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Henry W. Blake, Editor.

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DATE ON WRAPPER shows the month at the end of which the subscription expires. The sending of remittances for renewal prior to that date will be much appreciated by the publishers.

During 1907 the Street Railway Journal printed and circulated 427,250 copies, an average of 8216 copies per week. Of this issue 7700 copies are printed.

Checking Overcrowding

One of the novel features of the use of pay-as-you-enter cars in New York is the adoption of a limit to the number of passengers carried, a plan which is easier to follow in this case than with ordinary cars. We shall watch with interest to see how the proposition works out, not so much with respect to the use of the system with the pay-as-you-enter car, but rather as a test of the temperament of the American city crowd. It will be the first

serious attempt, so far as we know, to introduce the plan in this country. Abroad, as everybody knows, there is a point at which a car is definitely and finally filled and beyond which no more passengers are allowed to enter. Here it is popularly supposed that the public will not stand for such a limitation in fact, whatever protests may be put up against overcrowding. In the last analysis the congestion of traffic and the terrific overcrowding sometimes observed is due to the fact that everyone starts for home about the same time and will endure almost anything except waiting. A philosopher once wrote a monograph on the psychology of mobs, and an interesting chapter might have been added on the mental attitude of the street car bear who fights his way snarling through an already well filled car to save, as he supposes, two or three minutes on his homeward way.

Now in fact, in spite of the old saw that the profit is in the passenger who stands, no one knows better than the practical street railway man that a point of overcrowding is easily reached at which there is loss of time and fares. The mere extra seconds required to discharge passengers when the car is over-filled tends to disorganize still further the already congested traffic. It would seem to be good policy to try to spread out the peak of the load and it would be hard to find a better way of doing it than to stop taking on passengers when the car is full, provided the American public will stand for it—until the next car comes along. There will be a good chance soon to find out the facts as to this. We must confess, however, that we are not altogether sanguine as to the outcome. Hurry is one of our national vices hard to eradicate. Few men, apparently, are even willing to wait five minutes for the sake of saving ten, or for any other advantage. If the limited capacity plan could be carried out, with or without the introduction of special types of cars, it would help materially in giving the passengers comfortable passage and in quickening transit. As things now are there is a constant and quite unreasoning tendency to overcrowd certain lines of cars while nearly parallel lines almost as convenient for most passengers might be utilized to great advantage. A limitation of passengers to a reasonable load, if it could be carried out, would tend to deflect part of the traffic along parallel routes to the great advantage of everybody. Were one to make a careful study of the time actually spent day after day in getting from dwelling to office within the city we are inclined to think that in the majority of cases the route nominally quickest would not be so in reality, bearing out the old adage that the longest way round is the shortest way home. If limiting car capacity can, as seems likely, aid in distributing traffic, it should be fully tried, and we are glad to see that even in an incidental way experiments are going on. We hope they may prove successful.

Fire Prevention in Car Houses and Shops

Nothing will cripple the service and seriously affect the earnings of a street railway more quickly, surely and for long continued periods than a destructive fire in a car house or shop. That this is fully realized is shown by the fact that every modern car house and shop building is designed with the one idea of making it as nearly fireproof as possible and equipping it with every appliance to prevent the spread of any fire which may start. With the reduction of danger from fire in such buildings comes a corresponding saving in cost of insurance. But what can be done with the old reconstructed horse car barns and tumble-down sheds still used for car storage? Nearly every street railway company owns and uses one or more such buildings. They cannot be abandoned because no funds are available to replace them with modern fireproof structures and so they are insured at prohibitive rates and kept in service until they burn or fall to pieces. But insurance, even if complete, covers the property loss only, and is no protection against that caused by the decrease in earnings due to a crippled service.

The only effective protection against destructive fires in old buildings, and in fact in any building where combustible contents, like cars, are stored and high voltage current is wired, is never-ending vigilance in preventing fires from getting a start. In the modern fireproof car house a fire once started can usually be confined to the bay in which it originates; but, even then, the loss of five or ten cars is no small matter. Automatic sprinklers, fire extinguishers and other modern paraphernalia for fighting incipient conflagrations are important adjuncts to old or new construction, but do not absolve the management in either case from exercising every precaution to prevent the loss of equipment. The force should be trained in their use by the establishment of a set of rules and by frequent fire drills. Inspectors should be employed to examine the property from the standpoint of the fire risk. If the size of the company does not warrant an inspector who can give his entire time to this service, periodic examinations should be made by a fire underwriters' inspector. The foreman in each building should be held responsible for the condition of the building and contents and the inspector should report any violations of rules or dangerous conditions which come under his notice. Unless it can be shown that the practice complained of cannot be changed so as to be safe, his recommendations should be carried out at once. Having such a man around keeps every foreman up to the mark. The space around the fire hydrants and water buckets should always be kept clear. Cars should never be allowed to stand where they will interfere with the operation of the fire doors. Many fires in car houses originate from defective wiring in the cars. If the trolley is always pulled down when the car is laid up in the barn, there is no chance for a fire to start in this way. Aside from the danger of fire from keeping the trolley on the wire, a very appreciable amount of current is wasted. If the air compressor is not turned off it may work all night, and frequently the lights in the cars are left turned on. Smoking in and around car barns and shops ought not to be permitted under any circumstances during working hours or at any other

time. This is a difficult rule to enforce, but it is worth the trouble.

Of all the precautions to be taken around the car house and shops to prevent fires, the most important, except possibly good wiring, is absolute cleanliness and neatness. Piles of paper rubbish, oily rags and dirty storerooms are a continuous source of danger. Put it up to the foreman to keep his building clean and in order. If there is nothing lying around loose to start a fire there is not much danger from open stoves, lighted matches, oil lamps and torches.

By rigidly adhering to a few of these simple precautions the danger from fire can be greatly reduced in a non-fireproof building, and practically eliminated in a fireproof one. The larger companies have adopted such methods in most cases, but many of the smaller companies have not yet come to realize the importance of strict care to prevent fire. It is not so much a question of saving a small amount of insurance premiums by installing fire-fighting apparatus and enforcing precautionary rules as it is a matter of preventing the indirect loss which cannot be covered even by 100 per cent of insurance.

Reducing Substation Construction Costs

As the use of high voltage increases in connection with large power transmissions, the cost of substations tends to become quite a serious item in the total expense of construction. Thus far comparatively few electric railway companies have had to face the problem of building very high voltage substations, say, for potentials of 25,000 to 60,000, but as the sphere of successful power service broadens in regions adjacent to large water powers, the need of skilful high-tension design at distributing points will come closer home to the railway interests.

In a general way the cost of construction rises with the difficulties of insulation, and the auxiliary apparatus which can be easily disposed of in a substation built for conversion from 11,000 volts downward becomes in itself a special problem with the higher potential service. Similarity in every detail is vitally essential to the operating reliability of substations handling extreme voltages. Two practices successfully followed by the Southern Power Company in its 44,000-volt substation work in the Piedmont region illustrate how readily the first cost of substation construction can be reduced by careful designing.

In place of the commonly employed timber frame construction inside the substation for the support of the high-tension insulators, the latter are carried upon wrought-iron pipe rods, usually 1.5 in. in diameter. These rods are hung from the steel roof trusses by adjustable plates and clamps designed by the company's engineers and are used in place of tees for the mutual attachment of horizontal and vertical rods. The insulators are carried on pins which fit into adjustable sliding clamps that can be fastened at any desired point on the rods with simple bolt and nut locks. The result is an absolutely fireproof construction of great neatness in appearance and the cost is very much lower than the expense of installing specially treated and rigidly worked timber. An erection force can wire up a 44,000-volt substation with remarkable speed and accuracy by the use of this flexible method, and in cases where this class

of work is being done frequently by the same men it has been found unnecessary to draw detailed wiring plans for the substation before its construction, making an additional saving in time and expense.

Another scheme which has reduced the building cost of a 44,000-volt substation materially consists in placing the lightning arrester equipment entirely outside the substation proper in a neat frame tower with fireproof doors. One lead from each wire of the high-tension circuits is carried into this separate tower to the corresponding arrester terminal, care, of course, being taken to avoid any possible grounding at the entrance as in the substation building entrance itself. These towers are architecturally attractive, have given no trouble in the way of fire risk and obviate the extension of the substation floor space and weight on the high-tension side, saving a desirable percentage on the cost of the building.

The Shop Record

The purpose of the shop record is generally two-fold. The first is so that the cost of a particular part of the repair or maintenance of equipment can be segregated from other repairs and compared with similar work done at another time or by another machine or workman. In this way the record indicates the efficiency of the shop or a certain part of it, either tool or man, and also acts as a check on this efficiency from day to day. This is the interior or shop application of the shop record. Its second purpose is that of a measure of the efficiency or life of the equipment which is maintained by the shop. This is its exterior or road application and it is of much greater value than the first when properly used. Often the two sets of records, shop costs and equipment performance, are kept separately, but more often, owing to their interdependence, they are combined in one set of records.

The equipment performance, or the second kind of record, should be used to compare the life or cost of different materials or of devices of different design or manufacture but for the same purpose. This sort of record is also of great value at times in locating deficiencies or inefficiencies in a particular equipment. One of the most simple examples is that of a too rapid consumption of carbon brushes in a particular motor, indicating, not trouble with the make or design of brush in use, as the wear is normal in the other motors, but instead, either brush-holder or armature trouble in that motor. In the same manner excessive flange wear on one of a particular pair of wheels may not mean defects in the wheels themselves, but bad alignment of the truck or inaccuracy in checking up wheel diameters when returning or mounting on the axle.

All this is perfectly familiar and only leads up to a consideration of the treatment of the record of equipment performance which may be more or less familiar—that is, as a record of a continuous test of the equipment. Any equipment upon which a performance record is being kept is being subjected to a service test, the value of which depends, not only upon the accuracy with which the record is kept, but upon the method in which these records are used in making the final deductions. Too often the number of variables which may enter into the final result of such a test is overlooked. Sometimes such records of equipment

performance are compared with the car-mile record, sometimes with the ton-mile record, sometimes with the car-hour record, sometimes only with the calendar. Strictly speaking, other points must be considered in connection with many parts of the equipment, especially where comparisons are made with equipment operating under different conditions.

Examples illustrating this point can easily be given. Thus the schedule speed and number of stops per mile will affect controller and brake maintenance to a much greater extent than will the actual mileage. Again, motor capacity is affected not only by the weight of car per motor, but also by the line voltage, schedule speed, frequency of stops, number, length and severity of track curves and grades and by the rate of acceleration required. No engineer will recommend a motor for a certain service without knowing the requirements in all these particulars. The readings of a car wattmeter reduced to kilowatts per car-mile or per car-hour mean nothing without data as to all such variables. As another illustration of the point, consider a boiler test on different coals for a determination as to the one most economical for the particular station. Not only must the time or length of test be considered in connection with the gross coal consumption, or even the time and water consumption, or time and kilowatt-hour output, but great care must also be taken that the conditions of draft and variations in load and all other factors likely to vary are considered, or the value of the test is impaired. The number of variables affecting different parts of the equipment is, of course, not always the same. Various rates of acceleration and braking will affect journal bearings and their lubrication little or not at all, while the same variables will considerably affect the life of brake shoes, wheels and gears. The same may be said of schedule speed, frequency of stops and amount of track grades, while the amount of track curvature may be such as greatly to affect wheel wear, while having little effect on brake shoes or gears.

This does not mean that records on equipment performance, based on car-miles, or some one other figure, are not of value. Some such unit has to be selected and used since it would be impossible to employ a basis which would take into consideration all of the variables. Of course, where the services are equal, or nearly equal, the variables cancel each other. Thus, comparison may properly be made on the car-mile or some such basis, alone, when made between cars of the same size, weight and equipment, which are operating on the same schedule on the same run. When the comparisons are between equipments of different weights but with schedules very similar, probably the ton-mile basis is the most generally useful unit. In other cases allowances may be made for the variety in conditions. All records and statistics of this kind are of value and of great benefit, especially to the company which keeps them. No management can be considered to be up to date or to be conducting its system of transportation on a scientific or business basis unless it maintains strict records. The only danger lies in taking the records of one road, which are simply statements of the life or material consumption under one set of conditions and thoughtlessly applying them to a road operated under entirely different surroundings.

UNDERGROUND BRIDGE TERMINAL IN NEW YORK FOR BROOKLYN SURFACE AND "L" LINES

The Brooklyn Rapid Transit Company expects some time in May to begin to use, for its surface cars, the extensive new underground terminal at the Delancey Street end of the Williamsburg Bridge. The terminal will provide for the accommodation of both the surface and the elevated cars of the company, below the street level, but it will be some time before the elevated lines will use the station, as the efforts of the Bridge Department have been devoted to completing the trolley loops at the earliest possible date in anticipation of the large summer traffic.

The new terminal will be under the approach of the bridge, which extends from Clinton Street to the Bowery and is three blocks long and 180 ft. wide. Both trolley loops and elevated station will be at the same level with means of inter-communication, but entirely separate entrances will be provided at the street level. The terminal will do away entirely with the present temporary arrangement of stub tracks for the surface cars now crossing the bridge from Brooklyn, and will provide adequate accommodations for the elevated lines, which are not as yet operated over the structure. The bridge has been in use by the surface lines operating in Brooklyn since 1903, but the completion of the terminal has been delayed owing to the time required by the city authorities to decide between an elevated or subway loop to connect the Brooklyn and the Williamsburg bridges. The first was the original plan, but subsequently an underground connection was decided upon. It will thus be seen that the terminal for the elevated lines as now provided will on the completion of the loop to connect the bridges be converted into a way station. It was with this in mind that the station was laid out, as shown in the accompanying plan of the terminal.

face lines of the Brooklyn Rapid Transit Company and the Franklin Avenue line of the Coney Island & Brooklyn Railroad. Many of these lines enjoy exceedingly heavy traffic, especially those which in summer are operated to



ELEVATED RAILWAY APPROACH TO TERMINAL

Coney Island, among them the Nostrand Avenue, Tompkins Avenue, Reid Avenue and Franklin Avenue lines. Several other lines also reach amusement resorts. The Marcy Avenue line is operated to the race track at Sheepshead Bay, which is opposite Manhattan Beach. The Hamburg Avenue line is operated to Canarsie and the Grand Street line to North Beach, both of which are popular re-



LOADING AND UNLOADING PLATFORMS FOR ELEVATED TRAINS, SHOWING WORK BEFORE TRACKS WERE LAID

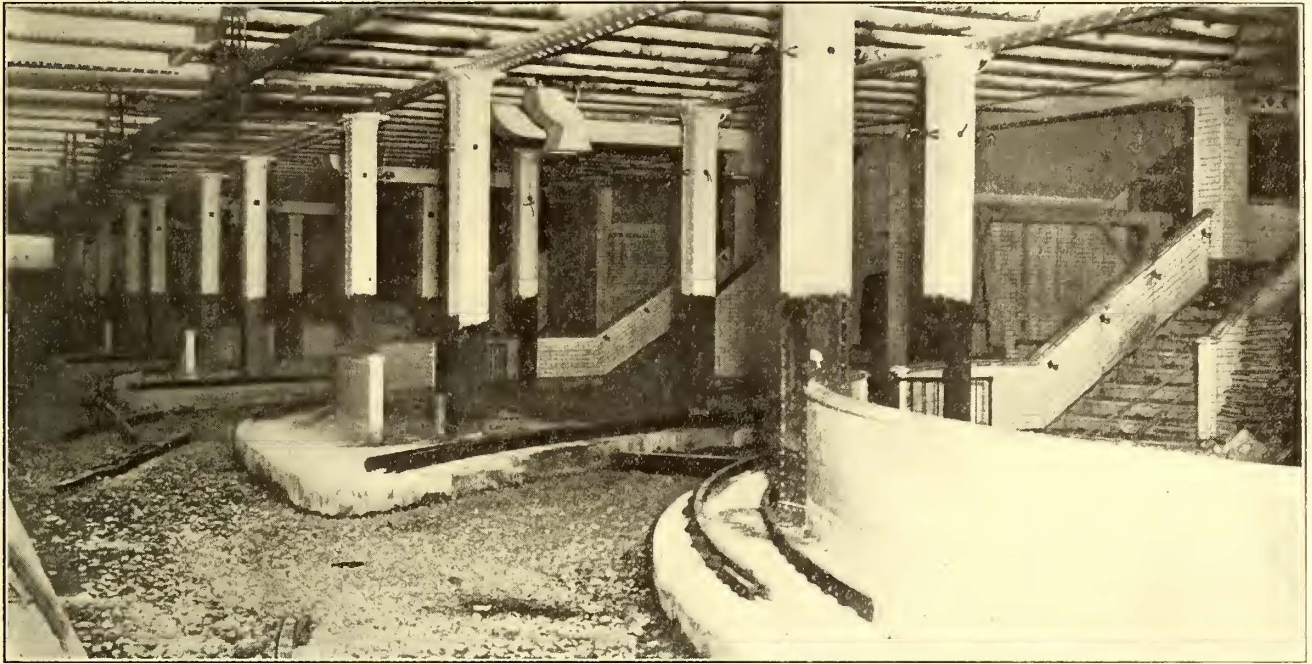
The surface lines that will use the terminal will be Nostrand Avenue, Marcy Avenue, Tompkins Avenue, Reid Avenue, Ralph Avenue, Broadway, Hamburg Avenue, Wyckoff Avenue, Grand Street and Bushwick Avenue sur-

orts. The elevated lines that will use the terminal are the Broadway and Cypress Hills and the Canarsie lines of the Brooklyn Rapid Transit Company. The estimated capacity of the trolley loops is 400 cars an hour, and the

estimated capacity of the elevated terminal is 30 eight-car trains an hour.

As far as possible the loops for the different surface lines will be so assigned that the number of passengers using

due from Loop 6, Bridge Local from Loop 7, Grand Street and Franklin Avenue lines from Loop 8. There will be a common stairway to each of the loops 12 ft. wide, divided by a railing to separate the incoming from the outgoing pas-



LOOPS FOR THE SURFACE CARS BEFORE TRACKS WERE LAID

any one will not be greatly in excess of another. The same system of numbering will be in vogue as at the Brooklyn Bridge, the first loop on approaching the bridge being numbered one, and the others two, three, four, five, six, seven

sengers. Several general directory signs to the different loops and the car lines will be conspicuously displayed, and at the entrance to each of the loops the loop number and the line operated will appear. In addition the loop



ARTISTIC TERRA COTTA SHELTERS

and eight, respectively. As now proposed, the Nostrand Avenue and Belt lines will be operated from Loop 1, the Broadway and Reid Avenue lines from Loop 2, Hamburg Avenue from Loop 3, Ralph Avenue from Loop 4, Bushwick Avenue from Loop 5, Sumner Avenue and Tompkins Ave-

number and the lines operated will be conspicuously displayed at the head of each pair of stairs inside the building proper, so that there will be no possibility of confusion. Several signs in foreign languages will also be posted for the benefit of those patrons who do not read English.

As in the case of the second lot of four loops installed at the New York end of the Brooklyn Bridge, the cars will stop on the near side of the loops to discharge passengers and then proceed and take on passengers at the far side. A gong at each of the loops under the control of a dispatcher will be rung for starting cars, just as is now done at the Brooklyn Bridge. A very valuable feature of the new arrangement for the surface cars is that a stub has been provided at the end of the loops with a capacity of two cars onto which such cars as become disabled will be run until the necessary repairs can be made. At the Brooklyn Bridge if more than one car becomes disabled one of the active loops has to be temporarily converted into a storage track. Another interesting feature in connection with the track layout is the provision made for quickly throwing the switches of the eight loops so that a car can be run through direct to the storage track just referred to. The grade from the bridge is about 4.6 per cent and a runaway car could thus be passed through the station and brought up against the bumper.

The track for the loops consists of 5-in. 80-lb. T-rail in 30-ft. lengths with a steel guard rail bolted to the running rail through cast-iron separator blocks. The ties are of long leaf yellow pine 6 in. x 8 in. x 7 ft., specially treated. The ballast consists of 2-in. to $\frac{3}{4}$ -in. broken trap laid under and to the top of the ties. The split switches are all of the guarded type with a single housing of manganese steel and frog arms 5 ft. long. The joints are bonded with No. 0000 bonds. The radius of each loop is 100 ft.

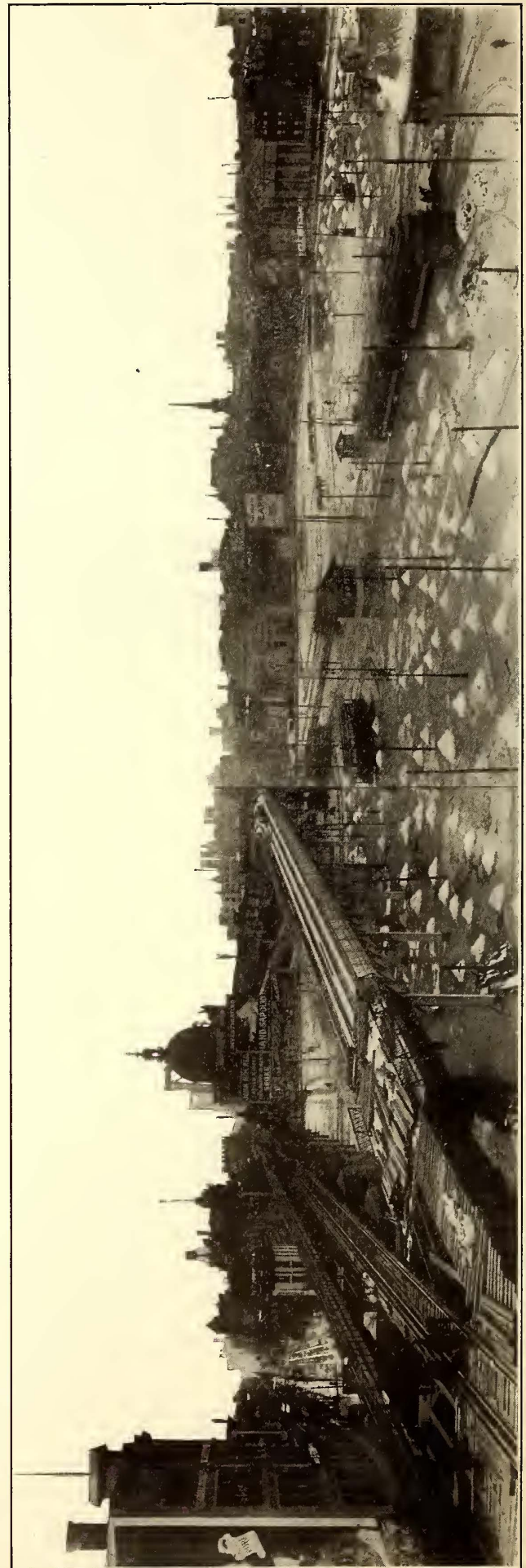
In connection with the track for both the elevated and the surface it is of interest to note that drains have been provided under the ballast to carry all the water to a sump from which it will be pumped by a $4\frac{1}{2}$ -hp centrifugal pump direct connected. An appreciable amount of water always will be carried into the station on rainy days and in addition allowance must be made for the water that ordinarily would trickle down the tracks and stairways.

The loading platform for the elevated trains will be 421 ft. long and 15 ft. wide. Each of the unloading platforms will be 421 ft. long by 12 ft. wide. There will be eleven exits from the two unloading platforms each 5 ft. wide. The entrances to the elevated terminal will be at the extreme east and west ends of the station by stairways 5 ft. and 16 ft. wide, respectively. The extreme width of the elevated portion of the terminal, including the unloading platforms, is 83 ft. At the throat of the entrance to the terminal the width is 43 ft. 6 in.

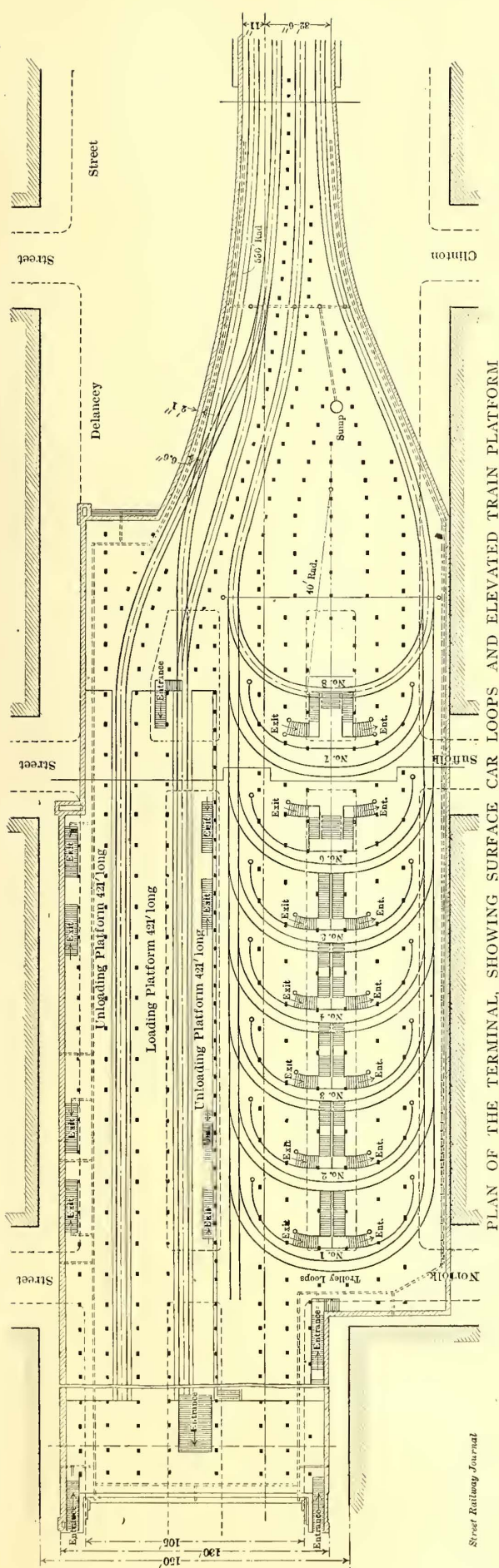
Both elevated and surface lines will be protected by an electro-pneumatic interlocking plant with six levers for operating three single switches and eight signals. The machine will be equipped with the usual track model and with two working semaphores to show the condition of the track for clearing the main line. The tower will be of concrete and will be located at the throat of the station. The power outfit will consist of two motor-driven air compressors. A mechanical counter will also be installed to record the number of trains and cars entering and leaving the station.

