

Street Railway Journal

VOL. XXVI.

NEW YORK, SATURDAY, JULY 29, 1905.

No. 5.

PUBLISHED EVERY SATURDAY BY THE
McGraw Publishing Company

MAIN OFFICE:

NEW YORK, ENGINEERING BUILDING, 114 LIBERTY STREET.

BRANCH OFFICES:

Chicago: Monadnock Block.

Philadelphia: 929 Chestnut Street.

Cleveland: Cuyahoga Building.

London: Hastings House, Norfolk Street, Strand.

Cable Address, "Stryjourn, New York"; "Stryjourn, London"—Lieber's Code used.

Copyright, 1905, McGraw Publishing Co.

TERMS OF SUBSCRIPTION

In the United States, Hawaii, Puerto Rico, Philippines, Cuba, Canada, Mexico and the Canal Zone.

Street Railway Journal (52 issues).....\$3.00 per annum
Combination Rate, with Electric Railway Directory and
Buyer's Manual (3 issues—February, August and November) \$4.00 per annum
Both of the above, in connection with American Street Railway
Investments (The "Red Book"—Published annually in May;
regular price, \$5.00 per copy).....\$6.50 per annum
Single copies, Street Railway Journal, first issue of each month, 20 cents;
other issues, 10 cents.

To All Countries Other Than Those Mentioned Above:

Street Railway Journal (52 issues), postage prepaid..... \$6.00
25 shillings. 25 marks. 31 francs.

Single copies, first issue of each month, 40 cents; other issues, 15 cents.

Remittances for foreign subscriptions may be made through our European office.

NOTICE TO SUBSCRIBERS

REMITTANCES.—Remittances should be made by check, New York draft, or money order, in favor of the STREET RAILWAY JOURNAL.

Change of Address.—The old address should be given, as well as the new, and notice should be received a week in advance of the desired change.

Back Copies.—After July 1, 1905, no copies will be kept on sale beyond fifteen months prior to date of issue, except in bound volumes.

NOTICE TO ADVERTISERS

Changes of advertising copy should reach this office by 10 a. m. Monday preceding the date of publication, except the first issue of the month, for which changes of copy should be received two weeks prior to publication date. New advertisements for any issue will be accepted up to noon of Tuesday for the paper dated the following Saturday.

Of this issue of the Street Railway Journal 8000 copies are printed. Total circulation for 1905, to date, 245,350 copies, an average of 8178 copies per week.

Interurban Service on the Rock Island

The Rock Island Railroad has begun war on the electric interurban roads in Iowa by establishing frequent train service at two places. Between Cedar Rapids and Iowa City it is announced that hourly service will be maintained on week days, with numerous excursion trains on Sundays. Round-trip tickets between Cedar Rapids and Iowa City (28 miles) will be sold for \$1, with a 50-cent rate on Sundays. Between Des Moines and Colfax also a similar competition will be made with the electric road. This service is of the same nature as

that recently started in several points in Illinois by the Illinois Central and Chicago & Alton Railroads. Thus it appears that another steam road has some money to burn. This present wave of interurban competition by steam roads is like the chickenpox, rather uncomfortable for the parallel interurban roads while it lasts, but not likely to work any permanent injury.

Numbering Cars in Classes

All electric railway systems, whether for city or interurban service, accumulate sooner or later a large number of classes and kinds of cars. Open and closed motor and trail cars, freight motors and trailers, line cars, cinder cars are some of these, and often there are many others. Usually these are purchased at different times and are given numbers in sequence as they are purchased. However, much confusion is often avoided by following the practice of steam railroads and the larger street railways, and numbering the different styles of cars according to their classes. Where there are less than 100 cars of any one class, the number 100 may be taken as a basis. The closed motor cars might be given numbers between 1 and 100. The open motor cars could be numbered from 100 to 200. The closed trail cars, the open trail cars and the several other classes could be given a similar range of numbers.

The system might be extended further by taking into consideration the size of the car. Then those with the shorter bodies could be given the smaller numbers of each class. With such a system the mere mention of the number of a car carries with it more or less of a definite idea of the car itself and would often make unnecessary further description to identify it.

Mirrors in Cars

Mirrors have been used for decorative and useful purposes both in steam and electric railway coaches for some time. The placing of such mirrors has been somewhat a matter of the personal taste of the manager of the road. To some, mirrors appeal as a decorative feature, to others simply as conveniences for passengers, and to still others as necessary or unnecessary nuisances. It is easy to overdo the use of mirrors, especially for decorative purposes. While they are handsome when new, many of them are almost certain to have the backing flaked off in the course of time, after which they are an abomination in the eyes of everyone. The present tendency is toward simplicity and toward securing as much window space as possible. This has kept down the use of mirrors somewhat. Nevertheless, when a mirror or two is placed in an interurban car where it is of use to passengers, observation will usually show that it meets the approval of the public by the number of times it will be used in a day. An overdose of mirrors in a city car, however, is likely to be much of a nuisance before a car is many years old, and there is not likely to be any violent reaction from the present sensible tendency to simplicity in car interiors.

Track Gages on American Street Railways

It is a revelation to one who has never given attention to the subject to learn of the large mileage of electric railway track in the United States which is other than the standard 4-ft. 8½-in. gage. In four large cities, Baltimore, Philadelphia, St. Louis and Cincinnati, the street railway track gage is slightly wider than standard. In Eastern Pennsylvania, Western New Jersey, Delaware and Maryland, gages of 5 ft. or 5 ft. 2 ins. are almost universal, while in a number of Western cities a gage of 3½ ft. is frequently found. These gages caused little thought or annoyance, except on the part of manufacturers and supply men, until the era of interurban development began. Then there was trouble at once. In some cases where the interurban lines have been built out of cities as continuations of city tracks, the odd gage has been continued. In other cases where independent companies have built the interurban lines, standard gage has been adopted. In Cincinnati, where city tracks are 5-ft. 2½-in. gage, a part of the interurban lines built have adopted the same gage, while those connecting with interurban lines in other parts of the State have standard gage, necessitating a change of cars at the city limits. This change is an expensive nuisance, but is not as bad as it would be were it not that a special car marked like an interurban car connects with the interurban line at the city limits. In the East there is another confusion of gages which is beginning to make trouble, as the tracks from Baltimore to Trenton are wider than standard gage, while those in Jersey City and Washington are 4 ft. 8½ ins. This militates greatly against through service between Philadelphia and New York, and between Baltimore and Washington. In Los Angeles, when interurban construction was begun, the city gage of 3½ ft. was abandoned by the interurban and a third rail was laid to permit of the interurban cars coming over the city tracks. At Portland also the gage is 3½ ft., and until recently this gage was in use at Tacoma. The importance of the interurban and suburban lines, however, caused the changing over of gage in Tacoma a short time ago. In Denver, where the gage is 3½ ft., the interurban lines have been built for the same gage. In St. Louis, where the gage is 4 ft. 10 ins., the absence of long interurban lines has prevented any serious inconvenience from this odd gage, but unfortunately for the East St. Louis lines, the practice in St. Louis influenced the street railway construction of the city across the river, although there has not been any physical connection between the street railways of St. Louis and East St. Louis. The East St. Louis and bridge lines were also built with a 4-ft. 10-in. gage. Recently interurban roads from the north and east have sought entrance to East St. Louis, and we note elsewhere this week a change to standard gage on the East St. Louis lines, making it possible to enter into traffic agreements with whatever standard gage interurban roads may seek entrance to St. Louis over the East St. Louis tracks.

Switches at Sidings

At the last convention of both the Ohio and Indiana associations there was some discussion on the comparative merits of stub-end sidings and sidings leading to the main line at both ends. In Ohio it seems to be a very common practice to have double-end sidings at meeting points equipped with spring point switches, so that cars can pass each other without the necessity of the conductor throwing a switch at either end of the siding. As far as convenience of operation at regular meeting points is concerned, there would seem to be no doubt that

this was the best plan, although for various reasons there are a number of roads where the practice is difficult. We have in mind one large interurban system where spring point switches normally set for the main line were in universal use, but the practice was abandoned in favor of fixed point switches on account of several wrecks which occurred to cars attempting to pass over facing spring points at high speed, one truck taking the switch and the other taking the main line, with results which can well be imagined. Nevertheless, some trackmen and managers maintain that with careful inspection and maintenance of spring point switches such a thing should never occur, and the long records of successful operation with such switches cited by some of the Ohio managers go to prove these claims. One plan, which certainly has safety as its strong point, even if awkward in many ways, is that of using stub sidings and making them all face in one direction, for example south, and having a rule that all cars going south or in a direction facing the switch points, shall take the siding at meeting points, leaving all cars going in the opposite direction to pass through on the main line without the necessity of stopping. In this way no car runs at high speed over a facing point switch at a siding where another car is waiting. Facing point switches on a high-speed track have been avoided for years by many railroad managers, and the recent accident at Mentor, Ohio, with the fast New York-Chicago train, simply emphasizes the desirability of doing away with them as far as possible.

Aside from the question of slightly greater safety, the practice with stub-end sidings just spoken of is certainly not desirable, because of the time lost at sidings by the cars which have to take the siding at all turn-outs. It is quite likely to be the case that cars which must take the sidings at all turn-outs will be the ones which are late, and that the cars in the opposite direction must wait for them at turn-outs and waste considerable time which might well be utilized in going on to the siding and clearing the main line for the belated car which needs to make up time. The same safety could be secured by making half the sidings face north and half south on a north and south road, making it a rule that cars facing the switch point at any siding shall take the siding. This will balance up the delays due to backing out of sidings, but the delay and nuisance still exists, although distributed between the cars going in both directions instead of concentrated on cars going in one direction as before. In the minds of many managers, the delays and dangers of backing out of sidings counterbalance the risks involved in double-end sidings.

Dinner Trips

The Detroit "United Weekly" recently published an attractive little editorial on "dinner trips." This does not refer to trips made by extra men and trippers while the regulars are getting dinner, but pleasure trips made by passengers to points on the suburban and interurban lines of the Detroit United Railway, where a good dinner can be obtained and a return to the city be made in the cool of the evening. The Detroit United Railway is fortunately situated in having numerous very attractive places on its line to which such dinner trips can be made. This brings to mind the fact that it is desirable for all interurban and suburban roads to encourage attractive eating places at points on its lines so as to make this kind of excursion business possible. An interurban road which does not give any kind of buffet or lunch service can well afford to look after such matters, not only on account of pleasure traffic, but because of regular business, which has been known to be well provided for in this respect in the past.

The Type of Car for City Use

Although we recently discussed at length the question of the proper type of car for city use, in connection with the report of the New York State convention, the importance of the subject and general interest in this matter by all city companies warrants further consideration of it. The discussion at the New York State convention covered mainly the engineering points involved, namely, the cost of operation and cost of maintenance. What has really determined the matter in the vast majority of cases has been public sentiment and the desire of railway managers everywhere to give the public the type of car it likes best. As to whether a car shall be single or double truck, the size of the road seems to have been and usually should be the governing factor. If the road has enough traffic to call for cars on short headway, so that lengthening the cars does not necessitate too long an interval between cars, the double-truck car has been selected because of public sentiment, the decreased cost of platform labor and the fact that the double-truck car on a poor or indifferent track rides much better than a single-truck car. As to whether a cross-seat car of the semi-convertible type, or a double equipment of open cars for summer and longitudinal seat box cars for winter is to be used is an independent question which depends also on local conditions, but the semi-convertible type is finding much favor, not only on account of the saving of the investment in a double equipment for summer and winter, but because of the ease with which it can be changed to suit the weather, and its freedom from accidents. Not a few managers are glad to get rid of the step accidents resulting from the use of the ordinary open car with running board the full length.

It is not, however, our purpose to discuss here the two sides of this question, but to call attention to the fact that, given a smooth riding car, the public cares little whether it is single or double truck. It does, however, prefer a cross-seat car, be it single or double truck. Even if cross seats are put in a single-truck car which is operated over a bad track, the riding is much more comfortable than on the same car equipped with longitudinal seats. The teetering motion of a single-truck car is less objectionable to passengers seated on cross seats than to those seated on longitudinal seats. A number of companies, previous to the introduction of double-truck cars, began to use single-truck cars with cross seats of practically the same type as the double-truck semi-convertible. The only objectionable feature of these cars was that frequently they were rather narrow for cross seats, making the aisle too narrow for comfort or for freedom of movement. Even if a double equipment for summer and winter is maintained, there are many points in favor of adopting cross seats in the single-truck cars used in the smaller cities. If these cars are made semi-convertible, another argument in their favor is added.

About the only advantage ever claimed for the longitudinal seat is that it accommodates a large standing load during the rush hours in large cities. In the smaller cities where double-truck cars are too large for the traffic, this argument in favor of longitudinal seats does not hold, as there is seldom much of a standing load in the cars any time of day, and the management in such small cities is usually glad to add enough cars at the rush hours to give every one a seat. In the small cities it is not a question of how to handle the people at the rush hour, but how to get the people to handle, and the management cannot afford to have people standing any time of day, except on special occasions, as it is likely to drive away traffic.

The point we wish especially to bring out here is that the advantages of the cross-seat semi-convertible car are not by any means necessarily confined to double-truck cars, as seems to have been assumed by the management of many roads and in many of the discussions which have taken place. The merits of the semi-convertible and the merits of the double-truck car should each be considered by itself. It is certainly a mistake to adopt heavy double-truck cars on a city road of little traffic simply for the sake of their superior riding qualities on bad track. It would be better in the long run to relay the track.

While it may be cheaper for a year or two for the company to buy new double-truck cars rather than relay its bad track, such a policy is only "robbing Peter to pay Paul." The company will have to pay continuously for the electric power required to haul around the greater dead weight of the long cars, and will also ultimately have to relay its track. Should the track be relaid in the first place, the easy riding qualities could be secured with the single-truck car, supposing, of course, the speeds to be moderate, such as are common in purely city service. In fact, this whole editorial is intended to apply to city service only, as suburban and interurban service introduce new considerations.

Noise as an Element of Damages

An interesting decision was recently handed down by the Massachusetts Supreme Court to the effect that the aggravation of the noise of surface cars running beneath an elevated railway structure, by the structure itself, constitutes an element of damage. It certainly is difficult to imagine by what occult mental psychic process this conclusion was reached, and still harder to realize how it is possible to base a definite award of damages upon so elusive a foundation. Granting that the structure causes a certain reverberation of street noises beneath it—and this is open to question—we should like to know what proportion of the sound can fairly be charged to the smoothly running trolley car and what to the endless procession of truck wagons, loaded with everything from loose steel plates to groceries, which caroms merrily over the cobble stones from hour to hour. It would not be very far amiss to state that the withdrawal of two or three beer trucks by Messrs. Schooner & Stein on account of a strike in their transportation department, or the placing in service of a half-dozen new storage warehouse vans by Holdup & Co., makes far more real difference in the total volume of noise in the street than the operation of a hundred surface cars an hour on a given piece of track.

Practically, the point is this: How can an operating company be fairly charged with producing a volume of noise which bears so small a proportion to the uproar of the entire street traffic that the variations of the latter far exceed in amount the magnitude of the former? By what scale of measurement can the percentage be obtained which will indicate the excess of noise which the structure presumably creates in connection with the surface car movement? It is impossible to escape the conclusion that the decision is grossly unfair, and that it was based upon the most indiscriminating guesswork. How little noise either at first hand or second hand the modern trolley car makes can be learned on any Sunday morning, when the streets are clear, provided the roadbed and track are in decent shape. As an example of legal hair splitting this decision bids fair to win the cup.

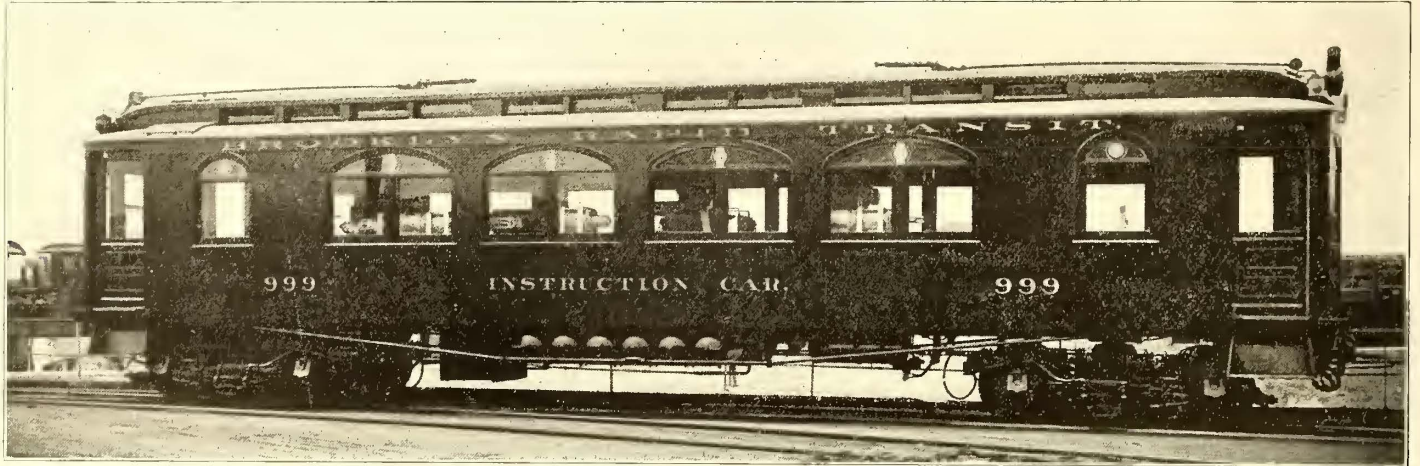
NEW INSTRUCTION CAR FOR THE BROOKLYN RAPID TRANSIT COMPANY

An ever-increasing problem has been experienced by the Brooklyn Rapid Transit Company in the selection and instruction of employees for the operation of trains since the inauguration of electric traction upon its elevated lines. Trains equipped with the multiple-unit control have been found to require much more care and more experienced handling than either the former steam locomotive equipment or the surface trolley cars. The recent extension of electrical operation to all

illustrated in the Aug. 6, 1904, issue of the STREET RAILWAY JOURNAL. The side-door feature of the Boston Elevated car was, however, omitted, but other interesting features, such as a Pullman palace-car window design, the use of end vestibule doors sliding into concealed pockets in the sides of the car and operated by compressed air, and a new scheme of interior finish in light oak with semi-empire deck, have been incorporated, which give the car a striking and remarkably pleasing appearance.

CONSTRUCTION OF THE CAR

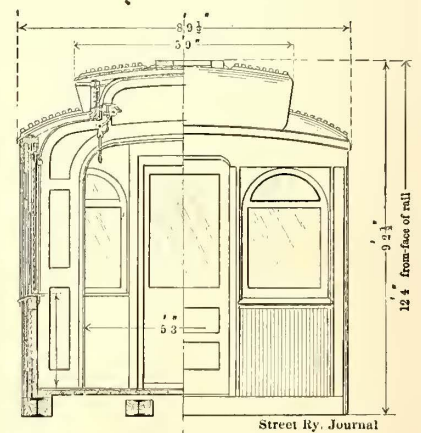
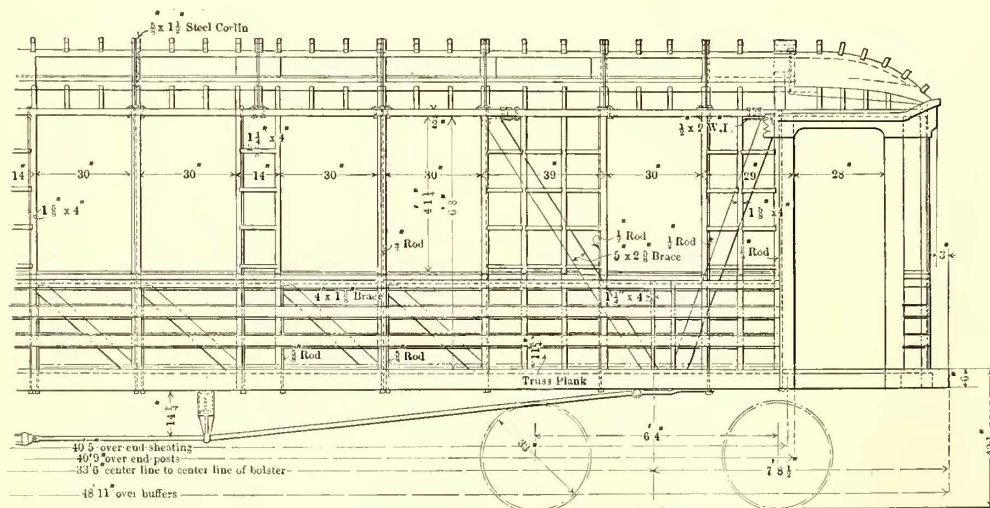
An accompanying drawing shows the details of construction



THE NEW INSTRUCTION CAR FOR THE ELEVATED DIVISION OF THE BROOKLYN RAPID TRANSIT COMPANY

elevated lines of the company and the inauguration of largely increased schedules have added greatly to the number of employees, and have made the securing of experienced men more and more difficult. To assist in the solution of this problem, and at the same time to raise the standard of the motormen, the company decided some time ago to equip an instruction car

and illustrates the method of securing the platform arrangement with omission of the usual end bulkheads. The car is 49 ft. in length over all, 40 ft. between the archways replacing the bulkheads, and is of the standard width of 8 ft. 7 ins. It has a heavy underframe construction consisting of 5-in. I-beams, which are built up for both center and side sills with heavy



END AND SIDE ELEVATION, SHOWING CONSTRUCTION FEATURES OF THE INSTRUCTION CAR

for the instruction of all present and future employees on its elevated division. The car that has resulted involves many features of novelty, not only as to its equipment for instruction, but also as to the constructional features of the car itself.

