start by sending extra cars between regulars, but found by placing them fifteen or twenty minutes ahead or fifteen or twenty minutes behind we could run them as second and third sections of regular cars and therefore eliminated the danger of having a car in between the regular scheduled cars.

Mr. Mitten: It is better that the trains be all run as sections, but in our practice we do a very heavy freight business and have sometimes quite a number of trains on the line. Our fruit business is very heavy, and in stopping at different stations to load fruit and shunt cars it would be impossible to run our train as a section in that you could not follow a regular train over a few miles of track before it would come against another regular train; so we give it written orders, passing it from station to station, not knowing what time it will be able to make, because we cannot be advised as to the work that it will be required to perform.

Mr. Seixas: I referred more particularly to extra cars on the passenger service. We also have freight under ordinary conditions, and the car is in charge of a steam railroad conductor of long experience, who operates strictly according to his written orders, which he gets at different points along the line, as he would on a steam railroad, with the exception of a few points where he must get telephone orders. That is the exception to our rule of running extras except as second or third sections. We run those trains as extra sections, but entirely on written orders. We have our own telegraph line along the entire length of the road and our own telephone line. Our telegraph is used from the main office and the telephone line from each branch. We have a telephone at each branch at every section, and the minute a car gets to that branch, whether it is an extra or not, the conductor must call up the dispatcher, whether he is exactly on time

or whether he is not on time, as long as the car he is to keep is standing on the branch. No matter if he is exactly on time, if the car is not on the branch he must call up for orders for the purpose of making the other branch if the other car might be delayed.

Mr. Cooper: I would like to ask Mr. Mitten why he makes his interval between his sections a space interval instead of a time interval. We are operating a high-speed road, and we found where we made a space interval we were liable to have a rear-end collision and had to make it a time interval.

Mr. Mitten: I do not see how a time interval could be any better observed than a space interval; in fact, not as well, in that the space interval can be maintained by the use of the motorman's eye, placing the tail signal lights on the train going in advance, while the time distance would depend entirely upon the speed at which the cars might be running at that moment. Our rule requires the motormen to approach all curves under full control, and we have a rule which requires, in case a car becomes disabled in the vicinity of a curve where the view is obstructed, to be immediately protected by the conductor. It provides against accidents sufficiently so that running in the way which I have described at exceptionally high speed, and running the line to its capacity at times, we have never had an accident, which is perhaps the best proof that the system is effective.

Mr. Cooper: I spoke especially with regard to fogs, when you cannot see fifteen feet ahead of your car. Our trouble was caused by fogs. We had a bad rear-end collision on that account, and we had to make it a time interval.

Mr. Danforth: On our small interurban line our trouble is very light. We cannot afford to maintain operators at our points. Our line is 40 miles in length. We have not as yet completed our telephone system, but are following the standard steam railroad rules as closely as possible. We use the telephone in place of the telegraph and we run entirely on written orders, the dispatcher issuing an order on leaving the city to every train. The crew registers in the register book at the dispatcher's office and again at the small points on the line and terminal, reporting at the terminal to the dispatcher. The register book at the intermediate points are at the sub-stations and are looked after by the operators. These operators report to the dispatcher by telephone the passage of all trains. If orders are to be delivered to a train from one of the sub-stations the conductor of the train receives the order. The operator also receives the order, and the conductor makes a record of his order in the register book, so that, while he does not follow the written order down beyond the dispatcher's office, by the use of the registration book we have on file the passage of all cars and the signatures of the crew, showing that they understand any order that they receive at the registration point.

Mr. Mitten: Have you a timetable?

Mr. Danforth: We have a timetable following the steam railroad form. The only thing omitted is the matter of printing the special rules in the table. That is a matter which will probably be taken up later. The form now is following single-division steam railroads. I believe the members of the association will appreciate the very compact form in which the International Traction Company is printing its tables and special rules. I believe that the printing of the rules on the tables is of almost as much importance as printing the table and that we will not go far astray in following that practice.

Mr. Barnes: Mr. Seixas brought out a point which I think is an important one and which I think all railroad managers should seriously consider, and that is the running of special cars. Where it is possible they should be run as sections of a regular run. We have had two serious accidents on interurban roads in the last two months which would have been avoided had the special cars which were in the accident been run as sections. Another point which appears in Mr. Mitten's paper is that all of the rules provide for the protection of cars when at a standstill. A second section of a regular run is entitled to the same running time as the first section. Mr. Cooper's idea of a time limit is a good one. The spacing plan has resulted in accidents, and the most serious accident that we have had in the last couple of months would not have occurred if there had been a spacing rule which could have been complied with. In this case the special train was following a regular, the regular losing time and the special making schedule time, the special coming up to the regular at a curve near the station. The regular came to a stop and was not at a standstill more than a minute before the extra smashed into the rear end. There was no time for the conductor of the regular train to protect his rear end. The road on which the accident occurred is full of curves, so that the view was limited, and it is a question whether the motorman on the extra car which was following the regular one got sight of the regular train three or four minutes

before the collision occurred. It is rather difficult to establish a time limit between trains which would be of any value on account of the lack of station agents or operators along the road; but if such a limit could be enforced it would add to the safety of the operation of that character of road.

The President: Our time is limited, and although we would like to discuss the paper further, I will ask Mr. Reed to read his paper on "Removal of Snow and Ice."

This was published last week.

A Member: I would like to ask Mr. Reed under which department the removal of snow comes.

Mr. Reed: The snowplows and all snow machines are furnished by the master mechanic. They are operated by the transportation department, except that the mechanical department operates the rotaries. We have two special men on each sweeper.

Mr. R. E. Danforth then read his paper on the same subject, "Removal of Snow and Ice."

This was published last week. There was no discussion.

Mr. Robinson: Mr. Vreeland's topics to be taken up at the next meeting are as follows. First, interurban service, divided into three heads: (A) standard equipment, (B) car despatching, (C) standard methods of fare collection and ticket taking; second, extra freight and baggage service on interurban lines; this subject has been divided into three heads: (A) traffic arrangement with steam roads and boats, (B) traffic arrangements with other interurban lines, (C) development of freight and express service.

The President: The next order of business is the nomination of officers.

Mr. Allen: Mr. President and Gentlemen of the Convention: The nominating committee would respectfully submit the following report:

For president, G. Tracy Rogers, of Binghamton.

For first vice-president, E. G. Connette, of Syracuse.

For second vice-president, Addison B. Colvin.

For secretary and treasurer, Henry A. Robinson, of New York.

For executive committee, Messrs. G. Tracy Rogers, H. H. Vreeland, W. Caryl Ely, T. J. Nicholl and J. L. Greatsinger.

These officers were elected unanimously.

Mr. Connette then extended an invitation for the association to meet next year at Syracuse. It was accepted by unanimous vote.

Mr. Ely: I want to say that since my membership in the association I have never seen so largely attended, so earnest and enthusiastic a convention. The banquet was the greatest success of anything which we have ever had. We are progressing forward instead of backward. It is well, and I want to say that I do not believe that General Manager Mitten and myself will incur during this fiscal year any expenditure of money which we feel is more beneficial to us and to our system than the voucher that we will audit for payment of the expenses of our delegation present here at this convention; and I wish to assure you that from now on you may always expect from us a delegation of substantial size and at least two papers, if you desire them, to be read at the convention. And I wish to say something further—and I feel my inability to convey the thoughts, which are too many to find utterance—as to the benefits of this convention and association. Many of them are of such a nature that it is quite impossible accurately or correctly to describe them. I feel that if it were not for this association and the united and co-operative efforts and endeavors that we are enabled to make by reason of this, the position of the street railways in the State of New York and the operating officers, would not be nearly so strong as it is to-day. I believe that all of us, that every president and every general manager, the executive committees of the different roads and different corporations owning and operating street railways or properties in this State, if they fully realized the benefits accruing to the personnel of their respective organizations, they would see to it that they had representation from each individual company, and they would gladly spend the money necessary to send them here in a proper, dignified way. I am not going to talk about the benefits of co-operation, combination and all that sort of thing, because those things you know just as well as I do; if you do not, you ought to. This is the age of combined effort, and individuals to-day are simply straws floating along the current, absolutely lost except in rare instances and ineffective. Combined co-operative effort and endeavor is what is storming all the lines of progress and business and every avenue where man's intellect and his energies and his powers are employed. Everybody knows it. No man can fail to see but that the only way to protect ourselves, the only way to protect our rights, is to get proper laws; the only way to keep track of the laws is to stand and fight shoulder to shoulder. This association is much more important to us than the National Association. The National Association is in-

structive in that you meet men from the large cities all over the country and compare thoughts and ideas, and so is very beneficial. But we are governed by one set of State laws; we have a single line of thought; we have a channel that we are all working in, and if we come together intelligently, exchange ideas and suggestions, it is almost impossible to measure the influence and the result if taken in comparison with the doing of nothing at all. Where would we be if we were left to take care of ourselves? Only those can begin to answer who for the last twenty years have looked after these things and given freely of their time and of their endeavors for the association. And I can only say, as I said before, that if the importance of this association was correctly understood no manager or officer of any corporation in this State would begrudge the money and time that is necessary to be expended to keep it together, to increase its membership and make it more and more effective. (Applause).

Mr. Vreeland: I cannot add anything to what Mr. Ely has said. We both have frequently spoken on the same lines before this convention. We have both given our views as to what we consider the value of this association to the combined interests of the State, and if the gentlemen who are on the executive committee of the association are thoroughly conversant with what is going on in connection with the problem of street railways in the State, understand and appreciate the value of the association, certainly those connected with the smaller roads should appreciate the value of this association and its worth to the general interests which we all represent. I do not know of any one interest connected with the street railways in New York which has been more valuable in my work than the association work of the executive committee, and I agree entirely with Mr. Ely that while I am president this year of the American Association and consider its work valuable I do not consider it half as valuable to any particular State interest as this State Association. We have had, so far as business is concerned, a better convention here than any session of the American Association that I have attended since I have been a member of that association and been in business. (Applause).

Mr. Connette: I would like to make a motion to this effect: that the committee on rules would be greatly pleased to receive suggestions from the Board of Railroad Commissioners, and especially from Mr. Charles R. Barnes, the electrical expert of that commission.

Motion seconded and carried.

Mr. Allen: It seems to me that we owe a vote of thanks, and sincere thanks, to our host, the Hudson Valley Railway Company. They certainly have given us a very fine entertainment, and I would move that a vote of thanks of this association be extended to the Hudson Valley Railway Company and its officers.

Motion seconded and carried.

The convention then adjourned.

The Terre Haute Boycott Declared Off

The boycott declared against the Terre Haute Electric Company, operating the street railway lines in Terre Haute, Ind., and the interurban railway between Terre Haute and Brazil, has been declared off by the Central Labor Union after having been in force for eight months. The boycott grew out of the strike of the employees of the company, and while first declared against the company, was extended from time to time so that merchants, manufacturers, shopkeepers and even clergymen were brought under its ban, the labor organizations carrying on their high-handed practices without regard for anybody or anything. The STREET RAILWAY JOURNAL has already told some of the curious results that followed the declaration of the strike. As previously stated, the boycotts were first declared against the company. Next they were extended to persons patronizing the cars. They were soon extended to the business men, and dry goods stores, mills and factories were one after another placed on the boycott list. Clergymen and school teachers next were assailed, and then a traveling salesman who patronized the cars was prevented from making a sale. One man took his children out of school because one of them was seated next to the daughter of a merchant against whom a boycott had been declared. The teacher was requested to change the seats of the children, but this she refused to do. A boycott was proposed against the school, but it was voted down. A clergyman, who frankly declared that the conditions existing in Terre Haute were a disgrace to the city, and that the law should be enforced, was threatened with bodily harm, and a boycott was declared against his church. Finally, a halt was called to the high-handed practice of the labor organization, and the citizens organized a protective league for self-protection, with the result described.