The interior finish of the terminal is of glass tile similar to that used in the subway. Incandescent lights will be used throughout, the fixtures being for both single and double lamps. Power will, of course, be taken from the lines of the Brooklyn Rapid Transit Company, but a connection with the Edison mains in New York has been provided so that a cut-over can be readily effected.

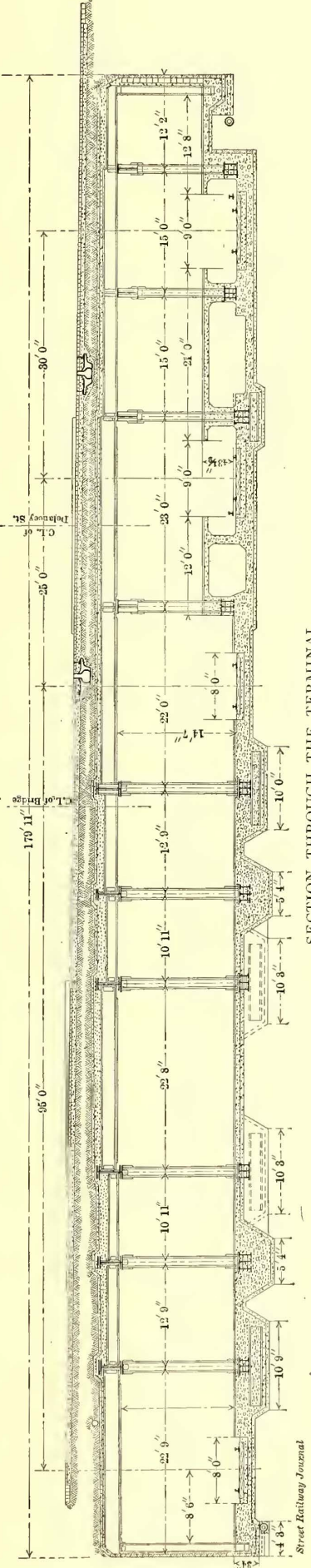
To facilitate the early opening of the station to the surface cars, the latter will be diverted for a time to the ele-



THE CONNECTING LINK BETWEEN THE BROOKLYN ELEVATED AND THE BRIDGE IN BROOKLYN



PLAN OF THE TERMINAL, SHOWING SURFACE CAR LOOPS AND ELEVATED TRAIN PLATFORM



SECTION THROUGH THE TERMINAL

vated tracks near the New York tower, and then will be switched to their own tracks at the throat of the tunnel. By this means it will be possible to carry on the work of demolishing the present surface car stub terminal. In Brooklyn the elevated structure was extended several hundred feet across to the bridge plaza to connect with the elevated tracks on the bridge proper.

At the street level the entrances and exits to the elevated terminal and surface loops will be protected by stair houses of artistic design finished in terra cotta. In addition there will be an artistic shelter at which the cars of the New York City Railway Company, which are operated to and from Brooklyn on the north side of the bridge, will stop. Many of the passengers on the New York City Railway destined to points in Brooklyn will transfer at the New York approach to the Brooklyn cars and the shelter will afford ample protection. These buildings are all shown in the accompanying illustrations.

The station will be cooled by means of two Sturtevant motor-driven exhaust fans which will be located in special fan houses at the east end of the station. The inlets will be 60 in. square and the outlets 48½ in. square. The capacity of the fans will be 35,000 cu. ft. of free air per minute when running at their normal speed of 200 r.p.m. The fan motors will be shunt wound and will develop 20 horse-power at the speed mentioned.

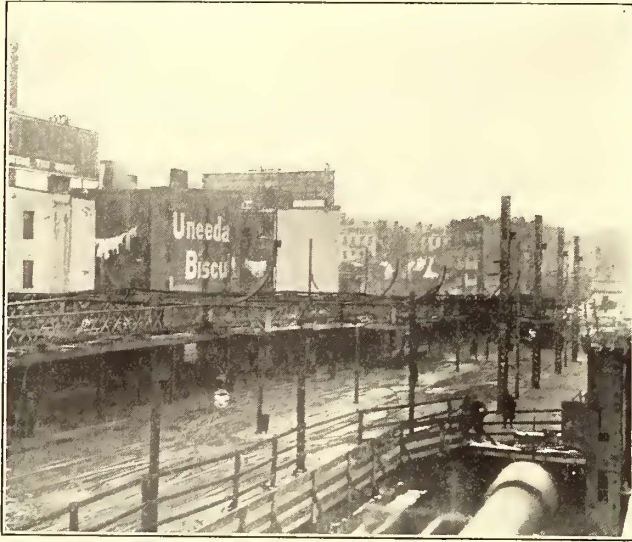
In connection with the construction of that part of the station to be used by the elevated lines it is interesting to note that all the work is of a semi-permanent character, the platform proper being hollow, so that it can all be readily changed should the building of the loop between the

Street Railway Journal

Street Railway Journal

bridges make it advisable to modify the station. In any event, the stairs at the west end of the station will have to be removed when the loop between the bridges is completed.

The station will be operated under lease from the city by the companies using it. The cost of the work is esti-



THE PRESENT TEMPORARY STUB TERMINAL AT THE NEW YORK END OF THE BRIDGE

mated at \$1,250,000. The STREET RAILWAY JOURNAL is indebted to the Bridge Department of New York for the drawings used in connection with the description and for courtesies extended in connection with the preparation of the article.

THE MOVEMENT FOR HIGHER FARES IN MASSACHUSETTS.

Although the gradual extension of the movement for higher fares among Massachusetts street railway companies brings out protestants, those cases which have come to trial before the Railroad Commissioners tend to substantiate the prophecy made in these columns that the final outcome of most of these proceedings will confirm the action of the companies. In fact, this result is being obtained in some instances merely by placing before the protesting parties, at the board's hearing or in local meetings, a complete statement of the companies' financial condition. In the case of the Blue Hill Street Railway the protest of one town was easily overcome, while that of another did not materialize when the protesting parties learned that the company's allegations of a long standing deficit were corroborated by the Railroad Board. In the same way, Taunton and Rehoboth patrons of the Taunton & Pawtucket Street Railway who came before the board recently prepared to make a vigorous objection to the insertion of a second 5-cent fare between City Square in Taunton and Norton Road in Rehoboth, clung tenaciously to their purpose half the forenoon, only to abandon their whole contention when the commissioners called to their notice the company's sworn returns, showing a deficit of \$3,000 last year increased by \$5,000 more for this year.

Not much different was the outcome of the protest of Natick, Ashland and other towns affected by the introduction of 6-cent fares on the companies controlled by the Boston Suburban Electric Companies, known as the New-

ton system. Previous to the recent hearing before the commission, President James L. Richards and General Manager Matthew C. Brush had made explanations in person before several local meetings of an official or social nature and had caused literature to be freely circulated, giving a statement of the company's growing deficit and showing that some increase in revenue was essential. These statements counteracted the feeling against the increase to such an extent that when the hearing was called not a single town was officially represented and the only speaker in opposition to the increase was the president of the Board of Trade in Hopkinton. Even he did not directly object to the 6-cent fare, but asked that the old rate be maintained for workmen's trips, by ticket, morning and evening. These protests affected the Middlesex & Boston and Natick & Cochituate lines. Wellesley, where there was at first the liveliest kind of objection to the increase, eventually asked a postponement of its hearing, and after receiving the company's explanation has decided to weigh the company's statements very carefully before proceeding further. In short, the public in the affected territories seems to prefer good service at fair rates rather than poor service at low rates.

One thing more is evident. It is that along with a growing disposition to accept the increases in the main as justifiable, the towns are showing a tendency to seek some modification through workmen's fares, as noted above with respect to Hopkinton. In the Blue Hill case the company was able to show that if workmen's fares should be granted the benefits of the extra cent in fares would be practically wiped out. In the case of Hopkinton, however, it was pointed out that many residents work in South Framingham or Natick; that in riding to and from work every day they turn in from two to four fares per trip per day, and that they find their daily expenses increased from 20 or 30 cents to 24 or 36 cents. In such cases it may be that the commissioners will find that constant daily travel is entitled to a reduced or "wholesale" rate, as they have done in times past with 5 cents as the fare unit; but the argument used against such a contention in the Blue Hill case may very likely be applied successfully to many other lines where 6-cent fares are going into effect. However this may be, the general educational effect of what has been done by the companies, coupled with the summary of the situation by President Sullivan, of the Boston & Northern Street Railway, printed recently in this paper, has opened the way for placing more of the non-paying street railway properties in Massachusetts on a better basis.

It may be noted in this connection that the increase just declared by the Connecticut Valley Street Railway is unique in that it was brought to the attention of the Railroad Commission by action of the company itself. The reason was that the law, although allowing companies to declare and maintain higher fares until some complaint is favorably adjudicated, gives the commission initial authority over the issue of free transfers. The Connecticut Valley proposes to collect an extra fare on certain lines where transfers are now given, and because the introduction of the higher rate is dependent on the permit to withdraw the transfers, action by the commission is a prerequisite.

As to financial results of the 6-cent policy, the Lexington & Boston Street Railway, one company of the Boston Suburban Electric system, showed 14 per cent increase in gross earnings for the first twenty-eight days of February, 1908, over the corresponding period of 1907.

MAINTAINING CAR EQUIPMENT ON THE CHICAGO CITY RAILWAY

The rehabilitation work of the Chicago City Railway Company has not been confined to rebuilding its tracks and purchasing new cars. Adequate provision has been made for maintaining its equipment to the highest standards of efficiency and safety, thereby following the spirit as well as the letter of the new franchise which was intended to give Chicago the best surface transit facilities, in point of comfort, convenience and frequent service. The complete change from cable to electric traction and the introduction of large double-truck cars as a standard type of equipment necessitated an entire rearrangement of car depots and methods of inspection and maintenance. This work has just been completed with the putting into commis-

track layout of the yard and in the method of handling cars sent in for repairs. The complete layout of the yard, shop buildings and car house is shown in Fig. 2.

The original property of the company was bounded by Seventy-seventh Street, Vincennes Road, Seventy-eighth Street and Wentworth Avenue. This was later increased by the purchase of the land south to Seventy-ninth Street and west to Armour Avenue, giving the company 47 acres of ground. The shops have been extended by the erection of a paint shop 260 ft. x 285 ft. east of Wentworth Avenue and the conversion of the old paint shop in the carpenter shop building into an extension of the carpenter shop. The open space south of the shop plant is now utilized for storage tracks, lumber yards, scrap bins and a new sand drier and storage plant.

The original car house was designed and built with the



FIG. 1.—FRONT OF NEW CAR HOUSE OF THE CHICAGO CITY RAILWAY

sion of a large addition to the Seventy-seventh Street car house, new car houses at Cottage Grove Avenue and Thirty-eighth Street and the reconstruction of the Wabash Avenue, Archer Avenue and Sixty-ninth Street car houses. The Cottage Grove Avenue buildings have been completed but are not yet fully equipped, being used at the present time only for the storage of about 200 cars. They will have an ultimate capacity of 250 cars with complete equipment for making all running repairs.

The main shops of the Chicago City Railway Company adjoin the Seventy-seventh Street car house on Vincennes Road. They were built in 1902 and were planned for future needs so that in the five years they have been in commission but few changes or additions have been required in the shop plant itself. These shops were described in detail in the *STREET RAILWAY JOURNAL* March 7, 1903, and need not be considered again here except to make passing reference to the changes which have been made in the

idea of adding in the future the new house facing on Vincennes Road which has just been completed. The two are separated by an open space 66 ft. wide for a fire break across which the 30 storage tracks are carried, making the new house simply an extension of the old, having the same number of bays and tracks. The car houses are separated from the shop buildings by a blank fire wall on the south side which is built across the end of the 66-ft. alley as well. The old house is 353 ft. x 349 ft. and the new house is 500 ft. x 349 ft.

The new car house is built of brick with cement floors and reinforced concrete roof. It is lighted by monitor skylights in the roof over the center of each bay. The interior is painted white above black wainscoting 5 ft. high. At night the illumination is by enclosed arc lamps hung from the roof and incandescent lights in the five emergency repair pits. The ends of the building are closed by rolling steel doors. In the northwest corner is the office building,

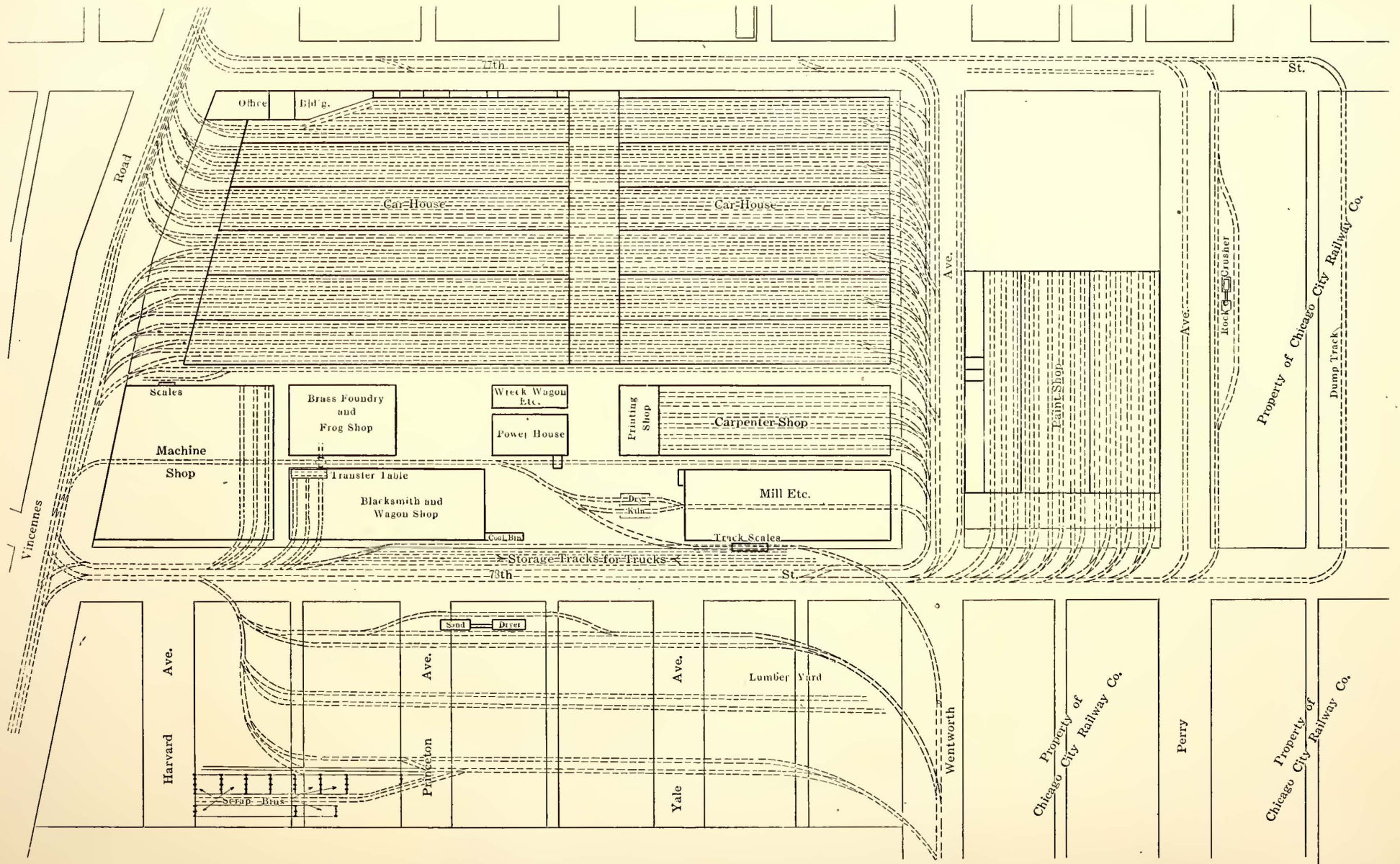


FIG. 2.—GENERAL PLAN OF THE CHICAGO CITY RAILWAY'S SHOPS AND OTHER PROPERTY, SHOWING LOCATION OF DIFFERENT DEPARTMENTS

a two-story structure 130 ft. x 38 ft., in which are located the trainmen's room, cashier's office, toilet room and barber shop on the ground floor and on the second floor the superintendent's office and employees' clubroom.

Back of the office building and extending along the north side of the car house to the rear is a narrow storehouse

than a statement of the number of the car for which required. This is recorded by the stock keeper on his books.

In the rear of the house and extending over part of the north bay is the office of the car house foreman and large lunch, locker and toilet rooms for the exclusive use of the car house employees. In the lunch room are benches and tables for the use of the employees during lunch hour. Off of it is the locker room containing separate steel lockers for each employee in which to keep their clothes and a well-equipped toilet and wash room. This room is in charge of an attendant at all times and the men are required to use it when beginning and quitting work. Employees are not allowed to keep clothing or lunch in the car house buildings.

INSPECTION AND MAINTENANCE PRACTICE

The system of inspection and maintenance at the five car barns of the company is substantially the same. The operation of the system at the Seventy-seventh Street car house, where, approximately, 600 cars are stored, will be described here as typical. Cars coming into the house at the end of a run proceed down Vin-



FIG. 3.—INTERIOR OF NEW CAR HOUSE OF THE CHICAGO CITY RAILWAY COMPANY



FIG. 4.—REAR OF OLD CAR HOUSE OF THE CHICAGO CITY RAILWAY

separated by fire walls from the adjoining storage bay. Part of this storage space is two stories high. A complete stock of car repair parts and supplies is carried; this material is ordered from the shop storeroom on requisitions made by the car house foreman. It is issued to the car house inspectors and repairmen without requisition other

cennes Road to Seventy-eighth Street and turn east on the running track south of the shop buildings to Wentworth Avenue, which is at the rear of the old car house. Under the direction of three car placers, who have charge of two bays each, they are assigned to a given track and run in. The motorman makes a verbal statement to the car placer

of any defects on his car before leaving it. The car placer keeps a record as shown in Fig. 5, giving the car numbers in the order in which they were run in on the several tracks under his direction. On the back of this sheet are blank spaces for entering the verbal report of defects as given by the motormen. These verbal reports are checked against the motormen's "signing-in" sheet, Fig. 7, by the carhouse foreman.

detail any defect or difficulty in operating the car or to place an O. K. in the column if in good condition. This "signing-in" sheet has lines for the entry of 38 incoming cars, but before the sheet is entirely filled a clerk in the car-house foreman's office transfers the entries of all defective car numbers to a large repair chart filed on a board located conveniently for the use of the inspectors and repair men.

CHICAGO CITY RAILWAY COMPANY									
CAR HOUSE <u>77 St.</u> CAR PLACERS RECORD <u>FEB 2 1908</u>					BAY NO. <u>3</u> BAY NO. <u>4</u>				
TRACK					TRACK				
1	2	3	4	5	1	2	3	4	5
		5287	5071		5066	5068	5060		5096
		5201	5119		5124	5121	5049		2704

5101 PLACED BY: <i>McKeever</i>									

FIG. 5.—CAR PLACER'S RECORD

CHICAGO CITY RAILWAY COMPANY
FOREMAN'S REPORT OF CARS RETURNED TO SERVICE.

MASTER MECHANIC.

CAR _____ REPORTED AS "HELD IN" ON THE SIGN IN SHEET OF _____ FOR _____

NECESSARY REPAIRS HAVE BEEN MADE, CAR HAS BEEN THOROUGHLY INSPECTED BY ME, IS IN GOOD OPERATIVE CONDITION, AND RETURNED TO SERVICE. _____ 19____

FOREMAN

NOTE.—CAR HOUSE FOREMAN WILL FILL OUT ONE OF THESE REPORTS FOR EACH CAR REPORTED "HELD IN" ON SIGN IN SHEET. WHEN CAR IS RETURNED TO SERVICE, REMAINDER OF REPORT TO BE FILLED OUT AND FORWARDED TO MASTER MECHANIC AND THEN TO CLAIM DEPARTMENT FOR PERMANENT FILE

FIG. 8.—FOREMAN'S REPORT FORM ON CARS REPAIRED AND READY FOR SERVICE

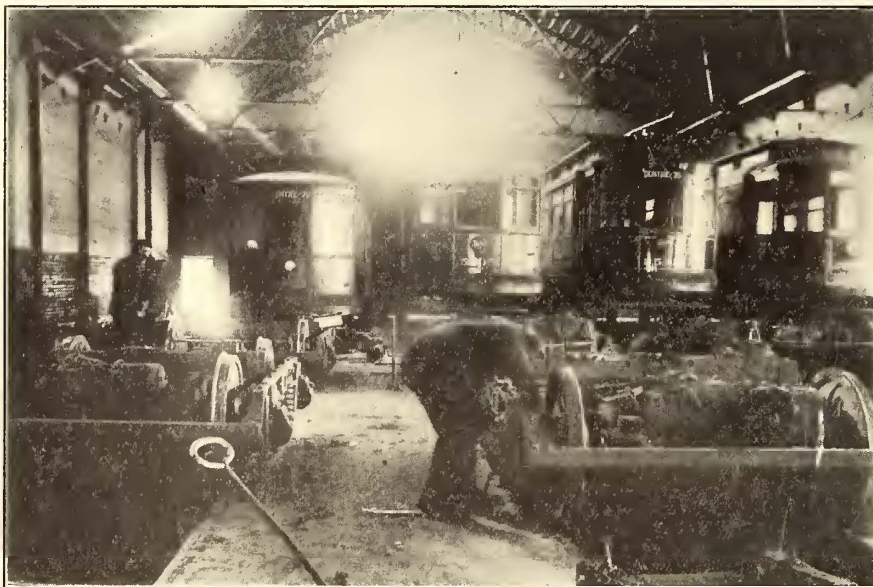


FIG. 6.—TRUCK PITS IN FIRST BAY OF CAR HOUSE

CHICAGO CITY RAILWAY COMPANY
MOTORMAN'S DAILY SIGNING-IN SHEET.

TIME IN		CAR NO.	NOTE BELOW ANY DEFECT OR BREAKAGE FOUND TO EXIST IN YOUR CAR	ICONSIST TO BE CAR BEING IN CONDITION AS NOTED HEREON MOTORMAN'S SIGNATURE	FOREMAN'S COLUMN ACTION TAKEN
A. M.	P. M.				

SIGNED _____ STATION _____ 1908 _____

FIRST MASTER MECHANIC. CAR HOUSE FOREMAN.

THIS REPORT, SHOWING CONDITION OF ALL CARS USED IN PASSENGER SERVICE, MUST BE MADE DAILY. PROPER NOTATION SHOWING THAT CARS HAVE BEEN "REPAIRED," "HELD IN" OR SENT "TO SHOPS" SHOULD BE NOTED THEREON BY CAR HOUSE FOREMAN, WHOSE SIGNATURE MUST BE THEN AFFIXED. REPORT WILL THEN BE CAREFULLY CHECKED OVER BY ASSISTANT MASTER MECHANIC, WHO WILL FORWARD SAME TO MASTER MECHANIC, WHO WILL CERTIFY TO THE CORRECTNESS OF THE SAME AND PASS TO CLAIM DEPARTMENT FOR PERMANENT FILE

FIG. 7.—PART OF MOTORMAN'S DAILY "SIGNING-IN" SHEET

When the motorman and conductor leave their car in the barn they report to the division superintendent's office for their time and next assignment. The conductor settles his accounts with the cashier and the motorman enters on a "signing-in" sheet, (Fig. 7) the time in, car number and condition of his car when turned in, signing his name on the same line as a certification. He is required to note in

The various defects are classified as follows on separate lines: Air compressors, bearings, bell rope, brakes, controllers, curtains, doors, circuit breakers, fenders, engineer's valve, gears and cases, glass, grabhandles, gongs, fuse boxes, headlights, heaters, hot journal, lights, motors, registers, resistance, sash, sander, seats, signal bell, steps, signs, trucks, truck fenders, trolley, vestibule doors, ventilators, wheels and wiring. Several blank lines are left for entering defects not classified as above. Nine double columns are provided across the sheet to enter in the numbers of cars with these defects and the pay-roll number of the repair man making the repairs. This chart serves as an assignment sheet for the repair men. On reporting for work they take off from the chart the numbers of cars with defects coming under their charge and proceed to the car house to make the necessary repairs.

CHICAGO CITY RAILWAY COMPANY
REPAIRER'S REPORT. CAR HOUSE _____ 19____

CAR NO'S	NATURE OF REPAIRS

REPAIRS MADE BY _____

FIG. 9.—PART OF SHOP MAN'S REPORT BLANK ON REPAIRS

When they have completed the work first taken from the chart they return to it, enter their pay-roll number after the numbers of the cars which they repaired and take off the numbers of any arrived in the meantime.

The work of inspection and light repairing is divided into six classes—trolleys, air-brake equipment, controllers, brake rigging and wheels, motors and bodies. Each class

of inspectors looks after its own particular kind or work. It should be explained here that all of the tracks in the old house where the cars enter first are pit tracks and all truck and under body inspection repairing and exterior body cleaning is done there. As fast as the inspectors and car cleaners finish their work the cars are moved across the alley and into the new house which has flush floors, except for five pits for making emergency repairs, and is used for storage and interior body inspection. All cars in this section of the house are ready for service.

In addition to requiring the repair men to affix their payroll number after the number of each car, on which they have worked on the repair chart, they are required to turn in a report showing the number of cars worked on and the nature of repairs made. These are filed for reference in the foreman's office. A blank form for this purpose is shown in Fig. 9.

All repairs to trucks and motors which can be made with the facilities at hand at the car house are made in

Repairs of this nature can seldom be made in time to return the car to service on its next run, and when such cars are held in the house it is so indicated on the "signing-in" sheet in the last column. Before "held in" cars are again returned to service they are thoroughly inspected by the

CHICAGO CITY RAILWAY COMPANY
CAR HOUSE FOREMAN'S REPORT OF CARS SENT TO SHOPS FOR REPAIRS

CAR HOUSE, _____ 190_____

CAR _____ RUNNING ON _____ LINE, IS DISABLED AS FOLLOWS:

REPORTED DISABLED BY MOTORMAN _____ BADGE _____

INSPECTOR _____

CAR _____ HAS BEEN THOROUGHLY INSPECTED AND RETURNED TO SERVICE _____

IN CASE WHERE REPAIRS ARE NECESSARY OWING TO CAR BEING IN ACCIDENT, MEMO OF COST WILL BE SHOWN BELOW:

LABOR	\$ _____
MATERIAL	\$ _____
TOTAL	\$ _____

FOREMAN, _____

NOTE.—THIS SLIP MUST ACCOMPANY EVERY CAR SENT TO SHOPS FOR REPAIRS.