An effort was made in the design of the car, which was built new from sills to roof, especially to meet the requirements of the instruction work, to embody in it the most improved principles of passenger-car construction. The most radical of the features introduced consists in the use of entirely enclosed platforms and the abandonment of the usual end bulkheads and doors. In this particular the car is very similar to the new rolling stock of the Boston Elevated Railway Company, as il-

oak fillers, and are carried the length of the car. The platform decks are reinforced by supplementary sills, or platform arms, of similar construction, extending from the body bolster to the end buffer beam. The bolster construction and side framing correspond in detail to those of the standard reconstructed cars of this company, which were described in the Aug. 6, 1904, issue of this paper. The roof construction employs steel car-lines with heavy side-post anchor bolts, consisting of 1/2-in. rods, which pass through the forged feet of the car-lines and extend down through the side sill. This permits a very light plate construction as well as of roof detail. The body end construction is notable for the carrying of the plate and all roof

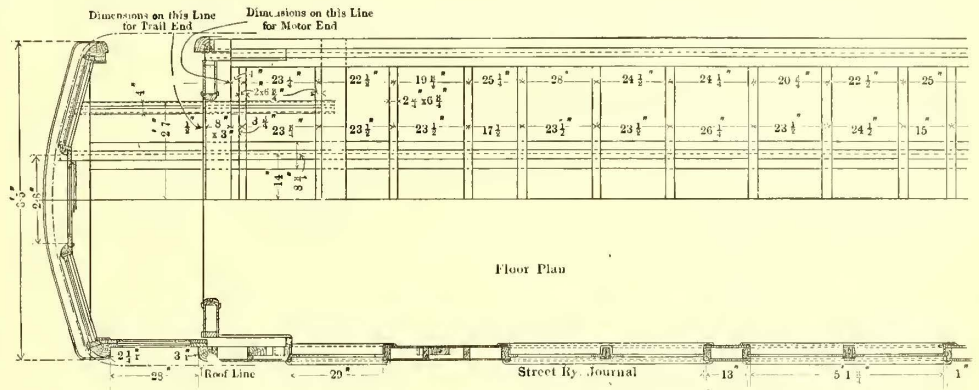
members beyond the body proper to the end of the platform. This plan, while preserving the usual lines of passenger car construction, secures a great rigidity throughout the superstructure. The housing of the platform which, in this car, supplies the framing members to take the place of the bulkhead, is heavily built with strong corner posts and cross bracing beneath the end windows. The usual bulkhead, as described, is replaced by an archway of simple construction with panels on either side and above, which, while not interfering with ease of access to and from the car, adds a very attractive finish to the interior.

A striking exterior appearance is secured through the special window design, which closely resembles that used upon the latest designs of Pullman palace cars. There are four groups of such double-arched windows, with smaller single-arched windows at either end, upon both sides. The end windows are also of similar outline. The car is painted in maroon with gilt lettering, an entirely new color for the system. The interior finish is of light quartered oak. A smooth, well-rounded treatment of detail has been applied to the inside, so that simplicity and neatness are apparent throughout.

The construction of the side pockets for the sliding vestibule doors was easily secured by the hanging of the door runway, which is of the Coburn roller-bearing trolley type, within the car framing and housing it over. The casing of the pocket has been made removable for ease of access to door and runway at all times. The door-operating device consists of a long pneumatic cylinder with a piston travel equal to that of the door

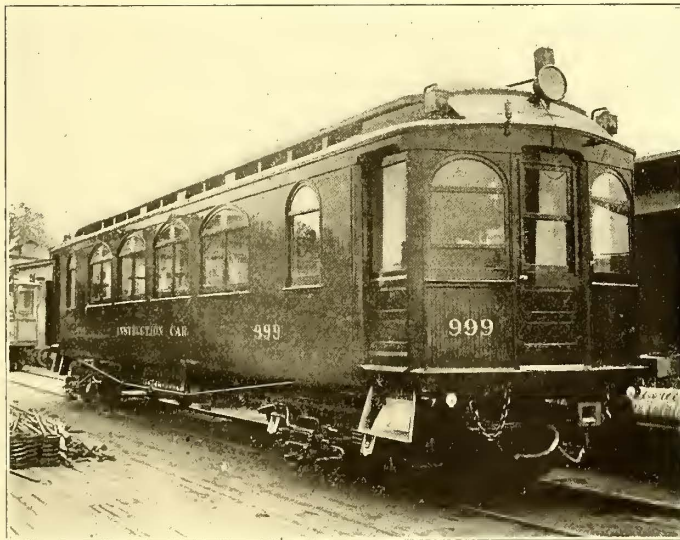
illustration. It may be noted that no effort was made to conceal the cylinder within the side pocket or side framing of the car, inasmuch as the company desired to demonstrate its construction, but it has been finished in highly polished brass, and corresponds with the general interior finish of the car.

The car is equipped with Peckham trucks, one of the trail type and the other carrying two motors, in accordance with the standard practice of the Brooklyn Rapid Transit Company. The motors are both of the 50-L type of the Westinghouse Electric & Manufacturing Company, and the car is provided with the Westinghouse electro-pneumatic system of unit-switch-control, of which there are about 600 equipments in use upon

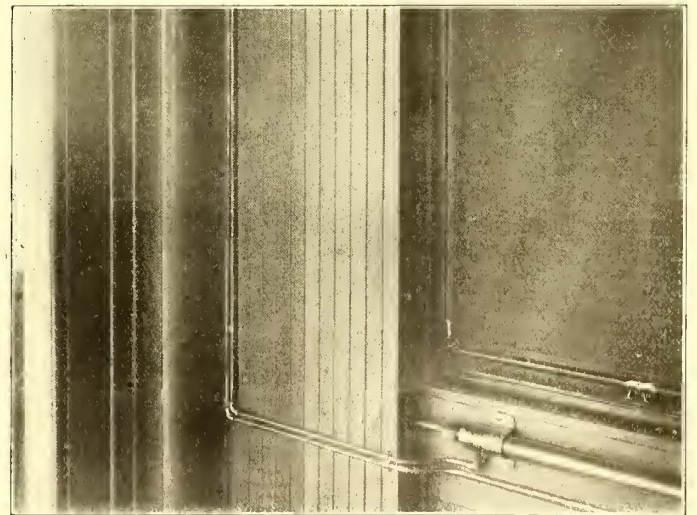


DETAILS OF FLOOR FRAMING

the elevated lines of the Brooklyn Rapid Transit Company. The controller operating the motors is located within the car, so as to serve as a working model for instruction purposes, as will be described later. The low-voltage, multiple-unit operating connections of the control mechanism is entirely exposed to view for ease of examination and demonstration to the stu-



END VIEW OF THE NEW BROOKLYN ELEVATED INSTRUCTION CAR, SHOWING CLOSED PLATFORM



DETAIL VIEW OF THE PNEUMATIC SIDE-DOOR OPERATING DEVICE, WITH CONTROL VALVE

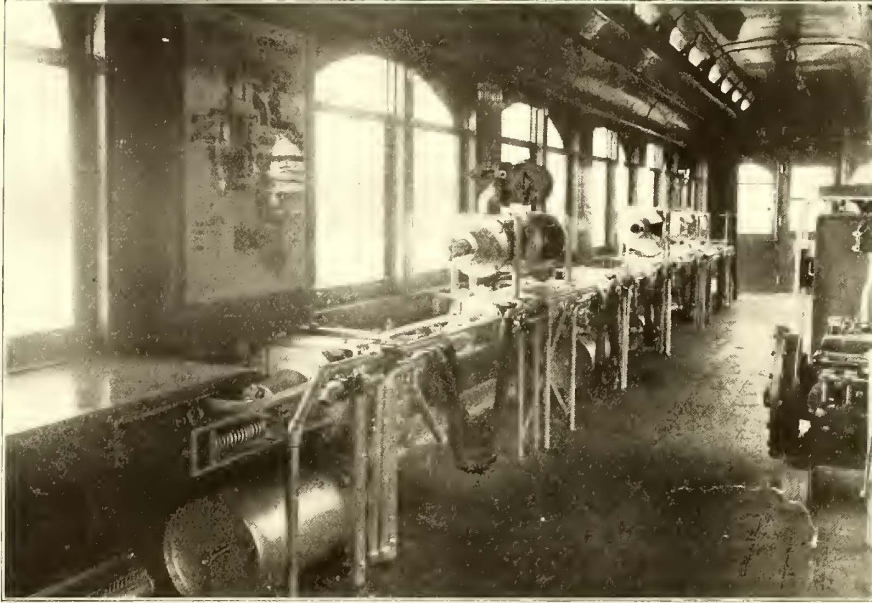
movement, the cylinder being located beneath the window sill at the rear of the pocket, and the piston extending inward through the pocket to the door. The controlling mechanism is located on the inside of the archway panel, convenient to the guard for opening and closing. The control valve consists of a simple three-way valve for admitting the compressed air supply from the air brake reservoir beneath the car into either end of the cylinder or exhaust for the operation of the door. The details of this device, which are clearly shown in an accompanying photograph, are very simple, having been built at the company's shops, and will be readily understood from the

dents, while they are protected from accidental contact with the higher voltage-line current under all circumstances by the usual arc detector casing about the drum proper, and a neatly finished boxing over the motor leads and other line-voltage wiring entering the controller from beneath the car. The air-brake equipment of the car corresponds with the standards of the road, namely, the New York brake cylinder and triple apparatus and the Christensen compressor and governor. The motorman's valves and gages are located, together with the master controllers for the multiple-unit control system, in the vestibules for regular operation upon the road. The car is

further equipped with the Dayton arc headlight and Earll trolley retriever for the control of the trolley rope when operating upon surface lines.

INSTRUCTION EQUIPMENT

The system of instruction for the training of the motormen includes a study of a new book of rules and regulations under a competent instructor and is supplemented by illustrations of



THE SIX-CAR TRAIN EQUIPMENT OF AIR BRAKE APPARATUS, WITH SECTIONAL PARTS

the actual operation of all features of the air brake and electrical equipment by means of the working models in the car. The new rule book is a well-arranged 150-page pocket-size book with cloth binding, and contains rules governing the deportment of the men when in service, directions for the operation of the air brake and multiple-unit train control apparatus, and also for the signal and interlocking systems in use upon the elevated lines. The work will be handled in classes in which the men will be drilled upon the rules and will be systematically examined as to their efficiency. Every assistance possible has been secured for demonstrating the principles taught, including, beside the sectional apparatus, large colored charts and detail drawings for use in describing the functions of all the parts.

As will be seen from the interior views herewith, the electrical apparatus is arranged upon one side of the car and the air-brake equipment upon the opposite side, while at one end a working model of the Van Dorn automatic coupler has been installed for demonstrating its action in coupling. The air-brake apparatus consists of a complete six-car train equipment, including four motor-car and two trailer-car equipments, in accordance with the standard train arrangement of the company, in which the two trail cars are the second and fifth cars in the train. The equipment embraces working models of the car reservoirs and brake cylinders with their triple valves, piping, hose and all auxiliary fittings, the motor-car equipments including 10-in. cylinders with separate reservoirs, and that for the trail cars, 8-in. cylinders with attached reservoirs. The motorman's valve is located conveniently near for the proper demonstration of the apparatus by the lecturer, and the train

line is provided with valves to enable it to be split up into sections of various lengths as desired. For securing the same action of the equipment as would be experienced under service conditions, extra lengths of pipe are connected in the various sections of the train line beneath the car in the form of coils. These extra lengths serve to introduce a total length of train line pipe exactly equal to that of the standard six-car train. The brake-cylinder pistons operate against spring blocks carried in extension riggings so that the effect of various train line reductions may be shown to a nicety by the compression of the springs.

An important feature of the brake equipment is the sectional apparatus provided to illustrate the methods of operation. Located alongside of the motorman's valve there is a sectional motorman's valve, the handle of which is connected to the working model by a yoke in such a way that its exposed rotary valve follows the working valve exactly throughout its cycle of operations, and thus indicates the relative arrangements of ports for all effects, such as lap, release, service application, etc. Sectional triples are also installed for demonstration and an extra brake-cylinder equipment is provided with a special design of triple valve whose slide valve operates the slide valve of an adjacent sectional triple for demonstrating the triple under actual working conditions. This special cylinder is located above the six-car equipment near the motorman's valve.

Another interesting feature of the car equipment is a sectional air compressor, which is the type D-2-E-G of the Westinghouse Traction Brake Company, and which is fitted with corresponding sectioned governor. The compressor is sec-

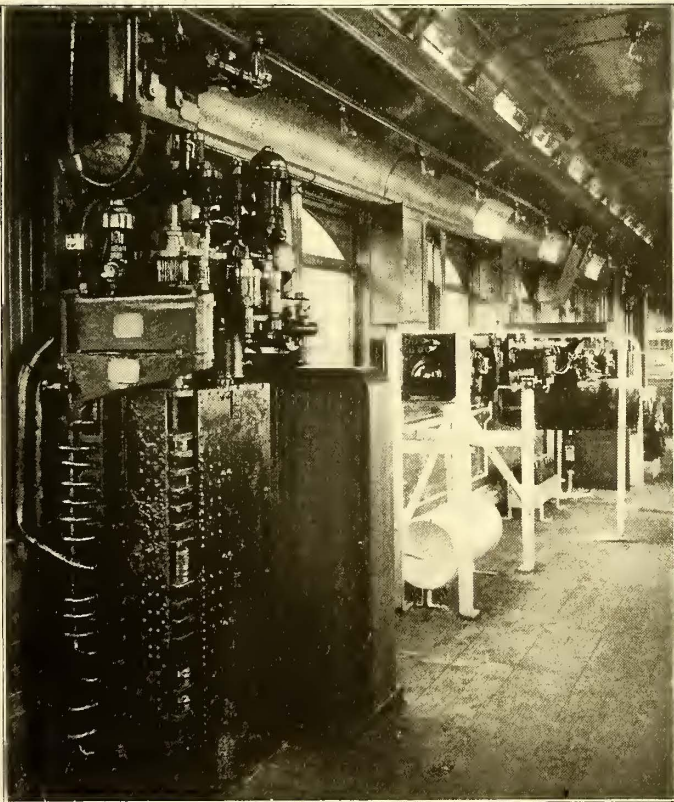


GENERAL INTERIOR VIEW OF THE BROOKLYN ELEVATED INSTRUCTION CAR, SHOWING THE OMISSION OF BODY END BULKHEADS

tioned in such a way as to show the interior of the compressor motor without at all interfering with its operation, and also to expose the compressing cylinder interiors, their pistons, valves, etc. The motor may be operated at speed so that the method of operation of the outfit may be readily followed. The air supply for the six-car train model equipment in the car is supplied by the regular Christensen compressor beneath the ear. The governor for this compressor is located within the ear so

that its operation may be more evident to the students in attendance.

Part of the elevated cars of the Brooklyn Rapid Transit Company is equipped with the Westinghouse electro-pneumatic drum controller and part with the later form of Westinghouse unit-switch-group controller. To properly give instruction on both forms the instruction car is equipped with full-sized models of each. The unit-switch-group controller, which is plainly shown in one of the accompanying illustrations, is mounted upon a framework for ease of access for examination, and while not used for operation of the car so that line current enters it to endanger those examining it, yet it is equipped for operation by a master controller through the various steps in acceleration, reversing, etc. For this purpose a special attachment to the limit switch is required. It will be remembered, from a recent description of the unit-switch-group control in these columns, that the controller provides for automatic acceleration of trains by means of a limit switch device



THE WORKING MODELS OF THE ELECTRO-PNEUMATIC DRUM, AND OF THE UNIT-SWITCH GROUP SYSTEMS OF CONTROL

whose action depends upon the amount of current passing through the motors. The absence of the motor current is provided for in the model of the limit switch by a special dashpot arrangement which succeeds in bringing the same conditions in the acceleration cycle as obtains under service conditions. The auxiliary apparatus used in connection with the unit-switch-group control is located conveniently near the main controller, and includes the reverser, the line switch or circuit breaker, the relay, the limit switch and the storage battery for supplying the low-voltage master-control current.

As described above, the drum-control equipment, by which the car motors are operated, is also arranged for demonstration purposes, being located near the end of the car and entirely exposed to view. All parts of the master-control mechanism are made readily accessible and sectional parts are provided to illustrate their construction. The sectional model of the unit-switch group illustrates the method of operation of the air cylinders, switch-contact arms and electro-pneumatic valves which are common to both systems of multiple-unit control of the Westinghouse Company. It is furthermore intended to in-

stall sectional jumper cables as well as other parts of the apparatus used upon the cars for use in explaining their action. Models of the two types of switchboards used in the motor cars for the control of their lighting, heat and power circuits are also installed, the later or cupboard type of switchboard, as used upon the newest cars and upon a large number of the reconstructed cars, employed for the control of such circuits upon this car, while the older type of board is installed merely for demonstration only.

Another interesting feature is to be noted in the compressed-air-operated coupler model, by which the method of operation of the Van Dorn automatic coupler, as used upon the system, is demonstrated in coupling and uncoupling. One of the coupler heads is mounted in a stationary position in a strong structural framework, as shown, while the other is attached to the piston of an air cylinder and slides to and fro between guides formed by the channel bars for the coupling process, a spring in the air cylinder holding the couplers normally apart. The air supply to the cylinder is controlled by a motorman's valve by which graduated application may be made for bringing the couplers together at any speed of impact desired.

Much credit is due the officials of the Brooklyn Rapid Transit Company for the novel features of design incorporated in both the construction of the car and its equipment. The car was built and equipped at the Eastern Division shops of the company under great pressure of work during the recent reconstruction of rolling stock equipment, and yet with extremely satisfactory results. Much that is novel in the design of the car is due Ferris A. Overfield, who is directly in charge of the Eastern Division elevated shops and had supervision over the construction of the instruction car.

ADVERTISING THE ROCHESTER & EASTERN RAPID RAILWAY THROUGH ILLUSTRATED POST CARDS

A novel and effective form of railway advertising has been instituted by the Rochester & Eastern Rapid Railway Company, which has taken advantage of the prevailing craze for illustrated post cards to familiarize the public with the interesting scenes along its line. Recently J. H. Pardee, general manager of the company, had a number of photographs taken at various places along the route, and arrangements were made with the local news company to have these views issued on postal cards. The news company issues the post cards and then sells them in quantities to the news dealers in that section of the State. Samples of these cards have been posted attractively in each of the company's ticket office and in many of the stores in the towns along our line, noting on the bottom that the cards are on sale at the ticket offices.

The cards are sold at a price of 3 cents each, or two for 5 cents. They cost the company 1 cent each in lots of 1000, and Mr. Pardee estimates that the profit on the sale of these will pay for the original photographs and for the expenses of displaying the samples.

Underground railways that will become elevated roads on leaving the city is a feature of a concession that has been asked of the City of Mexico, Mexico, by Lieut.-Col. Felix Diaz, chief of police; Lorenzo Elizaga, an attorney, and Francisco Ibarra, an engineer, to establish an electric street car system that will embrace this city and most of the suburban towns. It is proposed to extend the line from the city to Tlalpam, Coyoacan, San Angel and Atzacapotzalco, touching the intermediate towns of Churubusco, Tacubaya, San Pedro, Tacuba and Popotla.

STEEL CAR FOR NEW YORK CITY RAILWAY COMPANY

A great deal of attention has been directed for several years past toward the construction of non-combustible cars by the replacement of wood by steel, but, with the exception of the New York Subway cars, very little has been done in the construction of non-combustible passenger coaches for use on either steam or electric roads. Frequent occurrences of fire through accident or short-circuiting and other causes have developed a demand for a non-combustible car.

One of the first people to appreciate the importance of a non-combustible car for surface railway work was H. H. Vreeland, president of the New York City Railway Company. Owing largely to his initiative, the engineers of his company, in connection with those of the Pressed Steel Car Company, have combined their efforts in the production of a steel car which for over a month past has been operated on Broadway, New York. There is no wood used in the construction of this car, except a portion of the window sash, roof and floor matting strips, and these have been thoroughly treated with fireproofing compound which makes them non-combustible. This metal car is modeled very closely after, and in general appearance is like, the standard double-truck wooden car now in operation on the New York surface lines.

The body is 28 ft. long, and the over all dimension is 37 ft. 1 in. The car complete with motor and trucks weighs about the same as a wooden car of the same type, but the builders state that in future construction they will be able to reduce the weight materially without sacrificing the strength—that is, that a steel car can be constructed of the same dimensions and not exceed the weight of a wooden car, and may be lighter.

As will be understood from the accompanying drawings, the underframing of the new steel car consists of angle-shaped sills, which are connected by pressed-steel channels. Each platform is made up of four channel members, which are bolted to the under side of the body underframing, the two outside platform members extending to the body bolster. Each plat-

the bottom of the side sill to the top of the eaves. The carlines consist of bent angles and run continuously from side post to side post across the car. The side posts are strengthened longitudinally by angle-iron bridge members between each two posts at the window rail and at the tops of the windows.