Report of Committee on Standard Code of Rules for the Government of Conductors and Motormen*

The committee on standard code of rules respectfully submit the following rules merely suggestive toward reaching a code that will be applicable to all of the street railroads in the State, realizing, however, that the conditions existing in connection with the operation of the large and small roads are such as to make a solution of the problem a difficult one, but we believe that there can be a uniformity in the fundamental rules governing the operation of both large and small roads, and while the committee realize that the rules, which they submit herewith, are perhaps imperfect, they come nearer toward meeting the required standard than the report submitted at the last meeting.

The committee would suggest the following subjects for discussion in connection with these rules, with a view of incorporating the judgment of the convention relative to these subjects, as a part of the standard code of rules:

1. A rule restricting the carrying of large packages or bundles upon a car. What should a passenger be allowed to carry on a car as personal baggage?

2. The advisability of a rule prohibiting conductors from changing bills of a higher denomination than \$2, and defining their duties when bills of a higher denomination are presented.

The committee not only recommends the above subjects for discussion, but also recommends that each member of the convention should carefully consider each rule embodied in this report and make such suggestions to the convention or to the committee as they may deem advisable.

For interurban service, and especially for high-speed roads we recommend that they conform as far as practicable to standards of steam railroad practice, not only in the construction of track and equipment, but in the rules and regulations for the government of employees and the movement of trains.

Respectfully submitted, E. G. Connette, Oren Root, Jr., J. C. Brackenridge, Edgar S. Fassett, J. P. E. Clark, committee.

GENERAL RULES

1. Conductors and motormen are required to be familiar with the rules, and with every special order issued. The bulletin board must be examined daily for special orders. Entrance into the service of the company implies acceptance of its rules and regulations, and ignorance of rules will not be accepted as an excuse for neglect or remission of duty. If in doubt as to the exact meaning of any rule or special order, application must be made to the proper authority for information.

2. Regular conductors and motormen must report for duty ten minutes before leaving time for their first trip, or, if for any good reason unable to so report, must give notice ten minutes before such leaving time.

Extra men must report at such time as ordered, or must give notice ten minutes before such time. They must not absent themselves after answering roll call without permission.

3. Motormen and conductors must report for duty clothed in full regulation uniform, and must be clean and neat in appearance.

4. Treat all passengers with politeness; avoid difficulty, and exercise patience, forbearance and self-control under all conditions. Do not use uncivil, indecent, or profane language even under the greatest provocation.

5. Drinking intoxicating beverages of any kind, or entering any place where the same is sold as a beverage; carrying of any intoxicating drink about the person, or the bringing of same on to the premises of the company; or smoking tobacco during hours of duty, or, the constant frequenting of drinking places or entering such places wearing uniform, or the indulgence to excess in intoxicating liquors, when off duty, is positively prohibited.

Smoking is not permitted in any part of the company's buildings, except in the rooms set apart for use of motormen and conductors.

All forms of gambling, including bets and raffles, are forbidden upon the premises of the company.

6. Cars must never be run ahead of schedule time, but must pass time points, and leave terminals promptly on time unless unavoidably delayed.

7. Cars must be brought to a full stop, at a safe distance, at all steam railroad crossings at grade, and motormen must not proceed until conductor has gone ahead to the center of crossing, looked both ways, and given the "Come ahead" signal—but before starting the motorman will look back to see that no passengers are getting on or off; and in no case proceed, even after conductor's signal, until you also have examined the crossing.

When there is more than one track, the conductor must be in advance of the car until the last track is reached.

8. In the event of a blockade of cars from any cause, the cars

*Submitted at the annual meeting of Street Railway Association of the State of New York at Caldwell (Lake George), Sept. 9 and 10, 1902.

in such blockade must not be started at one time, but at such intervals as will not burden the feeder line. The starting of a number of cars at the same time at one point is injurious to the electrical apparatus, hence the necessity of a careful observance of this order.

9. Never run against a switch point when meeting a car, but slacken the speed of your car and allow the car moving in the opposite direction to pass before striking switch point. This rule refers particularly to all crossovers and curves having switch points facing opposite to that in which your car is going.

10. A hearing by the superintendent awaits every employee who has any grievance to make, and reports or suggestions for the betterment of the service will always receive consideration.

11. Employees riding on cars, and especially conductors on duty, are forbidden to converse with motormen while car is in motion.

RULES FOR CONDUCTORS

12. When not collecting fares, conductors must remain on the rear platform to keep a lookout for passengers. They must also keep careful watch of passengers in car to note requests to stop for those desiring to leave car, and must be careful to remember requests of passengers to stop at points ahead, stopping car and notifying such passengers when the point is reached.

When stops are made at principal streets, places of amusement, churches, or at any point where a considerable number of passengers enter or leave the car, conductors must be on rear platform until such point is passed.

13. Conductor and motorman will report to foreman or inspector any defect in car, track or wire which needs immediate attention, and make written report of same to superintendent at end of run.

14. Conductors will not remove trolley from wire at end of run or elsewhere, at night, until passengers have alighted from car.

15. Conductors will announce the names of streets, public places, and transfer points when approaching the same.

16. Conductors must see that route signs are properly displayed on each half trip.

17. Passengers must not be allowed to bring bulky packages aboard cars.

Conductors must not, in any way, assume responsibility for any package which a passenger may bring onto a car.

18. Conductors must be on the rear end of their cars when passing over switches, crossings, on going around curves, with hand upon the trolley rope. Should the trolley leave the wire, the conductor must at once pull down the trolley and signal the motorman to stop. After the car has stopped replace the trolley on the wire, ring two bells for the motorman to start, first looking carefully around and through the car to see if any persons are boarding or leaving same. They must see that passengers keep their hands off of trolley cord.

19. Front and rear gates on closed cars on the side between the tracks must always be kept closed and securely fastened when running on the road. On open cars the guard chains and guard rails must be kept fastened on the side between the tracks. When gates or chains, or their fastenings are broken or out of order, conductor or motorman must report it to foreman, inspector or starter.

20. When necessary for conductor to leave car he must notify the motorman to insure safety of passengers and care of car.

21. When car is run in the house in the day or night, always shut off lights, remove trolley from the wire, and turn up seats of closed cars before leaving car.

22. On closed cars, when standing passengers crowd the rear door, you will request them to please step forward in car.

23. Standing passengers should be directed to vacant seats, if any.

24. Elderly and feeble persons and women and children should be given assistance in getting on and off car, when possible.

25. No dogs will be allowed on a car except small dogs which are carried in the laps of passengers.

RULES FOR MOTORMEN

26. Motorman must keep a careful lookout on both sides of the street and bring the car to a full stop for every person who signals, except that when a car has considerable headway, is overcrowded, and another car with more room follows within the same block (or 200 ft.), the motorman may request passengers to take the following car.

Cars will stop on signal at corners only, on further crossing, at car stations, transfer points, and in front of places of amusement and churches, and at points as provided in special orders.

Do not stop cars so as to block cross streets or crosswalks.

27. When passing a church during the hours of service, and at all times when passing a hospital, do not use the current or ring the gong when it can be avoided.

28. Never use the reversing lever to stop car, except to avoid a collision or running over a person or animal, or when the brake rigging is disabled.

Do not reverse the power when brake is set, but first release the brake (if it is set) and reverse the power simultaneously, and when the reverse lever is thrown to position, apply the current one point at a time, otherwise the fuse will melt or the breaker will release. Sand should be used when making an emergency stop.

29. Motormen must never leave platform of car without taking controller handle with them, throwing off the overhead switch, and applying brakes. They must be careful to see that the hands point to the "off" mark before taking off controller handle.

30. In order to effect an economical use of the electric current, it is necessary that the continuous movements of starting and changing speed should be made gradually.

When starting car let it run until the maximum speed of each notch has been attained before moving handle to the next notch.

Do not apply brakes when the current is on.

Do not apply current when brakes are applied.

Do not allow the current to remain on when car is going down grade. Endeavor to run car with the least amount of current, allowing the car to roll without the use of the current when it can be done and maintain schedule time.

Motormen can save a great amount of power by using some judgment and discretion in approaching stopping places and switches by shutting off the power so as to allow the car to roll to the stopping place or switch without a too vigorous use of the brake.

31. An overhead switch must never be thrown unless power handle is turned entirely off, and must be thrown by hand only, except in case controller cylinder fails to turn when power is on.

32. When the power leaves the line the controller must be shut off and the overhead switch thrown, the light switch turned on, and the car started only when the lamps burn brightly.

33. When brakes are set to make a stop they should always be released, or nearly so, just before the car comes to a standstill.

34. When there is water on the track run the car very slowly, as there is danger of burning out the motors.

35. Never run on freshly sanded rail with brakes full on, except to prevent an accident, as the wheels are liable to be flattened when this is done. On cars provided with sand-boxes, in case of slippery rail, always sand the track for a short distance before applying the brakes.

36. During snowstorms much damage is done by "spinning" of the wheels with no forward or backward movement of the car.

37. On a slick rail motormen must not allow wheels to slide; as soon as the wheel commence to slide the brake must be released and reset.

38. Motormen must not oil or grease any part of a car.

SIGNALS AND THEIR APPLICATION

The following code of bell signals will be used in the operation of cars:

39. From conductor to motorman.

1 Bell—"Stop at next crossing or station."

2 Bells—"Go ahead."

3 Bells—"Set rear brake."

4 Bells—"Signal to conductor that motorman desires to back the car."

From motorman to conductor.

1 Bell—"Come ahead."

2 Bells—"Watch the trolley and danger signal to conductor."

3 Bells—"Throw cut-out switch on rear end of car."

4 Bells—"Set brake."

5 Bells—Warning—"Pull trolley down to roof."

All of the above signals are to be given on the conductor's signal bell.

When the car is standing and motorman desires to back for any reason, he will give the conductor four bells, but must not move the car until the conductor has answered with four bells to signify—"All is clear behind."

Whenever a car in service is stopped the motorman will, as soon as he is ready to go forward, give two taps of the gong; after which, if the conductor is ready to proceed, he will give the regular "go ahead" signal—two bells.

40. Red lights or flags indicate danger, and when they are placed alongside the track cars must be run slowly and with caution. When placed on the track, cars must come to a full stop until such signal is removed.

41. Before passing any vehicle or obstruction close to the track, where passengers or conductor are liable to be injured while standing on the step of an open car, motorman must give two taps of signal bell as warning.

42. Motormen must never move car (whether stopped on signal or for any other reason) without signal from conductor, and then only when assured that no one is getting on or off front platform.

Conductor must never give signal to start when passengers are getting on or off.

Conductor must never give signal to back car unless he is on rear platform and knows track is clear behind the car.

Conductor must see that the steps or running board are clear before giving the "Go ahead" signal.

43. Passengers have a right to ring the bell to stop a car, and conductors should bear this in mind. They must, however, try in a polite way to discourage passengers from doing so.

PRECAUTIONARY RULES; ACCIDENTS

44. The safety of passengers is the first consideration. All employees are required to exercise constant care to prevent injury to persons or property, and in all cases of doubt take the safe side.

45. In case there are persons between tracks, cars moving in opposite directions must not pass. One car must stop until such persons have crossed the tracks.

46. When any fire department vehicle or company patrol is observed approaching in any direction, cars must be stopped until such vehicle has passed.

47. Ambulances must be allowed right of way, and when approaching or passing, cars must be kept under control to avoid collision.

48. Conductors and motormen must, in a polite way, endeavor to keep people from jumping on and off cars while in motion. If they attempt to get on or off the car while it is in motion, call out to them, "Please wait until the car stops." When passengers are alighting from your car and you see a car approaching in an opposite direction, notify them politely to look out for car on other track. In approaching curves always give the warning to standing passengers, "Hold fast."