NOTE.—THIS SLIP PROPERLY FILLED OUT MUST BE TURNED INTO OFFICE AS SOON AS CAR IS REPAIRED.

FIGS. 10 AND 11.—FRONT AND BACK OF FOREMAN'S REPORT ON CARS SENT TO SHOP

car-house foreman, who certifies as to their condition on the form shown in Fig. 8. These forms properly filled out are sent to the master mechanic for approval and are then forwarded to the claim department to be permanently filed with the daily "signing-in" sheets. The claim department

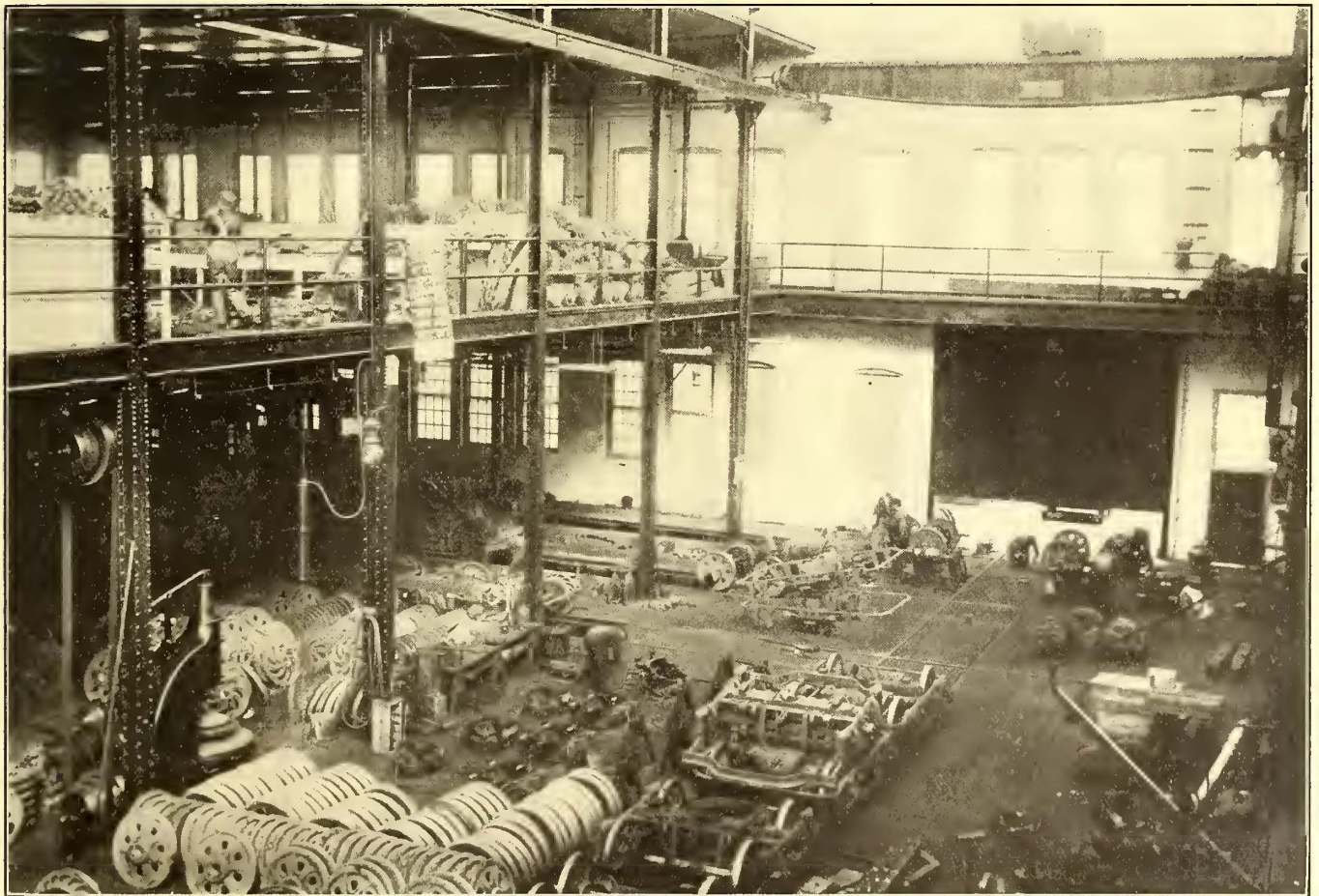


FIG. 12.—INTERIOR OF MACHINE SHOP, SHOWING TRUCK AISLE

No. 1 bay of the old house. The inner end of this bay, shown in Fig. 6, is equipped with body jacks on four of the five pits for removing trucks. An overhead traveling crane is provided for handling motor armatures and other heavy lifting. When the inspectors find defects requiring the removal of trucks, or cars are reported in for such defects, they are assigned to one of the pits in this bay.

is thus furnished with a complete record of the daily condition of every car on the company's lines. It does not have to consult the records of the mechanical department except to verify or elaborate on the information contained in these two sets of reports. If an accident happens, due to defective equipment, the condition of the car as reported in on the day previous can be looked up and the respon-

sibility placed on the motorman, the inspector or the repair man for not reporting or not repairing the defect. The additional checks of the repair chart, the car placers' verbal reports and the repair men's individual reports allow no loophole for dodging responsibility or overlooking defects not reported by trainmen.

Car cleaning is as carefully watched and as systematically done as car repairing. Every car is cleaned daily, the class of body cleaning except sweeping and dusting, which is done every time the car goes into service, being governed by weather conditions. Cars are thoroughly disinfected twice each week on the Stock Yards lines and at least once a week on other lines. The cleaning record is kept in book form, each two facing pages having blank spaces for entering the records of 28 cars for each day of the month. The numbers of the cars stored at the barn are entered consecutively in the left-hand column and the daily record indicated in the date column corresponding to the day of the month. A system of symbols is employed to show the kind of cleaning done each day. Interior cleaned is indicated by a vertical mark, exterior cleaned by a horizontal mark, car inspected by a diagonal mark inclined to the right, general overhauling by a diagonal mark inclined to the left, and disinfecting by an inverted semi-circle. These symbols may be used singly or in combination without confusion and indicate at a glance the cleaning given to a car during the entire month. In addition to car-house cleaning and repairs, men known as terminal cleaners are stationed at the end of each line. These men sweep, dust and make minor repairs to each car at the end of every round trip.

When a car is reported in for heavy truck or body repairs, repainting or general overhauling, it is withdrawn

and name of motorman by whom reported. One of these forms is shown in Figs. 10 and 11. On completion of the repairs the shop inspector certifies to the condition of the car as it left the shop and the work order is filed in the



FIG. 13.—TRUCK-CHANGING PITS IN THE BLACKSMITH SHOP

master mechanic's office. The car is again inspected at the car house before it is returned to service and a report of its condition sent to the claim department on the form shown in Fig. 9, previously referred to.

METHOD FOR HANDLING CARS

A new system of handling cars at the main shop has been worked out and will soon be put into use. Formerly when cars were sent in for truck or motor repairs they were switched onto one of the three lateral tracks in the machine shop shown in Fig. 12. These tracks have pits under the gallery on both sides of the main aisle and trucks are removed and replaced with the bodies standing over these pits. The trucks are dismantled and assembled in the open floor space of the main aisle, which is served with a 5-ton



FIG. 14.—GENERAL VIEW OF CHICAGO CITY RAILWAY SHOPS FROM THE SOUTH

from service and sent to the main shop, the fact being indicated on the "signing-in" sheet of that day. It is accompanied by a blank properly filled out by the car-house foreman, showing the line, car house, car number, nature of defects

traveling crane. It is necessary to hold a car in this shop for truck work before the body can be sent to the paint or carpenter shop for overhauling. Under the new system, which has been made possible by the gradual standardiza-

tion of equipment, truck work will be done independently and no car will be held for its own trucks. A supply of 50 good order trucks fully equipped will be kept constantly on hand and when one truck is removed another drawn from this stock will take its place and the car returned to service immediately if it requires no body repairs. The space now used for pits and truck repairs, extending the full width of the machine shop, 200 ft., and having three tracks, will be used for truck repairs, giving approximately 10,000 sq. ft. for this purpose. Three new single car pits with hydraulic body jacks have been built in the west end of the blacksmith shop. They are connected with the running track south of the building and across their inner end a depressed transfer table has been built. One of the pit tracks is extended through the north wall of the building across the through-freight track bisecting the machine shop and a turntable has been built at the intersection. Cars requiring truck repairs will be run in on one of these

defects and the time in the shop for general overhauling is lessened by the amount of time needed for truck repairs. The capacity of the truck shop is also greatly increased.

The mechanical department is headed by the master mechanic at the main shops, who reports to the chief engineer. An assistant master mechanic has supervision over the five car houses and the inspection and repairing done there. A car-house foreman is in charge of each house. He reports to the assistant master mechanic daily on the form shown in Fig. 15. This gives at the top the general condition of the equipment under his care and below a detail statement of the day's "pull ins" together with a statement of the cars held in for repairs. These reports are charted by the assistant master mechanic in the form of curves showing the daily percentage of cars pulled in for repairs to total operable cars. On this chart are shown the daily weather conditions and average temperature. It gives in condensed graphic form the efficiency of each car house and the equipment housed there.

The system of independent truck repairing will eventually be carried to the car houses, which will be kept supplied with extra trucks from the main shop and will send in bad-order trucks removed. The gradual standardization of the company's equipment has made the change possible. On the double-truck cars there are now only two types of trucks in use and one of these has been abandoned for new cars. No new single-truck cars will be put in service under the terms of the rehabilitation ordinance.

Credit is due to H. B. Fleming, chief engineer, and D. A. Faut, master mechanic, for the information from which this article was prepared. The new car houses were designed and the system of handling repairs was worked out under their supervision. D. McGill is assistant master mechanic in charge of shops and R. T. Senter is assistant master mechanic in charge of car houses.

CHICAGO CITY RAILWAY COMPANY
DAILY REPORT OF CAR HOUSE FOREMAN.

CAR HOUSE _____ 19__

CAR STATEMENT.

TOTAL CARS HOUSED _____

CARS "HELD IN" _____

CARS AT SHOP _____

TOTAL OPERABLE CARS _____

DEFECTIVE CARS "PULLED IN"

CAR NO.	RUN NO.	TIME	NATURE OF BREAKAGE, DAMAGE, OR DEFECT	REPAIRS COMPLETED

CARS "HELD IN" FOR REPAIRS

CAR NO.	REPAIRS NECESSARY	MATERIAL SHORT	REPAIRS WILL BE COMPLETED

FIG. 15.—PART OF FORM USED FOR DAILY REPORT OF CAR-HOUSE FOREMEN

three pit tracks, the trucks removed and good order trucks substituted. The trucks which are taken out will be moved on the transfer table to the turntable track, turned on the through track and run into the machine shop, a distance of about 60 ft. If the car body is to go to the carpenter or paint shop it is mounted on temporary shop trucks and run out of the building on to the running track leading to the shop buildings further to the east. It is kept on these trucks until it is ready to go back in service, when it is returned to the smith shop pits and mounted on road trucks drawn from the supply stored outside. Two storage tracks have been laid south of the blacksmith shop, on which will be stored spare road trucks complete and in good order and temporary shop trucks. A supply of both will be kept on hand and cars will be held over the pits only long enough to make the change and connect up the brakes and motors. By this system a car need be withdrawn from service only a few hours on account of motors or truck

TOLEDO & INDIANA RAILWAY RECEIVERSHIP

The receivership proceedings against the Toledo & Indiana Railway Company begun at Toledo, Ohio, and mentioned in the STREET RAILWAY JOURNAL last week, are of a friendly nature and were brought to obviate the necessity of the trustees taking charge for the bondholders. As was stated, the interest on bonds due Jan. 1 was defaulted and there has been a disposition on the part of the bondholders to require the trustees to take possession on April 2 at the expiration of the ninety-day period.

Under the receivership it is hoped that the company may be reorganized and retain its present officers and stockholders. Should the property be thrown into the hands of the bondholders a settlement could be reached only through a sale. S. C. Schenck, president, and Jacob M. Longnecker, one of the directors of the company, filed the application for a receiver. C. F. M. Niles, who was appointed to take charge of the company, is president of the Security Savings Bank & Trust Company, which is trustee for the \$1,650,000 bond issue of the company.

The petition states that the amount of interest due is more than \$60,000 and that the company is applying its profits and revenues to corporate duties instead of the discharge of its indebtedness. The business depression is probably responsible for the default in the payment of interest and it is believed that the receivership, which is meant to be only temporary, will be raised within a short time.

ISLAND PARK, EASTON, PA.

Island Park is located in the picturesque Lehigh Valley, 3 miles west of the center of Easton, Pa. It is entirely surrounded by the waters of the historic Lehigh River, which in turn are overlooked by fertile fields flanked by majestic peaks and hills which present a panorama of

day concerts are given. A baseball ground affords no end of pleasure to baseball lovers, and lovers of water are provided with every facility for taking advantage of the 5 miles of beautiful waterways. Gasoline launches and steel boats make up the equipment on the river at the disposal of patrons of the park.

The vaudeville and minstrel shows, dancing, moving pictures, out-door acts and Sunday band concerts are free. At the theater, however, there are 800 reserved seats, for which a charge of 5 cents is made for afternoon shows and 10 cents for evening performances. Excellent entertainments are provided by high-class artists furnished through the National Amusement Park Association, of New York City.

The steel rowboats and the merry-go-round are operated by the park, but the other attractions are conducted by concessionaries under the strict supervision of the company. Heading the list as a money-getter is the Figure 8 coaster. Rowboats are rented at 25 cents per hour. A charge of 10 cents is made for a trip on the launch, the distance being about 1 mile. No data are obtainable regarding the income of the restaurant and other concessions, but they are all patronized very liberally and give every evidence of be-



PROMENADE AND BOOTHS AT ISLAND PARK

rural scenery of matchless grandeur. Its limits enclose an area of more than 100 acres.

The ride to the park over the Easton Transit Company's line is very enjoyable and is a treat in itself. The cars whirl one through a wealth of river and mountain views which excite the admiration of every visitor. To convey the crowds to and from the park with speed, four cars, each with a trailer, are operated every five minutes. The fare from any part of the city is 5 cents, the greatest distance being a ride of 8 miles. No admission is charged at the gate and the principal attractions are free to the public.

The park caters especially for the patronage of Sunday-school picnics and excursions from a distance, and for their benefit maintains a picnic grove comprising more than 6 acres of heavily shaded ground equipped with an abundance of ovens, tables, benches, pure water and many other conveniences. Plenty of swings, sand heaps, etc., are provided for the children. Last season 58 different organizations held their outings at the park.

The amusements include a theater with two vaudeville shows daily, moving pictures, free dancing, sensational out-door acts, grand pyrotechnic displays, natatorium, merry-go-round, photograph gallery, Japanese ball booth, shooting gallery, baby game, parcel room, penny hippodrome, restaurant, fishing pond, etc., roller coaster, old mill, miniature railroad, pony livery, pop-corn booth, novelty stand. In addition free Sun-

ing decidedly profitable to the company.

The athletic field is at the western end of the park. Here also is the baseball diamond, which local teams and visitors are permitted to use free. A grand stand was re-



BAND CONCERT AT ISLAND PARK

cently erected by the company for the comfort of those who desire to view the contests.

The buildings within the grounds are a waiting station, restaurant, office, dancing pavilion, theater, photograph gallery, boat house, bathing house and arcade and a number of small buildings for attractions and many booths.

Publicity is given the park and all its attractions by a press department. Permanent display advertisements and local readers are used in both daily and weekly papers with gratifying results. Posters, dodgers and other devices are used for each weekly attraction and for special occasions, opening and closing days, and all holidays. In this manner the tributary population of 50,000 is kept well informed as to what is going on.

FOREST PARK, AT PINE BLUFF, ARK.

That Forest Park, in Pine Bluff, Ark., owned and operated exclusively by the Citizens' Light & Transit Company, is a highly popular summer amusement place is evident, as during the past summer season the Forest Park cars carried more than 400,000 persons, a remarkable



FIGURE EIGHT COASTER AT ISLAND PARK

No liquors are dispensed or allowed on the grounds, a feature that appeals strongly to the better class of people. A corps of uniformed guards interest themselves in the comfort of visitors, enforce order and look after the safety of the people while boarding the cars for the homeward trip. The outlook for the coming season, which opens Saturday, May 16, gives promise of being very satisfactory.

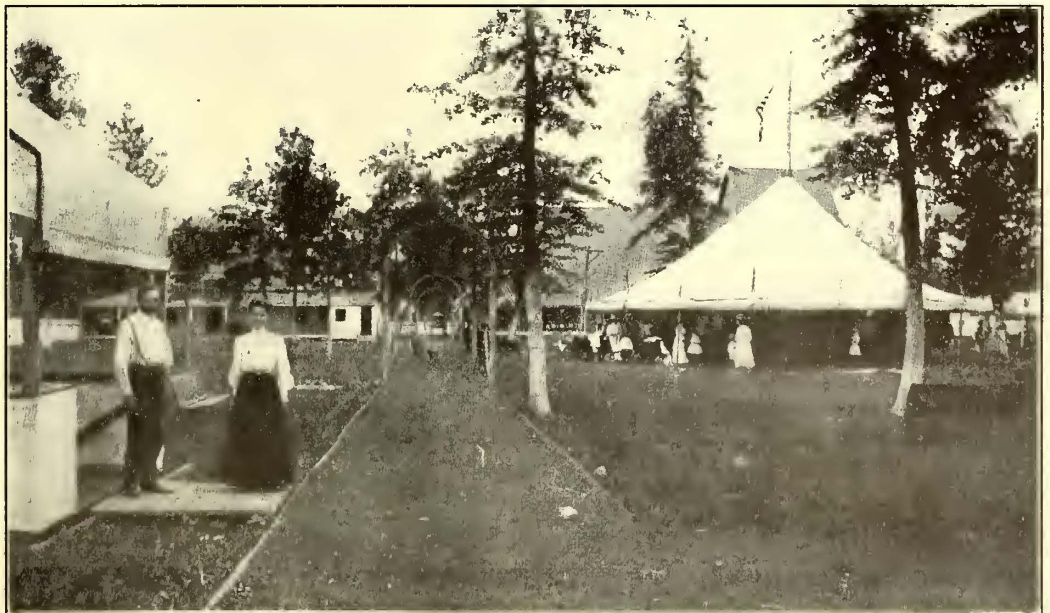
A minstrel troupe, composed of thirty motormen and conductors of the United Railways Company, of St. Louis, Mo., gave its first show last month in the large auditorium in the rear of the club house at Grand and Park Avenues, which was described in the STREET RAILWAY JOURNAL for Feb. 15. The auditorium has a seating capacity of nearly 2000 and every seat was occupied. The minstrel show was preceded by a concert of the United Railways Band, which is composed exclusively of motormen and conductors, and the program was concluded with moving pictures. The directors of the show were Bruce Cameron and Charles Richter. The company states that while the expense of running the clubhouse and its amusement features is considerable, it is amply repaid in better service by its employees.



METHOD OF ADVERTISING FOREST PARK

showing in view of the fact that Pine Bluff has a population of only 30,000 and an additional population to draw from in adjoining territories of twelve thousand.

Forest Park is only four years old. It is situated at the terminus of the Cherry Street line in the heart of a very attractive plot of ground which contains many inviting shade trees. Last season the management went into the park business on a much larger scale than in previous



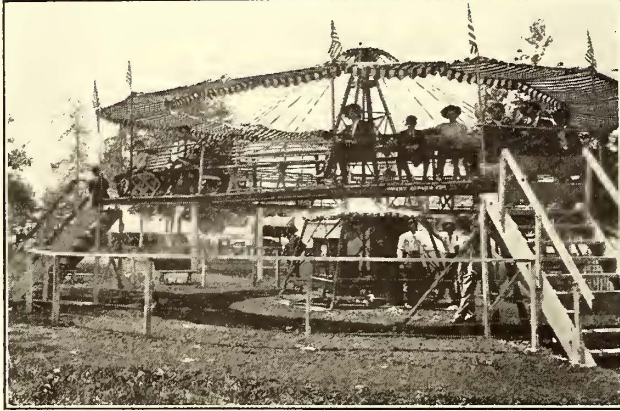
MERRY-GO-ROUND AND OTHER AMUSEMENTS AT FOREST PARK

years, and this season is contracting for a number of new attractions and plans greatly to improve the property. Especially is this true of the theater. The grounds are to be laid out with the "Pike" effect. The mechanical amusement devices are to be placed on one side of the proposed "Pike" and the buildings and other stationary concessions on the other.

To advertise the park last year a car—framed and cov-

ered with attractive bunting, flags and white canvas, upon which was printed an ad for the park, including features for each week—was operated over all the lines in the city. In this car was a full brass band, and the music was continued from the time the car was sent out in the afternoon until it was run into the barn at night, when the band was taken to the park and began its evening concert there. This method of advertising will again be used this year,

a grand stand and bleachers with large seating capacity. As Pine Bluff will be in the State League this season, the indications are that this part of Forest Park will be more popular than ever. The Detroit American League team has been at the park for ten days' spring practice. Forest Park is now open from May until October, inclusive. F. E. Cherot has had considerable experience as a manager, and the success of Forest Park is largely due to his initiative.



THE DIP AT FOREST PARK

so effective did it prove. It has always been a custom of the park management to have a "free gate." The interior of the café is made attractive with palms and an abundance of ferns.

The theater has a large stage with a seating capacity of 1000. Repertoire companies, musical comedies and vaudeville are presented nightly. Another attraction at the park is a commodious dance hall. This is very liberally patronized during the summer months. Both public and private dances are given. The theater, dance hall, dressing rooms and café are all furnished with electric fans. Penny arcades, shooting galleries, Hale's touring car, pal-

THE MANCHESTER TRACTION'S PLEASURE RESORTS

Pine Island Park, operated by the Manchester Traction, Light & Power Company, is about 4 miles from the business center of Manchester and within easy riding distance of Nashua and Derry, N. H. It comprises 135 acres of land along the shore of a pleasure pond about a mile or more in length and is mostly wooded with a tall growth of pine trees.

The principal amusements are bathing, dancing and skating. The bath house has 100 dressing rooms equipped with shower baths, hot and cold water, etc. The skating rink is on the North Island. It has a floor 80 ft. x 100 ft. and was erected last season. The dancing pavilion is near the water's edge and its broad balconies overhang the water. The dancers are admitted by ticket and the floor is cleared after each dance, there being ample room on the wide verandas for the pleasure seekers. An open-air refreshment room on a lower balcony overhanging the water has proved very popular and the lowest floor at the water level is devoted to canoes and boats.

Among the other attractions are a large bowling alley, Japanese ball game, menagerie and numerous booths scattered about the grounds. A roller coaster is planned for the ensuing season. For those desiring to be away from the crowd there are numerous pleasant walks about the shore and along the brook which feeds the pond, a broad



GENERAL VIEW OF FOREST PARK

ace of illusions, mechanical devices of almost every character and many modernly equipped concessions are to be found on the grounds. A zoo is another attractive feature and is a rendezvous for the little folk. It is owned by the company and open to the public throughout the year.

Forest Park is brilliantly illuminated. Flaming arcs are liberally distributed over the ground, being supplemented by innumerable incandescent lamps. An electric fountain is being installed. An addition to the park proper is one of the finest baseball diamonds in the South, having

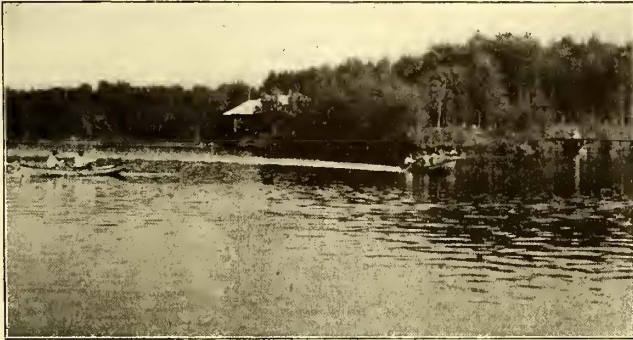
stream with beautifully wooded banks. At night much of the shore is decorated with white and colored electric lights.

Splendid cold drinking water is obtained from springs and wells. City water is used for fire protection and water from an electrically driven pumping system is used for the laundry at the bath house and other purposes. When picnic parties so desire one of the large islands is reserved for their use, an arrangement that has proved very popular. There is no regular park at Lake Massabesic, but the company has its summer theater there at the end of a line

about 4 miles in length. The lake is a very attractive sheet of water of 4 or 5 square miles, and although most of the shore is held by the municipality to ensure a pure supply of drinking water, there are many beautiful spots which the public may enjoy.

The pavilion, which contains the summer theater, is tastily built with tower and broad verandas. In the front is a large room with coin machines, refreshment counter and ice-cream tables. The theater proper is in the rear and the open sides insure a cool and breezy interior. The

wheels. A signaling circuit makes it possible for either motorman to signal the other so that the cars at opposite ends of the incline may be started and stopped in unison. The wires for this signal circuit are strung beside the track at the level of the rail and connection with the car is made by sliding contact. The safety appliances are very elaborate. A heavy timber 6 in. x 12 in. is laid beside the track and bolted to the ties and a grip is arranged to engage



THE LAKE AT PINE ISLAND PARK



UNCANOONUC INCLINE RAILWAY CAR

seating capacity is 900. The stage is equipped with up-to-date appliances and a motor-driven, 200-amp, direct-current generator is available for stereopticon moving pictures and spot light effects. Running water is provided.