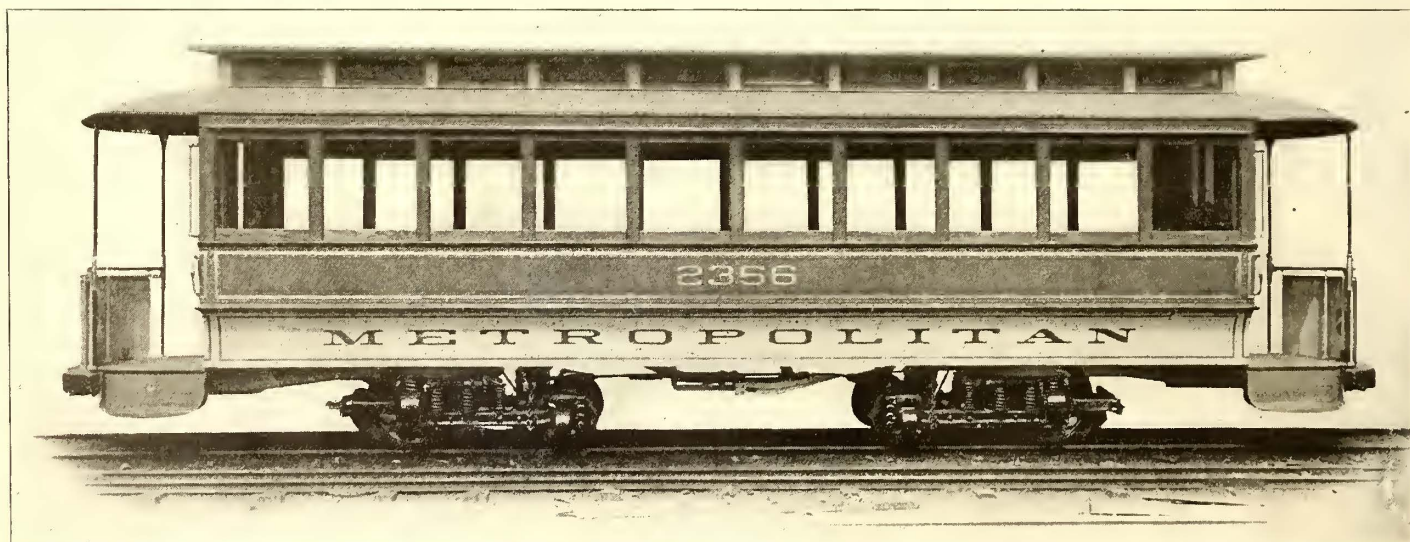
The outside panels are steel plates $\frac{1}{8}$ in. thick. The lower set of panels, running from the guard rail to the bottom of the side sills, are riveted horizontally under the guard rail and vertically at each post, so that in case of damage any panel can be easily replaced. The guard rail is a special steel section, as



INTERIOR OF NEW YORK STEEL CAR

shown on the drawing, and is also divided into sections, but the joints are flush and do not show in the finished car. The guard rail is bolted to the side of the car.

The side posts are connected at their upper ends by a con-



THE NEW STEEL CAR FOR THE NEW YORK CITY RAILWAY COMPANY, THE FIRST EVER USED ON A STREET RAILWAY

form structure is riveted up complete in itself, but it is attached to the underframe by bolts, and when necessary to make repairs either platform framing can be readily removed. The end sill or bumper is a pressed-steel channel, curved to shape. The floor, both of the car body and of the platform, is $\frac{1}{8}$ -in. steel plate, riveted to all the members of both the body framing and platform. Over the steel floor in the aisle are laid maple strip mats, treated, as previously explained, so as to be non-combustible.

The side posts of the car are of channel section and run from

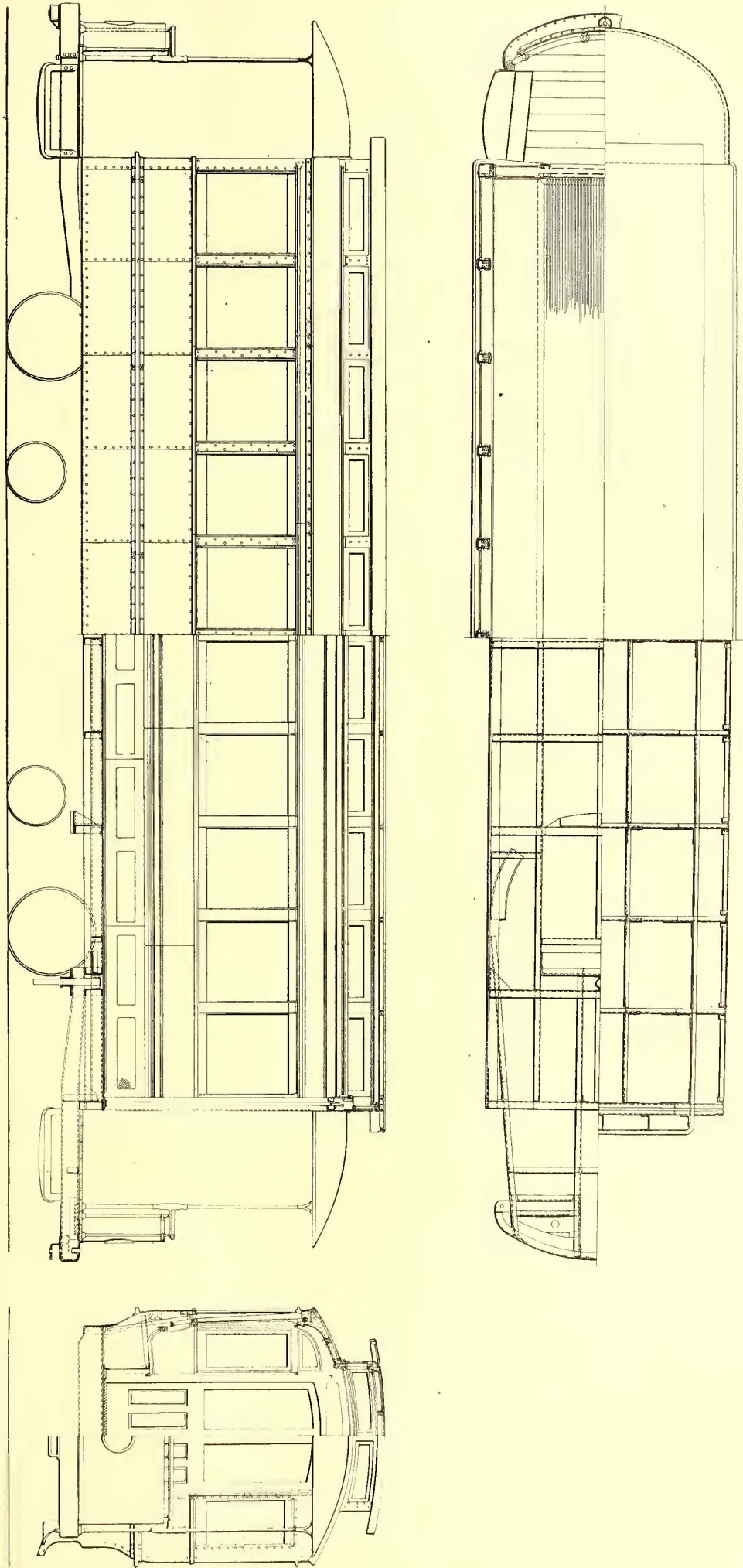
tinuous pressed-steel member, which also forms a water shed over the windows. The upper and lower roofs are made of composite board covered with canvas.

At the lower eaves a copper flashing is brazed to a brass cave running the length of the car. On the upper roof this copper flash is attached directly to the upper eave.

The hoods over platforms are made of steel plates, bent to shape, each hood being in three sections, riveted at the joints.

The windows are arranged to drop into the lower part of the car, as in the ordinary New York City standard car. The

PLANS, SECTIONS AND ELEVATIONS OF NEW ALL-STEEL CAR OF THE NEW YORK CITY RAILWAY COMPANY



upper and lower members of the window sash are fireproofed ash. The side members of the window sash are brass channels which slide in pressed-steel grooves.

The seats and backs are formed of thin sheet steel pressed to shape and stiffened with angles, the outside covering being carpet. Both seats and backs are removable and are held in position by overlapping cleats without the use of bolts.

As to the wiring, the motor cables are carried in split-iron pipes under the seats, and the branch-off wires to motors and controllers are run in iron-pipe conduits. This is the same practice as followed on the standard New York City wooden cars, except that on the latter the main cables are carried in transite moldings. In the case of the steel car, the iron pipes are attached directly to the sheet metal of the car by strap hangers. The motor cables are the same as adopted by the New York City Railway Company as standard for all cars. The specifications for wiring require that each conductor shall be made up of seven soft copper wires, stranded. The resistance of the conductors per 1000 ft must not exceed .07642 ohms for the No. 0 cables, and .1529 ohms for the No. 2 wire. Each conductor is insulated with rubber, according to the rule of the National Board of Fire Underwriters, and is further protected by a layer of approved flameproof braid at least 1-32 in. thick, the outside being saturated with an approved preservative water and flameproof compound. As an additional protection, each cable is wrapped with 1/8-in. thick strip asbestos paper, outside of which is applied a heavy cotton braid which is saturated with an approved preservative water and flameproof compound.

QUESTION BOX OF THE ACCOUNTANTS' ASSOCIATION

Elmer M. White, secretary of the Street Railway Accountants' Association of America, has published the list of twenty-two questions forming the Question Box of that association this year. All of these questions have been suggested by members. The secretary states that it is desirable that all replies be signed for publication, but if any member prefers not to have the name of his company appear, his wishes will be respected. As the questions and answers have to be printed for distribution before the convention, a request is made that replies be mailed to the secretary by Aug. 5, or earlier, if possible. They should be sent to P. O. Box 289, Hartford, Conn.

QUERIES FOR THE QUESTION BOX

1. What is the best method of establishing a "sinking fund account?"
2. What is the best method of filing canceled coupons?
3. In cases where the same company operates both railway and lighting plants, what is an equitable division of those expenses which are not directly chargeable to either plant?
4. What is the best method of computing car-mileage and car-hours? Reply in detail.
5. What is the best method of handling employees' transportation, as viewed by the operating as well as the accounting department?
6. Is it better practice to keep car, armature and wheel records at the shop or at the office?
7. What system do you consider best for keeping track of scrap material?
8. What is the best method of destroying used tickets after an accounting has been made?
9. What are the methods used by interurban roads in the accounting of cash fares paid on the car? If registers are used, how many classes of fares have you, and do you register tickets according to their value?
10. On roads where single and round-trip tickets are sold, is it the practice to carry, indefinitely, the value of the return coupon (not good after thirty days) in the ticket-sale account,

or are the values transferred to profit and loss at set periods?

11. Where a company is obliged to sell round-trip and other tickets, through conductors on the cars, what system is employed to keep account of tickets supplied to conductors? How often is their stock of tickets checked up? Is a deposit required from conductors to protect the company against loss?

12. On an interurban line with collections made on the zone plan, what is the best way to obtain traffic statistics? For instance, a road 21 miles in length has six separate 5-cent fare collections; how can the company ascertain the actual number of passengers carried through from one terminal to the other, or between certain stations?

13. When a weekly pay-roll does not end with the calendar month, what is the best way to separate it for a charge?

14. Is an individual receipt for each person on the pay-roll considered better than the plan of signing in a book?

15. What is the best process of apportioning damages into operating accounts 33 and 34?

16. What method is employed in keeping record of the expense incident to each individual case of personal or property damage?

17. What is the best manner in which to treat "additions and betterments" account for a particular fiscal year?

18. What are the advantages of the voucher check over the old method of separate check and voucher?

19. What is the best form of voucher check? (If members will take copies of the one they think best to the convention, possibly one that could be called standard would be found.—Secretary.)

20. What operating expense accounts should be taken to get the cost of power per kw-hour? Should anything be added for interest or depreciation?

21. On a small road, is it necessary to separate the register checkers and ticket counters from the cash counters?

22. Should register totals be carried forward from day to day—that is, should a record be made so that the closing number can be compared with the opening number the next day?

THE EAST ST. LOUIS & SUBURBAN RAILWAY CHANGES TO STANDARD GAGE

The East St. Louis & Suburban Railway Company's system, which has heretofore been slightly wider than standard gage, being the same as that used in the city of St. Louis, across the river, is now being changed to standard gage, 4 ft. 8 1/2 ins. The change was necessitated by the advent of interurban roads from the north and east, which could not bring their cars in over the East St. Louis & Suburban system. With an odd gage, it was manifestly impossible for traffic agreements to be made with any standard gage interurban line which might wish entrance over the East St. Louis & Suburban system, and it would have been necessary for these lines to build independent standard gage tracks through East St. Louis in order to reach St. Louis. Furthermore, a part of the lines controlled by the East St. Louis & Suburban Railway system were originally standard gage, and the existence of two gages on the same system naturally was a matter of considerable inconvenience.

EDUCATING THE PUBLIC AGAINST THE ACCIDENT 'FAKIR

In the August number of "Pearson's Magazine," Theodore Waters writes of the doings of street railway accident fakirs in some of the large Eastern cities. This installment in the series on "The Profession of Getting Hurt" is of special interest to claim adjusters, as the results of the cases cited show how the aggressive "no-compromise" methods of the Philadelphia Rapid Transit Company have succeeded in making the Quaker City a place shunned by this type of blackmailers.

THE QUESTION BOX

In the Question Box this week are discussed a variety of subjects, including the following: Fire insurance; sinking fund for settlement of accident claims; co-operation between the claim department and the operating department; the use of the camera in adjusting claims; handling fares; keeping records by means of diagrams, and various questions relating to the mechanical department, steam engineering, the engine room and the line department.

The occasion is taken to emphasize again that the Question Box is open to all readers for the asking of questions or the answering of any of the queries that have been published from time to time.

A.—GENERAL

A 8.—A company wishes to carry its own fire insurance, by setting aside a certain percentage of its gross receipts each year to cover fire losses. What would be a safe percentage to allow?

This necessarily would have to be determined by the character of the risk. This company stores its cars in various car houses equipped with sprinkler systems, standpipes and fire hose. Also, each car is equipped with one or more dry powder fire extinguishers. By close adherence to the underwriters' rules and specifications, our insurance is reduced to a very low percentage—about one-half of 1 per cent of the gross receipts.

DENVER CITY TRAMWAY CO.

A 9.—Under what conditions can an electric railway company venture to carry its own fire insurance on its various properties?

The risk should be put in the best possible condition. Every precaution specified by the underwriters should be taken, and thorough inspection made at frequent intervals by someone familiar with the underwriters' requirements. Rolling stock should be housed at various houses, in different parts of the city, and not concentrated at one point, if the company intends to carry its own risk.

DENVER CITY TRAMWAY CO.

A 11a.—Do you have a sinking fund for the settlement of accident claims? Please give details of the methods you use for handling this matter.

We do not have a sinking fund for the settlement of accident claims. When an accident occurs on one of our roads, it is fully investigated by the superintendent in charge of the property, and his report, together with the report of the conductor and motorman, are submitted to the local attorneys of the company, who in turn pass upon the same in regard to the liability of the company. When the accident is serious the company's physician always visits the patient and sends in his report. When these reports are all completed the matter is then handed to the claim agent, with the recommendations of the attorneys as to whether the case should be settled or allowed to go to trial.

D. A. HEGARTY, Gen. Supt.,
Railways Company General, New York City.

A 13a.—How can the claim department best co-operate with the operating department in the prevention of accidents?

The claim department can co-operate with the operating department in the prevention of accidents to the mutual benefit of not only the company, but also the several departments. If the claim department, upon investigating accidents, finds anything in the operation of the road that would be detrimental to the good of the service, the matter should be immediately called to the attention of the man in charge of the operating department, so there will be no recurrence of the accident from that same cause, and it is absolutely necessary, in order to get the most efficient service out of both departments, for them to co-operate with one another.

D. A. HEGARTY, Gen. Supt.,
Railways Company General, New York City.

The claim department's interests are best subserved by having in its force men having had practical experience in the operation of cars, and who are authorized to go among the men, riding with them, explaining the cause of certain accidents and how they could be avoided. Tactful agents can often treat with the men directly

to a better purpose than can the operating department, although, of course, the operating department should act in conjunction with the agents.

F. H. BROOKS, Supt., Lincoln (Neb.) Tract. Co.

A 13b.—Have you ever used the camera to good advantage in adjusting damage claims? Please give details.

We have used the camera in adjusting claim cases, by taking photographs of the place and locality of the accident, together with any special feature regarding the accident which we wish to appear prominently. We have also had surveys made for use in court so as to better illustrate the accident and give a better understanding to the jury. As a rule, preparations of street railway accident cases going to court have been very poorly made, and I think in matters of this kind too little attention has been paid to the details, and the street railways might well pattern after the steam railroads who go into court fortified with maps and plans and models and expert testimony to support their side of the case.

D. A. HEGARTY, Gen. Supt.,
Railways Company General, New York City.

A 35a.—Can a fifteen-minute service be given successfully upon a single-track interurban road? If so, under what conditions?

Fifteen minutes, or even shorter headway on single-track suburban road can be operated successfully, even under heavy traffic. To accomplish this it is necessary to locate turnouts accurately with respect to running time, and turnouts should be of a length equivalent to 60 seconds in running time to allow for any slight variation in headways.

F. W. BACON, Gen. Mgr.,
New Jersey & Hudson River Ry. & Ferry Co., New York City.

A 36a.—Based upon experience, what is a proper rate per mile for interurban passenger business, and to what extent should these rates be reduced by the sale of commutation tickets, monthly tickets, coupon books, etc.?

In making up a schedule of fares for an interurban road, it is better to base the rates on mileage, and there must also be taken into consideration the fact that a great many of the ordinances granted to interurban roads by municipalities fix a rate of fare within municipal boundaries, which make it essential that reference be made to these limits. In regard to the proper rate per mile for passenger business, this all depends upon the territory through which the railway passes. From the manner in which an interurban road has to be operated, I think the proper rate per mile for passenger business should not be less than 2 cents. A reduction for round trip tickets should not be less than one-fourth of a cent, making the rate .0175 cent per mile.

D. A. HEGARTY, Gen. Supt.,
Railways Company General, New York City.

A 36b.—How do you handle your half-fares?

We have no half fares on the interurban roads, but on the city roads half-fare tickets for children under ten years of age are sold at the company's offices in lots of ten tickets. Any child riding has to present one of these tickets, or otherwise must pay full fare.

D. A. HEGARTY, Gen. Supt.,
Railways Company General, New York City.

We have no half fares on our system. Children under five are carried free, and over five pay full fare. We believe this is the best way of solving the half-fare difficulty.

GEO. O. NAGLE, Gen. Mgr.,
Wheeling Traction Co., Wheeling, W. Va.

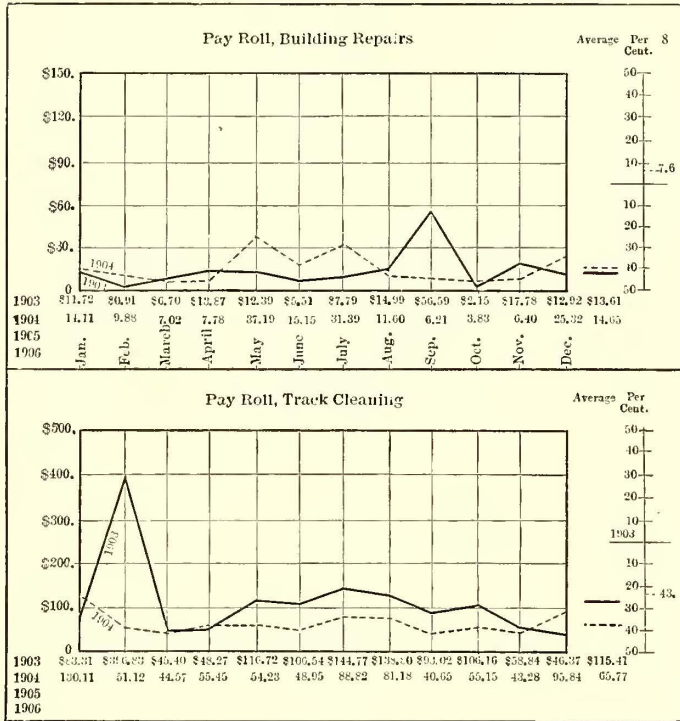
A 37.—What is the best method of collecting and checking fares on interurban roads?

The method used by our conductors in checking and collecting fares on our interurban road, which we have found satisfactory, is for the conductor to go through the car and take up all the tickets and issue cash-fare receipts to those paying cash fares. An identification ticket is put in the hat band or in the seat in front of the passenger, showing that he paid a cash fare. This ticket is printed in such a manner that the conductor punches out the date, trip, and the destination of the passenger. The checks are also in different colors, so they can be readily distinguished at a glance. At the end of each zone, the conductor also registers the number of passengers on his car. The registers on the cars are of the recording type and keep the total for the seven zones, which is the number of zones on each trip. Each zone covers a five-cent fare.

D. A. HEGARTY, Gen. Supt.,
Railways Company General, New York City.

A 47.—Have you worked out any special form of hand book or note book by which the manager can keep in convenient shape for quick reference the various data and statistics relative to his property, such as comparative receipts, car mileage, station output, etc.? How do you keep this information? Sample pages or sheets from your book, with description, will be appreciated.

The accompanying sample sheet of curves illustrates the method followed by the writer for keeping records in diagrammatic form. It will be noticed the curves are plotted on perfect cross-section paper from which blue prints can be made. The curves and figures are



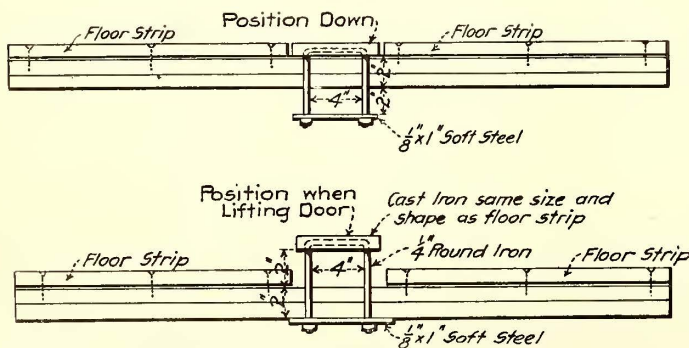
KEEPING DATA IN DIAGRAMMATIC FORM, LINCOLN TRACTION COMPANY

given; then the averages of the curves and the percentages of increase or decrease are indicated at the right. 1903 was taken as the basis of calculations. These can be changed to fit any requirements. Any number of combinations, as "total kilowatt-hour output" and "total cost per kilowatt-hour," etc., can be made. In fact, a complete record of what the company is doing in any branch can be kept in ready reference form in this way.