49. Do not permit anyone to stand on the steps, and never, under any circumstances, permit a woman or child to ride on the steps. They should be fully inside of the car before the signal is given to start.

50. Motormen are cautioned to exercise great care when a vehicle is passing alongside of track ahead of car. Ring the gong vigorously to attract the attention of the person driving, as a warning not to pull in ahead of car; and run guardedly until the vehicle is passed in safety.

51. Whenever persons or vehicles ahead of the car are in a dangerous position, do not rely upon them to get out safely, but get the car under control or stop at once.

52. Under no circumstances must the arrest of any passenger, truck driver, or any other person be caused by a conductor or motorman without an order from starter, inspector or official of the company.

53. When passing standing cars gong must be rung and car brought to slow speed.

54. When it becomes apparent that there is liable to be an accident, such as a collision with a vehicle or person; or when in the judgment of the motorman an accident cannot be avoided, always drop the fender before reversing power, or making any effort to stop the car.

55. In case of accident, however slight, to persons or property, in connection with or near any car, the motorman and conductor in charge of the same will render all assistance necessary and practicable, and make the best of the situation. In no case will they go away, leaving injured persons, without first having seen that they are cared for.

56. Motormen or conductors will not authorize medical attendance, except for the first visit in severe cases of personal injury, nor will they visit injured persons at any time afterward, unless specially instructed so to do by an officer of the company.

57. In the event of a fatal accident, it will not be necessary to blockade the line awaiting the arrival of the coroner or any other official. If any accident occurs where it is impossible to carry the body to a place of shelter and security, motorman and conductor will put the body on the car and carry it to some suitable place.

58. A full and complete report of every accident, no matter how trivial apparently, and whether on or near the car, will be made by the conductor; as accidents, which the conductor may not consider worth reporting, are often the most serious, troublesome, and expensive.

In all cases full data must be obtained and stated in the report as follows:

The date, exact time, exact place, run and car number and the direction in which the car was moving, the nature of the accident.

The full name and address of the party injured or whose vehicle was in collision (giving the name of both the driver and the owner of the vehicle).

Ascertain the extent of injuries or damages, if any, before leaving the spot.

In case there has been an accident on the car and the conductors change ahead, the conductor taking the car on which the accident happened, must secure the name of witnesses as above.

In case a person is struck by a car after passing around the rear

of a standing car, the numbers of both cars must be obtained.

If accident is caused by any defect or damaged condition of car, conductor must report same.

Accidents to employees will be reported the same as accidents to passengers.

The conductor will obtain the name and residence in full of all witnesses on or near the car.

The motorman will assist the conductor in securing the names of witnesses whenever practicable, and he will be held jointly responsible for the observance of this rule.

Any trouble or disturbance of a boisterous or quarrelsome character which occurs on a car, or the ejection of a person from a car, will be reported as an accident.

59. Conductors and motormen will make a verbal report to the first inspector or official of the company they meet of any accident, blockade, or mishap of any kind.

60. No employe shall, under any circumstances, give any information whatever concerning any accident, delay, blockade, or mishap of any kind to any person except to a properly authorized representative of the company.

61. In case of a serious blockade, where assistance is required to get cars moving, conductor of car first in block must, in absence of any inspector or official, telephone at once to nearest depot and give notice and particulars of block. Expense of telephone message will be refunded upon application at office.

62. Employes will be held strictly accountable for any damages caused by their neglect or carelessness or by disobedience of rules. The company reserves the right to charge employees for such damages.

63. The motorman or conductor of any disabled car, withdrawn from the track, must remain with the car until relieved by proper authority or until car reaches depot.

EJECTIONS

64. No passenger shall be forcibly ejected from a car for any cause whatever, without order of an inspector, starter, or official of the company, unless the conduct of the passenger is dangerous or grossly offensive to the other passengers. In such case the ejection must be made by the conductor, with the assistance of the motorman, after the car has been brought to a stop, and with as little force as possible.

65. When a passenger refuses to pay fare or presents a defective transfer upon which, in the judgment of the conductor, the passenger is not entitled to ride, the car must be stopped and the passenger requested to leave. If the passenger fails to comply with such request, the facts of the case must be brought to the attention of the first inspector, starter, or official of the company who is met, and the conductor must act according to instructions received from such inspector, starter, or official. In all cases the passenger must be given the benefit of the doubt.

When a person who refuses to pay fare requests that he may be allowed to leave the car, the car must be stopped and the person permitted to alight.

66. No person will be ejected from a car for mere intoxication unless he becomes dangerous or offensive to the other passengers; then he must be ejected with great care and must be guided until free from probable injury from the car.

67. Any person caught stealing a ride on a car must never be pushed from the car while car is in motion.

68. No passenger will be ejected from a car for spitting on the floor. If a passenger violates the rule or law prohibiting spitting the conductor will call the attention of the passenger to the law prohibiting such conduct and endeavor to persuade passenger to desist.

69. In case of ejection always get names of witnesses, the same as in case of accident.

70. Any person ejected from a car must be put off at a regular stopping place.

No passenger should be put off at a point where he will be exposed to danger.

Particular attention must be paid to this rule during bad and inclement weather, late at night or when a passenger is intoxicated.

FARES AND TRANSFERS

71. As soon as a passenger is seated conductor must collect fare. When more than one passenger or party enters at a time the fare must be rung up on the register in the presence of the party who paid it before any more fares are collected. Conductor must ring each fare from the place where he collected it. Thus a fare paid inside of car or on platform must be rung up inside of car or from platform, as the case may be.

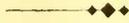
72. When necessary to give change, conductors must first register fare and immediately thereafter give change.

73. Conductors must be careful to see that register rings each fare and that dial shows it.

In case the register gets out of order the conductor must stop using it, make memorandum of fares on back of trip report and report the fact to the first inspector or starter met on the road and give written report to superintendent.

74. In case any line is blocked it is the desire of the company to carry passengers to their destination on other lines. Under such circumstances conductors of parallel or intersecting lines will accept transfer tickets accordingly and will issue a transfer on a transfer if necessary. They will also accept transfer passengers without tickets on orders from any inspector or authorized representative of the company.

75. Motormen and conductors will be held equally responsible for leaving a transfer point when a car of the connecting line is approaching so as to prevent proper transferring of passengers.



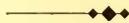
The Philadelphia, Bristol & Trenton Passenger Railway

The Philadelphia, Bristol & Trenton Passenger Railway Company has received the rails for its extension from Bristol to Morrisville, opposite Trenton, and work will be commenced at once. It is expected that 10 miles of track will be completed and that cars will be running between Philadelphia and Morrisville (33 miles) by Dec. 1. While nothing has been decided in the case, it is possible that the company may secure entrance to Trenton over the tracks of the New Jersey & Pennsylvania Traction Company, which owns the New Jersey-Pennsylvania bridge across the Delaware at Calhoun Street and controls the Yardley, Morrisville & Trenton Street Railway. This would make a continuous line from this city to Philadelphia without a break, although it will be necessary to change cars at Tacony, Philadelphia. This may be overcome in time if traffic arrangements should be entered into with the Philadelphia Rapid Transit Company, which is not unlikely, and then cars would be run to the center of Philadelphia.

The line is already completed from Philadelphia to Bristol, and includes the Bristol & Neshaminy Elevated Railroad, through which a notable victory was won at Croydon after seven years' litigation, in which there were a dozen charters and a dozen suits, practically, before the final victory was won.

High-speed cars, fitted with all the modern conveniences, will be used on the line. No schedule has been announced, but it is probable that the time will be about one hour and thirty minutes to Tacony and from two to two and a half hours will doubtless be the time to the center of Philadelphia. It is not expected that the fare will be over 30 cents at the most, making the round trip 60 cents, or less than one-half the steam railroad rate, which is \$1.25.

The competition between the company and the Pennsylvania Railroad and the Reading Railroad will be watched with interest. Each of the steam roads operates a high-grade service between the two cities, having, combined, more than 150 trains per day. Many of these are fast express. In addition to the steam railway competition the new electric railway will have to compete with the Camden & Trenton Railway, on the New Jersey side of the river, and with the Wilmington & Delaware River Navigation Companies, both of which operate fast steamers between Philadelphia and Trenton. The completion of the Philadelphia, Bristol & Trenton road will also complete the direct electric railway connections between New York and Philadelphia, and the extension of the Trenton, Lawrenceville & Princeton Railroad to Bound Brook will complete the second line between New York and Philadelphia. The first line, via the North Jersey and other lines to New Brunswick, the Trenton & New Brunswick Railroad, the Trenton Street Railway, the Camden & Trenton Railway and the Camden & Suburban Railway will be in operation within the present month.



Meeting of the Massachusetts Street Railway Association

At the annual meeting of the Massachusetts Street Railway Association, held at Young's Hotel, Boston, Mass., Sept. 10, 1902, the following officers were elected: President, Elwin C. Foster, Lynn; first vice-president, Edward P. Shaw, Newburyport; second vice-president, Francis H. Dewey, Worcester; treasurer, Fred H. Smith, Quincy; secretary, Charles S. Clark, Boston. The executive committee elected consists of Elwin C. Foster, Lynn; Edward P. Shaw, Newburyport; Francis H. Dewey, Worcester; H. H. Crapo, New Bedford; P. F. Sullivan, Boston; W. S. Loomis, Holyoke; W. W. Sargent, Fitchburg, and R. S. Goff, Taunton. The auditing committee elected were H. B. Parker, Newtonville; George W. Cook, Springfield, and Charles F. Grosvenor, Palmer.

Investigating Brakes, Jacks and Fenders in Massachusetts

Under date of Sept. 10 the Board of Railroad Commissioners of Massachusetts addressed the following letter to all street railway companies of the State referring to the hearing to be held Monday, Sept. 29, to consider the question of equipping cars with power brakes, jacks and fenders, which hearing was authorized by the Legislature of 1902:

COMMONWEALTH OF MASSACHUSETTS.

BOARD OF RAILROAD COMMISSIONERS.

Mr. President _____, St. Ry. Co.
_____, Mass.

BOSTON, Sept. 10, 1902.

Dear Sir—The board has appointed Monday, Sept. 29, at 10:30 a. m. as the time and the office of the board in Boston as the place at which a hearing will be given in connection with the inquiries which it has been directed to make under the following resolves of the Legislature of 1902:

Chapter 29. Resolved, that the Board of Railroad Commissioners is hereby authorized and directed to investigate the practical application and operation of the power brake in use upon certain street railways in this commonwealth, and, if they see fit, of the power brake used by street railway companies elsewhere, and to report, after such public hearing or hearings as they may deem necessary, on or before the fifteenth day of January, 1903, upon the following questions:

(1) Is the power brake superior as a safety device to the hand brake?

(2) What expense would be entailed upon street railway companies by the equipment of their rolling stock with power brakes?

(3) Would public safety be furthered by the adoption of a power brake?

(4) Within what time might the street railway companies operating in this commonwealth reasonably be required to equip their rolling stock with power brakes in case the use of the device should be made obligatory?

Chap. 67. Resolved, that the Board of Railroad Commissioners is hereby authorized and directed to investigate the advisability and necessity of having all street railway cars equipped with jack-screws or other implements or machinery of sufficient power to raise the cars to such a height as will permit the extrication of injured persons held beneath them and to report thereon to the general court on or before the fifteenth day of January, in the year 1903.

Chap. 75. Resolved, that the Board of Railroad Commissioners is hereby authorized and directed to examine the fenders in use upon street railway cars in this commonwealth and such other fenders as may be brought to their attention and are in their opinion worthy of consideration. After giving such public hearings upon the subject as they may deem necessary the board shall report to the general court on or before the fifteenth day of January, 1903, and make such recommendations in regard to fenders upon street railway cars as they may deem proper.

You are requested to present at that time any information which you may have pertinent to the consideration of these matters. Yours truly,

(Signed)

WILLIAM A. CRAFTS, Clerk.