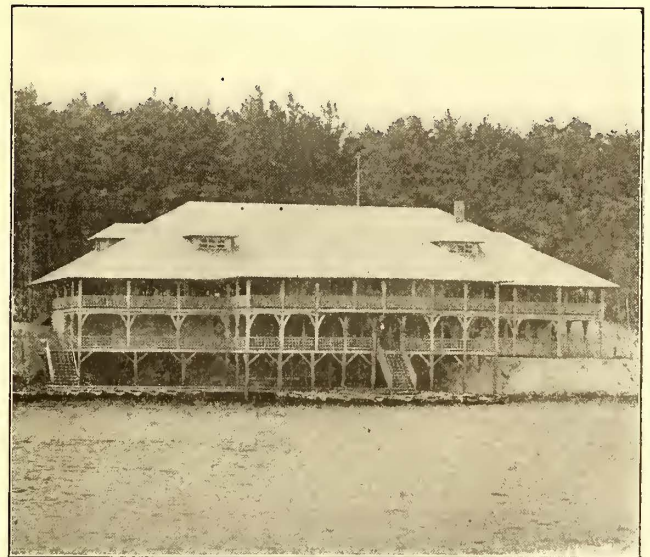
An inclined railway up the mountain is owned and operated by the Uncanoonuc Incline Railway & Development Company. It is reached by a branch which leaves the Manchester Company's Goffstown line at Shirley Station and extends about 2 miles, over wooded and meadow land to the base of the mountain. The rise of this portion is almost continuous. At the base of the mountain passengers are transferred to the incline proper. The special cars em-

this timber automatically by means of a centrifugal device if the speed becomes excessive. The grip can also be actuated by hand. In addition to this, regular hand brakes are provided. The length of the ascent is about half a mile.

From the top of the mountain one can see 30 miles in any direction, while many more distant mountain peaks are visible. On a clear day the Presidential Range of the White Mountains, 101 miles distant, can be discerned.



PENNY ARCADE, PINE ISLAND PARK



DANCING PAVILION, PINE ISLAND PARK

ployed are equipped to correspond with the grade, which is 34 per cent. There are two cars, one of which is ascending while the other is descending. There is only one track and a turnout is provided in the middle. In order to enable the cars to take the special work properly the outside wheel of each car is provided with two flanges, while the inside wheel is perfectly flat, having no flanges. The cable passes over a large sheave at the top of the mountain and motive power is supplied by two special GE-80 motors placed under each car and geared to the

The city of Manchester, 7 miles away, seems almost at one's feet and Lake Massabesic is seen among the trees just beyond. The landscape is a thing not soon forgot.

At the summit is a large park, in the center of which is a roomy hotel with broad, comfortable verandas. Cottage lots about the park are owned by summer pleasure seekers and others are in the market.

The road is only operated in the summer time. Last season many thousand people availed themselves of the opportunity to enjoy this resort, 1400 ft. above the sea.

CONTOOCCOOK RIVER PARK

Contoocook River Park, on the Concord & Manchester electric branch of the Boston & Maine Railroad, is a New England street railway park property that enjoys very liberal patronage and is constantly growing in public favor.

to the resort, steam boats are operated on the Contoocook River. While the capacity of the largest of these boats is only 200, they are compelled to make frequent trips, as attested by the average daily attendance at the resort of 2500 persons a day. The schedule on the electric railway is 15 minutes.



SCENE ON CONTOOCCOOK RIVER

The park is on the Contoocook River, about 8 miles from Concord, a city of about 20,000 inhabitants. In respect to its location the park is very fortunate, for the Contoocook is a beautiful stream navigable for canoes and light draft boats for a distance of eight or ten miles. In fact, the advantages which the river offers in summer have led to the building of a number of lodges which are occupied sea-

The result of cottagers locating along the road and near the park has been that many itinerant pleasure seekers have had the advantages of the country brought to their attention and have been led to spend their vacations there. Of course the demand is for a high class of entertainment at the park. It is not a hilarious, boisterous crowd that patronizes the park, yelling for the latest of the freak



ENTRANCE TO CONTOOCCOOK RIVER PARK

son after season by cottagers who have laid out their own little summer retreats and who in many cases maintain boats and launches of their own on the river. An estimate of the number of private boats owned by those near the park places the figure at upward of 100. Besides the trolley line

amusement features. The equipment really bespeaks the patronage. The forty acres which make up the park shelter a theater, restaurant and dancing pavilion as the chief sources of revenue and amusement.

For a small property the theater is unusually complete.

It is a frame building about 120 ft. x 40 ft. and has a seating capacity of 900. The stage is about 30 ft. wide and 30 ft. deep and the equipment includes a number of changes of scenery. The entertainments given are of a very high character. They are either farce comedy or musical comedy. The companies engaged never number less than 22 members. Both matinee and evening performances are



RUSTIC HOUSE, CONTOOCOOK RIVER PARK

given. The price for the matinees has been fixed at 10 cents, but in the evening reserved seats are sold, the prices ranging from 5 cents to 25 cents, according to location, the charges being 5 cents, 10 cents, 15 cents and 25 cents. The bill is changed weekly. The booking is done through Joseph J. Flynn, of Boston.



THEATER AT CONTOOCOOK RIVER PARK

The dance pavilion is about 50 ft. x 50 ft. and is open and rustic in its finish. The dances are given every afternoon and evening, a charge of 5 cents being made for each dance. Music is furnished by Stewartson's orchestra,

of Concord. Seats are provided for spectators. This feature is well patronized. Many couples come out from the city purposely to dance, and many parties are formed among the cottagers along the route. While the private invitation dance is exclusive, it does not offer the same advantages for pleasure which the pavilion at the park affords with its well kept floor and good music.

The restaurant is leased to an outside party on the commission basis, and pays well. In reality it is a lunch room, the items on the bill of fare for the most part being made up of sandwiches, cakes, etc.

Special efforts are made to book schools and picnics for the park. No general admission is charged.

PORTABLE TRANSFORMER SET FOR PARK LIGHTING

White City, an amusement park at Broad Ripple, Ind., which is reached by the northern division of the Indiana Union Traction Company, buys current for lighting from that company. As the consumption of current for this purpose alone is nearly 500 kw, it was not possible to connect up with the permanent substation at Broad Ripple, about a mile distant, without greatly enlarging its capacity at considerable expense. The lighting system was therefore designed for single-phase alternating current at 360 volts and a portable transformer outfit and switchboard were installed in a remodeled box car to supply the lighting mains. Three 120-volt incandescent lamps are wired in series across each pair of mains and by balancing the load between mains all three phases of the transmission line are utilized.

The car was remodeled by cutting three doors in the side near one end for readily removing or replacing any one of the bank of three transformers installed. Another door was cut in the opposite end for access by the attendant. The high-tension wires are led through tile conduits in the roof of the center of the car to the high-tension lightning arresters beneath. The transformers are of 175-kw capacity each, and with a line potential of 30,000 volts deliver current to the switchboard at 360 volts. They are duplicates of the transformers installed in the permanent substations, as is all of the other apparatus, including the switchboard. The car is painted white and is stored during the park season on a stub track inside of the park enclosure. It is surrounded with a high fence on which are painted danger signs to warn inquisitive persons. An attendant is on duty whenever the lights are required. The few arc lights in the park are supplied with direct current from the trolley line.

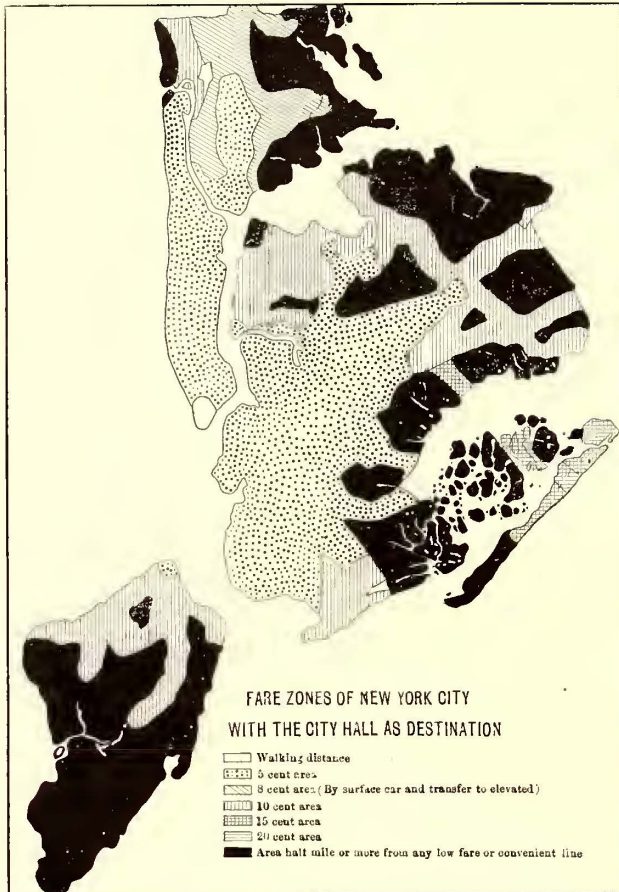
The principal advantage of the arrangement described is that no permanent investment in special substation apparatus is required. If at any time the lighting contract should be annulled the apparatus in the car could be utilized in any of the substations for additions or renewals. The only permanent investment involved was the construction of about one-half mile of high-tension line from the transmission line into the park.

Work has been begun for the extension of the electric service of the Long Island Railroad to Hempstead.

TRANSIT EXHIBIT AT THE CITY CLUB

The City Club of New York has recently had compiled a collection of several hundred pictures, blue prints, maps and charts illustrating various phases of transit operation in Europe and America. This collection formed part of the recent Exhibit of Congestion of Population at the Natural History Museum in New York. It was shown at

would travel downtown to their work. The map shows graphically that the subway would accommodate a territory merely adjacent to its line. Another map shows the territory in the upper part of Manhattan and in the Bronx that would be served by 10 subways on the supposition that this territory were built up solidly with five-story apartments. This map is reproduced herewith and is based on a capacity of each subway of 35,000 passengers an hour.



Street Railway Journal



MAPS SHOWN AT THE TRANSIT EXHIBIT IN NEW YORK

the club house last week and this week was moved to the Brooklyn Institute of Arts and Sciences.

The views shown include photographs and prints of the latest semi-convertible double-truck car used in Berlin and copies of Berlin traffic figures, a series of pictures of the Barmen suspended railway and of the short section recently built for exhibit purposes in Berlin, prints and photographs of the latest London County Council conduit plow, and a large number of photographs illustrating European practice in car design, car signs, fenders, wheel guards, brakes, heaters, etc.

In addition several large transit maps are presented of New York City. One of these shows the fare zones from the Manhattan City Hall. The cheapest means of transportation, not the quickest, are represented in this map. Allowance was made for a walking distance of about five minutes beyond the point where the fare increases. Most steam railroad lines were omitted, because of their higher fares or because an additional transit line has to be used to reach City Hall. The map gives a very clear idea of territory needing transit facilities.

Another map shows the territory that the present subway would serve if it were built up along the streets through which it runs with five-story apartment houses, and assuming that from every two families three persons

The commuters from the sections colored black on the map would fill all the subway trains on the 10 lines if only an average of three persons rode from every two families and traveled during two rush hours every way. The remedies suggested are: (1) That the new transit lines must be given far greater capacity than the existing subway, or (2) that the lines must be built both above or below the surface of every avenue, or (3) that most of the people must live so near their work as not to need transit lines during rush hours, or (4) that the city must spread east and west.

To show the possibilities of the third remedy suggested another map gives possible locations of factories outside of Manhattan. The map was prompted by the supposition that if factories continue to locate in Manhattan it will be practically impossible to handle the transit question and also on the acknowledged fact that life in tenements is not conducive to the best type of citizenship, and that, were it possible, it would be much better for workmen to live in single houses in the outskirts of the city within walking distance of their work. The sites recommended are for the most part along the shore front or steam railroad lines for easy access to freight transportation, and it is hoped that manufacturers can be induced to see that it will be to their economic advantage to select such locations. Already a start has been made.

EXAMINATION OF TRAINMEN BY THE AURORA, ELGIN & CHICAGO

The Aurora, Elgin & Chicago Railway completed during the past winter a thorough examination of all trainmen on its book of operating rules. The form of examination paper and the methods of filing the answers present some interesting features. The examination paper consists of twenty-five sheets on which are printed 193 questions with blank lines under each for the written answer. The sheets are of good bond paper, 8¼ in. x 10¾ in., and liberal space is allowed for answers, not more than eight questions being printed on each page. An employee presenting himself for examination is handed a set of these sheets and shut in a room by himself after first making sure that he has no copy of the rules about his person. He is required to answer in some manner every question on the sheets and is allowed all the time he wants to do so. On the completion

ords of demerits, etc. The deficient papers are kept as well as the successful papers.

The questions printed on the examination papers have been carefully selected to test the employee's specific knowledge of the rules and their application in ordinary train service and in emergencies. The first 11 questions relate to the general duties of every employee. Eight of these, printed in the first page of the examination paper, are reproduced herewith. The remaining three are as follows:

9. Do you understand that you are required to familiarize yourself with the location of all structures or obstructions along the line that will not clear you when on the top or sides of cars? Also as to the condition of equipment or track?

10. Do you understand that you are required to know all brake wheels, dogs, grab irons, hand holds, steps and all other appliances are in safe condition before using same?

11. Who are required to wear uniforms and badges when on duty?

TRAIN ORDERS

1. HAVE YOU READ THE RULES AND REGULATIONS OF THIS COMPANY GOVERNING THE EMPLOYEES OF THE OPERATING DEPARTMENT, AND DO YOU FULLY UNDERSTAND THE PROVISIONS THAT RELATE TO YOUR PARTICULAR DUTIES?
.....
2. DO YOU UNDERSTAND THAT YOU ARE REQUIRED TO HAVE A COPY OF THESE RULES AND THE CURRENT TIME TABLE WITH YOU WHEN ON DUTY?
.....
3. WHERE ARE THE SPECIAL INSTRUCTIONS TO BE FOUND?
.....
4. WHEN ARE BULLETIN BOARDS TO BE CONSULTED?
.....
5. ARE SPECIAL INSTRUCTIONS, WHETHER IN CONFLICT WITH THESE RULES OR NOT, TO BE FULLY OBSERVED WHILE IN FORCE?
.....
6. WHAT IS EXPECTED OF YOU WHEN YOU KNOW OF AN INFRINGEMENT OF ANY RULE OR SPECIAL INSTRUCTION?
.....
7. WHAT IS EXPECTED OF YOU WHEN THE MEANING OF ANY RULE OR SPECIAL INSTRUCTION IS NOT CLEAR TO YOU.
.....
8. DO YOU UNDERSTAND THAT IN ACCEPTING EMPLOYMENT WITH THIS COMPANY YOU ARE REQUIRED TO ABSOLUTELY OBEY ITS RULES AND ASSUME ITS RISKS?
.....

(1)

125. 1ST NO. 10 WILL CALL FOR ORDERS AT BUSHNELL'S BASIN SIDING 8. IF YOU WERE ON 1ST NO. 10 AND COULD NOT GET IN TELEPHONE COMMUNICATION AT BUSHNELL'S BASIN WITH THE DISPATCHER, WHAT WOULD YOU DO?
.....
126.
127. SUPPOSE 2ND NO. 10 DID NOT HAVE ABOVE ORDER AND ARRIVED AT BUSHNELL'S BASIN WITH 1ST NO. 10. WHAT WOULD SHE DO?
.....
128.
128. NO. 3, CAR 4, AND NO. 6, CAR 8, WILL MEET AT GARY SIDING. HOW WOULD YOU BE GOVERNED IF IN CHARGE OF NO. 3?
.....
129.
129. 1ST NO. 10, CAR 5, WILL MEET EXTRA 100 EAST AT PLEASANT HILL, EXTRA 32 AT INGALTON SIDING, AND EXTRA 4 AT SMITH'S SIDING. WHAT WOULD YOU DO UNDER THIS ORDER?
.....
130.
130. NO. 5, CAR 7, AND EXTRA 8 WEST, WILL MEET AT GARY'S SIDING EXTRA 8 WEST AND EXTRA 31 EAST WILL MEET AT WARRENVILLE. EXPLAIN THIS ORDER.
.....
131.
131. NO. 15, CAR 6, WILL CARRY SIGNALS, WHEATON TO EOLA JUNCTION, FOR CAR 30. EXPLAIN THIS ORDER AND SAY HOW IT MAY BE MODIFIED?
.....

(24)

TWO PAGES FROM THE TRAINMEN'S CATECHISM USED BY THE AURORA, ELGIN & CHICAGO RAILWAY COMPANY

of the examination the sheets are bound into a cardboard cover bearing the name of the employee and the date and are submitted to the superintendent of transportation for his inspection and marking. The answers are carefully looked over by him and graded on a basis of 100 per cent. A mark of 95 per cent is required to pass. If the employee fails to attain a grade of 95 per cent he is allowed two weeks for further study of the rules before taking another examination. In case he fails a second time he is suspended until he can pass. New men entering the service are allowed two months in which to prepare for the examination, but not until they have successfully passed are they given regular assignments with full responsibility. It is the intention to re-examine all employees once a year, regardless of their previous standing. The examination papers after being marked are filed in the office of the superintendent of transportation as part of the employee's records along with their applications for employment, recommendations, rec-

Following these general questions are 5 on standard time, 6 on timetables and their use, 13 on signal indications, 12 on train signals, 13 on whistle signals, 9 on bell signals, 5 on hand and lamp signals, 2 on fixed signals, 9 on use of signals, 57 on train rules, 42 on movement of trains by telephone orders and 8 on interpretation of train orders. One sheet of this last section is also reproduced as showing the general form and scope of questions. Motormen, in addition to answering the 193 general questions, must also answer 41 questions on the construction and handling of air brakes.

The advantages of the system are numerous. All employees are put on the same basis and must stand on their specific written answers to questions which are designed to thoroughly test their knowledge of the rules. A mark of 95 or higher is assurance that the employee knows what is required of him in the pursuit of his duties. There is no chance for using unfair methods when going up for ex-

amination, except smuggling in a rule book, which is carefully guarded against. But more than anything else is the record obtained in black and white of each man's familiarity with the rules and their interpretation, which is always available in placing responsibility and inflicting punishment for infractions of rules. Excuses of ignorance or misunderstanding have no standing in the face of the written evidence of presumptive knowledge.

SEMAPHORE SWITCH SIGNALS ON THE TERRE HAUTE, INDIANAPOLIS & EASTERN

All of the turnout switches on the Indianapolis-Richmond division of the Terre Haute, Indianapolis & Eastern have recently been equipped with supplementary semaphore arms operated by a wire connection from the switch rod. The semaphores were put in because it was difficult to see the ordinary switch targets or lamps at a safe distance, due to the interference of the pole line. The track is laid



HOME-MADE SEMAPHORE SWITCH SIGNAL

close to the highway with all poles, turnouts and switch stands on the inside, and it was not possible to change their position without encroaching on the highway. One of the semaphores is shown in the accompanying illustration.

The semaphores are home-made affairs and are mounted about 15 ft. above the ground on a stub pole set close to the switchstand. A pivot casting is attached to the back of the pole and a fixed lamp bracket is attached on the front side. The spectacle frame to which the semaphore arm is attached is made of 1-in. boards sheathed with thin sheet iron on the outside. It is made in two parts which straddle the pole and enclose the lamp. The arm is made of a 1-in. board 8 in. wide and 3 ft. long, having a notched end and painted red. The two halves of the spectacle frame are connected at the back with a ½-in. rod which carries eight circular cast-iron counterweight disks. These counterweights are sufficient to cause the arm to assume a horizontal position in case the connecting wire breaks or when the tension on it is released by the movement of the switch rod when opening the switch. The colored glass disks,

green for clear and red for danger, are mounted in holes cut in both sides of the spectacle frame. When the arm is down, indicating that the switch is set for the main line, the green disk shows in front of the lamp lens. When the arm is in a horizontal position, indicating that the switch is set for the turnout, the red disk appears in front of the lamp lens. An ordinary oil switch lamp with two white lenses is used. No lamp is now used on the switch stand, but the day target has not been removed.

The arm is held down when the switch is closed by a No. 6 galvanized iron wire attached to the spectacle frame at the upper end and running loose down the side of the pole to a small bell crank mounted on one of the switch stand ties. The other arm of the bell crank is connected by a ¼-in. rod, 12 in. long, to a clip put under one of the bolts connecting the switch rod to the stand. Both arms of the bell crank have a number of holes drilled in them for adjusting the throw so that full movement of the semaphore arm can be had corresponding to any movement of the switch.

EXPRESS SERVICE ON THE ILLINOIS TRACTION SYSTEM

On April 1 the United States Express Company began operating over the interurban lines of the Illinois Traction System, comprising a total of 425 miles. The express company has a contract with the electric line under which it pays half the wages of the trainmen running the express cars, a percentage of gross receipts at each station to the traction company's agent, who also acts as agent for the express company; and, in addition, a percentage of its total gross receipts is paid to the traction company for the privilege of operating over its lines. The traction company supplies the cars and terminal facilities. The United States Express Company formerly operated over the Chicago & Alton, but it has recently lost this contract. Under the new arrangement it now reaches the towns on the Chicago & Alton south of Bloomington by the electric line and also has a large new territory east of Bloomington and Springfield opened up to it, including the cities of Decatur, Champaign, Urbana and Danville. For the present a special express car will leave Danville every night at 8 o'clock, arriving in Springfield at 12 o'clock and leaving Springfield at 2 o'clock on the return trip to Danville, where it will arrive at 6 a. m. One or more cars will also be run between Springfield, Decatur, Bloomington and Peoria, and between Springfield and East St. Louis. The traction company will continue to handle its own package freight as before.

SOUTHERN PACIFIC PLANNING GASOLINE CAR SERVICE

It is said that within the next six weeks the Southern Pacific Railroad will place in service 60 new gasoline cars for the purpose of regaining some of the traffic that has been won by the electrics. The company, according to report, will give a service as frequent as that which prevails on the electric lines and an entire readjustment of rates of fare will be made to conform with those charged on the electric railways. The gasoline cars will each accommodate about 60 passengers. Because of its private right of way, the few stops necessary and the shortness of its line, the steam road hopes, with its new motive power, to regain much of its lost traffic, especially between Los Angeles and Pasadena. Where there is no trolley competition the gasoline cars will take the place of trains on short runs, thus reducing expenses.

CORRESPONDENCE

THE INTERSTATE COMMERCE CLASSIFICATION OF ACCOUNTS

SCRANTON, PA., April 1, 1908.

EDITORS STREET RAILWAY JOURNAL:

I have been following with interest the article published by you on Circular No. 20 of the Interstate Commerce Commission. The system of accounting prescribed is so complicated that street railway companies must begin by dismissing from their service many of their most worthy and valuable employees if the classification is to be lived up to. The reason for this is not that the present men do not understand railroading. They do and are fulfilling their duties ably and conscientiously. They have the mechanical instincts, the brawn and the muscle, but these qualities must now be considered as subordinate to book-learning and a capacity for drawing fine-spun accounting distinctions, whether the possessor is educated or uneducated so far as practical railway work is concerned.

The employment of the proposed system would practically mean the placing of a premium on education. This fact alone would no doubt be commendable were it not that the premium must be paid by the poor unfortunate who was obliged to begin work at an early age through loss of parents or some other circumstances beyond his control, and by the company as well, because it will often be found that the services of the practical man are much more valuable than those of the man the extent of whose ability is limited by his capacity to comply with the accounting system shown in Circular No. 20.

To the railway owners the proposition of installing the system must be most discouraging because of the resulting increase in operating expenses. With the use of the proposed accounting system many of them will see their profits vanishing and many others must no doubt conclude that in order to continue the service on their lines it will be necessary to draw periodically on their personal bank accounts. It is extremely doubtful if either of these plans will be popular, so that to keep the balance annually on the proper side of the ledger the company must adopt one of the three following methods: (1) A general reduction of employees' wages, (2) a general curtailment of service, and (3) an increase in the rate of fare. The first method will add to the breach at present existing between employer and employee; will cause annoyance and inconvenience to the public, the employees and the employer; will promote disorder and strife and will result in loss, suffering and all the other attending difficulties that follow labor disturbances. The second method of retrenchment would mean that the public would suffer by reason of long waits and the crowding of cars beyond their normal capacity; there would be a cry about the insatiable greed of railway corporations; civic pride would be entirely lost sight of and the growth of municipalities would suffer generally because it would be difficult to secure capital for the development of the street railway systems. The difficulty of securing the consent of the American people to the last method, or the reduction of fares, is too well known to require comment further than to say that if the Interstate Commerce Commission has the authority to inflict on operating companies a system of accounting that will add to their operating expenses they should be clothed with the further power to authorize such companies to employ a means of increasing their revenue to overcome the increase in operating expenses.

It is extremely doubtful if the ends which the proposed system is intended to meet will ever be secured, and, even if they are, all railway accountants will agree that the end does not justify the means. That there is small likelihood of there being anything like a fair degree of accuracy contained in the figures which might be made up through employment of the proposed system is best evidenced in the fact that the statistics compiled under the present accounting system, which is simplicity itself when compared with that proposed, are more often inaccurate than otherwise and require adjustment. The inaccuracies which appear with the present system are admittedly no fault of the accounting employees, but are the result of lack of education on the part of the under employees, an element which must always be considered in connection with current operating accounts. What is required is a system even more simple than the one used at present, and if the matter of arranging a standard system of accounting is left in the hands of men who have practical experience in that direction they will undoubtedly bend every effort to securing simplicity.

That the proposed system was compiled by expert accountants is evident throughout the entire classification, but that their knowledge of street railway affairs is limited is equally plain. They have evidently gone on the theory that steam and electric railway practice are largely the same and have failed to see why the accounts of the latter class of carrier companies should differ from those of the former.

I presume that the proposed system is intended for the protection of either the public, the investor or employee, collectively or individually. If I am correct in my conclusions the commission will find that it will have to do its work all over again as none of these persons is interested in placing the street railway interests in a position where they will fail as paying and profitable institutions.

I am unable to see wherein any benefits could be derived from a line of demarkation between large and small railway companies. The latter almost invariably operate at proportionately the same expense as the large road. All roads are constantly growing and it will not work out satisfactorily to permit a road that is annually earning \$49,000 to use one system of accounting and require it to change its manner of accounting when the gross earnings reach \$50,000. No doubt owners of roads that are now earning less than \$50,000 will dissent on this point, but if they admit the truth their chief reason will be found to be to escape, "temporarily at least," the unfair increase in operating expenses which they will encounter if they are obliged to employ the system as outlined in Circular No. 20.