CHAS. H. COX, Gen. Mgr., Lincoln (Neb.) Tract. Co.

E.—MASTER MECHANIC'S DEPARTMENT

E 16.—What is the best form of handle for trap-door lifts in cars?



SUGGESTION FOR TRAP-DOOR HANDLE

Enclosed find a rough sketch of trap-door handle. This is the cheapest and most durable trap-door handle that I know of.

J. L. SULLIVAN, Foreman Motor and Truck Dept., United Rys. Co., St. Louis, Mo.

E 20.—What has been your experience in the use of car fenders?

Experience with fenders that project beyond bumper and those that do not makes possible the following comparison: The fender that is attached to the wheel guard and does not project beyond bumper of the car can be set at a minimum height above the rail, and in this position is most effective for picking up objects and is less liable to injury. With this type of fender fewer people and vehicles are struck and it does not interfere with coupling cars with short couplings. Although the projecting fender is more apt to strike persons, the person struck sometimes falls on the fender without serious injury, particularly in case of small children, whereas, persons struck by the bumper of the car are generally seriously hurt. A disadvantage of the fender on the wheelguard of double-truck cars is that it projects just about even with the bumper and offers a tempting place for a boy to stand and steal a ride, with the result that occasionally a small foot slips through and the boy is dragged.

MASTER MECHANIC.

E 25.—In the use of a projecting fender, do you consider it desirable to have the fender so arranged that it can be dropped to the track, and if so, do you favor an automatic drop, or one worked by the motorman?

It does not seem practical for the motorman to drop his fender, as he needs the use of all his limbs for other purposes, particularly at the time when the fender should be dropped.

MASTER MECHANIC.

E 45.—A road is having trouble with motors becoming hot on hills. What can be done to keep motors cool under these conditions?

Use large motors, and increase size of feeder cables, so as to maintain voltage at hill to near normal.

J. CHAS. ROSS, Gen. Mgr., Steubenville (Ohio) Tract. & Lt. Co.

The motors are too light for the service required. I know of no remedy except to use heavier motors. (I had this same experience winter before last in Pennsylvania.)

J. L. SULLIVAN, Foreman Motor and Truck Dept., United Railways Co., St. Louis, Mo.

E 36.—For armature bearings, which form of lining do you prefer, babbitt or brass? Please give your experience with either.

We have some devices which we consider valuable, such as the use of brass for main motor bearings instead of babbitt. We cast the journal-box brass, allowing for shrinkage, and do away with the machine work by simply rattling the sand from the castings and pouring in a lead or tin lining for bearing purposes.

R. H. YOUNG, Master Mechanic, Lincoln (Neb.) Tract. Co.

E 42.—After the armature shaft has become worn, how do you insure good fit at the bearings?

After an armature shaft has become worn away between 1-32 and 1-16 of an inch, it should be turned down to 1-16 in. After it has worn again between 1-32 and 1-16 of an inch, it is turned down again and a sleeve shrunk on, bringing the shaft to its original size. By using two mandrels, one for the large size and one for small size, it will be readily seen that boring the bearing is not necessary.

J. L. SULLIVAN, Foreman Motor and Truck Dept., United Railways Co., St. Louis, Mo.

E 46.—State experience with use of oil instead of grease for motor lubrication.

In the older types of motors we use oil instead of grease fed through a wick or a piece of cane tubing set in the oil-way. Grease gave us trouble in becoming so thin in warm weather that it would run down and collect on the commutator rings and cause them to be so saturated with grease that they would become conductors of current.

R. H. YOUNG, Master Mechanic, Lincoln (Neb.) Tract. Co.

E 49.—In lubricating armature bearings, is there any advantage in using both grease and oil at the same time, feeding oil with a wick from below, and grease from cups above the bearings?

No. It is not practical, as the grease will form a coating over the wick that will not allow the oil to pass to the journal.

J. L. SULLIVAN, Foreman Motor and Truck Dept.,
United Railways Co., St. Louis, Mo.

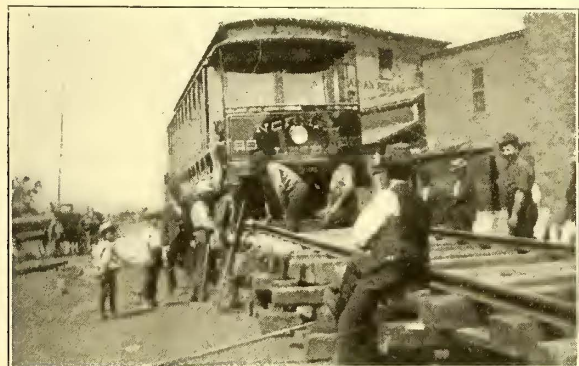
E 157.—What is a convenient and satisfactory method of unloading cars from flat cars?

The illustrations herewith explain how a small road unloaded two heavy 15-bench open cars that came fully equipped from the



UNLOADING CARS, BLOOMINGTON & NORMAL

car builders. An incline was built up of ties connecting the steam railroad flat car with the street railway tracks. The car motors were connected by means of a flexible insulated wire to the trolley



INCLINED PLANE FOR UNLOADING CARS

line, thus utilizing the car motors to unload the cars down the incline as shown in the views. C. H. ROBINSON, Master Mechanic,
Bloomington (Ill.) & Normal Ry. Elec. & Heating Co.

F.—STEAM ENGINEERING

F 2.—When computing the overload capacity of a boiler plant, what percentage above rated capacity is it safe to rely on?

With clean boilers and tubes, fairly good water and furnaces that are equal to it—the water-tube boiler as now commercially rated can be relied upon to work at 100 per cent overload during night and morning "peak-work" on trolley loads.

D. F. CARVER, Supt.,
Rochester Ry. Co.

The overload capacity depends upon grade of coal used, condition of chimney, draft, whether forced or induced, method of firing, whether hand or stokers, etc. We have hand-fired boilers and weak draft, and hence cannot rely on more than full rating of boilers with mine run coal.

E. G. HINDERT, Chief Engineer,
Cleveland & Southwestern Tract. Co.

F 3.—With reference to the relation between average and peak loads on an electric railway power station, what is the best size and what the best arrangement of boiler units?

I consider the following the ideal arrangement. Have one engine generator set that will take care of the ordinary load, and another set of same capacity to take care of heavy days and increasing load. A third unit should be installed when load increases to a point where a break-down would mean crippling of the service. For boilers I would have, if generating set is 500

hp or less, a single boiler unit large enough to take care of one generating set, and then one boiler for every additional generating set. If generating set is larger than 500 hp, get two boiler units of ample capacity to take care of one generating set, and two similar ones for each additional generating set, and one boiler set for service while cleaning and repairing any of the other boilers.

E. G. HINDERT, Chief Engineer,
Cleveland & Southwestern Tract. Co.

G.—THE ENGINE ROOM

G 1.—Discussion is invited pertaining to comparisons of the various system of power generation and distribution now available for electric railway purposes.

We have six water-power stations and one steam station all operating in parallel, giving a general supply for incandescent and arc lighting, power for various purposes, such as smelters, mines, cement works, brick works, mills, factories, etc., also for the entire railway system of Salt Lake City. The system is run at 60 cycles. The supply for the railway is transformed by means of rotary converters and synchronous motor generators. For 60-cycle work the motor generator is the most advisable, and of the induction and synchronous types of generators, the synchronous is for several reasons the best. We have perfect success with the rotaries, but it is only after a great amount of testing and experimental work, making necessary adjustments of transformer ratios, etc., to give proper running conditions for the rotaries.

O. A. HONNOLD, Opr. Engineer,
Utah Light & Ry. Co., Salt Lake City.

G 2.—What are your ideas, based on experience, regarding the use of several small generating units in place of one or two large units? Give details, cost and results secured.

In consideration of the fact that the railway business as well as lighting and power is growing faster than the engineers seem ever able to contemplate, there is certainly no reason for ever installing small generating units in place of an equivalent large unit. This is true in both steam and water-power work. More economy is obtained in space and in first cost, and efficiency is increased. Simplicity of operation, reduction of labor required, etc., are important factors favoring large units.

O. A. HONNOLD, Opr. Engineer,
Utah Light & Ry. Co., Salt Lake City.

This depends on what is meant by small units. My experience has shown me that two 250-kw units are better than one 500 kw, and two 500 kw are better than one 1000 kw.

H. A. TIEMANN.

Units should be so proportioned on a new road that two machines will carry the load and one be in reserve so that in case one engine is out of commission only one-third of the plant will be useless, instead of one-half if two larger engines had been installed in place of three smaller ones.

FRANCIS G. DANIEL.

H.—THE LINE DEPARTMENT

H 12.—What is the most efficient method of tapping trolley wire to feeders?

The most efficient method of tapping trolley wire to feeders is to use the feeder tap as a span wire and attach the ear by means of a brass yoke.

MECH. AND ELEC. ENGR.

With side pole construction solder feed tap on to feeders and out to the trolley, and solder it to an ear by itself, keeping it clear of bracket. On span-wire construction solder on to feeders and use a brass feed hanger.

Columbus, Buckeye Lake & Newark Tract. Co. and Columbus,
Newark & Zanesville Elec. Ry. Co.

H 21a.—What means, machines, devices or special rigged cars are you using for expediting or cheapening the work of the line department? Please send descriptions, with photographs or drawings, and statement of results secured.

Where it is necessary to string in a considerable length of wire, a very short flat-car can be used to great advantage. This car has a post on each side of the car, braced so that there is no danger of turning over, and high enough so that a reel of trolley wire will swing clear of the car floor. When the regular cars are stopped for the night, or even between cars on regular schedule, this flat-car can be drawn along by a motor-car on a team of horses, the line wagon following close behind and tying trolley wire to span wires temporarily.

A. M. SMITH, Engineer,
Rapid Transit Ry. Co., Dallas, Tex.

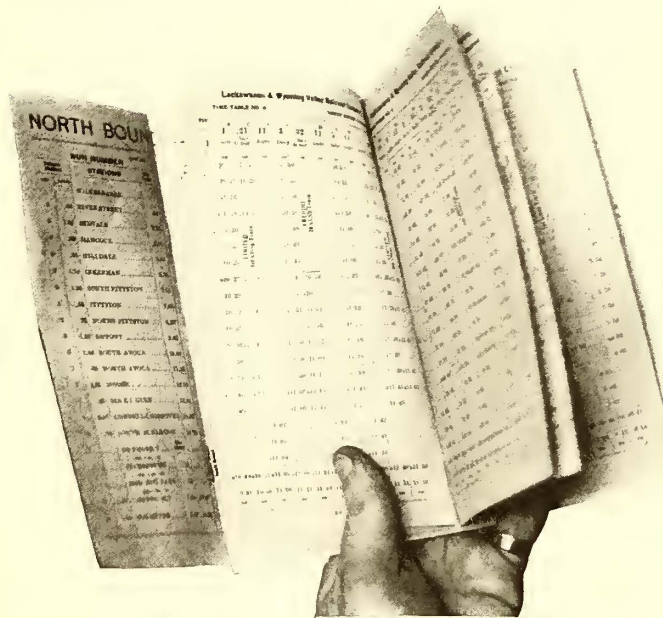
A NEW FORM OF TIME-TABLE FOR FAST INTERURBAN SERVICE

A valuable improvement in the form of time-tables for frequent interurban service has recently been introduced upon the Lackawanna & Wyoming Valley Railway Company, commonly known as the "Laurel Line," operating between Scranton and Wilkesbarre, Pa. The requirements of modern high-speed interurban service are similar to those of the steam railroads in that employees' time-tables should be easily read and understood; but the tendency is to make use of the form of time-table so long in vogue upon the steam railroads, namely, the long folder type, which sometimes reaches lengths of 20 ins. to 30 ins. A difficulty with this older form of time-table has always been its inconvenience of reading, especially out of doors and in bad weather, when it soon becomes torn and illegible. If, on the other hand, it is refolded frequently to bring forward the different times of day as needed, the portions creased in folding are very liable to become unreadable.

To overcome these difficulties, the Lackawanna & Wyoming Valley Railway devised the type of time-table illustrated herewith. The time-table consists of a pocket-size pamphlet, the

the same car have been given a run number, which number is also carried both on the front and the rear of the train for purpose of identification by all operators and roadway employees along the line. The large heavy type number at the top of each train schedule is a run number. For the purposes of the auditor, the round trips made by each run number are numbered consecutively. This is the small figure shown in the upper right-hand corner at the head of each train schedule. For the purpose of operating department reports, a train is identified, for example: "Run No. 3, north, leaving Wilkesbarre 10:30 a. m." The advantage of this scheme for frequent service like this will be readily appreciated; the various trains in operation retain their original run numbers throughout the day and are marked accordingly, the only difference in designation necessary throughout the day for accounting purposes being with reference to the number and direction of the trip.

The time arrangement of schedules in the table provides that all trains throughout the book shall be in consecutive order of time, so that if a train lays over at any station along the line for any length of time for switching or passing purposes, this is apparent. Another important practice in use by this company is that of changing the color of the time-table paper for all new editions of the table. This prevents confusion between



APPEARANCE OF OPENED TIME-TABLE WHEN HELD IN THE HAND

NORTH BOUND

Table titled 'NORTH BOUND' showing station names and run numbers. The stations listed include Wilkesbarre, River Street, Midvale, Hancock, Hilldale, Inkerman, South Pittston, Pittston, North Pittston, Dupont, South Avoca, North Avoca, Moosic, Rocky Glen, Connellycrossover, and South Scranton. Run numbers are listed in the right margin.

Table titled 'Lackawanna & Wyoming Valley Railroad Company NORTH BOUND-Continued'. It shows a detailed schedule with columns for 'Run No.', 'Station', 'Day', and 'Time'. The schedule includes runs for various stations like Wilkesbarre, River Street, Midvale, Hancock, Hilldale, Inkerman, South Pittston, Pittston, North Pittston, Dupont, South Avoca, North Avoca, Moosic, Rocky Glen, Connellycrossover, and South Scranton.

Table titled 'Lackawanna & Wyoming Valley Railroad Company NORTH BOUND-Continued'. It shows a detailed schedule with columns for 'Run No.', 'Station', 'Day', and 'Time'. The schedule includes runs for various stations like Wilkesbarre, River Street, Midvale, Hancock, Hilldale, Inkerman, South Pittston, Pittston, North Pittston, Dupont, South Avoca, North Avoca, Moosic, Rocky Glen, Connellycrossover, and South Scranton.

REPRODUCTION OF PAGES 24 AND 25, WITH THE NORTH-BOUND FLY-LEAF

present issue embracing forty pages beside the cover. Of these pages, thirty-two are devoted to train schedules, and the remaining eight and the cover to rules governing the department of trainmen and the care of apparatus. The names of all the stations upon the system are printed upon two flyleaves which project out so as to come opposite the corresponding station locations on all the following pages. The first half of the table is arranged for southbound trains, while the last half covers the northbound runs, there being over fourteen pages devoted to the runs in either direction. By means of this flyleaf arrangement of listing the stations, it is possible to bring any page of the time-table opposite the station list. The flyleaves are printed on but one side only, and the fold is made so that the page of which it is a part is narrower than the other pages in the time-table. Adherence to these two points prevents the use of either flyleaf with the wrong set of train schedules.

Another important feature of the arrangement of the table is to be noted in the scheme of run numbers and the arrangement of the train schedules in chronological order. With the large number of trains provided for the frequent service desired, difficulty was foreseen in any attempt to number the trains serially. Accordingly all trains which could be run with

old and new tables, and minimizes the possibility of trouble from this direction.

There are other features of the new book worthy of attention. In addition to the rules which are printed in the last eight pages of the book, special instructions are given for the operation of cars with the new Westinghouse unit-switch-group system of multiple-unit control which has been applied to a large number of the cars of the system. These instructions include methods of cutting out a motor, of cutting out cars, and in general as to the handling of disabled control equipment if such difficulties are encountered. There is also a list of the whistle signals in use, the list of telephones at all stations, cross-overs and switches, the distances of all of these points from either end of the line and the running time and distance between any two adjacent stations. The front cover carries the regular third-rail warning of the company, in which the employees are forbidden from touching the third rail, etc. Two other notices are incorporated upon the front cover at the top and bottom, as well as also upon all rule pages of the book, as follows:

The safety of passengers and trains is of first importance, and all operations of working, repair or construction must be subservient thereto.

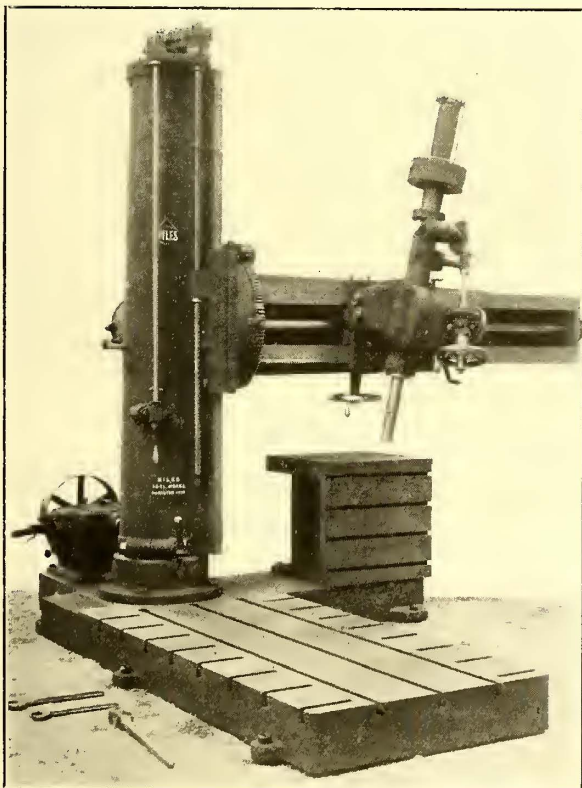
Every person in the service of this company is expected to be courteous and obliging toward the public and his associates.

The inside of the front cover is devoted to instruction regarding accidents, in which reference is made to the rules of the company in regard to them. This is supplemented by the names and addresses of the company's surgeons in Scranton, Pittston and Wilkesbarre, and also the locations of the hospitals in these cities.

The new table was developed by Chester P. Wilson, the superintendent of the company.

NEW SIX-FOOT UNIVERSAL RADIAL DRILLING MACHINE

The Niles-Bement-Pond Company has recently brought out the improved 6-ft. radial drill shown in the accompanying illustration. It is built to use high-speed drills to their fullest capacity. The drill-head saddle fits between as well as outside of the arm guides, which completes the double-box section of the arm and insures great rigidity. The column saddle is strongly gibbed to flat scraped bearings on the column, and the post about which the column revolves extends to the extreme top of the sleeve. The use of large shafts, steel gears, bronze bushings and ring oiling bronze bearings for all fast running shafts makes a strong, durable machine, capable



IMPROVED RADIAL DRILL

of standing the hardest service. The principal feature, however, of this machine is its convenience and ease of manipulation. All the feeds and speeds are changed by means of levers, and great care has been taken to arrange the levers and hand wheels so that they shall be within easy reach of the operator. The column rests on ball bearings. An idea of the simple, compact design of the machine can be gained from the illustration.

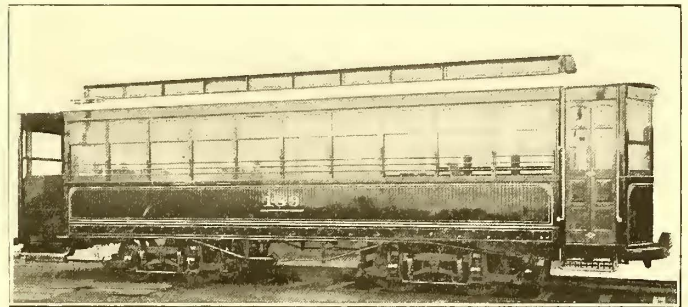
The machine is adapted for use with either carbon or high-speed drills, the range of spindle speeds being sufficient for this purpose. Friction clutches are used for starting and stopping the machine at high speeds, so as to prevent shock and consequent wear. The speed box is planed on the top, in order that the drill may be easily changed from a belt-driven machine to a motor-driven machine by the simple substitution

of two gears for the pulley. Reversing gears for tapping are provided. All speeds and feeds may be changed while the machine is running at its highest speeds.

This radial drill is a full universal machine—that is, both the arm and the saddle swivel. This fact should be borne in mind in considering the design. The dimensions of the machine are as follows: Drills to center, 12 ft.; maximum distance from face of column to center of drill, 77½ ins.; least distance from face of column to center of drill, 22½ ins.; greatest distance from spindle to base plate, 72 ins.; and traverse of spindle, 20 ins.