New Transfer System at Birmingham

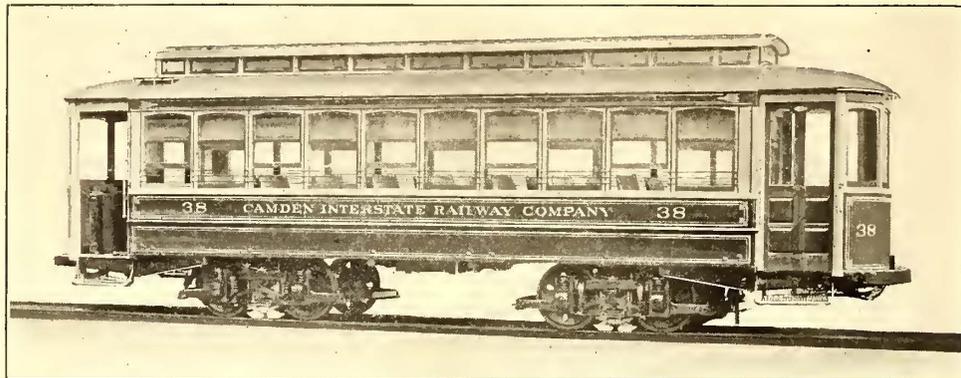
On September 20 the Birmingham Railway, Light & Power Company, in response to an agreement with the City Council, will place in operation a new transfer system affecting all of its lines. The plan of the company is to date the tickets for a special day, as is done by a number of companies, and to each line will be issued a transfer of a color different from that of any other. The day of the week, month and year are to be printed in large type which can be seen at a glance. There will be an hour mark followed by the time in periods of fifteen minutes. The line on which a transfer is available, the place at which it will be accepted and the direction of travel will be made plain. There will be a column marked "Emergency," which is to be used in the case of a blockade or when occasion arises for transferring passengers from one car to another on the same line.



The Youngstown & Sharon Railway Company, of Youngstown, Ohio, has notified the motormen and conductors in its employ that an increase in wages of 1 cent an hour will be given to those who have no accidents for a period of six months.

Brill Cars for West Virginia

The Camden Interstate Railway Company, of Huntington, W. Va., has lately added to its rolling stock four handsome cars, built by the J. G. Brill Company, of Philadelphia. The cars, which are Brill patented semi-convertibles, are 37 ft. 5 ins. over the vestibules, 7 ft. 10½ ins. over the sills, and 8 ft. 2 ins. over the posts at belt. This form of car has come into large favor in all parts of the country within a comparatively short time, doubtless on account of the remarkable increase of interurban lines and a more



DOUBLE TRUCK CAR FOR CAMDEN

definite knowledge of their requirements. The distinctive features of the Brill cars of this type consist of roof storage of the windows by an exceedingly simple and practical system, and the elimination thereby of wall pockets, increasing the width of the car 7¼ ins. The windows raise with great ease, the lower sash automatically engaging the upper and carrying it into recesses in the roof. The parts fit snugly, and at the same time move readily in the post grooves.

The interior of the cars are finished in natural cherry, with ceilings of handsomely decorated birch. The Brill patented specialties with which the cars are equipped are as follows: Angle-iron bumpers, "Dedenda" gongs, radical draw bars, ratchet brake handles, sand boxes, Brill platform steps, etc. The trucks are Brill No. 27-G pattern.

Census Report of Electrical Manufactures

Carefully prepared statistics relating to the manufacture of electrical apparatus and supplies are intelligently presented in Census Bulletin No. 245, recently issued by the United States Government, embodying the work of Thomas Commerford Martin, of New York City, editor of the *Electrical World and Engineer*, whose report as expert special agent of the census department of manufactures forms very interesting reading, giving, as it does, the first complete statistical review of the electrical industries of this country. The figures given relate to manufacturing only, and hence do not include data to local operating companies in electric lighting, telephone, street railway or other branches, the statistics otherwise being as comprehensive as it was possible to make them. It is shown that a capital of \$83,130,943 is invested in the manufacture of electrical apparatus and supplies, this sum representing the value of land, buildings, machinery, tools, implements and the live capital used, but does not include the capital stock of any of the manufacturing corporations. The value of the products is returned at \$91,348,889, to produce which involved an outlay of \$4,563,112 for salaries of officials, clerks, etc., \$20,190,344 for wages, \$6,788,314 for miscellaneous expenses, including rent, taxes, etc., and \$48,916,440 for materials used, mill supplies, freight and fuel. In order to avoid the deduction of erroneous conclusions from the above figures the statement is made that the difference between the aggregate of these sums and the value of the products is not in any sense indicative of the profits in the manufacture of the products during the census year. The census schedule takes no cognizance of the cost of selling manufactured articles or of interest on capital invested, or of the mercantile losses incurred in the business, or of depreciation in plant.

The Philadelphia & Lehigh Valley Traction Company has secured the contract to carry the mails between Quakerstown and Allentown, and will begin operations Oct. 1. The schedule of the mail service has not yet been announced. A number of intervening towns will be accommodated by the new arrangement.

I-T-E Switchboard Practice

This is the title of a handsome volume issued by the Cutter Electrical & Manufacturing Company, Philadelphia, Pa., as supplement to "Modern Switchboards," which was published by them in 1898, but which has for some time been out of print. The new volume embraces matter dealing with the principle on which automatic circuit breakers operate, presenting some of the advantages of circuit breakers over fuses and dealing with the use of circuit breakers as indicators on electric circuits. The book

is profusely illustrated by half-tone and line engravings of superior quality—circuit breakers for direct and alternating current generators and feeders, storage battery equipments, as well as special types and their accessories being shown. An article by W. H. Tapley, an electrical engineer at the government printing office, Washington, D. C., on "Circuit Breakers and Their Use in Power Transmission" is presented, as well as matter dealing with the use of circuit breakers as protectors of various kinds of electrical machinery. Dimensional diagrams of I-T-E circuit breakers are given, together with plan drawings of various types of switchboard panels with connections. An interesting and valuable feature of the book is a treatise

on electrical measuring instruments by J. Franklin Stevens, M. E., president of the Keystone Electric Company, of Philadelphia, the sales management of whose line of electrical measuring instruments was recently assumed by the Cutter Company. The treatise not only clearly describes the principles involved in the construction and operation of the instruments of which dimensional diagrams are given, but indicates what considerations should determine the selection of such apparatus. Paper and typography are of the highest class. The book, 9 x 11 ins., of nearly 200 reading pages, with a number of advertising pages at the back, is not for free distribution, but is sold at a price of \$3 per copy.

Evansville & Princeton Traction Company's Affairs

It is claimed by Perry J. Freeman, president of the Evansville & Princeton Traction Company, of Princeton, Ind., that the building of the road upon which this company is engaged, is progressing steadily and satisfactorily, and that there has been no serious delay in carrying out its plans. "The company hopes to have the work completed by the spring or early summer of next year. The right of way has been surveyed and secured all the way from Princeton to Evansville, with the exception of a very few places. It has 12 miles graded, its car house and shop erected and the foundation of its power house partly in. Its rails are all purchased, and part of them delivered; they are being laid on Reed Street, in Evansville. The line material has also been secured, and contracts have been placed with the Westinghouse Company for electrical machinery to equip the power house and two sub-stations. More than 25,000 ties have been purchased, and they are being distributed daily along the lines. More than fifty teams are employed in the construction of the grade. Within a week the boilers and engines will be purchased as well as the cars, the car equipments having already been bought of the Westinghouse Company."

Another Hudson River Tunnel

The Hudson & Manhattan Railway Company, which was incorporated under the laws of New Jersey a few days ago, proposes first to build a tunnel under the land in Jersey City skirting the Hudson River from the Erie Railroad at Pavonia Avenue south to the terminal of the Jersey Central at Communipaw. It will pass under the Pennsylvania Railroad at Hudson Street. The charter also authorizes the company to operate cars in a tunnel under the Hudson as far as the boundary line between New Jersey and New York, where it will connect with a tunnel to be constructed by a company to be incorporated under the laws of New York. It will be a feeder for the river trolley tunnel and will permit passengers to go from New York to the Erie, Pennsylvania and Central Railroads in a few minutes.

The steam railroad companies are not interested financially in the Hudson & Manhattan Railway, it is said, although they are favoring its construction.

New Interurban Line Opened in Indiana

The Indianapolis, Shelbyville & Southeastern Traction Company's line between Indianapolis and Shelbyville, a distance of about 28 miles, has been placed in operation. The contract for building and equipping the road was let to Townsend, Reed & Company, of Indianapolis, on Sept. 26, 1901. Actual work was commenced on the grading on Oct. 21, making the period of building about eleven months. There are twenty-eight bridges on the line, eleven being steel structures, one a stone arch bridge, one a concrete arch, and all have solid masonry abutments. The longest bridge is at Shelbyville, being 200 ft. in length. The steepest grade on the road is only 4 per cent. The power house, the car houses and the general offices are at Shelbyville. The route traverses the towns of Norwood, Five Points, New Bethel, the Acton assembly grounds, Acton, Brookfield, London, Fairland and Shelbyville, while the country adjacent is not only very populous, but is exceedingly wealthy. An extension is planned to Greengburg. The officers of the company are: Ed. K. Adams, president; Albert Deprez, vice-president; Thomas E. Goodrich, secretary; John R. Messick, treasurer; Charles R. Osgood, general manager.

Location Controversies in Massachusetts

A very unique case came before the Massachusetts Railroad Commissioners, Sept. 17, it being on the petition of the Waltham Street Railway Company for authority to extend its lines into Lincoln, under the general law which permits the Railroad Commissioners to authorize extensions by street railways into adjoining territory. During the hearing the point was brought out that the Newton Street Railway Company had a franchise for Lincoln, and that it had secured a location in Weston, which lies between Waltham and Lincoln, while the efforts of the Waltham Street Railway Company to secure a location through Weston had failed. Counsel for the Waltham Company then frankly admitted that the design of the company was to secure an extension into Lincoln, get locations from the Lincoln selectmen, and return to the Railroad Commissioners and ask them to grant a location in Weston under the provisions of the "missing link" statute, which gives the Commissioners the right to grant a location when the link through a recalcitrant town is necessary to connect two parts of a line. Although it was shown that the East Taunton Street Railway secured a location in Lakeville by first securing rights in Middleboro and then getting a missing link location, the Railroad Commissioners refused to follow the precedent, and dismissed the petition, on the ground that it had no authority to act in such cases, stating that the company must appeal to the General Court for legislation. Incidentally the Chairman of the Board of Railroad Commissioners ruled that in all such cases it is necessary for the petitioning road to be in a position to go into practical operation, but that it is not necessary to build up to a town line in order to have standing, as in many cases an extension would not be made to a town line unless to connect with locations which might be granted in the adjoining town.

The Waltham Street Railway Company came before the Railroad Commissioners on Sept. 18 for approval of locations granted by the Aldermen of Newton, from the Weston line at Newton Lower Falls to a connection with the new Boston & Worcester Street Railway at Newton Highlands. The petition not only raised a question as to whether the location should be approved when the Selectmen of Weston had refused a connecting location from Waltham to this point, but several other interesting law questions. It was argued by L. E. Chamberlain, counsel for the company, that this should be considered an "original location" in Newton. It appears that the articles of association under which the company was formed provided for a line in both Newton and Waltham, but that before the charter was granted the Newton authorities had refused the location desired in Newton, from the Waltham line to Newtonville Square, so the charter merely gave the location in Waltham. Sometime ago, however, the company asked the right to extend into Wellesley on the strength of the fact that the articles of association gave locations in Newton, lying between Waltham and Wellesley. William H. Coolidge, counsel for the Newton Railway Company, argued that the only locations which could be held to be "original" were those between the termini named in the articles of association, and that until construction was completed on this portion the company could not ask new locations, particularly when they were far away from any connection with the original termini. This point Chairman Jackson, of the Board of Railroad Commissioners, thought well taken, but left the matter open until Counsel Chamberlain could prepare

a brief citing authorities, if there are any, which would serve as precedents for the theory that naming a city in articles of association carries with it the right to obtain original locations in any part of the city.