W. W. MAY.

**BELFONTAINE-LIMA DIVISION WILL COMPLETE LINE
JUNE 15**

J. T. Adams, who has the contract for laying the track and ballasting the Bellefontaine-Lima division of the Ohio Electric Railway, expects to complete the work of laying the track this month. He will then begin ballasting. Mr. Adams says the line will be ready for service June 15. The bridge over Tucker Run has been repaired. It is a concrete structure and before the concrete had set the contractors began to fill it up to the parapet wall, with the result that part of it collapsed. The National Bridge Company, of Indianapolis, Ind., the builder, immediately repaired the damage, and the accident will in no way delay the opening of the line.

REPLY FROM MILWAUKEE ON THE INTERSTATE COMMERCE CLASSIFICATION

The following reply to the questions contained in the recent letter to the accounting officers of electric lines from the Interstate Commerce Commission has just been sent to Professor Adams, of the Commission, by the Milwaukee Electric Railway & Light Company. The letter is signed by C. N. Duffy, comptroller of the company:

Mr. Henry C. Adams, In charge of Statistics and Accounts, Interstate Commerce Commission, Washington, D. C.

Dear Sir:—Replying on behalf of this company to Accounting Series, Circular No. 20, dated Washington, Jan. 10, 1908, addressed "To Accounting Officers of Electric Lines," the circular states, "it is desired that reply to this circular be made not later than March 28, 1908." Circular No. 20, although dated Jan. 10, 1908, was not received at this office until March 2, 1908.

In compliance with your request for certain specific information as outlined in questions Nos. 1 to 11, both numbers inclusive, on pages 4 and 5 of Circular No. 20, the following is submitted:

1. Name of company?
2. Number of miles of line operated?
3. Number of cars operated under normal conditions?

The Milwaukee Electric Railway & Light Company, operating also Milwaukee Light, Heat & Traction Company, covers the following electric railway systems (overhead trolley):

(a) Milwaukee City System, the system operated in the City of Milwaukee, Wis., and to and in interurban points adjacent to the City of Milwaukee, Wis., comprising approximately 143 miles of single track (revenue track only, tracks in car houses, yards, etc., not considered) and an equipment of 398 double-track cars.

(b) Racine City System, the system operated in the City of Racine, Wis., comprising approximately 18 miles of single track (revenue track only, tracks in car houses, yards, etc., not considered), and an equipment of 20 single truck cars.

(c) Interurban System, composed of three interurban lines radiating from the heart of Milwaukee, Wis., to Oconomowoc, Wis., East Troy, Wis., and Kenosha, Wis., respectively, comprising approximately 138 miles of single track (revenue track only, tracks in car houses, yards, etc., not considered) and using approximately 15 miles of single track in the City of Milwaukee, Wis., with an equipment of 35 interurban motor cars and 60 interurban trail cars.

This makes a total, as shown in (a), (b) and (c) of approximately 299 miles of single track operated (revenue track only), and approximately 11 miles of single track (non-revenue, tracks in car houses, yards, etc.), or a total trackage of approximately 310 miles measured as single track with an equipment of 513 cars.

The average maximum number of cars operated per day in the year 1907 was 387, and the average car-hours per car per day was 11.5.

4. Do you favor dividing electric lines into two classes, as outlined in this circular?

No.

5. What limit, in your opinion, should be used as a line of demarcation indicating the distinction between a large and a small company?

If only one line of demarcation is to be drawn and that line based on "Gross Annual Revenue," then the dividing line should be \$500,000 gross annual revenue and not \$50,000. Furthermore, the question of having possibly three classes instead of two is worthy of careful consideration, as for example, the following:

(1) For companies having gross annual revenue of \$500,000 or less.

(2) For companies having gross annual revenue between \$500,000 and \$1,000,000.

(3) For companies having gross annual revenue of \$1,000,000 and over.

It may be that some basis other than "Gross Annual Revenue" could be taken as a line of demarcation, for instance, trackage, cars, etc.

6. What was the gross revenue of your company as shown in its last annual report?

\$3,926,469.28.

7. What would be the approximate aggregate charge to operating expenses for the year ending June 30, 1908, resulting from the application of the theory of depreciation to the equipment of your company as outlined in this classification? (In your reply, please explain in detail the method by which you arrive at the amount stated.)

Assuming that "equipment" means the physical property covered in "Tentative Classification of Expenditures for Road and Equipment" grouped under "Permanent Equipment," "Revenue Equipment" and "Service Equipment," the approximate aggregate charge to operating expenses for a period of one year would be about \$280,000, based on a "Depreciation Estimate" of 7 per cent per annum, as being the estimated depreciation over and above maintenance chargeable to operating expenses. "Permanent Equipment," as herein treated, is exclusive of "Cost of Road Purchased."

In its relation to "Depreciation," "Maintenance" is a most important factor. The measure and extent of "Depreciation" of physical property is dependent, in so far as wear and tear incident to use is concerned, on the amount of "Maintenance" expended in the physical up-keep of the property.

This "Depreciation Estimate" of \$280,000 is figured at 7 per cent per annum on the cost of reproduction on new, for the physical property covered in "equipment," approximately as valued by the Wisconsin Railroad Commission as of Jan. 1, 1907, plus additions and betterments made in the year 1907, subsequent to the date of the valuation. The depreciation charge of 7 per cent per annum is intended to provide only for depreciation resulting from deterioration and wear incident to use, without regard to obsolescence or supersession.

This company believes in the principle of "Depreciation" and the practical application of the principle in providing for depreciation in its accounts; it has recognized and applied this principle in its accounts since Jan. 1, 1897. The provision for depreciation has not been to the extent the company considered necessary, but to the extent it was consistently able to provide for and give to capital some measure of fair return on its investment.

Referring to "Consideration of Depreciation," as outlined in Circular No. 20 (pages 7 and 8) and with reference to "Depreciation Estimate," as laid down in other places in Circular No. 20, would it not be well to consider as a means of recognizing the principle of depreciation and the application of that principle, to suggest, or permit, or instruct, if you please, the "Accounting Officers of Electric Lines" to take from the gross earnings a certain percentage monthly, from 1 per cent per annum upwards, credit same to a "Depreciation Reserve Account" and distribute the sum so set aside in the proper operating expense accounts, so as to apply to the entire physical property. This in a way has been the method pursued by this company, the percentage of its gross earnings so set aside being practically 10 per cent since Jan. 1, 1897.

8. What is the present surplus (or deficit) from operation of your company, and in what particular years did it accumulate?

The surplus of this company, as per its books, at the close of business Dec. 31, 1907, was \$884,808.61, accumulated as follows:

Year.	Surplus.	Deficit.
1897.....	.....	\$26,447.91
1898.....	\$75,870.13	.....
1899.....	138,686.67	.....
1900.....	1,439.13	.....
1901.....	198,543.59	.....
1902.....	350,849.01	.....
1903.....	.....	77,264.15
1904.....	150,016.95	.....
1905.....	.....	120,207.64
1906.....	99,431.54	.....
1907.....	93,891.29	.....
Totals.....	\$1,108,728.31	\$223,919.70

9. Please give a list of joint facilities involved in the operations of your company?

This company has no joint facilities involved in its operation.

10. Do you consider the principles involved in the point facility accounts as applicable to electric railway carriers?

There is a question as to the practicability of applying to electric railway carriers the principles involved in the joint facility accounts, particularly on such interurban lines as use the tracks of urban companies in operating interurban cars into the heart of and through large cities, especially where the application of said principles would involve a complicated divi-

sion of fares to cover a complicated ownership or joint use of tracks. The principles involved in the joint facility accounts, as laid down in Circular No. 20, are sound and correct.

11. General criticisms:

In connection with suggestions made relative to establishing a line of demarcation indicating the distinction between a large and a small company, the advisability of considering two separate and distinct classifications of accounts may be proposed, one for "interurban railway systems," the other for "urban railway systems," as the construction and operation of one are quite different from the other.

The classification of accounts as outlined in Circular No. 20 appears to be essentially a classification better adapted to the conditions and wants of steam railroads rather than electric railways, and better suited to interurban electric railways than urban electric railways.

It should be borne in mind in speaking of urban electric railways that, in addition to surface lines in cities, there are elevated lines and subway lines as well.

This company operating two city systems of electric railways, aggregating 161 miles of single track, and an interurban system of electric railways, aggregating 138 miles of single track, has used continuously for a period of nine years the standard system of electric railway accounting of the Street Railway Accountants' Association of America (amplified for its specific purposes), and has found it not only fully adapted to its requirements for both its urban and interurban electric railway systems, but entirely satisfactory to the Wisconsin State Railroad Commission in making annual reports of the operations of the railway systems to that body.

The State of New York found the standard system of electric railway accounting of the Street Railway Accountants' Association of America adapted to its needs, not only for the surface, elevated and subway lines of the City of New York, but also the interurban lines of the State, and the same is true of the State of Illinois with reference to the elevated lines of the City of Chicago, as well as the interurban lines of the state. This is referred to here in view of statements made to the effect that the classification of accounts of the Accountants' Association was suitable only for urban electric railways and was not adapted to interurban electric railways.

The tentative classification of operating expense accounts adopted by the Accountants' Association of the American Street and Interurban Railway Association at its convention held in Atlantic City, October, 1907, was devised for the purpose of meeting the supposed wants of interurban electric railways and with the idea of conforming to the Interstate Commerce Commission classification for steam railways, in so far as was possible and practicable, consistent with the difference in conditions in the construction and operation of electric railways, as compared with steam railways, and at the same time meet the requirements of electric railways. This was accomplished, judged by the action of the convention of the Accountants' Association, in unanimously adopting the tentative classification, after a full and exhaustive discussion and debate of its features, endorsing its principles and the application of same, and with the conviction that the 50 primary operating expense accounts and the sub-accounts recommended were ample for the purpose of showing the results of the operation of electric railways from the point of view, not only of investors and managers, but State railroad commissions, or other like bodies who exercise or may exercise supervision over the operations of electric railways and their accounts, and the public as well.

The old classification of the Accountants' Association, with its 39 primary operating expense accounts and without any sub-accounts, used by electric railways for a period of ten years, officially adopted by the Association of Railroad Commissioners and used by the Bureau of the Census in gathering and compiling statistics of electric railways for the year 1902, has met all requirements, the 39 accounts being adapted for the wants of the largest electric railway systems and not burdensome for the smallest, by reason of the simplicity and flexibility of its construction and arrangement.

The classification of accounts outlined in Circular No. 20, consisting of 22 primary operating expense accounts for "small companies" and 116 for "large companies," does not prescribe sufficient primary accounts for a small company and too many for a large company. A classification of accounts, devised and applied for the purpose of reflecting broadly the results of the operation of a particular business, should be so constructed and arranged as to accomplish this by the application of correct

accounting principles in a practical manner to the peculiarities of the business dealt with and cover the specific conditions of the operation of that business. As you yourself, Professor Adams, once said in connection with this question, "Business cannot be put into a strait-jacket." To apply the classification of accounts as outlined in Circular No. 20 to the rank and file of the 481 electric railway companies whose gross earnings were published in 1907, would put the majority of them in a "strait-jacket."

The aims and objects of the Interstate Commerce Commission to bring about a uniformity of accounts for all carriers, whether operated by steam or electricity, should have the hearty support and co-operation of everyone in anyway engaged in the transportation business, whether passenger or freight, or both, electric or steam. The principles laid down to govern a classification of accounts to accomplish such a result, if these principles are sound and correct and practicable in their application, should be upheld and followed in all classifications of accounts of all railroads. This should obtain, whether dealing with steam or electric railways, urban or interurban, surface, elevated or subway lines in cities, or the operation of parts of the great railroad systems of the country, as they are now operated in part by electricity, notably the New York Central, or applicable to the operation of the present electric line now in operation underneath the Hudson River, or similar lines under construction and soon to be put into operation. Indeed, the question should be looked at from such a broad, comprehensive and practicable standpoint, as to anticipate and provide in advance for what within a few years may be a reality, namely, the substitution of electricity for steam, as a motive power, in all lines of railroad transportation.

TENTATIVE CLASSIFICATION OF OPERATING EXPENSES OF ELECTRIC RAILWAYS

Adjustment Accounts: The principles governing "Adjustment Accounts" for the treatment of "outside operations" are sound and correct, but the points as presented in Circular No. 20 would hardly be applicable to electric railways, generally, at least not in the manner and to the extent referred to, and it is questionable whether the questions are of sufficient importance to justify the application of the principles involved in the manner or to the extent suggested.

Availability Maintenance Expenses: Account 39, Care of Track, intended for and applicable to interurban electric railways, can be properly classified as a maintenance account without the qualifying term "Availability Maintenance."

The principles laid down with respect to "Availability Maintenance Expenses," governing charges under Accounts 40, Removal of Snow, Sand and Ice, and 41, Cleaning, Sprinkling and Oiling Roadbed, are not applicable to electric railways, as the character of the work performed chargeable to these two accounts does not deal with "maintenance," but with "operation" or "use." The principles involved in connection with the treatment of these two accounts are differently applied with reference to instructions under "Lubricating Cars" in Account 95, Car Supplies and Expenses. The lubrication of car journals dealing with the "operation" or "use" of the cars is classified, and properly so, under "Operation of Cars," while the up-keep of the car journals dealing with the "maintenance" of cars is classified, and properly so, under "Maintenance of Revenue Equipment."

There seems to be a difference and contradiction in the application of the same principles in connection with the treatment of "Availability Maintenance Expenses" under "Maintenance of Way and Structures" and under "Maintenance of Equipment," the latter having no "Availability Maintenance Expenses." Accounts 40 and 41 should not be grouped under "Maintenance of Way and Structures," but under "Transportation Expenses," and furthermore, there should not be any such group as "Availability Maintenance Expenses" under "Way and Structures" or "Equipment."

Account 42, Injuries to Persons, and Account 43, Other Miscellaneous Maintenance Expenses, are improperly classified when placed in a restricted way under "Availability Maintenance." The scope of these two accounts, if they are to be applied as outlined, should deal with "Maintenance of Way and Structures," broadly, and not restrictively to "Availability Maintenance" only.

Maintenance of Service Equipment: "Maintenance of Service Equipment" should be grouped under "Maintenance of Equipment," and not under "Maintenance of Way and Structures," as unquestionably the former is the correct subdivision for

"Maintenance of Service Equipment," for the reason that all the service equipment, except snow equipment, is used for other purposes than "Maintenance of Way and Structures," just as "Shop Machinery and Tools" are used for all purposes and properly classified under "Maintenance of Equipment." There is no separation under "Maintenance of Service Equipment" between the electric equipment of the work cars, electric locomotives, etc., and the cars, locomotives, etc., although there is such a separation as applied to the different types of revenue cars operated. This appears to be inconsistent. If a separation of the electric equipment is necessary or desirable in one case, it should be in the other, and unquestionably there should be a separation, especially in attempting to arrive at a charge for "Depreciation Estimate." Furthermore, the experience of electric railways has demonstrated that it is the best practice to carry the maintenance of all electrical equipment of cars, whether for "revenue equipment" or "service equipment," in one account, as these equipments are frequently shifted from one type of car to another.

General Expenses: It is not a desirable arrangement to group "Salaries and Expenses of General Officers" under one account, as provided in Account 106, nor "Salaries and Expenses of Clerks and Attendants" in one account, as provided in Account 107, as these accounts are neither one thing nor the other, with respect to the distinction as between what may be "salaries" and what may be "expenses."

Clearing Accounts: The six Clearing Accounts as prescribed can be made applicable to electric railways, and the principles governing same are sound and correct, but it would appear that if there is to be a clearing account for "Shop Expenses" that it should also include Account 62, Shop Machinery and Tools, and Account 63, Other Equipment Expenditures, and that "Work Equipment-Operation" should also include "Maintenance of Service Equipment," or these Clearing Accounts, as proposed, will deal only partially with the principles underlying the use of clearing accounts; on the other hand, the important question of drawing the line of demarcation and preserving the integrity of that line absolutely, as between what is "maintenance" and what is "operation" or "use," will be rendered impracticable.

The application and use of "Shop Expenses" as a clearing account would probably prove somewhat difficult on many electric railways; to treat "Insurance" and "Injuries and Damages" as clearing accounts is an innovation and a departure from former practices in electric railway accounts, but may be the solution of reconciling the differences in the treatment of these two latter accounts, as between steam and electric railways, especially as to "Injuries and Damages." As to "Insurance," the practice of electric railways to consider this as one of the "general expenses" of conducting the business, an executive or administrative proposition, rather than a departmental one, and by reason thereof, carrying all "insurance" in one account and grouping it under "General Expenses" is logical and the proper treatment of the question.

If the use of Clearing Accounts is to be so extensive, it might be well to add to the six prescribed an additional one, "Stationery and Printing."

The clearing account entitled "Injuries to Persons" should be entitled "Injuries and Damages," in order that the use and application of this account would be broadened, as indicated by the title, and not be restricted, as it would be, under the title "Injuries to Persons."

Number and Titles of Accounts, Their Grouping and Arrangement: The number of primary operating expense accounts prescribed by Circular No. 20, 116, is objectionable, unnecessary and in many instances impracticable; the number should be condensed into at least one-half of the number proposed.

The titles of many of the accounts are strange and unfamiliar; in a number of cases, the titles should be changed for more appropriate and comprehensive ones.

The grouping of the accounts, from the standpoint of electric railways, is not in accord with the best practice based on experience.

These questions are to a considerable degree of minor importance, being questions of detail rather than of principle, outside of the number of primary accounts, which is a matter of the greater importance.

Tentative Classification of Expenditures for Road and Equipment: In the text for Account 61, Interest and Commission, there is the following note:

"Discounts on securities issued for construction purposes or to raise funds for construction should not be charged to this account or considered as a proper charge against construction."

Discount on securities issued for construction purposes or to raise funds for construction is a "Capital Expenditure," whether such construction is in connection with a steam railroad or an electric railroad, and if not carried in "Expenditures for Road and Equipment," where is it to be carried?

Under the laws of the State of Wisconsin, bonds covering the construction and equipment of electric railways cannot be issued without the sanction and approval of the Board of Railroad Commissioners. The law provides that the bonds so issued may be sold at a discount, said discount not to be more than 25 per cent.

Discount on bonds issued and sold for the construction and equipment of steam or electric railways is as much a part of the cost of the construction and equipment as are the rails or cars.

This principle is sound and correct from an accounting standpoint, just, as far as the public is concerned, equitable, from the standpoint of investors, and a vital question that must be dealt with in financing railroads, steam or electric.

CONSULTING ENGINEERS TO THE RECEIVERS OF THE NEW YORK CITY RAILWAY COMPANY

On April 2 Oren Root, general manager for the receivers of the New York City Railway Company, published general order No. 12, as follows:

Effective this date, the firm of Ford, Bacon & Davis has been designated as consulting engineers to the receivers of the New York City Railway Company, with regard to certain improvements which are now being made in this property. The representative of Ford, Bacon & Davis acting in the capacity of chief engineer, will have his office at 621 Broadway, and will report to the general manager for receivers.

The architect, the engineer in charge of construction and the chief draughtsman will report to the chief engineer.

The electrical engineer, the engineer maintenance of way, the superintendent of equipment and the fire protection engineer will report to the chief engineer with regard to those matters of construction only as designated by the general manager for receivers from time to time.

The appointment of Lord, Bacon & Davis as consulting engineers for the receivers of the New York City Railway Company indicates the rehabilitation of the company's property on broad engineering lines. The work will be one for which the firm is well qualified, since it has acted in a similar capacity for many prominent city systems.

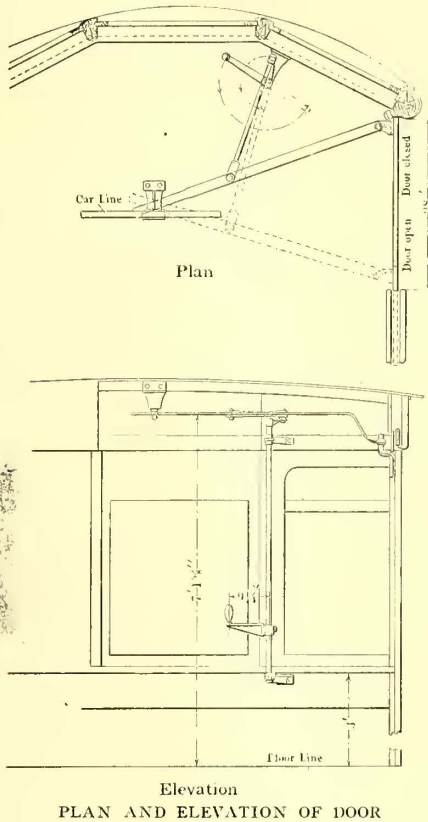
FIGURES OF STOCK VALUE IN CLEVELAND

After a full discussion of their differences Tuesday afternoon both Mayor Johnson and Mr. Goff presented their figures on stock valuations as a conclusion of the negotiations which have covered four months. Mr. Goff claimed \$58.75 as a fair value for the stock, without consideration for the franchises on the portions of the lines outside the city limits, and he asked the Mayor to take his claim of \$3 a share on this point into consideration. This would make his value \$61.75. Mayor Johnson set his figures at \$50 a share. He arrived at this conclusion by taking \$15,034,614 as the physical value of the property and \$3,980,340 as the franchise value. To the sum of these he added \$1,998,350 for good will. Everybody has waited long on his idea of good will and it seems to have been made to fill out the sum lacking to make the value of the stock \$50. The Mayor talked as if he were not willing to consider the outside franchises as worth anything.

The Mayor now states that the holding company will not attempt to operate the properties at a fare of 3 cents at once after they are taken over, but that this rate will come gradually.

MECHANICAL DOOR-OPENING DEVICE FOR PAY-AS-YOU-ENTER CARS

The Chicago City Railway Company is equipping its pay-as-you-enter type cars with a mechanical door-opening device to enable the motorman to open and close the exit door



PLAN AND ELEVATION OF DOOR

in the outside of the front platform without leaving his position at the controller. The operating handle is mounted on a vertical 1-in. shaft secured in brackets attached to the vestibule front to the right of the controller and brake valve. A short crank arm at the top of the shaft under the roof is connected by a link with the driving lever. The outer end of this lever, which is 2 in. x 3/8 in. x 30 in. long, is pivoted to a bracket on the edge of the door near the top. The inner end is reduced in width to 1 1/2 in. and slides in a bracket attached to the platform roof carline about on the center line of the car. To open the door, the operating handle is turned 180 deg. to the right. The operating handle is made so that it can be removed from a dove-tail socket in the fixed sleeve on the vertical shaft, to prevent tampering by passengers on the rear platform when the direction of running is reversed. The proportions of the levers and links are designed for a 28-in. door opening, and adjustment is provided for by making the connecting link with right and left threads on the ends as in a turnbuckle.

This paper is indebted to H. B. Fleming, chief engineer of the Chicago City Railway Company, for the accompanying drawing of the application of the device.

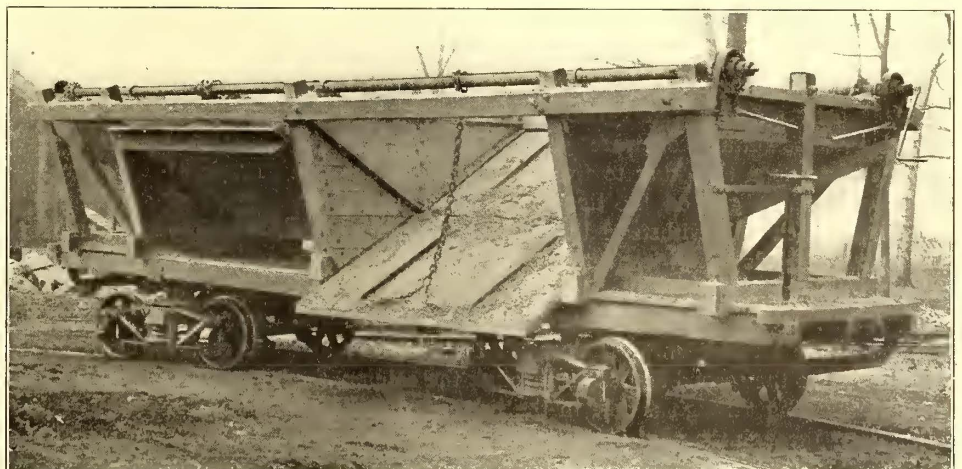
CHANGES IN NEW ORLEANS

It has been announced that Hugh McCloskey, who is now chairman of the board of directors of the New Orleans Railway & Light Company, will be elected president of the company at the next meeting of the directors, which will occur April 13. Mr. McCloskey has been a director of the company for a number of years, and is a member of the firm of McCloskey Brothers, prominent commission merchants of the city. He is also president of the Dock Board. Mr. McCloskey's election to the presidency is the natural result of the change in ownership of the property, 75 per cent of whose stock has now been acquired by local capitalists in New Orleans. E. C. Foster, present president of the company, intends to remain in New Orleans and will be actively interested in the company.

Mr. Foster went to New Orleans in 1903 under a five-year contract to take charge of the property which was then controlled by New York banking interests. When the property went into the hands of receivers on Jan. 1, 1905, Mr. Foster was appointed one of the receivers. It was taken out of the hands of the receivers on July 16, 1905, and since this time the change in control mentioned above has occurred. During the five years in which Mr. Foster has had charge of the property, the gross receipts of the company, which include the railway, gas and electric lighting interests of the city, have increased 50 per cent.

SIDE-DUMPING GONDOLA CAR USED IN BIRMINGHAM

In the accompanying illustration is shown a homemade side-dumping gondola car used by the Birmingham Railway, Light & Power Company in hauling ashes away from its power station. The car is 27 ft. 4 in. over all and 8 ft. 9 in. wide, its capacity being 12 cu. yd. It has two central compartments with hinged shelves which can be tilted to discharge on either side of the car, on both sides simultaneously, or on one side from one compartment and on the other side from the adjoining compartment. At each



SIDE-DUMPING GONDOLA CAR

end is an extension of the central compartment which helps in the securing of the necessary capacity.