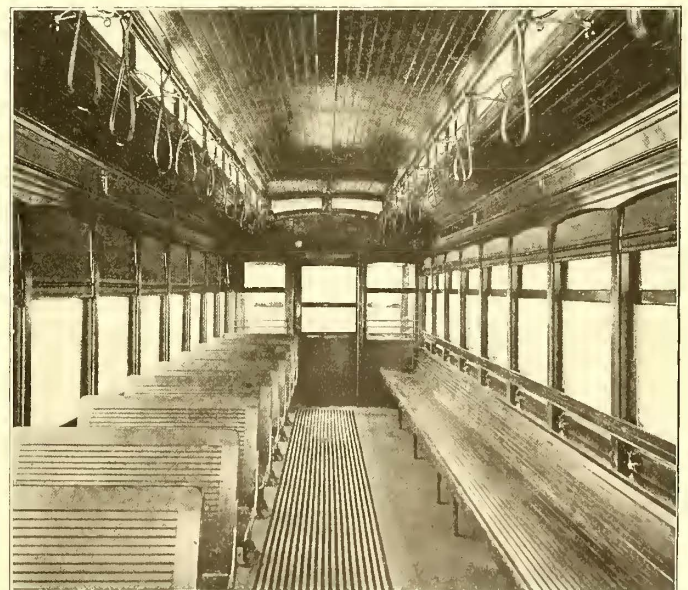
CLOSED CARS FOR THE DES MOINES CITY RAILWAY

Fifteen cars of the type illustrated have lately been delivered to the Des Moines City Railway Company by the American Car Company. The railway company operates over 100 cars



DOUBLE-TRUCK CLOSED CAR USED IN DES MOINES

on its 65 miles of trackage in and about the city. The new cars are 28 ft. over the bodies and 8 ft. wide over the posts at belt. Longitudinal slat seats are along one side of the cars and eleven transverse seats are on the other side. This seating arrangement is evidently very satisfactory, as over fifty cars, counting this present order, have been built for the rail-



INTERIOR OF DES MOINES CAR, SHOWING THE COMBINED CROSS AND LONGITUDINAL SEATING ARRANGEMENT

way by the American Car Company. The purpose is to obtain the largest seating and standing capacity possible to the area of the floor. Having the seats longitudinally placed on one side gives an unusually wide aisle, which facilitates the movement of passengers in and out, an important consideration in city service. The entrances of the vestibules are both on the same side, as the cars are to be run in one direction only. The

upper sashes in the cars are stationary, and the lower sashes are arranged to be raised. The vestibule sashes are arranged to be dropped into pockets. The interiors are finished in cherry, with ceilings of the same make of tongued and grooved boards. The cars are equipped with automatic folding wooden gates at the entrances to the rear platforms, which are operated by the motormen. Three-bar guard rails are used, and as an extra precaution a wooden strip extends the entire length of the side of the car having the longitudinal seat. The cars are mounted on No. 27-G trucks for fast and heavy city and suburban service. The specialties include Brill angle-iron bumpers, steps, vestibule doors, and American Car Company's sand boxes, gongs and brakes.

The general dimensions are as follows: Length over the crown piece, 37 ft., and from the panel over the crown, 5 ft. at the rear and 4 ft. at the front. The width over the sills, including the sheathing, is 8 ft. The distance between the centers of the posts is 30 27-40 ins. The side sills are 4¾ ins. x 7¾ ins., and the end sills are 4 ins. x 7¾ ins. The sill plates are 8 ins. x 5/8 in. The thickness of the corner posts, 4½ ins., and of the side posts, 2¼ ins. The length of the seats is 32½ ins., and the width of the aisle, 36 ins. The height of the steps is 18 ins., and of the risers, 14 ins. The trucks have a 4-ft. 2-in. wheel base and 33-in. wheels.

THE GRAND RAPIDS RAILWAY COMPANY'S NEW CARS

Strength, beauty and convenience characterize the ten new cars built for the Grand Rapids Railway Company after its own specifications. These cars are of the semi-convertible, double-truck type. The main dimensions are as follows: Length of the car body over the end panels, 30 ft.; length over the platform nose pieces, 43 ft.; width at the sill, 8 ft. 3¼ ins.; width at the belt rail, 8 ft. 9 ins.; height inside the center, 8 ft. 9 ins.; at the plates, 6 ft. 3 ins.; from under side of sill to the top of the trolley boards, 9 ft. 11 ins. The side sills are of yellow pine and the end sills of oak, covered with 14-gage sheet steel inside of the vestibule. The center cross sills are of oak and the two sub-sills of yellow pine for the full length of the car.

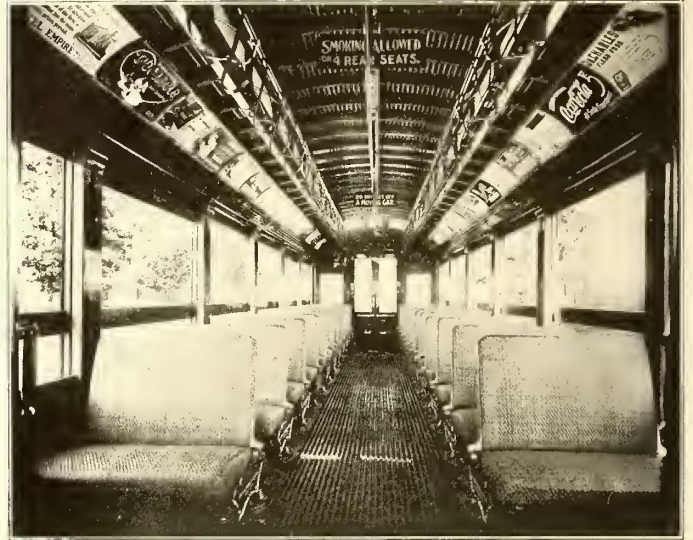
The body framing is of white ash and yellow pine. The length of the platform is 6 ft. 6 ins., with steps and openings on both sides, with doors for the full width of the openings. When open, the doors lock against the end of the car body with the company's special lock. A steel plate attached to the inside of the door closes the step opening and folds behind the door when it is open. The doors are fitted with removable sash. Floors are of oak and platform timbers are reinforced with ½-in. steel plates. The portion of the vestibule below the windows is closed with one piece of 14-gage sheet steel extending from one corner post to the other. Each vestibule is enclosed with three drop glass windows and two single hinge side doors. The interior of the vestibule is of reinforced steel. The windows are of the large observation type, 32 ins. x 48 ins.

The cars are equipped with twenty-four rattan walkover seats, arranged crosswise, and having a double pedestal base. The car bodies were built by the G. C. Kuhlman Car Company, and run on Brill 27-G trucks, which carry GE 70 motors, four on each car. Each car is equipped with the Garton-Daniels automotoneer and K-28 controllers.

The company is in the market for ten more cars of this type for fall delivery, concerning which information may be secured from W. W. Butler, engineer and superintendent.

WEST PENN RAILWAYS ADOPTS A TRADE MARK

Steam railroads for the greater part have a distinctive design which appears on schedules, advertising matter and frequently on rolling stock. Almost everyone recognizes the dome of the Capitol at Washington as the emblem of the Baltimore & Ohio, while the Pennsylvania Railroad has chosen the Keystone as its trade mark. The Maltese Cross of the Big Four, the railway track running into the setting sun of the Southern



INTERIOR OF ONE OF THE NEW CARS DESIGNED BY THE GRAND RAPIDS RAILWAY COMPANY

Pacific and the triangle of the Chicago & Alton are also well known designs. Quite a number of electric railways have adopted a trade mark, and one has just been chosen by the West Penn Railways. The names of the three counties of Fayette, Allegheny and Westmoreland are inscribed on a triangle, representing the strength and solidity of that portion of the State, while the name of the West Penn Railways appears



ONE OF THE GRAND RAPIDS RAILWAY COMPANY'S NEW CARS, SHOWN COMPLETELY EQUIPPED FOR SERVICE

on the encircling ring, representing the splendid facilities for travel throughout the enclosed counties furnished by the West Penn Railways.

The street car line in Guatemala City is to be equipped with electricity. General Manager Ricardo Echeverria is now in the United States, and may be addressed in care of the Consul of Costa Rica, at New York.

LEGAL DEPARTMENT*

DUTY TO PERSONS IN STREETS

In the legal department of the *STREET RAILWAY JOURNAL* for April 1, 1905, there was considered the decision of the Supreme Judicial Court of Massachusetts in *Duchemain vs. Boston Elevated Railway Company* (71 N. E., 780), in which it was held that the technical relation of carrier and passenger does not commence until a person has touched the step, or the hand rail, or some other part of a car with the purpose of boarding it. The abstract principle there laid down was approved, but it was suggested that the practical scope of the decision would probably not be very great, because, while theoretically a higher degree of care is owed to persons who have become passengers, a street car company is nevertheless liable for the exercise of reasonable care to all passers-by in the street. In that case the injury was to a person who, intending to become a passenger, had approached so near a car as to be injured by the fall of the trolley pole, which, striking a sign upon the car, caused it to fall upon the plaintiff. Outside of the question of the relation of passenger and the duty of extraordinary care, it seemed to the writer that a prima facie case of lack of reasonable care was made out, so that the plaintiff might have been permitted to recover if the trial court had not incorrectly charged the jury to the effect that the relationship of passenger had begun. Among other things, we said:

"The trial court had instructed the jury that the plaintiff was entitled to rely upon the technical status of a passenger, and therefore the company owed him the obligation of extraordinary care of a common carrier. Conceding that this instruction was erroneous, and that a reversal of the judgment in favor of plaintiff was therefore correct on this ground, the fact still remains that a street railway company owes reasonable care to any pedestrian in the street, and, further, that the practical situation of the plaintiff was necessarily different from that of an ordinary pedestrian. Although he was not technically a passenger, he unquestionably had the right as an intending passenger to approach so near the car that he was liable to be injured by the falling trolley pole. This consideration would bear very cogently, perhaps conclusively, upon the issue of his freedom from contributory negligence. The fall of a sign and trolley pole upon a person rightfully standing within their reach might result from neglect of reasonable and ordinary care, and be actionable even at the suit of one who was not a passenger."

A more recent decision that bears out this view is that of the Supreme Court of Illinois in *Chicago City Railway Company vs. Bruley* (June 1905, 74 N. E., 441). The important facts are stated as follows in the opinion:

"The accident took place about 7:30 on the evening of the 24th day of February, 1898. There were several inches of snow upon the ground, and from three to five minutes prior to the accident a sweeper, propelled by electricity, passed east upon the south track upon Thirty-First Street, and turned south upon the west track on Center Avenue. One witness, who was near by and saw the sweeper turn into Center Avenue, testified that, after the sweeper passed from Thirty-First Street to Center Avenue, it did not stop, nor did any one leave the car, but that it continued south upon Center Avenue. The appellee was going east upon Thirty-First Street. She saw a car coming from the west upon the south track upon that street, and started across Center Avenue to the southeast corner of that avenue and Thirty-First Street for the purpose of taking said car at that point. The car was moving rapidly, and when it reached a point a few feet west of Center Avenue it left the Thirty-First Street track, and ran in a diagonal direction to the southeast corner of Thirty-First Street and Center Avenue. Appellee attempted to reach the sidewalk, but was overtaken by the car and knocked down, the fore part of the car passing over her body. She remained beneath the car from twenty to thirty minutes, and sustained serious and permanent injuries."

The court held that the injured woman was entitled to re-

cover and that the evidence sufficiently conformed with the plaintiff's pleading to the effect that the damages occurred through the railroad company's negligence in leaving a switch open at a curve. The proof as to the open switch was not direct and was not so conclusive but that the jury might have found otherwise. The case is significant as recognizing the duty of a street railway company to exercise reasonable care toward all persons rightfully in the street and as illustrating the judicial tendency to permit judgments to stand if there be a reasonable sufficiency of evidence in support of a company's negligence. In both the Massachusetts case and this Illinois case, the person injured intended to become a passenger. As above suggested, that factor would have a bearing upon the question of contributory negligence in cases where the intending passenger had approached very close to the car. But, according to the circumstances of each case, a street railroad company may be held liable for injury to any person in the street if, without contributory negligence, the latter be injured through the negligent operation of cars. Many cases have emphasized the concurrent rights of a street car company and the public in that part of a street occupied by the roadbed, and important distinctions have been drawn between street railways and steam railroads as to the right to drive vehicles on the roadbed and to cross the tracks. The duty to guard persons using other parts of the street from injury from derailed cars and similar mishaps would seem to be, if anything, still more clear than towards persons on the roadbed.

CHARTERS, FRANCHISES, ORDINANCES, ETC.

CALIFORNIA.—Street Railroads—Franchises—Construction—Issuance of Transfers—Assignment of Rights.

1. A grant, assignment, lease, or transfer of a street railway franchise carries with it and imposes upon the grantee or assignee all the duties and obligations which rested upon the original holder of the franchise.

2. An assignee of a street railway franchise, a condition of which required the holder thereof to issue transfers to other lines in the city operated by it or its assigns, which assigned its rights in the franchise to another, and ceased operating cars under the franchise, could not be compelled to interchange transfers with its assignee from and to its remaining lines operated under other franchises.—(*Reynolds vs. Pacific Electric Ry. Co. et. al.*, L. A. 1642, 80 Pac. Rep. 77.)

CONNECTICUT.—Appeal—Mandate—Disposition of Cause in Trial Court—Pleading—Amendment—Municipal—Corporations—Public Improvements—Assessments.

1. Where a new trial was not awarded on appeal, but, under Sup. Ct. Rules, p. 109, Sec. 63, the case was returned with a mandate defining the duty of the trial court, the mandate was controlling, and the trial court had no authority to permit the plaintiff to present new grounds for relief.

2. On the application of a street railway company to be relieved from an assessment for paving, it was held that the railroad company was not liable for that proportion of the cost of the paving contract which was for prospective repairs; and the court found that the cost of construction was \$2.95 per square yard, and the cost of the agreement to repair 37 cents per square yard. Held that the finding that the cost to the city of the agreement to repair was 37 cents per square yard was not inconsistent with the fact that the work was done under a contract which called for construction and maintenance for a gross sum.

3. When an appellant, whether required to do so or not, sets out his reasons of appeal, he will be limited in his evidence to the matters so set out.

4. When one party to a cause, by his silence when it was his duty to speak, has naturally induced conduct on the part of his adversary, he is estopped to take advantage of any act or omission so induced to the latter's disadvantage.

5. Evidence offered and admitted for a limited purpose, and facts found upon such evidence, may not be used for another and totally different purpose in the cause.

6. Where, on appeal in an application by a property owner to be relieved from an assessment for a public improvement, the question of the constitutionality of the assessment, under the statutory provisions governing it, had been presented for decision on the plaintiff's bill of exceptions, and fully argued, the question was no longer an open one in the case, and plaintiff could not, on a second appeal, gather additional facts, and frame new reasons to secure a revision on the ground of the unconstitutionality of the proceedings.—(*Fair Haven & W. R. Co. vs. City of New Haven*, 60 Atl. Rep., 651.)

* Conducted by Wilbur Larremore, of the New York Bar, 32 Nassau Street, New York, to whom all correspondence concerning this department should be addressed.

ILLINOIS.—Eminent Domain—Street Widening Proceedings—Partial Destruction of Buildings—Damages—Benefits—Assessment — Theory—Evidence—Instructions—Verdict—Objections—Appeal.

1. Where the front 35 ft. of defendant's building and lot were taken to widen a street, and it appeared that in case of reconstruction it would be necessary to have the walls remaining reinforced to comply with an existing building ordinance, it was error for the court, in a proceeding to determine defendant's damages, to refuse to charge that, if the remainder of the building was susceptible to reconstruction, it would have to be reconstructed subject to the building ordinances of the city.

2. Where the front 35 ft. of defendant's lot and building were taken to widen a street, a verdict assessing damages, allowing only a portion of the value of the building, was sustainable only on the theory that the remaining portion of the building would be of value by building a new front wall and other reconstruction and rearrangement.

3. Where the front part of a building and lot was taken to widen a street, the jury, in assessing the owner's damages, should either consider the remainder of the building worthless and allow its value, or consider what could be done with the remainder of the building, and the cost of doing it.

4. Where the front of defendant's lot and building was taken to widen a street, and a witness testified that the improvement would benefit the remainder of defendant's property by bringing produce and commission business into the street as widened, defendant was entitled on cross-examination to ascertain whether witness considered that defendant would be compelled to pay for repaving the street and a new sidewalk.

5. Where the only objection relating to the appointment of the cost of street widening proceedings between the public and the property owners was that the improvement was a public one and a public benefit, such objection was insufficient to raise the question that the statute prohibiting a review on error or appeal applies only to special assessments proper, and not to a proceeding for condemnation of property.

6. Where there was no hearing or any evidence introduced on the subject of the apportionment of the cost of the widening of a street between the public and the property owners, such apportionment could not be reviewed on appeal.

7. In proceedings for condemnation of land to widen a street, evidence held insufficient to sustain a verdict arbitrarily allowing a certain sum for the land taken, assessing an equal amount for benefits to land not taken, and allowing a part only of the value of the building for the taking of the front 35 ft. thereof.—(West Chicago Masonic Association vs. City of Chicago, 74 N. W. Rep., 159.)

ILLINOIS.—Eminent Domain—Condemnation—Damages—Evidence—Sufficiency—Pleadings—Issues—Judicial Notice—Instructions.

1. On proceedings by a railroad company for the condemnation of a right of way, evidence considered, and held to warrant the damages awarded.

2. The petitioner in a condemnation proceeding is required at his peril to ascertain and name in the petition the true owner of the land sought to be condemned and taken, and the person so named is not required to prove title.

3. In condemnation proceedings the petitioner in a cross-petition praying for an award of damages to land which is not taken must allege in the cross-petition that he is the owner of the property alleged to be damaged.

4. Where, in condemnation proceedings, a landowner files a cross-petition praying for an award for damages to land not taken, if the original petitioner desires to contest the allegation of ownership the issue must be raised by an appropriate pleading.

5. In condemnation proceedings the issue of ownership of land, if any, is preliminary to the submission of the question of damages to the jury, and is to be determined before the jury is impaneled to assess the damages.

6. Where, in condemnation proceedings by a railroad to acquire a right, both litigants proceeded in charging the jury on the theory that damages to lands not taken had been established by the evidence, neither could complain of instructions which assumed that such damages were to be assessed.

7. An appellant cannot complain of error in an instruction where the same ruling was contained in an instruction given at his request.

8. On proceedings by a railroad company to condemn land for a right of way, an instruction that under the statute the railroad company was not required to fence its road until six months after it had completed the same, and that the damages, if any, attending the keeping open of the right of way during that time,

were proper for the consideration of the jury as an element of damage, was proper.

9. Judicial notice cannot be taken that the rights of way of railroad companies are fenced as the track is constructed.

10. On proceedings by a railroad company to condemn land for a right of way, an instruction that the jury must be confined to the market value of the land was not erroneous for not confining the jury to the "fair cash market value," they having been informed that the only measure of damages was the fair cash market value in another instruction, and the court in the examination of witnesses having restricted the proof to the fair cash market value of the land.

11. Where, on proceedings by a railroad company to condemn lands for a right of way, the jury visited and viewed the premises of D., one of the property owners, on whose land there was no building, an instruction that the element of danger by fire and increased cost of insurance on buildings should be considered on the question of damages was applicable to the proof of damages to the other property owners, and was not prejudicial as to D., because of the fact that there was no building on her premises.

12. On proceedings by a railroad company to condemn land for a right of way, an instruction that in estimating the compensation for land actually taken no deductions could be made because of any benefits which would accrue to other portions of the lands not proposed to be taken was not erroneous on the theory that it should have gone further and informed the jury that benefits to lands not taken were proper to be considered in estimating the damages to land not taken, other instructions having clearly shown that benefits to land not taken were proper to be considered on the question of damages to land not taken.

13. Where the charter of a railroad company authorized it to use steam or other motive power, and on proceedings by it to condemn land for a right of way it was not willing to stipulate that it would not use steam, it could not complain that the court instructed the jury that the property owners had the right to have their damages estimated with reference to any motive power that the railroad company might use under its charter.

14. On proceedings by a railroad company to condemn land for a right of way, an instruction that in arriving at the value of the land the jury might consider its value for the purpose for which it was shown by the evidence to be most available was no ground for reversal.—(Chicago & M. Electric R. Co. vs. Diver et al., 72 N. E. Rep., 758.)

IOWA.—Taxation—Assessment—Executive Council—Street Railroads—Interurban Railroads—Certiorari—Motion to Dismiss—Statutes—Implied Repeal.

1. A motion to dismiss a petition for a writ of certiorari is in the nature of a special demurrer.

2. Under code supp., sec. 2033a, declaring that any street railway operated by other power than steam, which extends beyond the corporate limits to another city or village, shall be known as an interurban railway, a corporation operating a line connecting three different municipal corporations and organized under code, sec. 2026, authorizing street railway corporations to extend their lines beyond the limits of a city along public roads, is an interurban railway.

3. Code supp., sec. 2033a, defines an interurban railway as any railway operated upon the streets of a city or town by other power than steam, and extending beyond the corporate limits to another city or town, and section 2033b provides that such roads and companies operating them shall be governed by the same laws that govern railroads and railroad companies. Section 2033c provides that any interurban railway shall, within the limits of any city or town, upon such streets as it shall use for transporting passengers, etc., be deemed a street railway, and be subject to the laws governing street railways. Held, that this latter section operates merely to render an interurban company liable to the obligations and entitled to the rights of a street railway as to those portions of its line within city or town limits, but does not give those parts of its line the character of a street railway so as to require them to be assessed in the manner prescribed by law for street railroads, instead of the manner prescribed for railroads.

4. Code supp., sec. 2033a-c, provides that street railroads, portions of whose lines extend beyond the limits of a city or town into another city or town shall be known as interurban railways, and all the statutory provisions applicable to steam railways shall be also applicable to interurban railways. Code, sec. 1343, provided that the property of street railroad companies either within or without the limits of a municipal corporation should be assessed by local assessors, while code, sec. 1334, provides that all railways shall be assessed by the executive council. Held, that section 1334 impliedly repeals section 1343 as to the method of

assessing the property of interurban railway companies.—(Cedar Rapids & M. C. Ry. Co. vs. Cummins, Governor, et al., 101 N. W. Rep., 176.)

KENTUCKY.—Contract to Erect Depot—Damages for Breach—Evidence.

1. Where plaintiff conveyed a right of way through his land to defendant in consideration of its agreement to erect a depot on his land and stop its cars there, the measure of damages for its breach of the agreement is the difference between the market value of the residue of his land with and without the depot.