Widener-Elkins and Pomeroy-Mandelbaum Alliance

Semi-official announcement is made in Cleveland of an alliance, financial as well as operating, between the Pomeroy-Mandelbaum syndicate, of Cleveland, and the Widener-Elkins syndicate, of Philadelphia, which controls the Cincinnati Traction Company. The great importance of this alliance can be appreciated only by a review of the causes which led up to it. Briefly, the situation is as follows: The Pomeroy-Mandelbaum syndicate controls the Cincinnati, Dayton & Toledo Traction Company, formerly the Southern Ohio Traction Company, which has operated to College Hill, 7 miles from the heart of Cincinnati. Here it has been blocked for years by the Cincinnati Traction Company, and the series of attempts made by the Cleveland syndicate to gain entrance have been reviewed from time to time in these columns. Some time ago the Pomeroy-Mandelbaum syndicate purchased a steam road operating to within 3 miles of the heart of the city, but up to very recently its plans to operate cars over the steam road have been successfully blocked. The Pomeroy-Mandelbaum syndicate also is back of the Miami & Erie Canal Transportation Company, which has a franchise for the use of the canal banks from Cincinnati to Toledo. This would afford a fine entrance to Cincinnati, but attempts to induce the Legislature to permit the operation of passenger cars along the canal have also been successfully blocked by the Widener-Elkins syndicate.

On the other hand, the Cincinnati Traction Company controls the Mill Creek Valley Railway, operating from Cincinnati to the outskirts of Hamilton. Retaliating for the opposition of the Widener-Elkins syndicate, the Pomeroy-Mandelbaum syndicate purchased the city lines of Hamilton, and thus thwarted numerous attempts on the part of the Widener-Elkins syndicate to gain entrance to the center of Hamilton. Last week the courts settled the Hamilton situation by deciding that the Cincinnati Traction Company could condemn right of way into Hamilton, using the tracks of the Pomeroy-Mandelbaum syndicate, and laying a third rail to allow for a difference in track gage. Whether or not this decision resulted from the acquiescence of the Pomeroy-Mandelbaum syndicate is not positively known, but it is suspected that this was the case. In any event, this break in the deadlock was followed by the negotiations that resulted in the plan of the syndicates to operate jointly.

It is announced that the Elkins-Widener syndicate will purchase large blocks of the securities of the several properties controlled by the Pomeroy-Mandelbaum syndicate, and it is probable that the sale of securities has already been effected, since, as is noted from the stock exchange transactions, large blocks of Cleveland securities have been sold to Cincinnati interests. The securities of the Miami & Erie Canal Company, the Cincinnati, Dayton & Toledo Railway, the Springfield & Xenia Traction Company, and the Western Ohio Railway have advanced remarkably during the last few days, and the general belief is that a merger of all the interests in that section is contemplated. This would mean that the Mill Creek Valley Railway would be consolidated with the Pomeroy-Mandelbaum interests mentioned.

It is officially announced in Cleveland that in the near future the Cincinnati, Dayton & Toledo Traction Company will operate its cars to the center of Cincinnati, "over a route not at present utilized for a car line." This undoubtedly means that the Cincinnati and Cleveland interests will combine in an effort to induce the Legislature to permit the operation of cars over the canal banks into the heart of the city. If this cannot be accomplished it is pretty certain that the Cincinnati, Dayton & Toledo cars will then enter over one of the existing city lines.

There is another reason for this "community of interests" which is not generally appreciated. The Widener-Elkins syndicate has, up to date, been successful in keeping out the Pomeroy-Mandelbaum syndicate, but new projects have been springing up in Cincinnati which promise to be antagonistic to both the older interests. For instance, the syndicate is building a line to Lebanon, and is desirous of extending to Dayton. Other syndicates have the same aim in view, while the Appleyard syndicate, of Boston, has been working for many months to secure entrance for a through line from Columbus and Dayton into Cincinnati. With the Pomeroy-Mandelbaum and Widener-Elkins syndicates combined, it now seems possible that this flood of new traction lines can be coped with to better advantage.

The Detroit & Toledo Shore Line Sold

It is announced that the deal for the sale by the Everett-Moore syndicate to the Grand Trunk Railway (steam) of the Detroit & Toledo Shore Line, has been finally consummated, the price being about \$1,600,000. Since the embarrassment of the Cleveland syndicate the property has been held under option by W. B. Strang, who built the line, and the sale of the property to the Grand Trunk Railway has been consummated only after lengthy negotiations. It is now probable that the Everett-Moore syndicate will redouble its efforts to repurchase the Toledo & Monroe Railway, in order that the connection of the Ohio & Michigan systems may not be broken. The closing of this deal removes the last of the Everett-Moore difficulties, so far as traction properties are concerned.

Pennsylvania Tunnel Conference

The latest advice concerning the Pennsylvania Tunnel franchise are reassuring. At the last conference between the Aldermen, Rapid Transit Commission and the Pennsylvania Railroad representatives it was agreed to insert the clause providing that the company indemnify the city and property owners for damages sustained through building the Manhattan station and closing streets, on condition that the rest of the arrangement be accepted by the city. Vice-President Green explained why the company would never agree to labor clauses. There could be no compromise on the subject, he said, because New York city was not the only place where the company carried on large undertakings. If the road were to tie itself up here, it would have all manner of trouble everywhere else. He said he wanted to impress on the committee the fact that the Pennsylvania always treated its employees well; that it expected to pay very high wages for labor in the tunnel, and that the record of the road in regard to labor ought to convince everyone of the certainty that its men on the proposed work would be treated fairly and generously. Mr. Cantor announced that he would yield on the question of wages, and Mr. Grout suggested an alternative proposition, providing for arbitration in case of strikes on the tunnel. To that Mr. Green replied: "We have considered that, but such a provision would get us in the same trouble we have tried to avoid by refusing Mr. Cantor's proposals. We expect troubles on the tunnel. I think we may have to yield more before the work is over than we would yield by consenting to make promises about the treatment of our employees. But we do not want to be tied up in the franchise, as I have explained."

Conditions Under Which Street Railway Locations Will be Granted in Massachusetts

The Railroad Commissioners of Massachusetts have issued the following statement of the conditions under which street railway locations will be approved:

In acting under the provisions of Chapter 399 of the Acts of 1902, the Board of Railroad Commissioners will make the following requirements a condition of approval of locations granted to street railway companies:

Every location must be accompanied by a plan showing the place in the highway to be occupied by the railway (including turnouts) and by trolley poles. The plan should also give grades and street lines, and such other information as may be practicable.

The following conditions should be attached to grants of location:

1. T-rails to be not less than 60 lbs. per yard in weight.
2. Ties to be of suitable timber, not less than 7 ft. in length, 6 ins. wide, with 6-in. face, and spaced not more than 2 ft. on centers.
3. The roadbed to be constructed with at least 18 ins. of suitable ballast below base of rails and properly drained.
4. When practicable the railway to be continuously either on one side or in the center of the driveway, and separated from the driveway, with a clearance from any obstruction of at least 4½ ft. on tangents and more in proportion on curves.
5. The roadway independent of the railway to be of sufficient width to properly accommodate other travel.
6. Crossings of railway from one side to the other of the highway to be avoided; but if permitted, only with provision for proper regulation respecting the operation of cars and restriction of speed.

These requirements are not to exclude other suitable conditions and restrictions by local boards or by this board, as the circumstances in particular cases may require.

Stanley Employees to Organize for Mutual Benefit

A meeting of the employees of the Stanley Electric Manufacturing Company was held on Friday evening, Sept. 19, 1902, for the purpose of organizing a club to be known as "The Stanley Club." The object of the organization is the betterment of the individual interests of all employees, intellectual, physical, moral and material, and the company has furnished meeting rooms for the club.

Committees are to be formed to consider the following subjects: Employees' insurance, employees reading room, a series of lectures for the winter months, grievances, athletics and other questions.

Labor Troubles Arbitrated in Chicago

The arbitrators selected to settle the differences between the Chicago City Railway Company and its employees have made an award that will result in an increase in the salaries of the men.

Ten per cent is added to the wage scale of the company in the mechanical and repair shops, the nine-hour day will be inaugurated at once, and overtime is to be paid for at the rate of time and a half.

The agreement will be in force from Sept. 1, 1902, to Sept. 30, 1903.

The arbitrators were ex-Judge Samuel S. Page, for the company; James H. Bowman, for the men, and A. C. Bartlett, vice-president of Hibbard, Spencer, Bartlett & Company.

Power Station Equipment for Auburn-Syracuse Interurban Road

The Syracuse Railroad Construction Company, which is building a 25-mile electric railroad between Auburn and Syracuse, N. Y., has placed a contract with the Westinghouse Electric & Manufacturing Company for two 650-kw engine-type alternators, delivering three-phase current at 360 volts and 3,000 alternations; also five 400-kw rotary converters, together with raising and lowering transformers for operating a 15,000-volt transmission line and two sub-stations. A complete switchboard is included, and, in fact, everything for the operation of a complete railway line. The generators are to be direct connected to two 22-in. and 44-in. x 48-in. cross-compound horizontal Corliss engines, purchased from Westinghouse, Church, Kerr & Company, and built by the Westinghouse Machine Company, of Pittsburgh, Pa. The engines are to receive steam at 150 lbs., and will run at 100 r. p. m., and are rated at 1000 hp each, with a maximum rating of 1800 hp.

Work on the Boston Tunnel

The Boston Transit Commission has begun tunnelling with a construction shield on the west side of the harbor, near where the East Boston Tunnel will descend beneath the water. The shield had been standing for several weeks past at the bottom of the shaft in State Street, opposite the Custom House, and the first regular test of its operation was made on Sept. 15. Power is supplied through a 2-in. wire-wound rubber hose at a pressure of about 95 lbs., operating a pump which forces water from a tank in the centre of the shield into the tubes of the hydraulic jacks, which press forward with a force of about 900 lbs. per square inch. At present there are but three jacks on each side of the shield, but when the shield comes far enough in, so that a piece of arch may be built to furnish the necessary resistance, nine or ten more jacks will be inserted, and power will be applied to all of them. The walls of the tunnel have been built in the shaft, and the six jacks now in position push against them. The present shield is destined to the station at the foot of State Street and corner of Atlantic Avenue. It is doubtful if it will be used at all in the construction of the section between the Custom House and the old State House, as the tunnel will be so near the surface in this stretch that the ground will probably not hold the compressed air, without which miners could not work. It appears more convenient to follow the bridging method in the construction of this section. By this method, the walls of the tunnel are built first, and these are now under construction, and parts of them have been made in different places the entire length—then the arch is put on from the surface, and finally the core taken out in the ordinary way, through the shaft.

The final completion of this tunnel will work little short of a revolution in the transportation facilities of East Boston, and

the proposed connection with the new projected Washington Street Subway will add one more spoke to the Boston rapid transit wheel. The system promises to grow still more comprehensive with each succeeding decade.