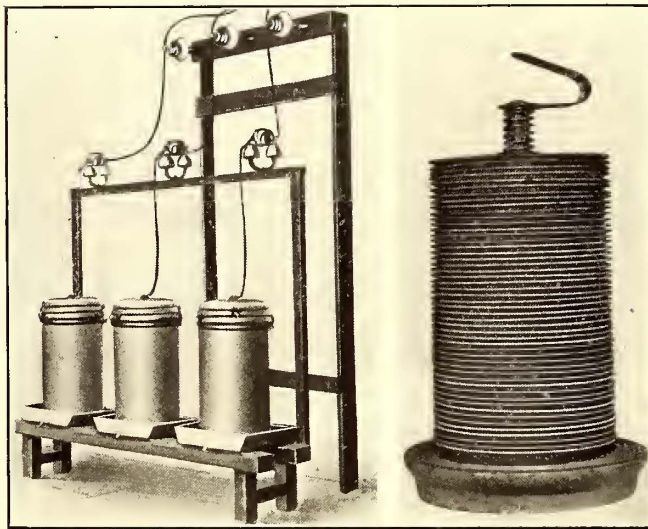
The timbers used in the floor and framing are of pine. The principal framing is 5 in. x 7 1/2 in. and 5 in. x 8 in. in cross section, the cross framing being of the smaller size. The braces are 4 in. x 5 in. and the floor sills are 1 3/4 in. x 11 in. The car is supported on two trucks, 15 ft. 7 in. apart on centers, with 24-in. wheels and 4-ft. 4-in. wheel base.

The draw-bars are the standard of the Birmingham Railway, Light & Power Company.

The swinging shelves or hopper bottoms are operated by $\frac{5}{8}$ -in. wrought-iron chains, which are wound up or released upon two shafts of double-strength wrought-iron pipe rods, one shaft being located on each side of the car. Each shaft is 3 in. in diameter and is operated by cranks at its ends, ratchets and brakes being provided to hold the bottoms of the hoppers at any desired angle. The car is fitted with hand brakes, weighs 15,200 lb. and cost \$685.78.

ELECTROLYTIC LIGHTNING ARRESTERS

As the result of experiments covering a number of years the Westinghouse Electric & Manufacturing Company has developed the electrolytic lightning arrester shown in the accompanying illustrations. It consists of a number of aluminum plates pressed into tray form so that when set one within the other, separated by small insulating washers, they may be built into a column capable of withstanding high voltages and still retain the safety valve characteristics



ELECTROLYTIC LIGHTNING ARRESTER

of a single plate. These columns are made in two sizes, one for voltages between 4000 and 7500, the other for voltages between 7500 and 15,000. The columns are enclosed in substantial stoneware jars. The jars may be mounted one upon the other to form arresters for any desired voltage. A gap on the line side of the electrolytic elements, which will withstand the normal voltage of the system, breaks down with over-voltage and permits the surge to discharge through the electrolytic units.

The electrolyte is dissolved in pure water and poured into the top of the arrester unit. It thus fills the first tray and runs over into the second and so on through the column, the surplus escaping through a hole in the bottom of the containing jar through the next jar, if there be more than one, to the pan at the bottom.

The electrolyte fills only the trays and not the jar, so there is no opportunity for the current to pass except from tray to tray. Each unit when placed in the pan or on another unit automatically makes contact.

The electrolytic solution causes a very thin film to form on the aluminum plates. This film has an apparent resistance of very high value when moderate voltages are impressed upon it, but when the voltage reaches a certain value it breaks down in myriads of minute punctures, making almost a short circuit. As soon, however, as the voltage

is reduced again the punctures seal-up at once and the original high resistance reasserts itself. These arresters are arranged for installation either indoors or out, as suits the convenience of the user.

ELECTRIC KALEIDOSCOPE

A colored electric sign which embodies a number of new features for which patents are pending has just been placed on the market by the Empire Electric Sign Company, of New York. It is arranged on the principle of the kaleidoscope, and according to the number of circuits and colors gives a variety of combinations of colors and designs ranging from a few to an infinite number. The idea briefly is the illumination of colored compartments by means of clear lamps, the effect produced depending upon the ingenuity of the designer in working out the details of the color-scheme and the arrangement of the circuits.

In order not to interfere with the distribution of light, no glass is used over the sign. In the signs so far made a central ruby lamp is kept lighted all the time, and the remaining lamps in the colored compartments are flashed in groups by means which are patented so as to throw on symmetrical designs. The lamps used are 2 candle-power with a consumption of 12 watts, and as not more than half the lights of a sign are in use all the time the cost of illumination is very small, amounting for a 53-lamp sign to about 3 cents per hour. The sign can be adopted for an attraction by being used for its color effects only, or it can be used as an advertising medium in connection with a permanent sign, or the changing color effects and the permanent sign can be combined as has been done by providing a changing border for a sign. The management of Luna Park, Coney Island, proposes this summer to use a number of these kaleidoscopes as attractions and will mount 48 of them on its central tower, thus converting it into a scintillating and brilliant display. Another sign, intended for a street railway park, will advertise a roller coaster. There will be a permanent sign calling attention to the coaster and a kaleidoscopic center affording beautiful color effects in the sun.

A KEY-LOCKING SOCKET

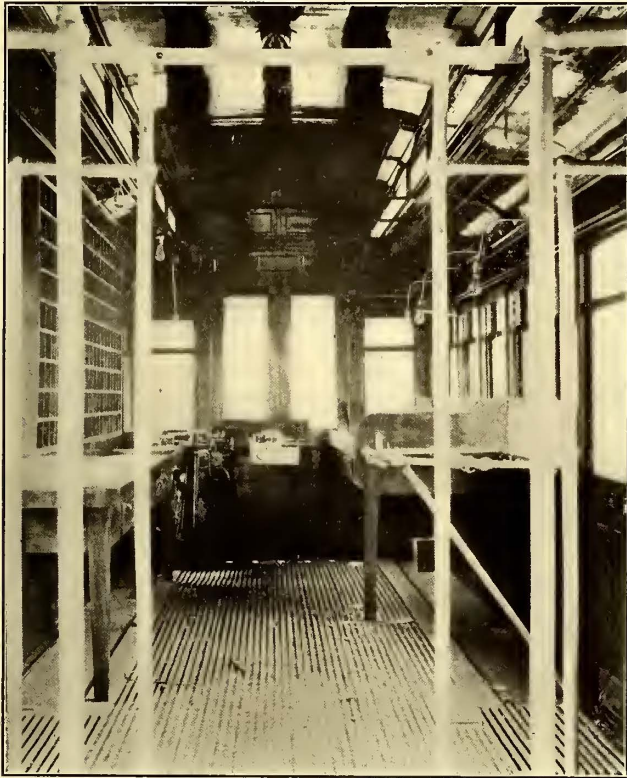
A special lamp socket has recently been placed on the market by the General Electric Company which should prove of value to hotel managers, factory owners, managers of amusement resorts and others who suffer lamp losses by petty thievery. In the old style of locking socket the lamp was held rigid in the socket, and attempts to remove it generally resulted in breaking the globe. In the new style the screw shell turns freely and the lamp cannot be removed until the shell is locked with the key. The addition of the locking feature has been made without detracting in any way from the neat appearance of the standard socket. The locking socket should appeal especially to users of the higher-priced tantalum and tungsten lamps.

EXTENSION FOR FILING INTERSTATE COMMISSION REPORTS

Word has just been received by the office of the American Street & Interurban Railway Association that Prof. Henry C. Adams, in charge of statistics and accounts of the Interstate Commerce Commission, has granted an extension of time in which to make answer to Circular No. 20, from March 28, 1908, to May 5, 1908.

POSTAL CAR IN CLEVELAND

A postal car was put into service in Cleveland last week that had been fitted out in the shops of the Cleveland Electric Railway Company under the supervision of T. Scullen, master mechanic. It is one of the ordinary 30-ft. cars used by the company for some time but rebuilt so as to meet the



CLEVELAND MAIL CAR SHOWING POSTAL RACKS

demands of the postal service. To all intents it is the same as the cars used on the steam roads. A letter rack occupies the space toward the rear on the left side of the car, while a sorting table and bag rack take up a like space on the other side. At the end is a canceling machine. The clerks are enabled by means of these accommodations to

down for a slide door. This is provided with hand-holds and a step for the convenience of the clerk who takes up the mail from the boxes along the streets. A slit for mailing letters on the car is cut in the door, the same as in regular postal cars.

The front end is used for the through mail bags, made up at the branch offices or substations. It is separated from the rear by a partition made of iron pipes, as will be seen from the accompanying illustration. Racks are provided for the bags. This mail is ready for the regular mail trains and the clerks do not have to handle it until they reach the main office.

The vestibules are the same as in the ordinary cars. The doors have been left at each end, so that they may be used when necessary. The train crew, it is understood, will be furnished by the street railway company.

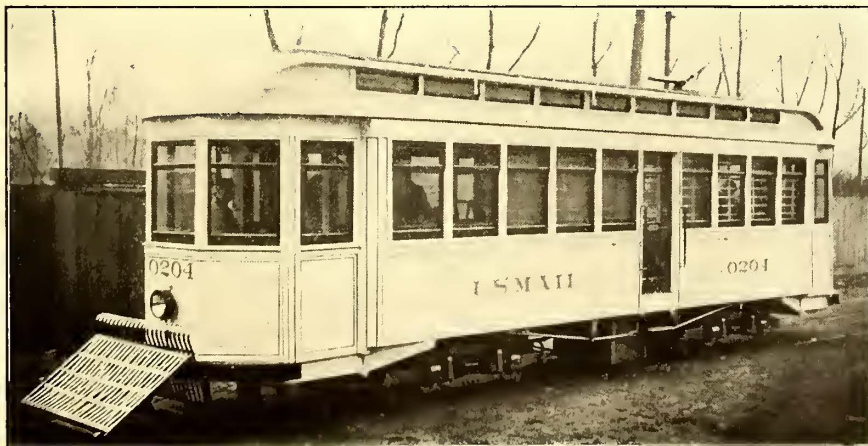
The exterior of the car is pure white, the car number and the lettering being in gold.

Lamps dropped from the sides of the car furnish light for the clerks at night. As several lines are operated all night, the postal car can be run night and day if necessary.

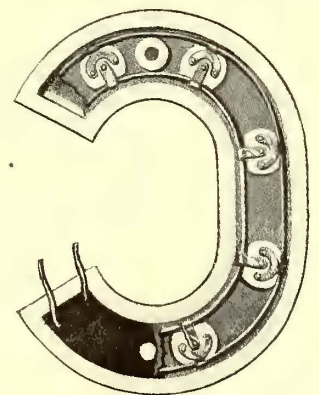
The car will make nine trips a day over the following route: Public Square to West Side station, to St. Clair Avenue N. E. and East Fifty-fifth Street, to Euclid Avenue and East 105th Street, to Broadway and East 105th Street, to Woodland near East 105th Street and back to the Public Square. The first trip will begin at 1:30 a. m. and the last will be completed at 11:04 p. m. Through the courtesy of the Cleveland Plain Dealer the accompanying illustrations are presented.

PORCELAIN SIGNS

The extension of the activities of electric railway companies into the park business has created a demand for electric signs which are at one time conspicuous, economical and durable. A great deal of inventive ingenuity has been devoted to this subject and has developed among other results the porcelain illuminated letter sign. The letters are concave on their face and of such form that they reflect the light in parallel rays. The lamps employed are especially designed and usually of about 2 cp. They are set



EXTERIOR OF CLEVELAND MAIL CAR



BACK OF PORCELAIN SIGN SHOWING WIRING

handle the mail gathered from boxes along the street and the local mail put on the car at the substations and have it ready for delivery on arrival at the main office. The foreign mail will also be sorted on the car and made ready for the outgoing bags when the post-office is reached.

Midway of the body one of the windows has been cut

into the concave face of the letter so that the entire interior surface is illuminated and a sharp defined outline is secured. The accompanying illustration shows the method of wiring sockets employed by the manufacturers, the Colonial Sign & Insulator Company, of Akron, Ohio. The wiring is shown in the cut, but in practice it is covered.

FINANCIAL INTELLIGENCE

WALL STREET, April 8, 1908.

The Stock and Money Markets

The stock market during the greater portion of the past week has been extremely quiet and the movement of prices as a rule has been in a downward direction, although much less important than of late. The uncertainty which has for some time surrounded the financial affairs of the Erie Railroad Company, which at frequent intervals has led to more or less talk of a receivership and which has only just been cleared up through the decision of the directors to extend the company's \$5,500,000 maturing short-time notes, has been largely responsible for prevailing conditions in the stock market, for while this matter remained in doubt there was very little disposition on the part of either speculators or investors to take on new commitments. Even now that the financial plans of the Erie have been made known, the market still continues dull and dragging and there does not appear to be much prospect of any relief from existing conditions for the present. It is true that money is virtually a drug on the market, which under ordinary conditions would lead to a greater or less demand for securities of all classes. Nevertheless, the uncertain political situation, the continued cutting of dividends by railroad and industrial corporations, the Atchison Railway and International Paper Company being the latest and most important cases in point; indications of some slackening in the iron and steel trade; the declining tendency in the copper-metal market; the fact that an unusually large number of men are now out of employment in various parts of the country, and the comparatively small earnings of the railroads all tend to offset the influence which the enormous supply of money should have upon the general stock market.

About the only source of comfort to be noted in the present situation is that, while the market shows a sagging tendency, there has been almost a complete absence of liquidation of long stock and the decline has been almost entirely due to selling by bearish professional operators. No serious losses have been recorded, although nearly all stocks have sustained greater or less declines. By many the reaction is looked upon as perfectly natural in view of the practically unbroken advance that had taken place for three or four weeks prior to the one under review, and consequently the market is regarded by these people as now being in a somewhat healthier condition.

It is noteworthy that the local traction shares have been much better sustained than have been the general run of railroad and industrial stocks, even though there have been no important developments to account for this state of affairs. However, it is recognized that with the advent of spring weather, the earnings of all these companies, and particularly of the Brooklyn Rapid Transit Company, are bound to increase, and for this reason, if for no other, this class of stocks has been accorded exceptionally good support.

Metals

There has been no improvement in the steel trade during the past week. Business in practically all lines continues quiet. The United States Steel Corporation is probably doing about 45 per cent of the normal business, as against 50 and 52 per cent a few weeks ago. The copper metal market is, if anything, somewhat easier, and business is extremely quiet. Quotations are barely steady at 12 $\frac{7}{8}$ @ 13 $\frac{1}{2}$ c. for lake, 12 $\frac{3}{4}$ @ 13c. for electrolytic, and 12 $\frac{1}{2}$ @ 12 $\frac{3}{4}$ c. for castings.

Philadelphia

The dullness prevailing in the general securities market was reflected to a great extent in the public utilities issues during the past week. Trading in this department was upon an extremely small scale, but prices generally displayed firmness. Philadelphia Rapid Transit, after an early decline from 17 $\frac{1}{4}$ to 16 $\frac{3}{4}$, recovered to 17, while Philadelphia Traction advanced from 86 to 86 $\frac{1}{2}$. Union Traction moved up from 51 $\frac{1}{2}$ to 52 $\frac{3}{4}$. Consolidated Traction of New Jersey sold at 65, United Railways Investment Company of San Francisco at 16, United Com-

panies of New Jersey at 240, American Railways at 42 $\frac{3}{4}$ and Philadelphia Company preferred at 37 $\frac{1}{2}$.

Baltimore

Extreme dullness prevailed in the traction issues at Baltimore. Trading included only a few issues and while weakness was shown in spots, the general trend of prices was upward. United Railway 4s sold at 85 $\frac{1}{2}$, and the incomes at from 50 $\frac{1}{4}$ to 50 $\frac{3}{4}$. The funding 5s, however, declined from 76 $\frac{3}{4}$ to 76. The stock sold at 11 $\frac{1}{2}$ @ 11 $\frac{7}{8}$. Norfolk Railway & Light 5s advanced $\frac{1}{2}$ to 88 $\frac{1}{2}$, and Macon Railway & Light 5s sold at 90.

Other Traction Securities

The trading in the Boston market was quiet, but was accompanied by generally higher prices. Boston Elevated was firm at 129, and West End issues advanced a point, the common to 87, and the preferred to 102 $\frac{1}{2}$. Boston & Suburban advanced from 10 to 12 $\frac{1}{2}$, and the preferred to 51. Boston & Worcester preferred sold at 56, and Massachusetts Electric preferred rose to 46. The Chicago market was extremely quiet and devoid of interesting feature. South Side Elevated at an advance of a point to 61 reacted to 60. Chicago & Oak Park sold at 2 and the preferred at 8. In the bond department sales of Chicago Railway 5s were recorded at 96 $\frac{3}{4}$ and City Railway 5s at 96 $\frac{1}{2}$.

Security Quotations

The following table shows the present quotations for the leading traction stocks and the active bonds as compared with two weeks ago:

	March 24.	April 6.
American Railways	42	42 $\frac{1}{2}$
Boston Elevated	129	129
Brooklyn Rapid Transit	47	45 $\frac{1}{2}$
Chicago City	155	155
Cleveland Electric	41 $\frac{1}{2}$	41
Consolidated Traction of New Jersey	64	64 $\frac{1}{2}$
Detroit United	33	31
Interborough-Metropolitan	7 $\frac{1}{2}$	7 $\frac{1}{2}$
Interborough-Metropolitan (preferred)	18 $\frac{3}{4}$	20
International Traction (common)	33	33
International Traction (preferred)	60 $\frac{3}{4}$	62
Manhattan Railway	125	118
Massachusetts Elcc. Co. (common)	10	10 $\frac{1}{2}$
Massachusetts Elcc. Co. (preferred)	45	45 $\frac{1}{2}$
Metropolitan Elevated, Chicago (common)	15	16
Metropolitan Elevated, Chicago (preferred)	47	48 $\frac{1}{2}$
Metropolitan Street	—	17
North American	48	50
Philadelphia Company (common)	35	36
Philadelphia Rapid Transit	18 $\frac{1}{2}$	17
Philadelphia Traction	86	85 $\frac{1}{2}$
Public Service Corporation, certificates	58	—
Public Service Corporation, 5 per cent notes	85	—
South Side Elevated (Chicago)	261	60
Twin City, Minneapolis (common)	—	83
Union Traction (Philadelphia)	52	52

a Asked.

ASSOCIATE MEMBERSHIP IN THE A. S. & I. R. A.

Secretary Swenson has just published a booklet descriptive of the associate membership in the American Street & Interurban Railway Association, with the purpose of increasing the number of this class of members. The pamphlet issued by Secretary Swenson describes the privileges to which associate members are entitled, which include eligibility to attend the conventions and to obtain a cloth bound copy of the proceedings of the Engineering and Transportation and Traffic Associations, and such of the proceedings of the American Association as are printed and generally distributed.

Associate membership should appeal to a large number of persons; among them officials of member companies who desire closer and more personal relations with the association and personal copies of the proceedings, officials of non-member companies who wish to attend the conventions and receive copies of the proceedings issued to associate members, manufacturers' representatives who desire to keep in closer touch with the practical operating side of the industry, bankers and financial firms, consulting engineers and college professors and students. All of these interests are represented in the present associate membership. A list of the associate members of the association is printed in the pamphlet, and all of them are urged to increase the number of associate members of the association.

HUNTINGTON DENIES HARRIMAN PURCHASE

"Not a particle of truth in the statement," is the wording of a telegram received in Los Angeles on March 31 from Henry E. Huntington, who, in this manner, denies absolutely all rumors and newspaper stories to the effect that he has disposed of his interest in the Pacific Electric Company and the Los Angeles Railway Company to E. H. Harriman.

For some time past reports have been rife, both in New York and on the Pacific Coast, to the effect that all of Mr. Huntington's street railway holdings in Southern California have been absorbed by the Southern Pacific interests. The deal was supposed to involve a transfer of stock worth about \$50,000,000. If the story were true, it would mean that Mr. Harriman would dictate the future policy of the Pacific Electric Company, Los Angeles-Pacific Company, Los Angeles Railway Company, Los Angeles Interurban Railway Company, Los Angeles & Redondo Railway Company and the Pacific Light & Power Company.

Mr. Huntington has definitely settled all rumors that he anticipates giving up the electric system he has constructed in the Southwest, and confirms the denials of his son, Howard E. Huntington, and other influential Los Angeles officials of the Huntington lines. It is believed that, when Mr. Huntington returns from New York to Los Angeles, as he expects to do within the next thirty days, he will have with him plans for still greater extensions and improvements in his electric and other holdings in Southern California. In the light of Mr. Huntington's positive denial, the only electric railway property owned by Mr. Harriman in Southern California is the Los Angeles-Pacific Company.

JOINT RATES REQUIRED ON THE NORTHWESTERN

A case has recently been decided by the Interstate Commerce Commission between the Cedar Rapids & Iowa City Railway & Light Company and the Chicago & Northwestern Railway Company. The former is an electric line built on its own right of way from Cedar Rapids, Ia., to Iowa City, about 27½ miles in length, and owning six passenger cars, one express car and six freight cars. It engages in interstate transportation and some time ago requested the Chicago & Northwestern Railway Company to join with it in establishing through routes and joint rates between interstate points on their respective roads. This request was declined by the steam railroad company, who claimed that the electric railway company was not a "full fledged" railroad, that it was not the policy of the Northwestern Railway Company to make such arrangements with electric lines that cannot reciprocate with the exchange of equipment; that such arrangements with small lines that are unable to furnish their percentage of equipment constitute one of the chief causes of the inability of the larger carriers to meet their demands; that the usual result of such an arrangement is that the larger carriers have to furnish equipment for the entire traffic of such lines, and this the steam railroad did not consider a good proposition.

The electric railway company, however, appealed to the Interstate Commerce Commission and in its application was joined by some shippers on its line. The commission went into the subject very carefully, considered the needs of the shippers on the line and concluded that there was sufficient traffic to justify the commission in ordering the establishment of through routes and joint through rates for a number of the cities on the electric line. It therefore required the establishment of such rates not to exceed by more than 10 per cent the class and commodity rates of the Northwestern Railway Company between Chicago and common points and Cedar Rapids for the transportation of interstate traffic on the electric line.

BULLETIN ON WAGES

The American Street & Interurban Street Railway Association has just published bulletin No. 102, giving rates of wages paid by different street railway companies to substation men, ticket agents, switchmen, starters, machinists, blacksmiths, carpenters, etc. This bulletin is intended to be supplementary to bulletin No. 101 in which data were given on wages paid to conductors and motormen. The statistics are subdivided under the heading of "city lines only," "interurban lines only," and "both city and interurban lines," and are subdivided again as to whether the rate is paid cents per hour, dollars per day or dollars per month.

BOSTON ELEVATED AND WEST END CONSOLIDATION APPROVED

The Massachusetts Railroad Commission has sent to the Legislature a decision in favor of allowing the consolidation of the Boston Elevated Railway Company and the West End Street Railway Company along the lines proposed in House Bill 1253. The decision is in answer to the following four questions submitted to the board by the general court:

1. What public benefit, if any, would accrue from the passage of House Bill 1253, which provides for the consolidation of the properties, privileges, and franchises of the Boston Elevated Railway Company and the West End Street Railway Company.

2. What benefit, if any, would accrue to the stockholders of the West End and the Boston Elevated by the above consolidation?

3. Whether or not under the terms of the bill, the consolidation would allow the transportation of freight or baggage over the tracks of the Boston Elevated Railway Company now prohibited by law?

4. Whether the rights of the public are fully safeguarded under the bill, and what are the recommendations of the Board in that respect?

Under 1 the board holds that the Legislature of 1887 declared the principle of consolidation as applied to street transportation in Boston and vicinity, and that the conditions to-day are not essentially different from those obtaining at the time, as well as at the time when the later elevated incorporation acts and lease of the West End were approved. The West End lease does not expire for 14 years. At the end of that time, in the absence of legislative authority, the Boston Elevated will cease to operate the West End, and the surface lines will therefore revert to a management separate and distinct. Boston and its vicinity would then be served by two independent transportation companies, in part connecting and in part competing. This would involve duplication of power stations and many other instrumentalities which are necessary for the operation of the road and to give a reasonable service to the public. The board believes that the conditions resulting from the operation of two such companies as independent and distinct systems would be unsatisfactory to the traveling public and that a single management should control the operation of both systems. One organization makes for efficiency of service as well as for economy to the company. The board has no fear that the consolidation, under the Massachusetts laws, will be a monopoly defiant of the law or heedless of the people's will.

Under 2 the board cannot see that the consolidation would be a gain to the stockholders of either company, and can only outline conditions and speculations as to the effect on stocks now held, without arriving at a definite conclusion. It feels sure, however, that the public interest can be properly safeguarded.

In regard to 3, the board assumes, under the conditions, that the legislature wishes to know whether the Boston Elevated will acquire any new or additional rights for the transportation of freight or baggage over any of its tracks, either owned or separated, exclusive of the tracks of the West End Street Railway Company. The board suggests the insertion of appropriate words to make the statement clearer and to limit, if it desires, the Boston Elevated Company.

In regard to 4, the board submits the following specific suggestions for the consideration of the Legislature:

First: An affirmative recital in the bill that the Boston Elevated shall be subject to all the duties, obligations, restrictions and liabilities of the West End under existing laws not in conflict with the express provisions of the act.

Second: An affirmative recital in the bill that the Boston Elevated shall not, in respect to any railway owned or operated by it, other than the West End, acquire any rights or privileges by virtue of the act additional to those possessed or enjoyed by it, except such as are expressly granted therein.

Third: That the act shall not be construed as, or taken to be an extension for any purpose of the 25-year limit as fixed in the act of 1897.

Fourth: That the Boston Elevated shall be subject to all the general laws of the Commonwealth now or hereafter in force, except as expressly stated in the act.

Fifth: The facilities of travel on the railways of each of the companies to be consolidated shall not be diminished, or the rates of fare increased by reason of the act or the consolidation.

Surrounded by such restrictions as the Legislature may determine, and safeguarded by an approval by some tribunal of the terms of the consolidation, the board has no hesitancy in declaring that the consolidation is in the public interest.