2. In an action for breach of defendant's agreement, in consideration of the right of way conveyed it, to erect a depot on plaintiff's land and stop its cars there, evidence of the prices for which other lands contiguous to his, and situated, like it, on the defendant's road, sold, and as to the advantages of plaintiff's land for business and suburban purposes, and also as to what value the location of the depot would give the land, is admissible.—(Louisville, A. & P. V. Electric Railway Co. vs. Whipps et ux., 80 S. W. Rep., 507.)

KENTUCKY.—States—Statute Regulating Use of Interstate Bridge—Limit of Jurisdiction—Federal Courts—Jurisdiction Enforcing Rights Under Statute of Another State—Railroads—Kentucky Statutes—Rights of Foreign Corporation—Subjecting to Use Property of Another Company.

1. A statute of Indiana cannot give a right to use a bridge across the Ohio River beyond low-water mark, which constitutes the boundary line of the State.

2. A Federal court in Kentucky cannot enforce rights given by a statute of Indiana with respect to the use of so much of a bridge across the Ohio River as is situated within the State of Indiana.

3. Const. Ky., sec. 211, provides that no railroad corporation organized under the laws of another State, doing or proposing to do business in the State, shall exercise the right of eminent domain or acquire right of way or real estate until it shall incorporate under the laws of the State. Ky. st., 1903, sec. 841, provides that any such corporation "may, for the purpose of possessing, controlling, maintaining or operating" a railway in the State, incorporate by filing its articles of incorporation as therein specified; section 763 provides the manner of organizing railroad corporations in the State, and section 765 provides that no railroad corporation of another State shall exercise the power of eminent domain, or acquire right of way, or purchase or hold land for railroad purposes, until it shall have become organized as a corporation of the State in conformity with section 763. Held, that under said provisions, as construed by the highest court of the State, a foreign railroad corporation, which has merely complied with the provision of section 841 by filing its articles of incorporation, acquired thereby only the right therein given to "possess, control, maintain and operate" a railroad in the State, and that it had no power to exercise the right of eminent domain or to have the property of another subjected to its use by legal proceedings, unless it became a full Kentucky corporation, by organizing as such under section 763.

4. While a public service corporation, like a railroad company, is bound to render to the public certain services appropriate to its particular functions, it is not bound to permit its property to be subjected to use by a rival corporation, unless by express statutory enactment and by due process of law thereunder.—(Evansville & H. Traction Co. vs. Henderson Bridge Co., 134 Fed. Rep., 973.)

LOUISIANA.—Municipal Corporations—Paving Streets—Liability of Abutting Owner—Estoppel—Nonsuit.

1. Act No. 10, p. 9, of 1896, empowering cities and towns (the city of New Orleans excepted) having a population exceeding 10,000 to pave streets and to levy special taxes and contributions on abutting property owners of real estate and railroads occupying a portion of the street, was, as to the city of Baton Rouge, repealed by Sec. 35 et seq. of Act No. 169, p. 340, of 1898, incorporating said city, which provides that the cost of paving any street shall be borne by the city of Baton Rouge and the abutting owners of real estate in certain proportions.

2. The mere silence and inaction of a street railway company while streets traversed by its tracks are being paved do not estop it to plead the absolute want of power and jurisdiction in the city council to levy a special tax against the company for street improvement. See Elliott, Roads and Streets, Sec. 689. This doctrine is especially applicable to a case where the contract was let on the basis of payment by the city and abutters, and the evidence shows no benefits accruing to the railway from the work.

3. Where a contractor for street improvements sues a street railway and a city on certificates of a city engineer that such railway owed certain amounts for paving, and no ordinance is shown

authorizing the transfer of such certificates to the contractor, his alternative demand against the city will be dismissed as in case of nonsuit. (Syllabus by the court.)—(Louisiana Imp. Co. vs. Baton Rouge Electric & Gas Co. et al., 38 S. Rep., 444.)

MICHIGAN.—Street Railroads—Establishment—Regulation—Change in Road—Manner of Granting Authority.

Though, under the express provisions of Comp. Laws 1897, Sec. 6446, a municipality can grant the right to a street railway company to operate a line on the streets only by an ordinance regularly passed and accepted by the company, a city which has by ordinance granted to a company the right to operate a car line, subject to a provision that the location of poles, side tracks, spurs and switches shall be under the control of the council, may, by a mere motion adopted by the council, authorize the company to change the location of a curve in the track connecting a street with a cross street.—(Mannel vs. Detroit, Mt. C. & M. C. Ry., 102 N. W. Rep., 633.)

MICHIGAN.—Street Railroads—Repaving—Use of Old Material.

Where a street railway company is required by the city to relay the pavement of a street, and, when it was engaged in tearing up the pavement for the purpose of relaying it, the city removed such material, requiring the railway company to replace it by new material, the city was liable to the railway company therefor.—(City of Detroit vs. Detroit Ry., 99 N. W. Rep., 411.)

MISSOURI.—Municipal Corporations—Street Railroads—Franchise—Conditions Imposed in Franchise—Acceptance—Estoppel—Condemnation of Way for Street.

1. An appeal lies to the Supreme Court in proceedings for the condemnation of real estate, since title to real estate is thereby affected.

2. Where a city granted a franchise to a street railway company "on the terms and conditions" in the ordinance specified, among which conditions was a requirement that the railroad plank all crossings of streets then existing or that should afterwards be laid, and, if required by the city, maintain signboards, etc., the railroad must do such acts at its own expense.

3. Where a street railway company, in accepting a franchise, agrees to certain conditions imposed by the municipality, it is estopped from thereafter saying that the conditions are not reasonable.

4. An ordinance granting a franchise to a street railway company required the company to keep the space between the tracks and 18 ins. outside of the outside rails planked with oak planks; to keep the street for a distance of not less than 6 ft. from the outside rails in good condition; if required by the city, to erect and maintain at crossings signboards, and to perform all duties devolved on the company by statute; and provided that, if the city should at any time cause a part of any street crossing the railroad at grade to be paved, the railway company should grade, pave, and keep paved the part of the street or avenue so crossed. Held, that such requirements were not unreasonable.

5. Where a crossing was condemned across the tracks of a street railway company for the opening of a street in Kansas City, there was no error in excluding evidence as to the cost of grading, proceedings for condemnation and for grading being entirely distinct under the city charter.—(In re Topping Avenue, 86 S. W. Rep., 190.)

NEW JERSEY.—Law of the Road—Right of Way at Crossings—Legislative Enactment—Custom—Pleading—Evidence.

1. The law of the road with relation to vehicles approaching a street crossing, that the first to reach the crossing traveling at a reasonable rate of speed has the right to pass over first, applies to vehicles of all kinds, including fire engines and trucks driving to fires, and trolley cars.

2. Fire engines and trucks while driving to fires may by legislative enactment be granted the right of way at street crossings, and compel all other vehicles to yield to such right.

3. Evidence that fire engines and trucks, while driving to fires, have by local custom the right of way at street crossings, cannot be given in an action against a street railway for injuries sustained to the driver of a fire truck in a collision with a street car at a crossing, where it was not pleaded that the trucks had the right of way by reason of local custom, though the trolley car reached the crossing first.—(Knox vs. North Jersey St. Ry. Co., 57 Atl. Rep., 423.)

NEW JERSEY.—Pleading—Charter Provisions—Demurrer—Street Railroads—Conditions.

1. The charter of the Jersey City & Bergen Railroad Company, approved March 15, 1859, and its supplements, being private acts, their provisions cannot, on demurrer, be noticed, except as they appear on the face of the pleadings.

2. The provision in that charter by which the company was

empowered to construct and operate a street railroad in Jersey City, provided that in constructing the railroad the company first obtained the consent of the city council; the ordinance of the council giving such consent on condition that the company should pay an annual fee for each car run on the railroad; the acceptance of the ordinance by the company, and the construction of the railroad in pursuance of the consent; and the supplement to the company's charter approved March 17, 1860, declaring that, in constructing and maintaining its railroad in Jersey City, the company should be subject to the conditions imposed in the ordinance—placed upon the company a legal obligation to pay the stated fee.

3. If a claim long dormant be not discharged by statutory limitation, the lapse of time is not legally a release, but is only evidence of a release, and therefore will not, on demurrer, defeat the claim. (Syllabus by the Court.)—(Mayor, etc., of Jersey City vs. Jersey City & B. R. Co., 57 Atl. Rep., 445.)

NEW YORK.—Street Railroads—Operation—Statutes—Application to Existing Railroad—Repair of Streets—Liability of Street Railroad—Contract with City—Construction—Paving Between Tracks—Liability of Company—Constitutional Law—Obligation of Contract.

1. Laws 1884, p. 313, c. 252, provides in Sec. 9 that every street railroad corporation extending or operating a railroad under the provisions of the statute shall, whenever required by the local authorities, keep in repair the portion of every street between the rails, within an incorporated city, and another section, relative to fares, provides that such section shall not apply to any part of any road previously constructed, unless the corporation shall acquire the right to extend the road under the statute, in which event its rate of fare shall not exceed its authorized rates prior to the extension. Held, that Sec. 9 applies to the tracks of companies incorporated under its provisions, and to the tracks of an extension of the lines or branches of the railroad of an existing street railroad company, but does not apply to the road of an existing street railroad company.

2. Laws 1869, p. 54, c. 34, required the Rochester Street Railroad Company to keep in repair the streets inside the rails of its tracks, but provided that, whenever any of such streets should be permanently improved, the company should not be required to bear any part of the expense. Railroad Law, art. 4, Sec. 98 (Laws 1890, p. 1112, c. 565, as amended Laws 1892, p. 1404, c. 676, Sec. 98), provides that every street railroad shall keep in repair the street between its tracks, under the supervision of the local authorities, and that on neglect to pave or repair, after notice, the authorities may do so at the expense of the corporation. After the enactment of Sec. 98, under an ordinance of the Rochester city council, the city ratified the location of all lines of the railroad company, and it was provided that the provisions of article 4 of the railroad law should be complied with, but that all agreements between the city and the railroad company should remain in full force, and the railroad company was required to give free passage to firemen and policemen, which it had not previously been required to do. Held, that the street railroad company did not by such contract assent to a right of the city to exact payment from the railroad for paving between its rails, since the provision as to the railroad law was modified by the provision that all agreements should continue in force, and the provisions for furnishing transportation had no consideration, except the approval of the location of the railroad and its tracks as the same were then used and operated.

3. Laws 1869, p. 54, c. 34, relating to the Rochester Street Railroad Company, provided that the company should maintain the surface of the streets inside of its rails in good repair, but that, whenever any of the streets should be permanently improved, the company should not be required to bear any part of the expense. Thereafter such agreement was embodied in a contract between the street railroad company and the city, and ratified by a resolution of the common council on a new consideration moving from the railroad. Held, that special acts of the legislature authorizing the municipal authority to assess on the property of the railroad the expense of paving between the tracks, and Railroad Law, Sec. 98 (Laws 1890, p. 1112, c. 565, as amended Laws 1892, p. 1404, c. 676, Sec. 98), requiring street railroads to make such pavements or defray the expense thereof, were, as concerned the railroad in question, inoperative and void.—(City of Rochester vs. Rochester Ry. Co., 91 N. Y. Sup., 87.)

LIABILITY FOR NEGLIGENCE.

ARKANSAS.—Carriers—Street Railroads—Injuries to Passengers—Time to Alight—Premature Start—Care Required—Actions—Instructions.

1. It is not sufficient that a street car should stop for a reason-

able time for passengers to alight, but it is the duty of the carrier's servants to see that no passenger is in the act of alighting or in a dangerous position before putting the car again in motion.

2. A carrier of passengers is not bound absolutely to carry passengers safely, nor to provide measures to protect them against accidents and injuries caused by their own acts or omissions which the exercise of reasonable care would not anticipate, but it is bound to exercise a very high degree of care and skill to secure safety to passengers and prevent accidents.

3. In an action for injuries to a passenger on a street car, an instruction that if defendant's conductor knew of plaintiff's negligent conduct in alighting from a street car, and by the exercise of proper care could have avoided the consequences of such negligence, and failed so to do, and the conductor's failure was the immediate cause of the injury, defendant could not rely on plaintiff's contributory negligence as a defense, was erroneous, for failure to define plaintiff's "negligent conduct."

4. In an action for injuries to a passenger, the court charged that though plaintiff was negligent and the conductor knew of his negligent conduct, such negligence was not a defense, if the conductor's failure to avoid the consequences thereof was the immediate cause of the injury, and that if such injury was caused by plaintiff imprudently attempting to alight from a moving car, or from his effort to alight in an unskilled or unsafe manner, the jury would find for defendant, unless they found that the conductor knew of plaintiff's negligence in so attempting to alight in time to have prevented the injury, and could by the use of ordinary care have prevented the injury and failed to do so. Held error, as excluding the point whether, in the exercise of reasonable foresight, the conductor should have anticipated that plaintiff would be injured by alighting when the car was in motion.—(Little Rock Traction & Electric Co. vs. Kimbro, 87 S. W. Rep., 122.)

CALIFORNIA.—Street Railroads—Injuries at Crossing—Contributory Negligence—Presumptions—Duty to Stop, Look and Listen.

1. In an action for death caused by a collision with a street car at a crossing there was evidence that the horse deceased was driving approached the crossing at a gallop, whereupon the motorman immediately applied the brakes and did everything in his power to stop the car, and so far succeeded that deceased almost got across the track before the cart was struck. Immediately after the collision the horse appeared to be "sweaty," but stood quietly with two of his feet on the curbing of the sidewalk. The cart, when struck, was in a position indicating that deceased saw the car and took a diagonal course to cross ahead of it. Held, that such facts justified a finding that deceased was guilty of contributory negligence, so that it was error to charge that, in the absence of all evidence tending to show whether deceased stopped, looked and listened before attempting to cross, it would be presumed that he did.

2. A person about to cross a street railroad track in an incorporated city is not bound, as a matter of law, to stop, look and listen.—(Los Angeles Traction Co. vs. Conneally et al., 136 Fed. Rep., 104.)

GEORGIA.—Carriers—Regulations—Injury to Passenger—Instructions.

1. A railway company has the right to make reasonable rules and regulations prohibiting passengers from occupying positions on its cars considered to be dangerous, except at their own risk; but when, notwithstanding such rules, passengers are permitted, and in some instances required, to occupy such positions, the company is still under the duty to exercise extraordinary care and diligence for their safety.

2. On the trial of a suit for damages alleged to have been occasioned by the negligence of the defendant, it is always error, requiring the grant of a new trial, for the court to charge the jury that given acts constitute negligence, when such acts are not declared by statute to be negligent.—(Augusta Ry. & Electric Co. vs. Smith, 48 S. E. Rep., 681.)

GEORGIA.—Evidence—Compromise—Street Railroads—Injury to Animals—Damages.

1. Evidence of compromise is excluded, because inherently harmful and calculated to leave the impression on the minds of the jury that the settlement was an admission of responsibility, even though coupled with a denial of liability.

2. The rule which excludes the propositions of compromise between the parties also excludes evidence of compromise between the defendant and third persons damaged in the same casualty.

3. The error in admitting incompetent evidence as to a settlement was not cured by the fact that the defendant itself offered the writing in evidence to show that it contained a denial of liability.

4. The charge as to the right to recover for the hire of the

animals injured, while abstractly correct, was harmful to the defendant, in that the jury were not instructed that they could not in any event allow more for injury and loss of hire than the sound value of the horses at the time of the injury.—(Georgia Ry. & Electric Co. vs. Wallace & Co., 50 S. W. Rep., 478.)

GEORGIA.—Trial—Instructions—Street Railroads—Injury to Traveler—Diligence—Mistrial—Evidence.

1. When the court properly instructed the jury as to the respective rights of the parties on a question in the case, the refusal to give in charge a request containing a general proposition of law, though pertinent to the question, was not cause for a new trial.

2. What particular means or measures of diligence would be appropriate for use under the circumstances should be left to the jury. Accordingly, it was not incumbent on the court to give, as requested, a charge that one who drives on and along a street railway track laid in a public highway "should be careful to look and listen with ordinary care to avoid a collision."

3. An exception to a correct charge because of failure to give in the same connection, some other pertinent legal proposition, is not a good assignment of error.

4. It was erroneous to instruct the jury that, in passing upon the credibility of the witnesses, "their bias or impartiality, as the same may legitimately appear from the evidence," might be considered.

5. A motion for a mistrial was not the appropriate remedy when, upon a poll of the jury, the party against whom the verdict was rendered contended that it appeared from the answers of one of the jurors that it was not his verdict.

6. There was evidence to authorize the verdict, and the court did not err in refusing a new trial.—(Macon Ry. & Light Co. vs. Barnes, 49 S. E. Rep., 282.)

GEORGIA.—Credibility of Witnesses—Instructions.

1. The rule of evidence, "Falsus in uno, falsus in omnibus," is applicable only to cases where a witness swears to a falsehood willfully and knowingly; but in a case where the only testimony to which it could apply must, in the nature of things, be either true or knowingly false, it is not error requiring the grant of a new trial for the court to charge the jury that "the principle of law to be applied to the testimony of witnesses is that, if you find them false in one thing, the presumption is they are false in everything testified."—(Glenn vs. Augusta Ry. & Electric Co., 48 S. E. Rep., 682.)

ILLINOIS.—Street Railways—Negligence—Contributory Negligence—Question for Jury—Instructions.

1. In an action against a street railway company for death resulting from a collision it appeared that deceased was driving behind a large covered wagon, and that when he reached a street intersection he pulled out from behind the wagon, and drove upon defendant's track and his vehicle was struck by a car coming from the opposite direction. At the time he drove upon the track the car was between 100 ft. and 200 ft. distant, and there was no evidence tending to show that the bell was rung or that he was conscious of any warning. Held, that the question whether deceased was guilty of contributory negligence was one for the jury.

2. In an action for negligent injuries it is not error for the court to define the meaning of the phrase "ordinary care" as applied to the conduct of either party.—(Chicago City Ry. Co. vs. O'Donnell, 70 N. E. Rep., 294.)

ILLINOIS.—Negligence—Injuries—Future Damages—Instructions.

1. A plaintiff in an action for personal injuries cannot recover for future suffering unless it is reasonably certain to result from his injuries.

2. In an action for personal injuries, an instruction that in determining plaintiff's damages the jury should consider such future suffering and loss of health as they may believe she would sustain was not erroneous, on the theory that it did not limit the jury to such future damages as were shown by the evidence, but permitted them to speculate.

3. Where, in an action for personal injuries, the evidence was conclusive that at the time of trial plaintiff had not recovered from her injuries, it was proper to instruct on future suffering.—(Chicago & M. Electric Ry. Co. vs. Ullrich, 72 N. E. Rep., 815.)

ILLINOIS.—Damages—Personal Injuries—Duty to Employ Physician—Inherent Tendency to Disease—Evidence—Expert Testimony.

1. Any person injured by the negligence of another is bound to use reasonable care to effect a speedy cure, and must exercise reasonable care to employ physicians of ordinary skill, but such person is not an insurer of the skill of the physicians employed, or required to employ the highest medical skill available, and the

fact that the physicians employed make a mistake in the treatment, and thereby fail to effect a cure, does not preclude the person injured from recovering for the entire injury sustained, so long as the requisite care has been used in the employment of a physician.

2. The question whether or not injuries were the result of defendant's negligence, or of an inherent disease or tendency to disease, in plaintiff, is a question of fact.

3. The fact that injuries caused through the negligence of another were aggravated by an organic tendency to disease existing in the person injured, which was developed by the injury, or the treatment applied to the injury by the physicians, does not preclude a recovery for the injuries.

4. In an action for injuries, where plaintiff had fully testified as to the circumstances of the accident, the refusal of the court to strike out an answer in which she stated that she was upset in every particular, and thought every function of her body was out of order from the shock, was not reversible error.

5. In an action for injuries, the evidence showed that plaintiff was thrown to the ground and struck upon her left side; that prior to the injuries she was in good health, and that she sustained an injury to the hip, which subsequently involved the knee. A physician testified that the night of the injury he discovered visible evidence of trouble with the knee, and further stated that the knee was very painful from the time of the injury. Held, that there was sufficient evidence that the knee was injured at the time of the accident to permit evidence that tuberculosis, which developed in the knee, might be occasioned by violence.—(Chicago City Ry. Co. vs. Saxby, 72 N. E. Rep., 755.)

ILLINOIS.—Personal Injury—Damages—Evidence—Admissibility—X-Ray Photographs as Evidence—Trial—Taking Papers to Jury Room.

1. In an action for a personal injury, evidence showing the salary of plaintiff for a period ending years before the injury, for services in an employment different in nature from that in which he was engaged when injured, and for five years before, is inadmissible on the issue of damages.

2. The testimony of an X-ray expert, regularly engaged in taking X-ray photographs, that he took the negative from which an X-ray photograph of the portions of the body of a person was developed, that he developed the photograph, and that it was a correct representation, rendered the photograph admissible in evidence.

3. The fact that a witness for the adverse party testified that the photograph had not been properly taken, and that it was of little or no value as a representation of the person's body, did not require the court to exclude it.

4. 3 Starr & C. Ann. St., 1896, page 3054, chapt. 110, par. 56, authorizing the jury to take to the jury room "papers read in evidence," other than depositions, empowers a jury to take to the jury room an X-ray photograph received in evidence.—(Chicago & J. Electric R. Co. vs. Spence, 72 N. E. Rep., 796.)

ILLINOIS.—Street Railroads—Negligence—Injuries—Action—Instructions.

1. Where, in an action against a street railroad company for injuries to plaintiff in a collision between the vehicle he was driving and defendants' car, defendants' evidence tended to show that plaintiff turned onto the track almost in front of the car, an instruction that if plaintiff, while in the exercise of ordinary care, was injured through the negligence of defendants, defendants should be found guilty, was not erroneous on the theory that it limited the duty of plaintiff in the exercise of due care to the time of the accident.