Contract Awarded for Building the New Electric Railway in Cuba

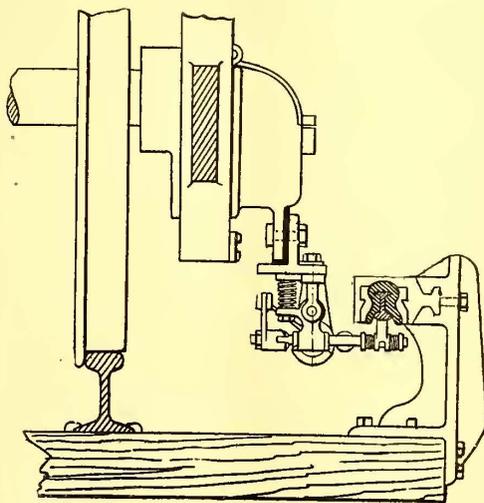
At a meeting held in New York a few days ago the Cleveland, Youngstown, Chicago and New York capitalists who are interested in the building of an electric railway in Cuba organized the Havana & Jaintos Railroad Company, to build the road. The capital stock of the company is \$2,500,000. The stockholders elected the following directors: W. H. Whipple, of New York; W. J. Hayes and L. W. Prior, of Cleveland; C. S. Fairchild, president of the New York Security & Trust Company; M. A. Devitt, of Chicago; H. A. McCoy, of Chicago; George F. Penhale, of New York; Thomas Vaughan, of the Cuba National Bank, and Judge Mandelay, of Havana. The directors elected W. H. Whipple president and W. J. Hayes vice-president. It was decided to commence construction work at once, and contracts for building the line were closed with Park & Hamilton, of Youngstown, Ohio. The New York Security & Trust Company will act as financial agents.

Street Railway Patents

[This department is conducted by W. A. Rosenbaum, patent attorney, Room No. 1203-7 Nassau-Beekman Building, New York.]

UNITED STATES PATENTS ISSUED SEPT. 16, 1902

- 708,980. Adjustable Truck Bearing; W. S. Adams, Philadelphia, Pa. App. filed March 7, 1902. Two screw-threaded parts by which the side bearing can be elevated or lowered, provided with a locking device to hold them at any point of adjustment.
- 708,994. Car Truck; J. A. Brill, Philadelphia, Pa. App. filed Jan. 10, 1902. Improvements in pivotal equalizing trucks.
- 709,015. Automatic Railway Switch; G. E. Janes, Cleveland, Ohio. App. filed Dec. 20, 1901. The switch is moved in one direction or the other by thrusting one of two rods downward from the car platform to engage with mechanism in the track bed.
- 709,063. Electric Railway System; L. E. Walkins, Springfield,



PATENT NO. 709,063

Mass. App. filed Dec. 2, 1901. An under-contact third rail suitably covered and adapted to be engaged by a shoe which can be turned by the motorman to carry it into and out of engagement as required.

709,071. Car Truck; W. S. Adams, Philadelphia, Pa., App. filed Nov. 15, 1901. The bolster is supported from the side frame and the draft tension is transmitted by inextensible devices carried by the bolster and connected directly to the side frames.

709,072. Car Truck; W. S. Adams, Philadelphia, Pa. App. filed Feb. 25, 1902. A novel construction of a certain "cross-bar carrier."

709,073. Convertible Railway Car; J. A. Brill and E. S. Bucknam, Philadelphia, Pa. App. filed Feb. 1, 1901. The side panels which move up and down in grooves in the side posts, have means for locking and unlocking the panels together as they are moved up and down in the grooves.

709,075. Convertible Railway Car; E. S. Bucknam, Philadelphia, Pa. App. filed Dec. 16, 1901. The sash inserted between the posts have extra strips secured to their edges which center the grooves in the posts.

709,076. Convertible Railway Car; E. S. Bucknam, Philadelphia, Pa. App. filed Jan. 21, 1902. A switching device is arranged in the groove traversed by the sash which automatically shifts the sash from one groove to another for storage in the roof of the car.

709,089. Trolley Guard; E. Gagne, Point St. Charles, Canada. App. filed April 16, 1902. Details.

709,111. Automatic Railway Switch-Operating Mechanism; La Fayette Pierce, Moundville, Mo. App. filed Jan. 3, 1902. A pin carried by the car engages a crank in the roadway and rotates a sprocket wheel to move a chain geared to the switch point.

709,113. Trolley Pole; W. Pullman and C. C. Feld, Sodus, N. Y. App. filed Dec. 16, 1901. Details.

709,134. Switch-Throwing Device; U. F. Beaghly, Dayton, Ohio. App. filed Oct. 22, 1900. Details.

709,156. Electric Railroad Switch; J. A. Joyce, Cleveland, Ohio. App. filed Dec. 17, 1901. Electromagnets for throwing the switch point are in circuit with certain insulated sections of the track, which are energized or not by the motorman while his car is on a section.

709,168. Trolley; F. A. Merrick, Johnstown, Pa. App. filed Sept. 14, 1899. A spring-mounted shoe bears on the hub of the trolley wheel.

709,208. Car Wheel; F. E. Crandal, Chicago, Ill. App. filed Feb. 6, 1902. The flange of the wheel has projections which break up packed dirt or ice in the groove of the rail.

PERSONAL MENTION

MR. G. M. GEST, the well-known conduit contractor, has secured the contract for the conduit system for the Schenectady Railway, Schenectady, N. Y. This work, which will amount to over 200,000 ft., will be a model installation, and many new features have been designed for this particular system.

MR. GEORGE C. EWING has resigned his position as president of the Morris Electric Company and also from the American Union Electric Company, of New York. He has opened offices in the Board of Trade Building, Boston, Mass., where he will establish a general agency for street railway material. He is the New England representative for the Nernst Lamp Company, of Pittsburgh, Pa.

MR. A. H. BERRY, who was for many years associated with the H. W. Johns Company, New York, as manager of the electrical department, recently resigned his position with that company to become the general manager of F. H. Lovell & Co., 100 William Street, New York, where he will be pleased to receive his friends and prospective purchasers of electrical insulating materials of all kind for railway switch work, motor controllers, arc lamps, etc., as well as enclosed fuses and fuse fittings for switch or panel boards. In addition to handling a general line of electrical supplies, he is prepared to furnish a full line of brass castings in the way of ears, trolley wheels, etc.

MR. D. W. DOZIER has resigned his position as chief mechanical engineer of the Metropolitan Street Railway Company, of Kansas City, Mo., to accept a more lucrative position with the Corn Product Company, which owns all the glucose and starch establishments in the United States. Mr. Dozier will be known officially as the superintendent of motive power of the Corn Product Company, and, with headquarters in Chicago, will have charge of all the power plants of the company. There could be no more fitting testimonial to the ability of Mr. Dozier than his appointment to this important position. Mr. George Lawson, for a number of years assistant to Mr. Dozier in Kansas City, has been appointed to the position vacated by Mr. Dozier.

MR. HARRY DESTESE has recently been appointed by the Stuart-Howland Company, of Boston, Mass., manufacturers of electrical supplies and specialties, manager of its branch at 26 Cortlandt Street, New York. For twelve years Mr. DeStese has been constantly engaged in various branches of street railway work, both in this country and in Europe, exhibiting marked ability in his line of effort. His earliest experience was gained under Postmaster-General Payne at Milwaukee, and from 1896 to 1900 he was manager of the railway department of the Western Electric Company at New York, leaving that position to take charge of the establishment of a supply business in London, England. Mr. DeStese's friends throughout the country will doubtless be glad to learn of his new connection, and the Stuart-Howland Company are to be congratulated on having secured so able and energetic a representative.

FINANCIAL INTELLIGENCE

THE MARKETS

The Money Market

WALL STREET, Sept. 24, 1902.

After a period of comparative ease the money market developed decided strength this week, and rates for both call and time loans were marked up materially, the quotation for time contracts touching the highest point of the year. This was but natural in view of the condition of the banks, as revealed by the statement of averages published on last Saturday. Not only was the surplus eliminated, but the reserve held by the banks were \$1,642,050 below the legal requirements. This was due almost entirely to the continued heavy collections on account of customs and the shipments of currency to the interior for crop-moving purposes. Last week the banks lost on account of sub-Treasury operations \$2,605,300 and to the interior \$3,039,000, making a total loss of \$5,644,300. This was partly offset by the receipt of new gold on assay office checks amounting to \$1,606,300, leaving a net loss by the banks of \$4,038,000.

This week opened with a renewal of the heavy customs collections and a continuation of the currency movement to the interior. The situation, however, is being constantly relieved by the contraction of loans, and although some relief will be afforded by the receipt of several millions of gold, due to arrive later in the week, still there is little hope entertained for easier money. The consensus of opinion in banking circles is that rates will rule at or near the lawful rate for the balance of the year. Money on call this week loaned as low as 6 per cent and as high as 20 per cent, the bulk of the business being transacted at about 15 per cent. Time money was particularly scarce, the banks and other institutions showing a disposition to put out as little as possible in view of the high rates prevailing for call loans. Six months' accommodations were 6 per cent bid, while for the short dates 6 per cent and a commission was asked, which brought the charge up to near 7 per cent a year. The European money markets are without material change from a week ago.

The Stock Market

The monetary situation has been the chief influence in speculative circles during the past week. The publication of last Saturday's bank statement, which not only showed that the surplus had been wiped out, but that the reserves were \$1,642,050 below the legal requirements, was followed on Monday by heavy liquidation by commission houses, speculative pools and large operators. Later in the week this movement gained momentum when the call money rate was marked up to 20 per cent. There was extensive calling of loans by the banks in order to strengthen their position, and stock market loans had to be thrown over. The banks not only continue to lose by the interior movement, but the losses on account of sub-Treasury operations were again heavy. Up to the close of business on Saturday the banks gained nearly \$1,000,000, but their gain was reduced to a relatively small amount on account of large customs collections. Prices all along the line declined sharply, but the greatest losses were shown in the higher priced issues which have been the speculative features. The local traction shares followed the general course of the market. There was scattered selling of Brooklyn Rapid Transit on the unfavorable report of earnings, and Metropolitan Street Railway continued weak, in liquidation occasioned by the high money rates. Manhattan Railway showed comparative strength, the buying being based upon reports of remarkably good earnings and the benefits to accrue from the installation of electricity on the west side lines. Subsequently, however, this stock gave way in sympathy with the causes recorded in the general market.

Philadelphia

The week started off with a general upward tendency, and on Sept. 17 American Railways reached 54, making a new high record for the stock, while the bonds rose to 109½. There was also a big demand for Philadelphia Rapid Transit after the issue of the annual report of the Union Traction Company, showing a net profit of \$1,078,038. On Sept. 19 Philadelphia Rapid Transit sold up to 16¼. There was also an active market for Philadelphia Electric, and rumors of a possible merger of this company with the Rapid Transit Company, and also of the Philadelphia Electric with the Electric Company of America, were current but were denied by the officials of the companies interested. On Sept. 22 and 23 there was some liquidation in the traction stocks in sympathy with the rest of the market, which declined with Wall Street, although nowhere near to the same extent. Call and time money remained firm at around 6 per cent, and considerable Philadelphia money was sent to New York and placed at higher figures.

American Railways kept all of its advance, and closed at 54½. Philadelphia Rapid Transit reacted to 15½, which, however, is nearly a point higher than it was last week. Union Traction and Philadelphia Traction remained practically steady as a result of the week's business.

Chicago

Dealings in Chicago securities were considerably less active during the past week and prices generally inclined to a lower level as a result of the higher rates for money. City Railway, which sold as high as 224 last week, reacted quite sharply as a result of realizing sales, and was offered with some freedom at 220, with 210 bid. Union Traction lost 4 points, to 50 bid, but little stock was offered at under 58. Lake Street Elevated remained steady, with sales around 10½, and Metropolitan rose from 39½ to 41 and later was 41½ bid, while the preferred held steady at 90¼@91. South Side Elevated dropped 3 points to 111 and sales of West Chicago Street Railway were reported at 96½. The market at the close displayed some irregularity and the tone in general was heavy.