AFFAIRS IN NEW YORK

In reply to a request for information from Chairman Willcox, of the Public Service Commission, Bridge Commissioner Stevenson has transmitted reports by C. M. Ingersoll, chief engineer of the department; Prof. William H. Burr, of Columbia College, and Leon S. Moisseiff, relative to the Brooklyn Bridge structure. Prof. Burr says in his report:

The heaviest Brooklyn Rapid Transit trains now running over the bridge consist of four motor cars and two trailers, the six cars loaded weighing 236 tons. This is the weight of train considered in the report of the commission to which allusion has already been made. It was shown in that report that with such trains moving at a maximum speed of 15 miles per hour, with a headway of 45 seconds, and with trains separated by not less than 700 feet between them, making a total of 80 per hour, the greatest stresses in the cables, suspenders, towers, anchorages and stiffening trusses would be "safe and prudent," it being the intention at that time to replace the floor system as soon as practicable, which work is now in progress. It is unnecessary to repeat here the details of this conclusion, as they will be found stated in full in the report of Dec. 31, 1906. It is clear, therefore, that the present use of the bridge, with the Brooklyn Rapid Transit trains running in the manner described, up to a limit of 80 trains per hour, cannot be productive of any conditions causing danger to the structure.

It has been proposed to operate six motor car loaded trains, weighing 275 tons each, at the same maximum speed and with the same clear headway as with the trains consisting of four motor cars and two trailers. If this should be done, the resulting total cable stress would not be increased more than 2½ per cent, with other stresses throughout the structure increased in a somewhat greater percentage, but still remaining within safe limits.

In fact, I see no reason for varying the conclusion which I expressed to you in my communication of April 3, 1907, as follows: "It is my judgment that it is entirely reasonable and safe to run the proposed six motor car trains over this bridge." In view of the results of these computations, and of my investigations of the structure repeatedly made under the present traffic, I have no hesitation in expressing my judgment that trains composed of the six motor cars described above, operating under their own power and with a fixed headway and spacing, cannot so affect the bridge as to cause any dangerous conditions.

The proposed operation of 80 trains per hour involves the installation of the signal system now contracted for and soon to be completed.

The efficient system of inspection under which the structure is maintained has resulted in replacements, the correction of misfitting members originally placed in the stiffening trusses, and the improvement of many details, until it may now be confidently stated that the bridge has never been in as satisfactory condition of capacity to carry traffic as at present.

The Public Service Commission for the First District on April 6 began advertising for bids for the construction of the Fourth Avenue subway in Brooklyn. This subway runs from the Brooklyn end of the Manhattan bridge under Flatbush Avenue extension to Fulton Street, under Fulton Street to Ashland Place, under Ashland Place to Fourth Avenue and under Fourth Avenue as far as Forty-third Street. The work is divided into six sections, and separate contracts for each section will be let. Nothing will prevent one contractor from bidding on all six sections. The six sections are as follows: On Flatbush Avenue extension from Nassau Street to Willoughby Street; on Flatbush Avenue extension and Fulton Street from Willoughby Street to Ashland Place; on Ashland Place and Fourth Avenue from Fulton Street to Sackett Street; on Fourth Avenue from Sackett Street to Tenth Street; on Fourth Avenue from Tenth Street to Twenty-seventh Street; on Fourth Avenue from Twenty-seventh Street to Forty-third Street. The estimated cost for the six sections is about \$15,000,000. These contracts will be let for construction only.

Judge Lacombe, in the United States Circuit Court, has made permanent the appointment of Frederick W. Whitridge as receiver for the Union Railway Company.

The Assembly Cities Committee on April 3 reported favorably Assemblyman B. R. Robinson's bill amending the New York City rapid transit law so that private capital can be interested in the building of new subways in New York City. This is the bill that is desired by the New York City Public Service Commission.

A number of engineers and railroad officials were present April 2 at Sherry's at a dinner given to celebrate the joining of the four Pennsylvania Railroad tunnels under the East River. The hosts were S. Pearson & Son, the English firm of contractors who built the tunnels, and those present included all who have been prominently identified with the task. The toastmaster was E. W. Moir, vice-president of the firm. Practically the whole directorate of the Pennsylvania Railroad Company attended. President James McCrea made a speech. Others who spoke were John P. Green, first vice-president;

George V. Massey, general counsel; G. W. Wickersham, H. W. Taft, Henry Japp, managing engineer, and Dr. Pritchard. Others present were: W. W. Atterbury, general manager of the Pennsylvania Company; N. P. Shortridge, W. H. Barnes, George Wood, Rudolph Ellis, C. E. Ingersoll, and Percival Roberts, Jr., directors of the Pennsylvania Company; Ralph Peters, president of the Long Island Railroad; Andrew Freedman, Charles M. Jacobs, W. G. McAdoo, J. F. O'Rourke, M. J. Degnon, De Lancey Nicoll, J. E. Gaffney, John D. Crimmins and W. J. Wilgus.

Answering an inquiry as to how the company's figures on transfers, passengers carried, and gross revenue per passenger compare with the memorandum submitted by General Manager Root under the receivers of the New York City Railway to Judge Lacombe, Vice-President and General Manager Calderwood, of the Brooklyn Rapid Transit Company, submitted the following comparisons:

NEW YORK CITY (SURFACE SYSTEM)		BROOKLYN RAPID TRANSIT (SURFACE SYSTEM)		
Year	Revenue passengers	Transfer passengers	Per cent transfer passengers to revenue passengers	Gross average fare in cents
1906	391,354,877	178,639,866	45.6	3.43
1907	376,629,571	194,765,342	51.7	3.29
1906	230,228,994	91,621,479	39.8	3.56
1907	228,524,961	127,032,395	55.6	3.17

Commenting on these figures, Mr. Calderwood is quoted as follows:

"From the above it will be seen that the percentage of transfer passengers to revenue passengers with the Brooklyn Rapid Transit is 55.6 per cent of the total as against 51.7 per cent for the New York City for the year 1907, and the gross average fare per passenger is only 3.17 cents for the Brooklyn Rapid Transit system as against an average of 3.29 cents for the New York City system.

"I have not the cost per passenger, including taxes and interest, separated for our surface system, but for our entire system (including elevated) it averages for the fiscal year 1906 3.43 cents, and for 1907 3.30 cents per passenger carried. As it costs less to carry passengers on our elevated system, it follows that if we separated the cost of our elevated from the surface the cost per passenger for our surface alone would be an increase on the above figures.

"Taking these figures of gross earnings and cost per passenger, it shows that we lost money on every passenger carried on our surface cars for the fiscal years 1906 and 1907, and that the little surplus shown by our annual report was due to our elevated operation, where the transfers are limited."

ELECTRIFICATION OF STEAM RAILROADS IN CHICAGO

On March 28, Paul P. Bird, city smoke inspector, made a report to the Mayor of Chicago on the feasibility of reducing to a very large extent the smoke nuisance by electrifying the terminal divisions of the steam railroads entering the city. He concludes as a result of a recent investigation:

1. The electrification of the terminals of the railroads now entering the City of Chicago is a practical and feasible undertaking. The success attained in the pioneer work in New York City proves this.

2. The operating costs of such electrically operated terminals will be reduced very materially over the present costs, even when the additional fixed charges on the cost of electrical installation are provided for.

3. By such measures the nuisances due to steam locomotives will be abated. This is the only practical method of accomplishing such abatement.

4. The problem confronting the Chicago railroads is much simpler than the one imposed on the New York roads. There are certain terminals in Chicago which undoubtedly present the simplest problem in electrification of any in the country.

W., B. & A. LINE OPENED TO WASHINGTON

The Washington, Baltimore & Annapolis Electric Railway has been opened to the National Capital. Up to noon of the opening day, April 3, about 300 round-trip tickets were sold at the company's terminal station in Baltimore. Cars have been making the trip from Baltimore to Washington in about 1 hour and 15 minutes.

CHICAGO APPROVES CONSOLIDATION—OTHER AFFAIRS

The City Council has approved the ordinance providing for the consolidation of the South Chicago City Railway Company and the Calumet Electric Street Railway Company, which occupy the territory south of the lines of the Chicago City Railway Company. The grant, which is for 19 years, will expire with the franchises of the other two street railway systems which have already accepted the terms of the city. The consolidated company will have three and a half years in which to complete the rehabilitation of its lines under the direction of the Board of Supervising Engineers. It must extend its present lines at the direction of the Council. In addition to its passenger business it is authorized to carry mail and express and to operate funeral cars. As under the other ordinances, the city will get 55 per cent of the net receipts and has the privilege of purchasing the property at the expiration of the franchise for the present value placed at \$5,000,000, plus the cost of rehabilitation and future improvements as certified to by the Supervising Engineers. Single cars only may be run. A zone system of transfers with the Chicago City Railway Company is provided. For the present transfers issued by the Chicago City Railway Company will be good as far south as Seventy-ninth Street and in the other directions passengers boarding cars north of Seventy-ninth Street and paying cash fare will be given transfers good for an unlimited ride north on any of the Chicago City Railway Company's lines. When the net earnings of the company reach 6½ per cent on the valuation fixed, the transfer zone will be extended south to Ninety-fifth Street.

The Council at the same meeting passed an ordinance providing for extensions of the present lines of the Chicago City Railway Company and the Chicago Railways Company in Western Avenue so as to connect and make possible a through route on that thoroughfare. A similar ordinance was passed providing for the extension of the Chicago Railways Company tracks in Kedzie Avenue from Twelfth Street to Twenty-second Street, to complete another through route.

The Board of Supervising Engineers has announced the program of track reconstruction authorized for the Chicago City Railway Company to complete during the year. A total of 43¾ miles of track are to be rebuilt at an estimated cost of \$2,112,000. The present loop on Wabash Avenue, Madison Street, Michigan Avenue and Randolph Street is to be abandoned and a new loop built on Washington Street, Garland Court and Randolph Street. The longest single stretch of track reconstruction is on State Street from Fifty-ninth Street north to Twelfth Street. In addition to track reconstruction, \$216,000 will be expended on construction of underground conduits for feed wires.

The city will receive its share of 55 per cent of the net earnings of the two large street railway systems for the last fiscal year on April 10. The controller estimates the receipts to be \$867,326 from the Chicago City Railway Company and \$675,882 from the Chicago Railways Company, making a total of \$1,543,208.

Traffic on the Northwestern and South Side Elevated roads for March shows an increase over last year due to extensions opened during the year. The Metropolitan operating the same mileage as last year shows a decrease of 6 per cent. The daily average number of passengers carried on the three roads is shown in the table below.

METROPOLITAN.				
	1908.	1907.	Increase.	Pct.
January	141,564	150,165	*8,601	5.73
February	145,427	154,443	*9,016	5.84
March	145,339	154,790	*9,451	6.17
SOUTH SIDE.				
January	112,707	92,411	20,296	21.96
February	102,182	88,435	13,747	15.55
March	114,891	100,226	14,665	14.63
NORTHWESTERN.				
January	100,392	88,632	11,760	13.27
February	102,182	88,435	13,747	15.55
March	103,130	89,344	13,787	15.43

*Decrease.

The South Side Elevated expects to open the new extension to the Stock Yards within a few days. It is estimated that the

new line will carry 25,000 passengers to and from the packing houses every day.

The second through surface car route between the north and south sides was put into operation on March 30. It is designated as Route No. 9 and begins at Sixty-ninth Street and Ashland Avenue, running north on Ashland Avenue to Twelfth Street, west to Paulina Street, north to Lake Street, east to Ashland Avenue and north to Clybourn Place. Single truck cars will be run for the present, until a number of obstructions which interfere with the large double-truck cars can be removed.

The cases against the newsboys arrested while trying to board the pay-as-you-enter cars of the Chicago City Railway Company, two weeks ago, came to an end with a verdict of not guilty on the charges of disorderly conduct preferred. The court ruled, however, that the company has a legal right to prevent any person from selling newspapers or any other merchandise on its street cars. The rule excluding newsboys from cars will continue to be enforced by the street railway company.

All of the street and elevated railways in Chicago notified the city on April 1 that hereafter no member of the police force should be carried free on cars unless in full uniform. Books of 100 tickets will be sold to the police department to be distributed among detectives and other officers not in uniform. It is estimated that the companies will gain \$50,000 a year by the change.

CHANGES IN THE WESTINGHOUSE MACHINE COMPANY

George Westinghouse, president of the Westinghouse Machine Company, has issued the following:

"I have much pleasure in being able to notify the clients and other friends of The Westinghouse Machine Company that the Receivers appointed Oct. 23, 1907, by the Circuit Court of the United States for the Western District of Pennsylvania, were on March 31, 1908, discharged by the same authority. All of the matters which made a temporary receivership expedient have been satisfactorily arranged, and the Company's position is greatly strengthened from every standpoint.

"All contracts made by the Receivers for the sale of the Company's product, or for the purchase of materials or merchandise will be carried out as though made by the Company's own officers.

"I take this occasion to announce the election of Mr. William H. Donner as the vice-president of the company in direct responsible charge of all of its activities, and to give the assurance of the continuance and accentuation under Mr. Donner's administration of that steadfast policy whereby the clients of The Westinghouse Machine Company have become friends as well as customers."

CONGRESS AND EXHIBIT OF SAFETY APPLIANCES

The Eighth International Congress of Safety to Life and Labor will be held this year in Rome, Oct. 12 to 16. This congress meets triennially, and is attended by prominent European governmental officials, social economists, and publicists. The Minister of Agriculture, Industry and Commerce of Italy has accepted the presidency of the Congress. Membership in the Congress is \$2, which entitles each subscriber to the volume of published proceedings. Subscriptions may be sent to Dr. W. H. Tolman, 231 West Thirty-ninth Street, New York.

It has been decided to open the New York exhibit of Safety appliances on April 13, although a private view will take place April 11 for the benefit of the exhibitors and their friends. The exhibit will be held in the museum, which is on the fifth floor of 231 West Thirty-ninth Street. No charge is being made for space or admission.

Among the exhibitors are the Carnegie Steel Company, Westinghouse Air Brake Company, American Bridge Company, Union Switch & Signal Company, Yale & Towne Manufacturing Company, Travelers' Insurance Company, etc. Three solid gold medals will be awarded for the best devices in transportation, mining, and the best safety device for motor boats and motor vehicles. The chairman of the committee of direction is Charles Kirchhoff, and of the exhibits committee Prof. F. R. Hutton.

THE CLEVELAND SITUATION

Extensive plans have been made for the improvement of the service, if negotiations result in a settlement. The most important is an express service over Superior Avenue to East Cleveland, connecting with the Euclid Avenue line at the crossing of the two thoroughfares near the Windenmere car house. This is to be accomplished by laying another double track on Superior Avenue, a very wide street, which will be used exclusively by the rapid transit cars. Faster headway will be made by these cars than by the regular cars now in use on the route, but the greatest gain will be in having but about four stops. One of these will be at East Ninth Street, another at Fifty-ninth Street crossing and a third at 105th Street, the fourth being at the junction of Superior and Euclid Avenue.

In addition to this, what is known as a "nonstop service," will be put on the Wade Park line. The cars would operate as usual on Wade Park Avenue, but instead of turning south on Sixty-sixth Street would turn north to Superior Avenue where they would take the fast line and stop only at Fifty-fifth and East Ninth Streets. The tracks on Sixty-sixth Street and Hough Avenue would thus be abandoned, cutting out curves and turns that would shorten the schedule very materially.

To improve the Euclid line the plans include double tracks between East Fifty-fifth Street and Fortieth Street, a section on which street railway lines have not been allowed to operate. In case the Legislature does not enact a bill doing away with the necessity of securing consents, the various grants on Euclid Avenue would be given up and an application for a new franchise for the entire length of the street would be made. Then, by securing the majority of the consents on the street, the company would be able to force its way through this portion where consents could never before be secured. To facilitate travel to the west a high level bridge is contemplated or an addition to the present Superior Avenue viaduct, by adding a second deck to it for the exclusive use of cars, and making this high enough so that vessels may pass under it. Other changes on the west side of the river will give an excellent service to that part of the city. It is also planned to have a down-town car yard and by re-routing many of the cars to reduce the schedule and increase the value of the service in many ways. It is believed by some of the municipal traction officials that the present average schedule of nine miles an hour may be increased to 10½, 11 or, perhaps, 12 miles. President DuPont believes that a more rapid service would accommodate the public better and be more satisfactory to all concerned.

General Edward S. Meyer, former prosecuting attorney, appeared before the open meeting Friday to represent the street railway men's union in an endeavor to have a wage scale included in the security franchise. In the course of his argument he created quite a bit of surprise by stating that the proposed lease of the Cleveland Electric properties to a holding company would be illegal and that a test in the Supreme Court would result in throwing the property back to the original company. Both Mayor Johnson and Mr. Goff insisted that Gen. Meyer make the reasons for his statement more definite and give the source of his information as to the illegality of the proposed lease, aside from his own opinion. Mr. Meyer gave an evasive answer. Mr. Goff offered to furnish legal opinion of the legality of the lease as framed by himself and Mayor Johnson.

At the close of the week no ticket rate had been agreed upon, as the value of the stock had not been fixed. Mayor Johnson has so far declined to state what he is willing to allow for goodwill and says that he will not be able to do so until he has all the papers in shape so that he may be able to judge to as definite a degree as possible what the goodwill of the company will be worth to the holding concern.

A. B. DuPont, who is slated for the presidency of the holding company, insists that the board of directors of the operating company shall be men loyal to the cause. He feels that men who are interested in seeing the holding company make a success will really put forth their best efforts to that end. It is possible that some of the directors of the Cleveland Electric Railway will be chosen to the board of the holding company and that some of the officers may also occupy like positions, that the business of the owning company may be taken care of properly and the co-operation may be secured. Mr. DuPont says that the employees of the old company will be retained, and that the work will go on as usual.

The form of lease worked out by Mr. Goff and Mayor Johnson, by which the Cleveland Electric properties are to be turned over to the Municipal Traction Company, was read at an open Council meeting Monday forenoon. It provides for almost every contingency that could be imagined, but the question of fare, the most important to the public after the holding company begins operation, is left to the Council in granting franchises to the Municipal Traction Company.

The consideration is \$1 and the lease is to run for 50 years and be renewable at the end of that time. A provision is inserted which says that the lease shall not extend to those portions of the system outside the city limits for a longer time than the terms of present franchises or renewals thereof to the Cleveland Electric.

The Municipal Traction Company is to pay 6 per cent on the stock issued under the new arrangement, interest on the indebtedness of the old company, interest on any bonds to be issued hereafter by the old company and interest on the floating debt. Should the holding company fail to pay three successive installments of interest, the same shall become due and payable at 8 per cent instead of 6, unless it is paid before the forfeiture of the lease is declared, in which case it reverts back to 6 per cent. In addition it is to pay all license fees, taxes, uncontested obligations and assessments of all kinds, except such as were incurred prior to 1908 that had not been included in the schedules. All other obligations incurred since the first of the year and except the \$2,026,000 first mortgage bonds of the Cleveland City Cable Railway Company, \$1,000,000 first mortgage bonds of the East Cleveland Railway Company, and the \$251,000 first mortgage bonds of the Cleveland Electric Railway Company. The \$1,288,000 floating debt is also to be paid by the holding company.

The holding company must indemnify the railway company from claims growing out of the management of the property or from neglect or violation of any law. It must carry out the legitimate contracts of the old company, protect and preserve the franchises and property and obey all legal regulations imposed upon it. All property must be kept in good repair and all worn out, injured or damaged property replaced.

A maintenance fund is to be accumulated by charging up 5 cents per car mile the first year, 5¼ cents the second year and 5½ cents each year thereafter for that purpose. This may be used for repairs, betterments, improvements and permanent extensions. The holding company may use \$250,000 out of its capital stock for repairs at first, if necessary. An accident fund is also to be formed by reserving 0.7 cent per car-mile the first year, 0.8 cent the second and 0.9 cent each year thereafter.

All books and accounts are to be open to the officers and stockholders of the Cleveland Electric and two rooms are to be reserved in the offices for their use. An annual examination of the company and the properties may be made and the reports published.

The Municipal Traction Company agrees not to lease any part of the system or become merged with any other company without the consent of the Cleveland Electric, not to encumber the property with any mechanic's lien and to pay all judgments promptly. New lines are to be built by the holding company, as needed, if grants are secured, and keep up with the needs of the city in other ways.

The Cleveland Electric must maintain its corporate existence and perform such corporate duties necessary to the proper handling of the property. It should accord the holding company the exclusive right to regulate and determine, subject only to the franchises involved, or that may be acquired, the rate of fare and charges for transportation, and to collect and receive them for its own use. It must, on request of the holding company, apply for franchises in its own name and relinquish the old for new ones, but the renewal or substituted grants must be upon the same terms as the old one and the unexpired term shall always be of greater duration than 15 years.

AN ARTICLE ON OUR PRINTING FACILITIES

The American Printer, of New York, publishes in its March issue an illustrated description of the printing plant of the McGraw Publishing Company. It is entitled "A Concrete Example of What a Printing Office Should Be." Views are also given of the composing rooms, press rooms and art department of the McGraw Publishing Company.

BULLETINS ON ACCIDENTS AND AMBULANCE CHASERS

An account has already been published of the series of advertisements being published by the United Railways & Electric Company, of Baltimore, in the local papers to educate the public on electric railway questions. Two of the recent advertisements relate to the subject of Accidents, Accident Frauds and the Ambulance Chaser, and are presented herewith:

ACCIDENT FRAUDS AND AMBULANCE CHASERS

An earlier bulletin pointed out that accidents are bound to occur where patrons are getting on and off our cars over 1,100,000 times a day, when vehicles travel everywhere on car tracks in order to avoid cobblestones, and when cars are passing through the crowded streets of this city over a distance in one day equal to three times the circumference of the earth. It is the price paid for the modern convenience of rapid transit.

Where the company is at fault, it should and does reimburse the injured party so far as possible, but it is true that the knowledge of this fact has been the source of the greatest temptation to the dishonest.

Throughout the country thousands of fraudulent claims are made and damage suits filed daily which are based on falsehood, perjury and the subornation of perjury. The companies cannot always defend themselves, owing to the subtle methods by which the claimants and their lawyers build up their cases and play upon the sympathies of inexperienced jurymen.

This company, however, has been particularly fortunate in discovering fraudulent claims by vigorous investigation, and in some instances the claimants have received a jail sentence. For example:

(1) X Y employed a lawyer and made a claim against the company, stating that his arm had been broken by the premature starting of a car. Later, becoming frightened at the close investigation of the company, he left the city. He was captured in Washington and brought back to Baltimore. Upon examination his arm proved to be uninjured and the evidence showed a typical fake suit. He went to jail.

(2) C D pressed his case to trial against the company, alleging severe injury, due to the company's negligence. It was discovered that the injury was an old one for which he had made claim and collected money from an insurance company. He served a sentence in jail.

A recent example is still in the minds of the public.

THE AMBULANCE CHASER

Out of this hot-bed of corruption has sprung the so-called "shyster lawyer" or "ambulance chaser." There are lawyers who solicit cases personally and also employ others to do so for them. Lawyers who claim to be reputable men allow their names to be used in this connection, and actually try the cases which they know have been solicited in the manner indicated. The impropriety of their act, however, does not cease here. The legal authorities are studied and the plaintiffs and witnesses are told what is necessary for them to testify to in order to recover damages.

WHAT THIS MEANS TO THE PUBLIC

If these lawyers confined their activity to claims against the Railway Company, it would not affect the public in so vital a manner. But—

(a) The activities of the "shyster lawyer" or "ambulance chaser" do not cease with us. Everything is grist for his mill. He alleges that his client has been injured by a hole in the city streets and he sues the city. He discovers a claim against the thrifty mechanic or laboring man, and he levies upon the wage-earner. He hears that a tradesman is a little behind in his settlements and he wrecks him by throwing him into the hands of a receiver. These are only a few of his many fields of action.

(b) He even finds his way into the home. Many a trifling quarrel between husband and wife, which would otherwise be forgotten in the course of time, is dragged by him into the records of the court. A divorce is obtained and a home is hopelessly wrecked. In the year 1897 there were in Baltimore city 442 applications for divorce; 10 years later there were 790 of such applications. While this may not be entirely due to the activity of the "shyster lawyer," those who know can see one of the baneful illustrations of his activities.

(c) Out of a total of nearly 1000 cases on the January calendars of one of the three civil courts of Baltimore city, to wit, the City Court, over 80 per cent more damage suits. The total costs for these civil courts alone is estimated at over \$200,000 per annum. The number of courts had to be increased recently to provide for damage cases.

You, as a taxpayer, must pay the costs of judges and jurymen and all other costs which the litigants fail to pay, while hundreds of these false and frivolous cases absorb the time of the court and postpone the consideration of commercial cases and honest disputes.

CONCLUSION

We intend to proceed more actively than ever against these false claimants and against the lawyers who are a disgrace to their profession. We need, however, public sentiment to back us. The public must be aroused to the fact that these "shysters" do not prey alone on corporations, but insert their hands into the pockets of the tradesmen and carry their trade into the very sanctity of family relationship.

Familiarity with rapid transit breeds carelessness. The average man is more or less forgetful, and children are notoriously so. Drivers will cross tracks from intersecting streets without giving a thought to the possibility of an approaching car. Frequently a pedestrian will cross one track when his vision of the other is obstructed. If it so happens that there is an

oncoming car, the usual consequence is a distressing and sometimes a fatal accident, which the motorman could by no possibility have avoided.

THE COMPANY'S POLICY

Our motormen and conductors are required to make a contemporaneous report of all accidents, giving full details and the names of all witnesses who will permit their names to be used. These witnesses are forthwith interviewed for the purpose of verifying the report, and thereafter an effort is made to effect a prompt and fair settlement with the claimant, not only where the company is clearly responsible, but also where the facts show a reasonable doubt about the company's responsibility. All cases are settled out of court except where, after careful investigation, we believe: (1) That the claim is a manufactured one; (2) or that the injury was due to gross carelessness on the side of the claimant; (3) or that the claimant is demanding excessive damages.

HOW THIS POLICY WORKS

Statistics show that in more than half the cases tried the plaintiff gets nothing from the jury; and that in a large proportion of verdicts for the plaintiff the amount recovered (which the plaintiff must divide with his lawyer and the latter's "runner" and "medical expert") does not exceed the sum which could have been gotten without litigation. The figures for January, February and March, 1908, are abnormal but interesting. Eighty-seven cases were called for trial; of these, 9 were abandoned by the plaintiff, 39 were "non prosed" or dismissed by the court, 23 resulted in verdicts for the company, and 16 in verdicts for the plaintiff. Of the 16 verdicts for the plaintiff, 3 were for amounts under \$50 and 13 for larger sums. And of the latter verdicts, 2 have been set aside on motion for a new trial. These figures do not include magistrate appeals or some cases which the company settled at the trial table by merely paying costs.