2. If such instruction was erroneous, it was cured by other instructions, one of which stated that the question whether plaintiff exercised ordinary care before and at the time of the occurrence was a question of fact, and another having called the jury's attention to plaintiff's conduct before the accident, and stated that, if he turned the horse in front of the car without looking, he could not recover.

3. In an action for injuries to plaintiff in a collision between the vehicle he was driving and a street car, the court refused an instruction that, if the jury should find that plaintiff was not entitled to recover, then they would not have occasion to consider the character or extent of his injuries at all. Held, that such ruling was not erroneous, another instruction given for defendants having told the jury that if they believed from the evidence that there was no negligence in the operation of the car, though plaintiff was injured, they should find for defendants.—(Chicago North Shore St. Ry. Co. et al. vs. Strathmann, 72 N. E. Rep., 800.)

ILLINOIS.—Injuries to Passengers—Evidence—Instructions—Review.

1. In an action against a street car company for an injury to a passenger resulting from the car on which he was riding coming in contact with a vehicle which it was passing, evidence as to the right of way of street cars over vehicles was properly excluded.

2. Refusing an instruction the substance of which had already been given is proper.

3. The Supreme Court will not review the conflicting evidence where there is evidence to support the judgment.—(Chicago City Ry. Co. vs. Lannon, 72 N. W. Rep., 585.)

ILLINOIS.—Master—Injury to Servant—Act of Third Person—Negligence—Assumption of Risk—Contributory Negligence—Questions for Jury—Appeal—Trespass—Several Defendants—Unity of Interest—Judgment.

1. An electric lighting company cannot be charged with negligence in maintaining a pole for its wires so near the right of way of a railroad company while in the performance of their duties for the railroad company, where the pole was shown to have been in place for two years prior to the injury of an employee of the railroad company, for which both the railroad and the electric company were sued.

2. A judgment in an action in trespass, as well as in all other action at law, is a unit, and hence, in an action against several defendants for personal injuries, reversible error as to one defendant requires a reversal of the judgment as to all of the defendants.

3. Where the close proximity of the pole of an electric lighting company to the right of way of a railroad constitutes a source of danger to the employees of the railroad company, it is not essential to the liability of the railroad company for injuries to an employee caused by the pole that it be proved that the railroad company in any way participated in erecting the pole, when it is shown to have knowledge of the location of the pole for two years.

4. Where a railroad company has knowledge of the existence of the pole of an electric lighting company in such close proximity to its tracks as to endanger the employees of the railroad while in the performance of their duties, or where notice may be presumed from the length of time the object has been so placed, it is negligence on the part of the railroad company to continue to operate its trains in such dangerous proximity thereto.

5. In an action by a railroad employee against his employer for injuries caused by an electric lighting company's pole in too close proximity to the railroad tracks, evidence examined, and whether plaintiff assumed the risk of injury and whether he was in the exercise of ordinary care, held questions for the jury.—(South Side Elevated R. Co. vs. Nesvig; Cosmopolitan Electric Co. vs. Same, 73 N. E. Rep., 749.)

ILLINOIS.—Street Railroads—Vehicles—Collisions—Injuries to Occupants—Negligence of Driver—Actions—Request to Charge—Refusal—Prejudice.

1. Where plaintiff was injured in a collision between a street car and a closed carriage in which she was riding, the railway company was not relieved from liability for its negligence merely because the driver of the carriage, over whose actions plaintiff had no control, was also negligent in turning across the track.

2. Where, in an action for injuries to plaintiff while riding in a closed carriage, in a collision with a street car, the court charged that, if there was no negligence on the part of the defendant in operating the car, it was not liable, and, if the sudden turning of the horses and carriage across the track in front of the car was not reasonably to be expected, then it was defendant's duty to stop the car only as soon as its servants had notice that the horses were being so turned, etc., defendant was not prejudiced by the refusal to charge that, if the sole cause of the injury was the negligent manner in which the horses were driven, defendant was not liable.—(Chicago Union Traction Co. vs. Leach, 74 N. W. Rep., 119.)

ILLINOIS.—Carriers—Injuries to Passengers—Boarding Train—Failure to Stop—Sudden Jerk—Negligence—Actions—Evidence—Failure of Proof—Right to Object—Peremptory Instruction.

1. In an action for injuries, the refusal of the court to instruct to find defendant not guilty raises the question whether there is any evidence in the record fairly tending to support the cause of action, and, if there is such evidence, it is not error to refuse such request.

2. In an action for the death of a boy 10 years and 8 months old while attempting to board a street car, evidence held sufficient to establish negligence on the part of the carrier.

3. That intestate attempted to board a train of slowly-moving street cars was not negligence per se.

4. While, in an action for death of a boy while attempting to board a street car, defendant introduced a witness who testified

that deceased and his companion were attempting to steal a ride, and that the conductor was chasing the boys therefrom, evidence that intestate's companion had 20 cents in money at the time was admissible as tending to show that the boys had sufficient money to pay therefor.

5. Where, in an action for death of a boy while attempting to board a street car with a companion, defendant claimed they were stealing a ride, but, after evidence had been introduced showing that the mother of deceased's companion, before the start, had given him 20 cents in money, the court, on defendant's objection, excluded evidence as to what she said when the money was given, defendant could not thereafter object that there was no evidence that the money was given the boy to pay car fare for both.—(Chicago Union Traction Co. vs. Lundahl, 74 N. W. Rep., 155.)

ILLINOIS.—Carriers—Injury to Passenger—Speed of Street Car—Negligence—Question for Jury—Remarks of Counsel—Appeal.

1. Where there is any evidence which, with the inferences that the jury may justifiably draw therefrom, is sufficient to support a verdict for plaintiff, a peremptory instruction to find for the defendant at the close of all the evidence is properly refused.

2. In an action against a street railroad for injuries to a passenger, evidence examined, and whether defendant was negligently propelling its car at the time of collision with a loaded vehicle, held a question for the jury.

3. In an action for personal injuries, it appeared that, on the night of the accident, defendant caused a physician to go to the home of the plaintiff; that he found her in bed, in her nightdress, talked with her, and made a careful external examination of her person. For that purpose it was necessary to remove the covering and draw up the garment in which plaintiff was attired. Counsel for plaintiff, in his argument to the jury, charged the physician with having, in an objectionable manner, turned down the bedclothes and pulled up the plaintiff's garment, and, in very vigorous language, the attorney characterized the physician's conduct as improper and unlawful. Counsel for defendant objected, and the court sustained the objection. An answer made by the physician furnished some ground for the attack made on him. Held, that the remarks of counsel for plaintiff were not cause for reversal.—(Chicago City Ry. Co. vs. Bennett, 73 N. W. Rep., 343.)

INDIANA.—Carriers—Injury to Passenger—Street Cars—Standing on Running Board—Negligence—Contributory Negligence—Verdict—Special Findings—Inconsistency—Instructions.

1. Under the express provisions of Burns' Ann. St., 1901, sec. 556, special findings control the verdict only when inconsistent therewith.

2. A passenger on a crowded street car, who stands on the running board and supports himself by the guard-bar, does not, as a matter of law, fail to exercise such ordinary care as the circumstances require, especially when the representative of the carrier, charged with the duty of seating and directing the passengers, expressly authorizes him to stand there.

3. Where a passenger standing on the running board of a street car was injured by being struck by another car passing on another track, held that the question whether defendant was negligent in running its cars so close together was one for the jury.

4. It is not the province of the Supreme Court on appeal to review the facts and weigh the evidence.

5. Where a passenger on a street car, while standing on the running board, was injured by being struck by another car passing on another track, in an action by him for the injuries, evidence considered, and held to sustain a verdict for plaintiff.

6. Where a passenger on a street car, while riding on the running-board, was injured by being struck by another car passing on another track, in an action by him for the injuries, an instruction that plaintiff's injuries were due to his violation of the rules of the defendant, and if a guard-rail was placed on the car, so that passengers were warned not to stand on the running-board, and plaintiff ignored the presence of the guard-rail, he could not recover, even though the conductor permitted him to stand on the running-board, was properly refused, in that it omitted to inform the jury that notice of the existence of the rules must be shown before plaintiff could be bound by them.

7. In an action against a street railway company for injuries to a passenger, the question whether the conductor of the car had authority to permit a passenger to stand on the running-board was for the jury.—(Fort Wayne Traction Co. vs. Hardendorf, 72 N. E. Rep., 593.)

INDIANA.—Servant's Injuries—Assumption of Risk—Promise to Repair Defect—Proximate Cause—Pleading—Complaint—Sufficiency—Evidence—Instructions.

1. Where, in an action for the death of a servant, the complain-

ant discloses the relation of master and servant, the existence of a defective appliance, rendering the servant's work unnecessarily hazardous, a promise to repair the defect, and an injury caused by such defect, a prima facie case is shown.

2. In an action for the death of a motorman on defendant's street car, an allegation that the air brakes of the car, which were necessary to its safe operation, were defective and out of repair, was sufficient to show a breach of duty on the part of the master, as against a demurrer.

3. A motorman of a street car reported the air brakes as defective, and the repair thereof was promised. Repairs were made, and the motorman took the car out, but found that the trouble had not been remedied, whereupon he ran the car back to the barn, and reported that it was no better, but the superintendent stated that the car would have to be used, and that the trouble would be remedied the next afternoon. The next morning the motorman took the car out and was killed in an accident due to the defective brakes. Held, that a finding that the motorman continued to use the defective car in reliance on a promise to repair was warranted.

4. Where all the cars of a street railroad company were equipped with air brakes, and there were heavy grades on the road, in an action for the death of a motorman owing to a defective brake on a car which weighed 12 tons, and which was carrying a load of 10 tons, a finding that the air brake was a necessary appliance was warranted.

5. Where an electric car ran down a grade, and on taking a curve a flange of the wheel broke, whereby the car was derailed and the motorman killed, in an action for the death, if the jury believed that the rate at which the car was running was due to the defective air brake, they might find the defective brake to have been the proximate cause of the injury.

6. An instruction that it was the master's duty to exercise reasonable care and diligence to provide and maintain a "safe place" and safe appliances for deceased to use in performing his duties was not misleading, though the breach of duty alleged related only to appliances.

7. Where, in an action for the death of a servant, the court, in the first instruction given, charged that before plaintiff could recover she must prove by a preponderance of all the evidence all the allegations of her complaint, criticisms of instructions for failing to include the statement that the finding in plaintiff's favor upon various points therein enumerated required a preponderance of the evidence were without merit.

8. It is not error for the court to assume in instructions the existence of uncontroverted facts.

9. In an action for the death of a motorman owing to a defective air brake on the car, it was proper to admit evidence that the brake had been out of repair before deceased worked on the car, which had been three or four days.

10. Where, in an action for the death of a servant, the physician who attended deceased testified to the character of his injuries, and pending the examination defendant offered to admit that the death was caused by the injuries received in the accident in question, it was proper to overrule a subsequent objection of defendant to a question to the witness, since defendant might not in such manner limit plaintiff's method of making proof.—(Terre Haute Electric Co. vs. Kiely, 72 N. E. Rep., 658.)

INDIANA.—Street Railroads—Injuries to Persons on Track—Care Required of Motorman—Instructions—Mental Capacity of Person Injured—Contributory Negligence of Parent.

1. In an action against a street railroad company to recover for the wrongful killing of plaintiff's infant son, an instruction that if the motorman could have discovered the child's presence on the track by proper diligence, and could have known of his peril in time to have avoided the injury, it was his duty to do so, was not misleading as to the amount of care required of the motorman, when considered in connection with another instruction that it was the duty of those in charge of street cars to use ordinary care to prevent accident, and that, if the motorman saw plaintiff's son on or so near the track that there was a reasonable probability that an attempt to pass would result in a collision, it was his duty to stop the car if he reasonably could have done so with the means at hand.

2. Where, in an action against a street railroad company for the killing of plaintiff's infant son, the complainant does not allege that the child was not sui juris, that question should not be submitted to the jury.

3. In an action by a parent to recover for the wrongful killing of his infant son, the contributory negligence of the parent is a defense.—(Indianapolis St. Ry. Co. vs. Antrobus, 71 N. E. Rep., 971.)

INDIANA.—Street Railways—Negligence—Collision with Teams—Contributory Negligence.

1. The running of a street car, without a headlight, on a dark and foggy night, at the rate of 25 or 30 miles an hour, and without warning, was negligence, or at least presented a question for the jury on the issue of negligence.

2. Whether one driving a buggy along a street on a dark and foggy night was guilty of contributory negligence in arranging with his companion to confine his own attention to the driving and let his companion look out for approaching cars was a question for the jury.—(Indianapolis St. Ry. Co. vs. Slifer, 74 N. W. Rep., 19.)

INDIANA.—Street Railroads—Injury to Passenger—Standing on Running-board—Contributory Negligence—Settlement—Burden of Proof—Complaint of Pain—Conclusions—Payment of Doctor's Bills.

1. It is not negligence as matter of law for a passenger to stand on the running-board of a street car, the seats being filled.

2. An instruction that defendant has the burden of proving the plea of settlement, and that, to sustain it, it must appear that a definite and distinct proposition was made on the part of defendant which in its terms was accepted by plaintiff, when followed by an instruction that if the jury find the parties came to an agreement as to plaintiff's claim, that plaintiff agreed to accept \$200 in settlement, and that defendant accepted said offer and tendered said sum and has paid it into court, will be held not to have misled the jury to understand that to constitute a compromise the proposition to take the \$200 must have come from defendant, instead of plaintiff.

3. An instruction that defendant has the burden to prove the plea of settlement by a preponderance of the evidence, and that to sustain the plea it must "clearly appear" that a definite and distinct proposition was made and accepted, will not be held to have placed too great a burden on defendant, the meaning of "preponderance of the evidence" having been properly defined by another instruction.

4. Plaintiff in an action for personal injury may show that he complained of pain after the accident.

5. Plaintiff, in an action for injury received by him while a passenger on a street car, having pleaded that he was compelled to ride on the running-board because there was no room elsewhere on the car, and having testified that passengers said: "Look out for the poles!" and that he tried to get between the seats to avoid them, may testify, as a reason why he did not get in the car, that it was so crowded it was impossible for him to get there before he was hurt, this not being the statement of a mere conclusion.

6. It is immaterial, in an action for personal injuries, whether plaintiff had paid his doctor's bills for treatment of his injuries.—(Indianapolis St. Ry. Co. vs. Haverstick, 74 N. W. Rep., 34.)

KANSAS.—Railroads—Stock on Track—Fences.

1. In an enclosed field through which there was located and operated an unfenced railroad, a cow rightfully in the field passed directly upon the railroad, and was struck and killed by a car without any fault of the employees of the railroad company in charge of the car. At the time, the general herd law was in force in the county wherein the cow was killed. Held, that the cow was not trespassing or running at large when she went upon the right of way of the railroad company, and, as she was killed because of the omission of the railroad company to fence its railroad as the law required, it is liable for the loss.

2. Where a railroad passes through an enclosure, it is the duty of the railroad company not only to build fences on each side of the track, but also to complete the enclosure by building end fences and cattle guards across the right of way where the railroad enters and leaves the enclosure.

3. A portion of the enclosure on one side of the railroad was platted, and lots, blocks, streets and alleys were staked out, but as no lots or blocks were sold, nor streets and alleys used as such, and as the platted portion was still used for agricultural purposes only, the platting did not relieve the company from the duty of fencing its road, nor absolve it from liability for the loss.—(Iola Electric R. Co. vs. Jackson, 79 Pac. Rep., 663.)

KENTUCKY.—Street Railways—Collision with Team—Negligence—Contributory Negligence—Evidence—Damages—Punitive Damages—Question for Court.

1. In an action against a street railway company for injuries to one driving a team, in consequence of a collision with a car, evidence held sufficient to show negligence on the part of defendant's servants in charge of the car.

2. In an action against a street railway company for injuries to one driving a team, caused by collision with a car, plaintiff could recover if defendant's servants in charge of the car saw that there was danger of the car striking plaintiff's horse or wagon, and

could have stopped the car in time to have prevented the collision, and failed to do so; but if the car was stopped, and, after it became stationary, plaintiff's wagon was, by the motion of the horse, brought in contact with defendant's car, and plaintiff's injuries were caused by such contact of the wagon and car, there could be no recovery.

3. In an action against a street railway company for injuries to one driving a team, caused by collision between the team and a car, where the answer alleged, and some of the evidence tended to show that the collision was the result of plaintiff's mismanagement of his horse while the car was stationary, an instruction on contributory negligence, being asked, should have been given.

4. The question of whether, there is any evidence in a case to justify the assessment by the jury of exemplary damages is one for the court.

5. In an action against a street railway company for injuries to one by a collision of his team with a car, where there was no evidence that the car was running at an unusual rate of speed, and plaintiff's evidence, which was contradicted by defendant, merely showed that his horse became frightened and uncontrollable, and he called to the motorman to stop, but he nevertheless kept his car in motion, the submission to the jury of the question of punitive damages was improper.—(Lexington Ry. Co. vs. Fain, 80 S. W. Rep., 463.)

KENTUCKY.—Street Railway Companies—Injury to Passenger
Furnishing Safe Place to Land—Pleading.

The petition in an action against a street railway company for injury to a passenger by turning her ankle over in alighting in the day time states no cause of action, it alleging the car did not stop at the usual place where the street was smooth, but was negligently stopped where the street was paved with rough and uneven granite stones, which made it an unsafe place to alight, that she had no means of observing and was not warned of the unsafe condition, and that the conductor knowingly failed to warn her of the danger of alighting there, and urged her to haste; there being no averment that the stones were more rough and uneven than was usual on streets so paved, that there was a hole there, that the conductor knew it was unsafe for her to alight there, or that the condition of the stones were not obvious to her.—(Murnhan vs. Cincinnati, N. & C. St. Ry. Co. et al., 86 S. W. Rep., 688.)

KENTUCKY.—Carriers—Negligence—Question for Jury—
Action—Instructions.

1. In an action against a street railroad company for injuries to a passenger by a shock received from the controller box of a car, evidence examined, and held that the questions of plaintiff's contributory negligence and of defendant's negligence were for the jury.

2. Plaintiff suffered an electric shock, which rendered him unconscious until the next day. His arm was paralyzed and his hand clenched so that he could not open it for some weeks, and at the time of trial he had about one-fifth of the strength in the arm that he had had before. The medical testimony was doubtful as to whether the injury would be permanent, and it was shown that he suffered a great deal, and could not work at all, and his capacity to earn was reduced from \$9 to \$7 a week. Held, that a verdict of \$4,000 was not excessive.—(South Covington & C. St. Ry. Co. vs. Smith, 86 S. W. Rep., 970.)

LOUISIANA.—Railroad Crossings—Danger—Precautions—Contributory Negligence—Action—Wrongful Death.

1. If a railroad company, in the management of its traffic, causes unusual peril to travelers, it shall meet such peril by corresponding precautions. So, where the crossing is especially dangerous on account of its locality or mode of construction, or because the view is restricted or the track is curved, it is the duty of the company to exercise such care and take such precautions as the dangerous nature of the crossing requires. If the City Council fails to pass ordinances called for by existing conditions, the company should, of its own motion, make a regulation to that effect, and notify their employees; but the latter are held, without notice, to have had knowledge of the visible dangerous conditions, and bound, without specific directions, to take the steps necessary for the public safety.

2. Where trainmen have reason to believe there are persons in exposed positions on the tracks, as over unguarded crossings in populous districts in cities, or where the public are wont to cross with such frequency and numbers as to be known to them, they will be held to a knowledge of the probable consequences of not taking proper care and precautions, and their employees will be responsible for injuries received in consequence thereof, notwithstanding there was negligence on the part of the person injured, and no fault on the part of the servant after seeing the danger.

3. The general public are not called upon to know or take in at a glance that the space between parallel tracks in a city is not wide

enough to afford protection to persons standing on that space, or to know the length and width of the cars used upon the road. A person has the right to assume that the width is sufficient, and to assume that it was not likely that two cars would pass each other, moving, while he was in that position.

4. Under the provisions of act No. 71, page 94, of 1884, amending and re-enacting article 2315 of the revised civil code of 1870, two causes of action arise when the deceased left a widow and minor children—one to recover the damages which the father might have recovered if he had survived the injury, and the other founded on his death. Before the adoption of act No. 71, page 94, of 1884, the first cause of action was joint, but that act provides that it shall survive in favor of the "minor children or widow, or either of them."

5. Hence, when the widow sues alone a judgment in her favor exhausts the first cause of action, leaving to the minors only a right of action to recover the pecuniary loss sustained by them by reason of the death of the father.—(Eichorn vs. New Orleans & C. R. Light & Power Co., 36 S. Rep., 335.)

MAINE.—Street Railways—Negligence—Duty of Traveler at Crossings—Evidence.

In an action on the case for negligence on account of a collision between a team and an electric car, it is held:

1. That between street crossings the car, from the fact that it must pursue one course, and cannot turn out, necessarily has a paramount right, to be exercised in a reasonable and prudent manner.

2. That, when approaching a public street junction, the rule is that the motorman shall be held to anticipate that any person approaching such junction from either side may turn his team into it, and shall then exercise all due care to have his car under such control as to be able to stop it at the crossing, if necessary, to avoid an accident.

3. At such crossings the car has not right superior to that of other vehicles.

4. The rule of caution required in approaching the crossing of a steam road does not fully apply to the crossing of an electric road.

5. In approaching such crossings, it is not incumbent upon the traveler upon foot or with a team, as a matter of law, to look and listen. He must be in the exercise of reasonable care.