Other Traction Securities

Boston Elevated has advanced during the past week to 158, while Massachusetts Electric, common, has remained between 38 and 39. The Baltimore market has remained dull, with a general expectation toward liquidation, in sympathy with Wall Street. This, however, did not materialize to any extent, although there was an easing off in several spots. United Railways closed at 14¾, a slight recession from last week, and the income bonds reacted to 68¾, by reason of the contemplated issue of new bonds. The 4s have remained stationary at 95. There has been a little business in Nashville, common, at 6¼. Other Baltimore transactions include Nashville 5s at 75¼, Anacostia 5s at 102½, Charleston Consolidated Railway 5s at 90¾, Charleston Railway 5s at 106, Newport News & Old Point 5s at 109½, and Lake Roland 5s at 119¼. The Cleveland Stock Exchange was an exception to the general rule, and to say that all records were broken would be putting it mildly. The fact of the matter is Cleveland and Cincinnati people are going wild over the securities of the Cleveland syndicates, particularly those of the Pomeroy-Mandelbaum syndicate. The total sales on the Cleveland 'change were 30,646, of which 28,081 were tractions. The report of an alliance between the Cleveland syndicate and the Elkins-Widener syndicate brought out numerous blocks of Cincinnati, Dayton & Toledo, Miami & Erie Canal and Springfield & Xenia. Aurora, Elgin & Chicago, and Elgin, Aurora & Southern were also very active through the announcement that a well-known Cincinnati broker had bought up large blocks of these securities and would boom them, as he has done with other Cleveland properties. Elgin, Aurora & Southern made the best advance, going from 49½ to 63½, on sales of 4611 shares. Aurora, Elgin & Chicago preferred sold from 88½ to par, a gain of 11 points, declining again to 98. The advance was due to the Cincinnati broker mentioned and his associates taking 10,000 of the 13,000 shares issued. Sales were 3194 shares. The common of this company advanced from 37½ to 42, closing at 41. Sales numbered 2800 shares. Cincinnati, Dayton & Toledo made a gain of five points, starting at 36 and closing at 41; sales, 2484 shares. Two weeks ago this stock was selling at 26 and 27. Miami & Erie Canal advanced from 26½ to 36, dropping off again to 33; sales, 2145. The general explanation for the wonderful advance is the community of interest relations with the Cincinnati syndicate, affording a possibility for the operation of passenger cars. Springfield & Xenia advanced from 26½ to 30½, on sales of 1735. Western Ohio did not participate seriously in the movement until the last day, when it moved to 30, a gain of 2½ points in the week; sales, 615 shares. The sales of Lake Shore Electric common were 6815 shares, the stock advancing from 20 to 22¼. The preferred gained 3½ points, from 55 to 58½ on sales of 1460 shares. Northern Ohio Traction common advanced from 62½ to 70 on 672 shares. The preferred gained 3½ points, from 94½ to 98, on sales of 1166 shares. Cleveland Electric and Syracuse Rapid Transit made gains of ½ point each, on small sales. Monday was another remarkable day in Cleveland. Two thousand Elgin, Aurora & Southern sold at from 62 to 64¾, and then closed at the former figure. Western Ohio receipts experienced a decided boom, advancing from 31 to 35 on sales of 800 shares. Aurora, Elgin & Chicago sold for 700 shares, advancing from 40 to 42½. Cincinnati, Dayton & Toledo advanced from 41½ to 42 on sales of 650 shares. Lake Shore Electric common went to 22, and the preferred to 57½ on small sales. Miami & Erie Canal dropped to 30½. Stocks of the Cleveland properties

were very active on the Cincinnati exchange last week, and it is known that many of the sales in Cleveland were for Cincinnati parties.

Security Quotations

The following table shows the present bid quotations for the leading traction stocks, and the active bonds, as compared with last week:

	Closing Bid	
	Sept. 16	Sept. 23
American Railways Company	51½	54½
Aurora, Elgin & Chicago	36	42
Boston Elevated	154	158
Brooklyn R. T.	68½	65½
Chicago City	220	215
Chicago Union Tr. (common)	17½	18¾
Chicago Union Tr. (preferred)	48	54
Cleveland Electric	90	90½
Columbus (common)	60	56
Columbus (preferred)	108	105½
Consolidated Traction of N. J.	69¾	70
Consolidated Traction of N. J. 5s.	110¼	110½
Detroit United	a94	95
Electric People's Traction (Philadelphia) 4s.	98¼	98¾
Elgin, Aurora & Southern	46¼	62½
Indianapolis Street Railway 4s.	87	—
Lake Street Elevated	10½	—
Manhattan Railway	136	134¾
Massachusetts Elec. Cos. (common)	38	37¾
Massachusetts Elec. Cos. (preferred)	97	96
Metropolitan Elevated, Chicago (common)	40	41
Metropolitan Elevated, Chicago	89½	90
Metropolitan Street	145	—
New Orleans Railways (common)	17¾	17½
New Orleans Railways (preferred)	56¾	56½
North American	124	125
Northern Ohio Traction (common)	62¼	70
Northern Ohio Traction (preferred)	93½	98
North Jersey	34½	34¾
Northwestern Elevated, Chicago (common)	36¼	36
Philadelphia Rapid Transit	14¾	15½
Philadelphia Traction	*98	98¼
St. Louis Transit Co. (common)	30½	29
South Side Elevated (Chicago)	112	111
Syracuse Rapid Transit	27	28½
Syracuse Rapid Transit (preferred)	75	73
Third Avenue	130	129
Toledo Railway & Light	35	37
Twin City Minneapolis (common)	125¼	125
United Railways, St. Louis (preferred)	84	—
United Railways, St. Louis, 4s.	87	86¾
Union Traction (Philadelphia)	47¼	47½
Western Ohio Railway	27½	30

* Ex-dividend. † Last sale. (a) Asked. (b) Ex-rights.

MACON, GA.—The City Council has passed the ordinance granting the Macon Consolidated Street Railway Company and the Macon Electric Light & Railway Company the right to consolidate as the Macon Consolidated Street Railway Company. The ordinance provides for a fifty-year franchise to the company and is said to be sufficiently liberal to warrant its acceptance by the company.

CHICAGO, ILL.—It is again reported that an announcement is shortly to be made in regard to the plan for reorganizing the Lake Street Elevated Railway. It is said that the plan now being considered provides for an assessment on the stock.

CHICAGO, ILL.—The North Chicago Street Railway Company has declared the regular quarterly dividend of 3 per cent, payable Oct. 5.

OWENSBORO, KY.—The Owensboro City Railroad Company is offering for sale \$200,000 of first mortgage, 5 per cent gold bonds.

WORCESTER, MASS.—The application for permission to consolidate the street railway companies operating lines between Worcester and New London, Conn., was discussed by the Railroad Commissioners on Sept. 8. The Worcester & Connecticut Eastern Street Railway asked the approval of the Commissioners for the lease of the Webster & Dudley Street Railway. This line, in connection with the Worcester & Webster Street Railway, whose cars run upon the tracks of the Worcester Consolidated Street Railway, in Worcester, covers practically the whole district from the Connecticut and Massachusetts boundary northward to Worcester, although it does not extend quite far enough south to touch Connecticut territory. The Connecticut end of the proposed system extends 25 miles south of the Massachusetts line, and parts of it between Putnam and Danielsonville, Conn., have been in successful operation for three years. The new line, with the leased roads, would give a through line from Worcester to Norwich. The road runs principally between Connecticut manufacturing towns.

BOSTON, MASS.—The Railroad Commissioners have authorized the West End Street Railway Company to issue \$3,559,000 4 per cent bonds. These bonds, dated Aug. 1, 1902, running thirty years, are issued for the following purposes: \$559,000 to be used in paying the Boston Elevated Railway for permanent improvements made under the terms of the lease, and \$3,000,000 to refund an issue of ten-year 5 per cent bonds of the West End Street Railway which mature Nov. 1, 1902. The Commissioners have also approved of the disposition of \$19,729 realized as a premium from the proceeds of bonds

issued under orders dated, respectively, Dec. 18, 1901, and June 2, 1902, to cost of permanent additions, alterations and improvements.

WORCESTER, MASS.—The Hampshire & Worcester Street Railway Company has asked the Railroad Commissioners for approval of a stock issue of \$80,000, making its total capital \$155,000. This increase is desired by the company for the purpose of paying its floating indebtedness, making extensions and increasing its rolling stock.

WORCESTER, MASS.—The Worcester & Southbridge Street Railway Company has asked the Railroad Commissioners for authority to issue bonds equal to its capital stock of \$500,000. These bonds are to be issued for the purpose of refunding floating debt.

STOUGHTON, MASS.—The receiver's sale at auction of the Stoughton & Randolph Street Railway, which was to have been held at the office of the United States Marshal on Sept. 17, was postponed until Oct. 1, by order of Judge Colt, of the Circuit Court.

JACKSON, MICH.—Application has been made to the Berrien Circuit Court to have a receiver appointed for the West Michigan Traction Company, which proposed a couple of years ago to tunnel under a portion of this city. Sixty carloads of steel rails were shipped to Benton Harbor for the road, but, although there was apparently nothing in the way of building the road, not one rail was ever laid.

MINNEAPOLIS, MINN.—The directors of the Twin City Rapid Transit Company have declared the regular quarterly dividend of 1¾ per cent on the preferred stock, payable Oct. 1.

MINNEAPOLIS, MINN.—The Twin City Rapid Transit Company reports earnings as follows:

	1902	1901
August		
Gross receipts	\$323,533	\$283,589
Operating expenses	137,969	122,035
Earnings from operation	\$185,564	\$161,554
Deductions	77,733	75,350
Net earnings	\$107,831	\$86,204
Eight months		
Gross receipts	\$2,327,425	\$2,031,771
Operating expenses	1,060,709	945,715
Earnings from operation	\$1,266,716	\$1,086,055
Deductions	610,500	585,398
Net earnings	\$656,216	\$500,657

ST. LOUIS, MO.—The stock transfer books of the United Railways Company, it was announced last week, will close Sept. 27 and reopen Oct. 12. This is understood to mean that the regular dividend will be paid on United Railways preferred stock October.

NEW YORK, N. Y.—The Metropolitan Street Railway Company has declared the regular quarterly dividend of 1¾ per cent on its capital stock, payable Oct. 15 out of and from the rent guaranteed and paid by the Interurban Street Railway Company, under lease dated Feb. 14, 1902.

TRENTON, N. J.—The Cuba Railroad Company has filed with the Secretary of State papers certifying to an increase in capital from \$500,000 to \$2,000,000. The company will construct and operate a railway from the Bay of Nipes, Province of Santiago, to meet the Railroad of Cuba Company near Alto Cedro. It is understood that both steam and electricity will be used as a motive power.

CAMDEN, N. J.—The Camden & Suburban Railway has increased its authorized capital stock from \$2,000,000 to \$3,000,000.

BROOKLYN, N. Y.—The annual report of the Brooklyn Rapid Transit Company for the fiscal year just ended, not including the operating figures of the Brooklyn, Queens County & Suburban Railway, was issued Sept. 22. The report shows:

	1902
Gross earnings	\$11,525,202
Operating expenses	7,717,129
Net earnings	\$3,808,073
Other income	331,524
Total income	\$4,139,597
Charges	4,268,753
Deficit	\$129,156

BUFFALO, N. Y.—The Central Crosstown Railroad Company has been granted permission by the State Railroad Commission to issue a first consolidated mortgage for \$3,000,000. The proceeds are to be applied to refunding former bond issues on the property and for improvements.

DAYTON, OHIO.—A meeting of the stockholders of the Dayton, Springfield & Urbana Electric Railway is to be held October 15 to consider the advisability of increasing the capital stock of the company from \$750,000 to \$1,500,000.

WHATCOM, WASH.—S. Z. Mitchell, president of the General Electric Company, which owns the street railway lines in Whatcom, denies the reported sale of the railway system to a Philadelphia syndicate.

LONDON, ONT.—The option held by Claude Ashbrooke, of Cincinnati, on the London Street Railway, owned by the Everett-Moore syndicate, has expired, and will not be renewed. It is said that the syndicate will retain this property.