THE EVIL DISCLOSED BY THESE STATISTICS

No claimant can be justly criticised for consulting a lawyer if the company declines to pay his demands; and it may happen sometimes that the lawyer will be misled by his client as to the facts. But when you consider that in 71 of the 87 cases called for trial during the three months last passed the plaintiffs did not recover one cent for demands aggregating thousands upon thousands of dollars, is it too much to say that most of these cases were merely so many attempts to levy blackmail? Moreover, great is the danger that the temptation to bear false witness will prove irresistible, when it is considered that many, if not most, of the cases are solicited by "runners," nursed by "medical experts" and tried by lawyers—all of whom depend upon the verdict for their pay.

HOW THE PUBLIC CAN HELP THE SITUATION

There are many ways in which the people interested in securing a square deal for good service can help the company: (1) When you witness an accident, let us know whose the fault was. This does not mean that you will be making trouble for the conductor or the motorman, because allowances are made for mistakes. Moreover, you or some member of your family may be the victim of the next mistake, and it is to the interest of all concerned that carelessness should be noted and checked. (2) When the car you are about to take is crowded, wait for the next one, if you can do so without inconvenience; you will generally find a half-filled or empty car just behind. (3) It is your right to have the car come to a full stop before you get on or off; do not attempt to board or alight from a moving car unless you are willing to assume the risk. (4) Remember that riding on the back platform or on the running-board is not safe. (5) Never cross a track when your vision of the car or wagon that may be coming in the opposite direction is obstructed. (6) Teach the little children that the car track is a danger signal. (7) Help us in our fight against blackmail by giving us promptly (whether for or against us) your account of any accident you may have witnessed; and remember that we gladly receive at all times criticisms and suggestions for the safety of the public and the betterment of the service.

OHIO LEGISLATION

The Stockwell bill, providing for the ownership of street railways by municipalities, was brought up for reconsideration in the House of Representatives, Wednesday, after an amendment requiring three-cent fare and universal transfers on leases made under this bill, and was defeated by a vote of 42 to 52. It is said the friends of the measure admitted that the bill was presented in order to legalize unauthorized expenditures of money in building tracks in the city of Cleveland.

Failing to get municipal ownership measures through the general assembly in separate bills, Representative Stockwell endeavored to reach the same result, a few days ago, by offering an amendment to the Anderson bill, which provides for the appropriation for land to be used for water supply reservoirs. The proposed amendment to this bill would have given the cities the right to appropriate street railways, electric light and gas plants and other public utilities as real estate is now appropriated. This amendment was lost by a vote of 59 to 14, while the original Anderson bill was passed almost unanimously.

The Lamb bill, which is intended to make it possible for interurban companies to reach their terminals in cities where opposition is made by the local street railway companies, has passed the Senate.

STREET RAILWAY PATENTS

UNITED STATES PATENTS ISSUED MARCH 24, 1908.

[This department is conducted by Rosenbaum & Stockbridge, patent attorneys, 140 Nassau Street, New York.]

882,553. Block Signal System; Fred B. Corey, Schenectady, N. Y. App. filed March 9, 1905. An overlap block signal for alternating-current railway systems wherein the track rails are sectionally energized. A coil of a track relay is supplied from the secondary of the same transformer which supplies the track circuit of the block in advance.

882,554. Signal; Fred B. Corey, Schenectady, N. Y. App. filed Feb. 17, 1906. A signal system for single track trolley roads. Has direct-current magnets for shifting the signal and a locking magnet which prevents the signal from going to danger whenever the power is interrupted.

882,596. Engineer's Brake Valve; Walter V. Turner, Wilksburg, Pa. App. filed June 23, 1905. Provides for varying the maximum area of the train pipe discharge port opening in proportion to the length or volume of the train pipe in making service applications, whereby the time required for making reductions in train pipe pressure on long trains is greatly diminished, while at the same time the maximum port opening on short trains is limited to such area as will not produce a quick action or emergency application.

882,608. Engineer's Valve for Air Brakes; Walter M. Austin, Swissvale, Pa. App. filed Oct. 29, 1903. Automatically maintains a predetermined pressure in the train-pipe system. In case leakage occurs from the train pipe after a given reduction has been made to apply the brakes, such leakage will be instantly responded to by the engineer's valve and the train pipe charged from the main reservoir to compensate for the leakage. If any pressure beyond that predetermined enters the train pipe, the valve will automatically discharge the excess pressure and prevent the tendency of the system to release the brakes.

882,609. Bonding Pin; Frederick H. Ayer, Chicago Heights, Ill. App. filed Feb. 23, 1907. The pin has a V-shaped groove on one side, the faces of which are arc-shaped so as to cooperate with a symmetrical bonding wire having similar arcuate faces throughout.

882,635. Convertible and Interchangeable Seat; Terence Scullin and Soren R. Skov, Cleveland, Ohio. App. filed Jan. 22, 1907. Means whereby the seats are readily available for either transverse or lengthwise arrangement in the cars for summer or winter use.

882,695. System for Automatically Stopping Cars or Trains; Edward E. Kleinschmidt, New York, N. Y. App. filed Feb. 8, 1906. Comprises an electromagnet placed between the rails in proximity to a signal and a coil supported preferably from the under side of the car so as to be carried in proximity to the magnet. The track magnet is controlled mechanically by the operation of the signal mechanism in such manner that when the signal is set at danger a circuit will be closed to energize the magnet.

882,717. Combined Trolley Wheel and Sleet Cutter; Edmund M. Schollenberger, Chicago, Ill. App. filed Oct. 30, 1907. Consists of a cylindrical grooved core and cup-shaped flanges which are hollowed out to fit over the ends of the core and be removable therefrom when desired.

882,744. Signaling Device; Spencer C. Cart, Spokane, Wash. App. filed April 6, 1907. Details of construction of a signal including audible and visible signals which are operated under danger conditions.

882,833. Trolley Harp; Frank M. Mudler, Pittsburg, Pa. App. filed Dec. 5, 1907. The trolley harp comprises a pair of slotted separable sections, one at each side of the trolley wheel, and a projection on each section arranged to enter the slot in the other section to lock the sections together. Oil reservoirs are provided in each section.

882,918. Air Brake; Walter V. Turner, Wilksburg, Pa. App. filed June 10, 1905. Comprises in addition to the usual straight air brake features, a train pipe adapted to be normally charged to a certain pressure, and a valve device operated by a reduction in the train pipe pressure for cutting off communication from the brake cylinder through the straight air brake pipe and for supplying air to the brake cylinder.

882,927. Railway Passenger Car; Thomas R. Brown, New York, N. Y. App. filed July 6, 1905. Provides a steel passenger car which is constructed principally of commercial shapes of cold drawn steel.

882,966. Trolley; Henry C. Reynolds, Portersville, Cal. App. filed Aug. 24, 1907. The harp is so pivoted to the trolley pole that it may swing into an inclined or horizontal position in passing curves and overhead switches.

883,012. Brake Head; Charles B. Gosnell and Adam M. Harris, Keyser, W. Va. App. filed June 21, 1907. Relates more particularly to an attachment for preventing the brake heads from dropping off their hangers in the event of the shoes breaking or becoming detached.

883,026. Signaling on Railways; Charles M. Jacobs and Robert J. Insell, Reading, and Ernest A. B. Bowden, Hanwell, England. App. filed Aug. 9, 1907. Employs inclined cam shoes along the track which move circuit-closing levers to establish alarm circuits in the locomotive cab under certain conditions.

883,089. Rail Joint; Frank A. Collier, Galveston, Tex. App. filed May 3, 1907. The abutting ends of the rail sections are connected by longitudinally extending bolts disposed along opposite sides of the rail sections and extend through enlargements or abutments forged with the rails.

883,092. Conduit Construction; William P. Day, Altoona, Pa. App. filed Jan. 10, 1908. Details.

883,178. Road Bed; Josiah L. Dickson, Winfield, Kan. App. filed June 28, 1907. Consists of a series of metal sections laid edge to edge thereby forming a continuous metal structure, said sections being provided with means for securing the track rails thereto, and formed outside of the rails with longitudinally extending channels in which the car wheels will run in case they leave the rails.

883,181. Electric Street Railway Switch; John P. Dowd and Thomas P. Dowd, Cedar Rapids, Ia. App. filed Sept. 30, 1907. Electromagnets are mounted on the car in pairs in advance of the car wheels, one on each side of the rails, and are selectively energized to attract the switch point.

883,186. Hose Bridge; Jacob Fine, Louisville, Ky. App. filed Jan. 13, 1908. A hose bridge for street railways comprising a pair of inclined bridging housings the base of which fit the groove of the rails, and a rod extending transversely of the rails and rigidly connecting the housings.

883,217. Automatically Tripping Trolley-Pole Mechanism; Thomas H. Mars, Chicago, Ill. App. filed April 5, 1906. Means for automatically tripping trolley poles consisting of a system of links and a latch so arranged that the pole is tripped in case of too great upward movement.

883,230. Car; Charles K. Pickles, Danville, Ill. App. filed Aug. 9, 1907. Relates to that type of car having roof pockets in which the window sashes are stored in summer. Consists of means whereby the lower sash will operate a trigger on the upper sash which will engage the lower sash and cause them to move upwardly together, such means being provided with a roller which guides and supports the sashes in their movement in the pocket.

883,242. Attachment for Trolley Harps; William F. Savage, Columbus, Ohio. App. filed May 3, 1907. Comprises a pair of laterally projecting upwardly curved horns on either side of the trolley wheel, which have conical spirally grooved rollers at their bases to direct the wire upon the wheel.

883,246. Dynamo Electric Machine; Robert Siegfried, Pittsburg, Pa. App. filed March 3, 1906. Means for supporting electric motors in concentric relation to the driving wheels of an electric locomotive so as to permit a certain yielding movement.

883,247. Supporting Structure for Dynamo Electric Machines; Robert Siegfried, Pittsburg, Pa. App. filed March 3, 1906. Relates to modifications of the above.

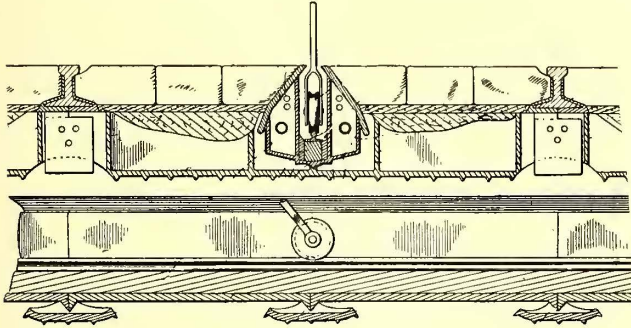
883,248. Supporting Structure for Dynamo Electric Machines; Robert Siegfried, Pittsburg, Pa. App. filed March 3, 1906. Covers additional modifications.

883,310. Trolley Harp; Edward J. Harrison, South Bend, Ind. App. filed June 10, 1907. U-shaped springs attached to the harp and engaging the trolley wheel so as to establish good electrical connection.

883,441. Amusement Device; Albert G. Andrews, Pittsburg,

Pa. App. filed Dec. 14, 1907. A car in the shape of a wheel travels a circular track and is at times entirely submerged in water.

883,542. Rail Joint; Robert B. Kennington, Ft. Patrick, Ga. App. filed July 20, 1907. Provides a scarf-jointed rail and a pair of fish-plates holding the meeting ends of the rails together, and a transverse bolt passing through the fish-plates and through recesses at the ends of the rail webs to prevent the rails from sinking or spreading.



PATENT NO. 883,092

883,601. Rail Joint; Willis D. Williams, Kirkland, Ariz. Ter. App. filed July 31, 1907. Relates to improvements in rail joints of the boltless type.

883,646. Safety Device for Electric Point Shifting, Signaling, Locking and Switching Apparatus; Lorenz Kottmair, Munich, and Rudolf Swack, Nordendorf, Germany. App. filed June 9, 1904. A safety device for electric shifting or adjusting apparatus such as switch-point shifting, signal shifting and other locking and switching apparatus.

PERSONAL MENTION

MR. E. P. WETMORE has resigned as general manager of the Augusta-Aiken Railway & Electric Company, of Augusta, Ga.

MR. E. J. IRWIN, who has been master mechanic of the Orange County Traction Company, of Newburg, N. Y., has been promoted to superintendent of electrical equipment of the company.

MR. L. EARL RIGHTMYER, of the construction department of the General Electric Company, of Schenectady, is at Porto Rico inspecting work on the water power plant being erected there for J. G. White & Company.

MR. JOSEPH F. GEISER, for almost four years superintendent of the Chambersburg, Greencastle & Waynesboro Street Railway Company, of Waynesboro, Pa., has tendered his resignation of that position, to take effect April 15.

MR. A. BURKHARDT, traffic manager of the lines of the Ohio Electric Railway Company about Lima, Ohio, has been notified that his jurisdiction has been extended to the southern end of this system and that his headquarters, hereafter, will be in Dayton. The change takes effect at once.

MR. J. J. C. GREGORY, of Sulsum, who has been acting as the legal adviser of the Vallejo & Northern Electric Railway, has been elected president as the successor of Mr. Melville Dozier, Jr., who resigned several days ago to accept the position of assistant general manager of the Northern Electric Company.

MR. HENRY S. KOLSETH, until recently an active member of the staff of the Westinghouse Air Brake Company's office, died at his home in Atlantic, Mass., last week. Mr. Kolseth was born in Norway in 1841, and came to the United States when he was 19 years old, settling in Worcester, Mass. He leaves a widow, one son and a sister.

MR. A. I. WOODRING has been appointed superintendent of overhead lines of the Waterloo, Cedar Falls & Northern Railway Company, of Waterloo, Ia., the offices of superintendent of telegraph and telephone and signal engineer having been abolished and the duties of these two departments com-

bined under the title of superintendent of overhead lines. Mr. Woodring will have charge of all overhead, substation and telegraph and telephone work.

MR. WILLIAM A. KREIDLER, founder and principal owner of the *Western Electrician*, of Chicago, died of apoplexy in Augusta, Ga., on March 26. He was born in South Danville, N. Y., on August 20, 1858, and attended the University of Rochester. Before graduation he removed to Chicago and entered the employ of the Western Electric Company. In 1887 he established the *Western Electrician*, and since then has devoted his entire attention to the direction of that paper. He was a member of the American Institute of Electrical Engineers, the National Geographic Society and the Chicago Academy of Sciences.

MR. EDWARD E. POTTER, formerly superintendent of the Union Street Railway and the Dartmouth & Westport Street Railway, at New Bedford, Mass., and more recently assistant manager of the Seattle Electric Company, has been made acting manager in charge of transportation. Mr. Elton S. Wilde succeeds Mr. Potter at New Bedford. Mr. Potter succeeds Mr. H. F. Grant, who will confine his work to the affairs of the Stone & Webster Corporation (which controls the Seattle property) in the Pacific Northwest. Mr. J. B. Lukes, former general superintendent of the system, becomes district superintendent of power for the Stone & Webster corporations.

MR. W. L. DERR has resigned as general superintendent of the New York City Railway Company. Mr. Derr was appointed a little over a year ago and had previously been connected with the Erie, New Haven and other steam railroads. No successor to Mr. Derr will be appointed, and the office will be abolished. Mr. Derr's resignation has made necessary some changes. On April 5, Mr. L. H. Palmer was appointed assistant to the general manager, and will have his headquarters at 761 Seventh Avenue. The superintendent of transportation, the superintendent of equipment, the master mechanic in charge of shops and the head of the appointment department now report to Mr. Palmer. The engineer of maintenance of way reports to the general manager.

MR. FREDERICK S. BERRY, superintendent of the Orange County Traction Company, of Newburgh, N. Y., has been appointed general manager of the company to succeed Mr. E. C. Boynton, whose resignation was announced recently in the *STREET RAILWAY JOURNAL*. Mr. Berry has been engaged in electric street railway work since 1891, when he entered the employ of the Port Richmond & Prohibition Park Electric Railroad Company as a conductor and operated the first electric car on Staten Island. For two years he acted as conductor and motorman and was then appointed assistant to Superintendent Vilas. In 1895 there was a reorganization and Mr. W. B. Rockwell, who then was manager of the Middletown-Goshen Electric Railway, took control. Five years later there was another reorganization and the Rockefeller interests took over the property. A few months later Mr. Berry came to Newburgh to reorganize the dispatching system of the road. He continued as dispatcher until two years ago, when he became superintendent.

MR. J. F. COLLINS has tendered his resignation as manager of railways of the Toledo Railways & Light Company, Toledo, Ohio, to become general manager of the Saginaw-Bay City Railway Light Company, with headquarters at Bay City, Mich. Mr. Collins had been superintendent of the local lines at Toledo many years. He began his career in the operating department of the Indianapolis Street Railway Company when he was eighteen years of age, and advanced step by step until he became assistant superintendent of the system. Mr. Thomas H. McLean, for a number of years manager of the Toledo Traction Company, invited Mr. Collins to become superintendent of the city system, a position which he accepted in 1890. A year later, when the tractions system was turned over to the Everett-Moore syndicate, Mr. Collins was promoted to the position of superintendent of railways. In July, 1907, he was made manager of railways, with authority over the city lines and those of the Maumee Valley Railways & Light Company. He was also made vice-president and manager of the Toledo, Ottawa Beach & Northern. In all, he had jurisdiction over 145 miles of track, as well as 250 cars, the large car shops and other property. Mr. J. N. Enright, division superintendent of the Valley Route, will be acting manager for the present, succeeding Mr. Collins.

NEWS OF THE WEEK

CONSTRUCTION NOTES

Items in this department are classified geographically by States, with an alphabetical arrangement of cities under each State heading.

For the convenience of readers seeking information on particular subjects, the character of the individual item is indicated as follows:

- * Proposed roads not previously reported.
- o Additional information regarding new roads.
- † Extensions and new equipment for operating roads.

Numerals preceding these signs indicate items referring to:

1. Track and roadway.
2. Cars, trucks and rolling stock equipment.
3. Power stations and substations.
4. Car houses and repair shops.
5. Parks and amusement attractions.

oGADSDEN, ALA.—It is understood that the Tidewater Development Company, which has projected an electric railway from Gadsden to Birmingham and Tuscaloosa, is engaged in building the line at Tuscaloosa and will probably have a crew of men on construction work at this end of the line this summer or fall. The company already has a franchise through Gadsden.

*HOT SPRINGS, ARK.—Articles of incorporation have been filed for the Essex Valley Land Company, which proposes to do a general real estate business and to construct an electric railway from Hot Springs to Essex Park and Potash Sulphur, two well-known resorts. It is stated that the line will be built on one of the surveys of the Little Rock & Hot Springs Interurban Railway, which is being promoted by L. Garrett. Among the incorporators of the Essex Valley Land Company are J. A. Riggs and W. S. Kirkham.

oPINE BLUFF, ARK.—W. F. Campbell, of Redfield, announces that the Pine Bluff-Little Rock Transit Company, a company which intends to build an electric railway from Pine Bluff to Little Rock, has already been formed, and that the company is now preparing to receive its charter. According to the statements of Mr. Campbell, who is president of the company, it is the intention to begin work on the line as soon as all of the right of way is secured. The officers of the new company are as follows: President, W. F. Campbell; vice-president, Ben F. Foreman, of Texarkana; secretary and treasurer, Mrs. F. A. Gibson, of North Carolina, now residing at Redfield; board of directors, J. A. Woodson, of Little Rock; C. W. Turner, of Casa, Ill., and J. W. Corber, of Pine Bluff. It is said that the company has already secured a portion of the right of way between here and Little Rock, and that the remainder will be secured at once. The line is to be built along the south side of the river and is to be 40 miles long.

†BAKERSFIELD, CAL.—Thomas Blackburn, superintendent of the Bakersfield & Ventura Railway, which is owned by the Eben Smith Estate, has applied for a street-railway franchise on A Street, in Oxnard.

1-2†LOS ANGELES, CAL.—The first three-car-train of the new broad-gage cars of the Los Angeles-Pacific Electric Railway was run over the new broad-gage tracks of the company from Sherman to the terminal station now in course of construction on Hill Street, between Fourth and Fifth Streets, on March 30. This run was simply for testing purposes and no passengers were carried. On March 31 the regular service on the new line was begun between this city and Playa Del Rey. Fifty new broad-gage cars were ready for service, and, in addition, the company has been converting the trucks of its old cars to broad gage. Fourteen of these are thus equipped, and the remainder will be finished as soon as possible.

3†SAN FRANCISCO, CAL.—General Manager Charles N. Black, of the United Railroads, recently announced that his company in accordance with its promise to the city, made shortly after the fire, had completed arrangements for the lighting of Market, Valencia and Sutter Streets. A contract has just been awarded by the company for ornamental poles, to be installed along Market to Valencia, and thence along Valencia to Twenty-eighth street, and along Sutter Street to Van Ness Avenue. The cost of this work, including the arc lamps which the United Railroads will suspend from these poles, will be approximately \$100,000. Manager Black has also under consideration the retracking of Market Street from Sansome to Twelfth Street and of McAllister Street. These are the only stretches of the old cable track still in use, and it has been the intention of the United Railroads to replace them with the regulation heavy grooved rails as the work of rehabilitation progressed.

1†ROCKVILLE, CONN.—It was announced from the offices of the Connecticut Company some days ago that the new route between Rockville and Stafford Springs would probably be opened May 1. The line is about completed and the trip of inspection will be made by officials

of the road within a few weeks. The line leaves the terminus of the present Rockville system and runs to the fair grounds, thence south of Snipsic Lake and thence to Stafford Springs. The line runs for a goodly part of the route through private right of way. It is 13 miles long.

†WASHINGTON, D. C.—The Washington & Alexandria Electric Railway Company has been granted an extension of time to carry the underground system over the entire Washington approach to the Highway bridge.

3†JACKSONVILLE, FLA.—The Stone & Webster Engineering Corporation has nearly completed the installation of additional power-house equipment for the Jacksonville Electric Company. This work has included the installation of an 800-kw General Electric railway generator direct connected to a 24-in. x 48-in. x 48-in. horizontal cross-compound condensing Rice & Sargent engine. The boiler capacity has been increased by the addition of a 520-hp Aultman & Taylor water-tube boiler and a new self-supporting steel stack has been erected. The old steel stack, which had become inadequate, has been removed and a barometric condenser with necessary circulating and dry-vacuum pumps has been installed in its former location. The new condenser is of sufficient capacity to condense steam from two 800-kw units.

oLEWISTON, IDAHO.—Frank McKean, of the Idaho, Washington & Oregon Electric Railway Company, has placed orders for 1000 tons of steel rails and 40,000 lb. of copper wire. The rails are purchased from the Colorado Fuel & Iron Company and the wire is purchased from the American Steel & Wire Company, of Chicago. The wire is to be shipped May 15 and the steel rails within 60 days from March 28.

oCHICAGO, ILL.—The Chicago Inland Traction Company has been incorporated to build an electric railway from Crete, Ill., to Kankakee, 32 miles, passing through Goodnow, Beecher, Sollett, Grant Park and Momence. The incorporators are Edward Doepp, Blue Island, Ill., C. W. Rhodes, Elmer Schlesinger and E. D. Lawler, of Chicago, and H. C. Bangs, of Glencoe, Ill.

1-2-3†MURPHYSBORO, ILL.—It is officially announced that the Murphysboro Railway, Light, Heat & Power Company contemplates purchasing considerable electrical equipment for a small power station, together with a number of cars. It is also intended to extend the street railway system for a distance of about two miles. John G. Hardy is secretary.

oEVANSVILLE, IND.—The Evansville Terminal Railway Company, recently incorporated to build a traction line from Evansville to Newburg, to connect with the Evansville & Eastern Traction line; operating between Rockport and Newburg, let the contract for three bridges on March 31. Work will begin on the 10 miles of grading within a short time. Aug. 1 is the date set for putting the new line in operation.

1†PRINCETON, IND.—Sufficient material has been received at this point for the completion of the Patoka extension of the Evansville & Southern Indiana Traction Company's line. The officials say they expect to complete the new division within 60 days. The line between Princeton and Evansville will also be improved this summer.

†ROCKPORT, IND.—Charles Tennis, of the Tennis Construction Company, brought about a meeting of George T. Woods, of Louisville, and C. H. Batton, of the Evansville & Eastern Traction Company, and others, in Rockport, on April 2, to talk over the advisability of extending the Evansville & Eastern line up the river from Rockport to Carrydon. Mr. Woods said he was interested in lines now being constructed from Louisville to Carrydon, and the proposed extension of the Evansville & Eastern would join that road at Carrydon and thus connect Louisville and Evansville by trolley.

oSOUTH BEND, IND.—The Kalamazoo, Elkhart & South Bend Traction Company, according to a recent official report, intends to begin constructing its line next month. The following cities will be connected by this proposed system: South Bend, Mishawaka, Elkhart, Bristol, Nottville, Constantine, Three Rivers, Fishers Lake, Parkville, Vicksburg, Austin, Long Lake and Kalamazoo. It will be a standard gage road, 73 miles in length. The overhead trolley system is to be installed. Two amusement resorts will be operated by the company, one at Fishers Lake and the other at Long Lake. The company has an authorized capital stock of \$1,384,000. The principal officers are as follows: A. D. Harris, president; J. M. Caulfield, vice-president; J. A. Bowman, secretary; A. Hunsberger, treasurer; L. M. Morrison, chief engineer. The general offices are at 110 South Main Street, South Bend, Ind.

1†SOUTH BEND, IND.—The Chicago, Lake Shore & South Bend Railway Company on April 2 laid the connecting link of track between South Bend and Michigan City. This completes track laying between South Bend, Ind., and Dune Park, a distance of 46 miles. J. B. Hanna, president of the company, states that as soon as the track can be ballasted between South Bend and Michigan City, which will be the fore part of June, that portion of the road will be opened to passenger traffic.

oVINCENNES, IND.—It is officially announced that the Vincennes, West Baden & Louisville Railroad Company expects to begin constructing its line about June or July of this year. The road will be approximately 42.5 miles in length and will connect Vincennes, Monroe City,