TORONTO, ONT.—A meeting of the stockholders of the Toronto Railway Company has been called for Oct. 6 to vote on a plan to issue \$1,000,000 of additional stock, providing for the development of additional power and for acquiring and operating radial lines.

TABLE OF OPERATING STATISTICS

Notice.—These statistics will be carefully revised from month to month, upon information received from the companies direct, or from official sources. The table should be used in connection with our Financial Supplement "American Street Railway Investments," which contains the annual operating reports to the ends of the various financial years. Similar statistics in regard to roads not reporting are solicited by the editors. * Including taxes. † Deficit.

COMPANY	Period	Total Gross Earnings	Operating Expenses	Net Earnings	Deductions From Income	Net Income, Amount Avail-able for Dividends	COMPANY	Period	Total Gross Earnings	Operating Expenses	Net Earnings	Deductions From Income	Net Income, Amount Avail-able for Dividends
AKRON, O.							DULUTH, MINN.						
Northern Ohio Tr. Co.	1 m., Aug. '02	84,340	42,191	42,149	12,737	29,412	Duluth-Superior Tr.	1 m., Aug. '02	51,457	26,505	24,952	9,671	15,282
	1 " " '01	67,693	34,024	33,669	11,653	32,016		1 " " '01	41,763	19,890	21,873	9,204	12,669
	6 " June '02	318,937	185,362	133,575	77,556	56,018		8 " " '02	349,496	183,903	165,592	77,200	88,393
	6 " " '01	268,967	164,458	104,510	63,494	41,016		8 " " '01	296,085	161,610	134,475	73,188	61,287
	12 " Dec. '01	617,011	*350,845	266,166	136,162	130,004	ELGIN, ILL.						
	12 " " '00	518,725	*317,475	196,249	141,133	55,117	Elgin, Aurora & Southern Tr.	1 m., Aug. '02	43,567	22,129	21,378	8,333	13,045
ALBANY, N. Y.								1 " " '01	37,295	17,094	20,201	8,333	11,868
United Traction Co.	1 m., Aug. '02	141,820	80,736	61,084	23,866	37,218		8 " " '02	270,435	158,851	111,584	66,667	44,917
	2 " " '02	282,029	169,749	112,281	47,732	64,549		8 " " '01	241,397	136,236	105,161	66,667	38,495
BINGHAMTON, N. Y.							FINDLAY, O.						
Binghamton St. Ry. Co.	1 m., Aug. '02	23,547	12,324	11,223	-----	-----	Toledo, Bowl'g Green & Southern Traction Co.	1 m., Aug. '02	24,340	12,033	12,307	-----	-----
	1 " " '01	21,400	10,886	10,604	-----	-----		1 " " '01	16,849	9,025	7,824	-----	-----
	2 " " '02	46,816	23,522	23,294	-----	-----		6 " June '02	111,972	60,838	51,134	-----	-----
	2 " " '01	43,970	31,638	22,932	-----	-----		6 " " '01	80,340	51,464	28,876	-----	-----
BOSTON, MASS.							HAMILTON, O.						
Boston Elev. Ry. Co.	12 m., Sept. '01	10,869,496	7,336,597	3,532,899	2,896,359	636,539	The Cincinnati, Dayton & Toledo Traction Co.	1 m., Aug. '02	49,301	24,483	24,819	15,820	8,999
	12 " " '00	10,236,994	6,828,110	3,408,884	2,932,839	476,044		3 " " '02	140,412	68,156	72,256	47,659	24,797
Massachusetts Elec. Cos	12 m., Sept. '01	5,778,133	3,915,486	1,862,648	937,206	925,442	LONDON, ONT.						
	12 " " '00	5,518,837	3,659,337	1,859,500	994,294	865,206	London St. Ry. Co.	1 m., Aug. '02	16,102	9,699	6,403	2,270	4,132
BROOKLYN, N. Y.								1 " " '01	16,260	9,347	6,913	1,895	5,019
Brooklyn R. T. Co.	1 m., July '02	1,236,400	*708,136	528,264	-----	-----		8 " " '02	97,503	62,164	35,340	18,174	17,165
	1 " " '01	1,203,761	*758,495	445,266	-----	-----		8 " " '01	91,676	58,064	33,611	15,971	17,641
	12 " June '02	12,789,705	*895,214	3,837,490	-----	-----	MILWAUKEE, WIS.						
	12 " " '01	12,101,198	*797,035	4,150,563	-----	-----	Milwaukee El. Ry. & Lt. Co.	1 m., Aug. '02	243,343	112,540	130,805	68,677	62,128
BUFFALO, N. Y.								1 " " '01	211,808	26,193	115,614	64,088	51,526
International Tr. Co.	1 m., June '02	271,245	147,614	123,632	97,043	26,589		8 " " '02	1,735,350	835,772	919,578	526,219	393,359
	1 " " '01	409,206	192,265	216,941	94,098	122,842		8 " " '01	1,574,615	784,752	789,864	497,404	292,460
	1 " " '00	218,738	106,174	112,565	65,348	47,217	MINNEAPOLIS, MINN.						
	3 " " '02	786,260	430,915	349,366	289,063	60,303	Twin City R. T. Co.	1 m., Aug. '02	323,534	137,969	185,565	60,233	125,331
	3 " " '01	952,792	485,899	466,894	272,864	194,030		1 " " '01	283,589	129,035	161,554	57,850	103,704
	3 " " '00	631,371	393,927	297,444	231,844	75,601		8 " " '02	2,327,426	1,050,709	1,266,716	470,500	796,216
CHARLESTON, S. C.								8 " " '01	2,031,771	945,715	1,086,056	445,398	640,657
Charleston Consol'ted Ry. Gas & El. Co.	1 m., Aug. '02	45,217	31,191	14,026	13,357	669	MONTREAL, CAN.						
	1 " " '01	45,474	28,296	17,178	13,627	3,481	Montreal St. Ry. Co.	1 m., July '02	198,656	93,966	104,689	19,929	84,760
	6 " " '02	358,984	203,200	155,784	81,064	74,720		1 " " '01	178,180	90,464	87,716	14,142	73,575
	6 " " '01	246,438	163,145	83,293	82,618	674		10 " " '02	1,643,837	949,860	702,977	164,228	538,748
CHICAGO, ILL.								10 " " '01	1,533,206	931,933	601,272	104,409	496,863
Chicago & Milwaukee Elec. Ry. Co.	1 m., Aug. '02	25,530	7,221	18,309	-----	-----	NEW YORK CITY.						
	1 " " '01	24,042	7,479	16,563	-----	-----	Manhattan Ry. Co.	12 m., June '02	11,291,711	5,518,585	5,773,126	2,699,670	3,073,456
	8 " " '02	123,060	52,859	70,201	-----	-----		12 " " '01	10,253,271	5,253,229	5,000,042	2,677,706	2,322,336
	8 " " '01	112,962	49,571	63,391	-----	-----	Metropolitan St. Ry.	3 m., Dec. '01	3,887,936	1,723,972	2,143,964	1,151,140	992,824
CLEVELAND, O.								3 " " '00	3,786,030	1,699,649	2,086,381	1,138,467	947,914
Cleveland & Eastern Ohio Traction Co.	1 m., July '02	20,223	10,534	9,689	5,416	4,253		12 " June '02	15,866,641	7,385,883	8,480,758	4,815,421	3,665,337
	1 " " '01	17,095	8,303	8,793	5,393	3,400		12 " " '01	14,720,767	6,755,131	7,965,636	4,534,068	3,431,567
	7 " " '02	101,889	60,569	41,381	36,474	4,907	OLEAN, N. Y.						
Cleveland, Elyria & Western.							Olean St. Ry. Co.	1 m., July '02	6,569	3,216	3,353	1,771	1,502
	1 m., July '02	28,542	13,875	14,667	-----	-----		1 " " '01	5,954	2,207	3,747	1,768	1,979
	1 " " '01	24,228	11,810	12,419	-----	-----		12 m., June '02	56,055	29,118	26,937	16,318	10,619
	7 " " '02	156,934	91,603	65,331	-----	-----		12 " " '01	52,018	26,228	25,790	16,755	9,035
	7 " " '01	131,255	76,069	55,187	-----	-----	PEEKSKILL, N. Y.						
	12 " Dec. '01	249,260	136,865	112,394	57,023	55,371	Peekskill Lighting & R. R. Co.	1 m., July '02	9,387	5,290	4,097	2,083	2,013
	12 " " '00	179,698	102,393	77,304	34,562	42,742		12 " June '02	86,795	*56,392	30,402	23,125	7,277
Cleveland, Painesville & Eastern.							PHILADELPHIA, PA.						
	1 m., Aug. '02	23,760	11,796	11,964	-----	-----	American Railways	1 m., Aug. '02	125,159	-----	-----	-----	-----
	1 " " '01	20,770	9,617	11,154	-----	-----		1 " " '01	91,152	-----	-----	-----	-----
	8 " " '02	125,966	66,931	59,035	-----	-----		2 " " '02	245,455	-----	-----	-----	-----
	8 " " '01	105,362	53,594	51,768	-----	-----		2 " " '01	180,811	-----	-----	-----	-----
	12 " Dec. '01	164,971	*87,102	77,869	72,500	5,369		12 " June '02	1,009,509	-----	-----	-----	-----
	12 " " '00	141,112	*89,592	71,520	72,500	†980	ROCHESTER, N. Y.						
COVINGTON, KY.							Rochester Ry.	1 m., June '02	89,236	46,809	42,426	24,754	17,672
Cincinnati, Newport & Covington Ry. Co.	1 m., July '02	77,888	*42,853	35,034	15,968	19,066		1 " " '01	85,227	45,814	39,413	26,704	12,709
	1 " " '01	76,621	*46,021	30,599	15,417	15,183		6 " " '02	527,742	288,005	239,737	148,608	91,130
	7 " " '02	500,038	*290,731	209,307	108,992	100,314		6 " " '01	495,226	306,966	188,259	147,157	41,102
	7 " " '01	461,259	*281,874	179,385	109,521	69,864	SYRACUSE, N. Y.						
DENVER, COL.							Syracuse R. T. Co.	1 m., July '02	62,571	34,365	28,206	19,025	9,181
Denver City Tramway Co.	1 m., Apl. '02	124,516	66,533	57,983	32,865	26,119		1 " " '01	59,433	31,620	27,813	18,971	8,843
	1 " " '01	116,357	62,866	53,490	31,304	22,186		12 " " '02	693,284	384,265	309,019	228,246	80,773
	4 " " '02	481,348	261,118	220,230	131,259	88,972		12 " " '01	621,299	340,830	280,469	223,918	56,550
	4 " " '01	435,297	236,915	198,382	125,622	72,759	TOLEDO, O.						
	12 " Dec. '01	1,507,293	818,521	688,965	383,180	305,785	Toledo Ry. & Lt. Co.	1 m., Aug. '02	138,643	69,890	68,753	38,999	29,854
	12 " " '00	1,302,290	722,458	579,839	374,291	205,548		1 " " '01	124,491	53,357	71,134	39,814	37,320
DETROIT, MICH.								8 " " '02	941,419	484,587	456,832	303,787	153,045
Detroit United Ry.	1 m., July '02	325,898	182,848	143,050	-----	-----		8 " " '01	844,432	410,373	434,059	203,918	230,141
	1 " " '01	302,988	149,812	153,176	-----	-----		12 " Dec. '01	1,311,084	*636,407	674,677	415,168	259,509
	6 " June '02	1,600,675	*907,044	693,631	395,739	297,892		12 " " '00	1,182,517	*616,945	565,572	409,051	156,521
	6 " " '01	1,384,181	*775,347	608,834	345,119	263,715	Lake Shore Elec. Ry. Co.						
	12 " Dec. '01	2,919,171	*1596765	1,322,046	652,277	670,129		1 m., July '02	49,122				