6. Whether a traveler, as above, is in the exercise of reasonable care is a question of fact for the jury, depending upon the circumstances of each particular case.

7. The speed of a car is a fact from which an inference of negligence may be drawn.

8. In crossing a car track at the junction of a street, the traveler is not required to look the whole length of the visible track to see if a car is coming, but along the track far enough to warrant an ordinarily prudent man, having in mind his own safety, under like circumstances, to conclude that no car was in such proximity as to endanger his safety in crossing.—(Marden vs. Portsmouth, K. & Y. St. Ry., 60 Atl. Rep., 530.)

MARYLAND.—Carriers—Injury to Passenger—Duty of Passenger—Contributory Negligence—Evidence.

1. Where a passenger in an open street car was entirely within the car, though his elbow rested on a rail at the side, his injury by a collision with a passing wagon raised a presumption of negligence on the part of the street car company, and placed on it the burden of showing contributory negligence.

2. In an action for injury to a passenger in an open street car, from being struck by a marble slab projecting from a passing wagon, a witness' testimony that, in his opinion, the noise of the wagon scraping against the car before the passenger was struck was loud enough to be heard by any one in the car who had any hearing, was admissible.

3. A passenger in a street car is not bound to be constantly on the lookout for danger, but has the right to presume that the company will use the high degree of care for his protection which the law requires.

4. Where, in an action for injury to the plaintiff while a passenger in an open street car, a witness testified that the wagon carrying the slab which struck plaintiff scraped the side of the car, making a noise that could be heard by any one in the car, before the accident, but the plaintiff testified that he did not hear it, it was a question for the jury whether he was guilty of contributory negligence.—(Jones vs. United Railways & Electric Co., of Baltimore, 57 Atl. Rep., 620.)

MASSACHUSETTS.—Street Railways—Collision with Team—
Negligence—Question for Jury.

Along the south side of an east and west road, running through the woods, was an electric car track. The part of the road wrought for travel was 12 ft. to 15 ft. wide, and to the north.

While plaintiff, in the evening, when it was so dark, as he testified, that one could see only 8 ft. or 10 ft. ahead, was driving east, with the off wheels of his cart, back over which he could look only by standing up, on the track, he was struck by an electric car coming down a grade, without any headlight; he, as he testified, having heard no gong or signal, but merely a buzzing on the wire, on hearing which he, as soon as he could, attempted to turn to the left. Held, that the questions of negligence were for the jury.—(Sexton vs. West Roxbury & R. St. Ry. Co., 74 N. E. Rep., 315.)

MASSACHUSETTS.—Street Railroads—Injury to Passenger—Negligence.

1. In an action by a passenger on an elevated railway for injuries sustained by getting her foot through the space between the car and the platform while alighting, it appeared that the car was constructed with a door on the side through which passengers passed out of the car, and that the platform was on a level with the floor of the car. The space between the car and the platform was 3 ins. when the car stood still, while when in motion there might be an oscillation causing the space to vary from 1 in. to 5 ins. in width. The oscillation was a necessary incident to the operation of the car, and it would not be safe to have the platform nearer. Held insufficient to show negligence in the construction of the car or platform.

2. It is not negligence to ask passengers leaving an elevated railway car to move quickly.

3. In an action by a passenger on an elevated railway for injuries sustained by getting her foot through the space between the car and the platform while passing out of the car at a side door, plaintiff testified that she was passing out in a crowd so great that she could not turn around, that she went out practically sideways, and that in this way her foot went down between the car and platform. Defendant had no reason to expect anything unusually dangerous. It did not appear that the passengers were disorderly, or that they were doing anything calling for interference by it. Held not to show that defendant was guilty of actionable negligence in not taking measures to prevent the crowding.—(Willworth vs. Boston Elevated Ry. Co., 74 N. E. Rep., 333.)

MASSACHUSETTS.—Master and Servant—Injuries to Employees—Contributory Negligence—Reliance on Orders—Questions for Jury—Evidence—Dying Declarations.

1. Under Rev. Laws, chapt. 175, sec. 66, authorizing the admission in evidence of declarations of deceased persons made in good faith before the commencement of the action, and upon the personal knowledge of the declarant, a declaration of an injured motorman, in response to a question of the conductor as to whether he got orders to proceed as he did, to the effect that he did get such orders, was admissible in an action for the death of the motorman resulting from the injuries, notwithstanding the leading character of the conductor's question.

2. Where there was evidence that a motorman injured by a collision received orders to proceed along the single track on which the collision occurred, and that such orders could have been given only by the starter, the weight to be given to the starter's positive denial that he gave such orders was for the jury.

3. In actions for injuries to motormen on colliding street cars, where there was evidence that one of the cars was running in accordance with a general order to pass the other at a certain point where there was a double track, and the other car was running under a special order given by the starter not to wait at the passing point, questions whether it was negligence for the motormen to run their respective cars at the rate of 8 miles an hour on the day in question, which was very foggy, upon the single track, which was greasy because of the dampness and the fallen leaves; whether the motorman running under general orders was negligent in view of his knowledge of, and failure to report, a disobedience of the general orders by the persons in charge of the other car on previous days, and whether it was negligence for the motorman to rely on the special order without taking further precautions to protect his car from collision—were for the jury.—(Nagle vs. Boston & N. St. Ry. Co., 73 N. E. Rep., 1019.)

MASSACHUSETTS.—Carriers—Injuries to Passengers—Negligence of Conductors—Liability of Carrier—Interrogatories—Time of Filing—Discretion of Court—Contents of Answers—Disclosure of Defense.

1. The conduct of the conductor of a street car while in the car is in a sense official conduct for which the street railway is responsible to a passenger injured thereby if such conduct—as in carelessly falling against the passenger and injuring him—is negligence, regardless of whether the conductor is, in general, competent or incompetent, or whether or not the street railway might reasonably know of his incompetency.

2. Orders granting leave to file additional answers to interroga-

tories or extending the time within which to answer are within the discretion of the court, and not the subject of exception.

3. A party interrogated who desires to avail himself of the protection of Rev. Laws, chapt. 173, sec. 63, providing that a party interrogated shall not be obliged to disclose the names of witnesses by whom or the manner in which he proposes to prove his own case, must fully state under oath in his answer that the matters inquired of are within the protection of the statute.

4. Under Rev. Laws, chapt. 173, sec. 63, providing that a party interrogated shall not be obliged to disclose the names of the witnesses by whom or the manner in which he proposes to prove his case, a street railway, sued for injuries to a passenger, need not disclose, in answer to interrogatories, the contents of a report containing the names of witnesses to the accident and the time and manner in which it happened, submitted by the conductor of the car.—(Spinney vs. Boston Elevated Ry. Co., 73 N. E. Rep., 1021.)

MASSACHUSETTS.—Street Railroads—Personal Injuries—Contributory Negligence.

Where a pedestrian had the whole highway, including a sidewalk devoted to foot passengers alone, to choose from, he was not in the exercise of due care in stooping over for even seven seconds to pull down the leg of his trousers while standing on a street car track at a point that might be reached by an electric car in eight seconds after it came around a corner, especially when he did not look up again after stooping until he was run over by a car.—(Jordan vs. Old Colony Street Ry. Co., 74 New England, Rep., 316.)

MICHIGAN.—Carriers—Street Railways—Negligence—Defective Appliances—Incompetent Servants—Questions for Jury—Contributory Negligence—Apprehension of Danger—Instructions—Damages—Expectancy of Life—Appeal—Errors in Charge—Failure to Except.

1. A street railway company owes to its passengers a high degree of diligence and care in respect to the character of its rolling stock.

2. In an action against a street railway for injuries to a passenger, where there was testimony that the brake rod had broken the day previous to the accident, but was repaired so that the brakeman had no reason to doubt the efficiency of the brake until he tried to use it, and it was found that after the accident the brake rod was useless for want of a bolt, the question of negligence, when taken in connection with the fact of the accident, was for the jury.

3. In an action against a street railway for injuries to a passenger, where there was testimony that the motorman did not know that he could stop the car by reversing the motor, and that his tutelage had been brief, although there was proof of the opposite, and that he did not turn off the current and lost his judgment, the question of his competency and the character of his conduct was for the jury.

4. A passenger on a street car is entitled to protection against imminent and unexpected danger, and it is not necessarily a defense that in the face of such danger the motorman lost his usual ability to control the car.

5. A passenger on a street car who jumps therefrom under the danger and excitement incident to an imminent collision is not guilty of contributory negligence.

6. In an action against a street railway for injuries to a passenger who left the car just before the occurrence of a then imminent collision, where her evidence was that she was thrown therefrom while the car was going around a curve by its centrifugal force, which broke her hold, and there was no evidence that she jumped from the car, there was no occasion to submit the question of her jumping from the car to the jury.

7. In an action for personal injuries, permanent in their nature, the jury may include damages for prospective suffering for such time as they find that plaintiff will suffer them, based on her expectancy of life at the time of the trial, and not on the basis of that expectancy before she was injured.

8. In an action for injuries permanent in their nature, a charge that the jury in assessing damages should determine the probable period that it might reasonably be expected that plaintiff "might have lived in the condition she was at the time of this injury," and that the jury would decide her expectancy of life "having in mind what the evidence discloses regarding the plaintiff's health previous to the accident," was open to the construction of erroneously permitting the jury to allow damages on the basis of expectancy of life before the injury.

9. Under the statute permitting counsel to assign error upon a charge without having taken exception thereto, the Supreme Court has no alternative but to reverse the judgment for error in a charge, though raised for the first time on appeal.—(Howell vs. Lansing City Electric Ry. Co., 99 N. W. Rep., 406.)

FINANCIAL INTELLIGENCE

WALL STREET, July 26, 1905.

The Money Market

The money market developed a decidedly easier tone this week, despite the comparatively low bank reserve and the preparations making by the local institutions to meet the demands soon to be made upon them for crop-moving purposes. The offerings of funds, although only moderate, was largely in excess of requirements. Call money was under pressure, bankers generally being disposed to place their funds in this department rather than to commit themselves for fixed periods. As a result, rates for demand funds fell off considerably, practically all of the week's business being transacted at $1\frac{3}{4}$ and 2 per cent. Sixty and ninety-day funds were offered more freely also, at $\frac{1}{4}$ per cent under the rates heretofore prevailing. For the longer periods, however, the market was held firm at $3\frac{1}{2}$ per cent for four months and 4 per cent for over the year maturities. Mercantile paper continued in good demand at $3\frac{3}{4}$ to 4 per cent for the best names, but the volume of business was limited. Sterling exchange displayed pronounced weakness early in the week, as a result of a liberal supply of loan bills, but subsequently there was a recovery to 4.8675 for prime demand sterling. The bank statement published a week ago was disappointing. There was an unexpectedly heavy increase of \$19,058,600 in loans, and an increase of \$18,380,000 in deposits. The gain in cash amounted to only \$21,700. Reserve requirements were \$4,595,000 larger, which resulted in a decrease in the surplus reserve of \$4,573,000. The surplus now amounts to \$14,949,950, as against \$19,523,250 in the preceding week, \$50,609,600 in the corresponding week of 1904, and \$18,915,400 in 1903. United States deposits were \$17,081,575, as against \$22,372,950 in the previous week. There were no material changes in the European markets during the week. Discounts at London remained easy at $1\frac{1}{8}$ per cent. At Paris the rate declined $\frac{1}{8}$ per cent to $1\frac{5}{8}$ per cent, and at Berlin the quotation was unchanged at $2\frac{1}{8}$ per cent. At the close there was nothing in the situation calculated to disturb the present easy condition of the market. Disbursements by the sub-treasury continue in excess of collections. Currency from the interior and new gold from the Klondike are also being received in moderate amounts. The supply of foreign money awaiting employment in this market was materially increased during the week by the placing of loan bills, and it is expected that the offerings of these funds will be sufficient to check any advancing tendency which might develop from an increased demand for money.

The Stock Market

The stock market has been exceedingly dull during the past week, and the dominant influence in checking speculation has been the conflicting character of the reports regarding the spring wheat crop, and the obvious efforts on the part of the bulls in wheat to create a crop scare. On Friday and Saturday there was rather free selling of stocks by the Western element, on the reports of black rust in Minnesota and the Dakotas; but these reports were flatly contradicted. On Monday the bottom practically fell out of the wheat market, and the stock market developed considerable firmness, but the only buying had been for the short account, with the exception of the Eries, which were bought in anticipation of the dividend action on the second preferred stock. The foreign situation has improved, and a conference between the two Emperors, it is believed, tends to an early peace between Russia and Japan. The Steel Corporation statement for the second quarter of the year was about what had been expected, and the buying of these stocks has been good, and was based upon the very favorable trade conditions. The important price movements were in the Northern Securities group of stocks and in a few of the specialties. Considerable attention is being paid, however, to the copper stocks as a result of the remarkably strong position of the copper metal market. The stock market, as a whole, is a waiting one, and no great activity or decided improvement in prices is looked for until uncertainty regarding the spring wheat crop is eliminated and the critical point has been passed.

Little interest has been shown in the local traction stocks, which have been under a moderate selling pressure, the purpose of which is believed to be an accumulation of Brooklyn Rapid Transit and Metropolitan.

Philadelphia

Extreme dullness characterized the local market for traction

stocks this week. Dealings included a fairly large number of issues, but the individual transactions showed a marked falling off as compared with previous weeks. The general tone of the market, however, was firm. United Gas & Improvement was the active as well as the strongest feature of the trading, upwards of 1500 shares changing hands at prices ranging from $94\frac{1}{2}$ to $95\frac{1}{4}$, a net gain of $1\frac{1}{4}$ points. Philadelphia Rapid Transit was dull and a trifle easier, notwithstanding the reported increase in the company's earnings. From 28 at the close of last week the price ran off to $27\frac{1}{2}$, and closed within $\frac{1}{8}$ of the lowest. About 1000 shares changed hands. It is said that the gross earnings for the month of June showed an increase of \$95,000 over June, 1904, and that the gross earnings and other income for the fiscal year will be about \$16,400,000, or \$470,000 larger than in 1904. Philadelphia Company common sold to the extent of about 650 shares at $43\frac{1}{2}$ to 43, while an odd lot of the preferred brought $48\frac{3}{8}$. Philadelphia Traction was steady, about 400 shares changing hands at 100 and $99\frac{7}{8}$. Union Traction was firm, upwards of 600 shares selling at $60\frac{3}{4}$ and 60. Other transactions included American Railways at 51, Consolidated Traction of New Jersey at 82, Fairmount Park Transportation at 17, United Traction of Pittsburg preferred at $50\frac{1}{2}$ to 50, Reading Traction at 33, and United Companies of New Jersey at $269\frac{1}{2}$ to $269\frac{3}{4}$.

Chicago

The local market was practically neglected. The demand for stocks was limited to a few issues, but at the same time there was no evidence of pressure to sell. About the weakest feature of the group was North Chicago, which sold to the extent of about 300 shares at $56\frac{1}{2}$ to 57, a loss of a point as compared with the previous week's close. South Side Elevated continued firm, 350 shares changing hands at 95. Northwestern Elevated jumped up a point to $22\frac{1}{2}$ on reports of increased earnings. Metropolitan Elevated sold at 65 to $64\frac{1}{8}$ for 120 shares, and Chicago & Oak Park brought 18 for fifty shares. West Chicago sold at 40 for one share.

Other Traction Securities

Trading in the Baltimore market was only moderately active, but prices generally displayed a firmer tendency. United Railway 4s were in better demand, about \$50,000 selling at 94 to $93\frac{3}{4}$, an advance of $\frac{1}{8}$ per cent. The incomes rose $1\frac{1}{2}$ per cent in the early dealings to $59\frac{3}{4}$, but subsequently eased off $\frac{3}{4}$, and closed at $59\frac{1}{4}$, with a net gain of $\frac{3}{4}$. About \$35,000 of the bonds changed hands. The stock was unchanged, 225 shares selling at $13\frac{1}{2}$ to 13, while trust receipts, representing 100 shares of stock, sold at $13\frac{3}{8}$. Norfolk Railway & Light 5s developed more activity, about \$16,000 changing hands at $93\frac{1}{2}$. Other sales were as follows: City Passenger 5s at 106, Knoxville Traction 5s at $104\frac{3}{4}$, Norfolk Street Railway 5s at 109 to $109\frac{1}{2}$, Washington City & Suburban 5s at $107\frac{1}{4}$, Charleston Consolidated Electric 5s at 96, Baltimore Traction 5s at 117, City & Suburban 5s at $113\frac{5}{8}$, and \$15,000 Macon Railway & Light 5s at 98. The Boston market was dull and heavy. Boston & Worcester sold at 30 to $30\frac{1}{2}$ for 103 shares, while 275 of the preferred brought 75 to $75\frac{1}{2}$. Massachusetts Electric common opened up a point at 20, but subsequently lost all the improvement on sales aggregating 800 shares. The preferred stock fluctuated between $63\frac{3}{4}$ and 63, closing at the lowest. Other transactions included Boston Elevated, at from $157\frac{3}{4}$ down to $157\frac{1}{2}$, and back to $157\frac{5}{8}$; West End common at 98, preferred at $113\frac{1}{2}$ to 114, and Boston & Suburban at $23\frac{1}{2}$. In the New York curb market transactions have been upon a much larger scale, and prices fluctuated sharply. Interborough Rapid Transit developed considerable strength in the early dealings, the price advancing to $208\frac{1}{2}$, but subsequently there was a sharp reaction to $203\frac{1}{2}$, with a subsequent recovery to $207\frac{1}{4}$, a net gain of $3\frac{3}{4}$ per cent; about 5000 shares were dealt in. New Orleans Railway stocks was unusually active, and prices for both issues fluctuated violently. The common opened at 34 and dropped to 27, but later rallied to 31, while the preferred broke from 74 to 70, and rallied at the close to 72. Upwards of 8000 shares of the common and 2000 shares of the preferred were traded in. The $4\frac{1}{2}$ per cent bonds were quiet but firm, \$30,000 selling at 90. The reorganization of the company has been completed, and the securities of the New Orleans Railway & Light Company, the new company, will be ready for distribution this week. Washington Railway & Electric common sold at $39\frac{3}{4}$ for 100 shares, and \$3,000 of the 4 per cent bonds brought $91\frac{3}{4}$.

Security Quotations

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

	July 19	July 26
American Railways	51	51
Boston Elevated	157	157
Brooklyn Rapid Transit	69½	67¾
Chicago City	—	—
Chicago Union Traction (common).....	7¾	8¼
Chicago Union Traction (preferred)	33	34½
Cleveland Electric	78	78
Consolidated Traction of New Jersey.....	82	82
Consolidated Traction of New Jersey 5s.....	108½	108½
Detroit United	92¾	92¾
Interborough Rapid Transit	203½	205
International Traction (common).....	26	—
International Traction (preferred) 4s.....	64	—
Manhattan Railway	165	164½
Massachusetts Electric Cos. (common).....	18	18
Massachusetts Electric Cos. (preferred).....	63	62¼
Metropolitan Elevated, Chicago (common).....	23¾	23¾
Metropolitan Elevated, Chicago (preferred).....	65	64
Metropolitan Street	127¼	125½
Metropolitan Securities	32½	31¾
New Orleans Railways (common), W. I.....	31½	29½
New Orleans Railways (preferred), W. I.....	73½	70½
New Orleans Railways 4½s.....	90	88½
North American	98½	98
North Jersey Street Railway.....	25	25
Philadelphia Company (common).....	43	43
Philadelphia Rapid Transit	27½	27¼
Philadelphia Traction	100	99¾
Public Service Corporation 5 per cent notes.....	97	—
Public Service Corporation certificates.....	68½	—
South Side Elevated (Chicago).....	94½	94½
Third Avenue	127	127
Twin City, Minneapolis (common)	112½	111½
Union Traction (Philadelphia)	60	60
West End (common)	97	98
West End (preferred)	114	a114

a Asked. W. I., when issued.

Iron and Steel

The "Iron Age" says there has been an active movement in many branches of the iron and steel trades, and manufacturers are facing the future with increasing confidence. Apparently the buying of pig iron is over for the present. It is estimated that the total sale during the two weeks of lively purchasing will aggregate 500,000 tons for the whole country. It has led Southern makers to advance their prices to \$11.75 and \$12 for No. 2 Birmingham, some of them holding for more. A number of the railroads have bought steel rails during the last ten days, the total figuring up close to 100,000 tons. In the structural trade the question of deliveries is the all-absorbing topic. During the past ten days there has been some heavy selling of steel bars. One interest has booked 70,000 tons, largely for makers of agricultural machinery.

OPERATIONS OF THE HUNTINGTON SYNDICATE

All of the property of the Los Angeles & Redondo Railway Company has been sold to Henry E. Huntington at a price approximating \$2,500,000, and the entire stock of that company has been transferred. Prior to the purchase, Mr. Huntington had acquired all of the property at Redondo belonging to the Redondo Land & Improvement Company, comprising 4000 town lots at a price reported to be \$1,000,000. Mr. Huntington now owns the railways, wharves, water-front and about three-fourths of the area of the city of Redondo. It is officially announced that Mr. Huntington will greatly improve his new electric railway. It is narrow gage, and hourly service is maintained. Mr. Huntington will double-track and standardize the present system as soon as possible, introducing fifteen-minute service between Redondo and Los Angeles. In Redondo Mr. Huntington succeeds the Garnsey-Ainsworth syndicate.

The Huntington system out of Los Angeles is pushing into the San Bernardino Valley. The surveyors have run a line for a new road between Riverside and Colton. This will connect the Huntington system at Riverside with the lines of the San Bernardino Valley Traction Company at Colton, thus making a through connection between San Bernardino and Riverside. The projected road covers a distance of six miles. The route begins at the corner of Eighth and J Streets, runs south on Eighth Street to O Street, thence through orange groves and fields about one mile over a bluff to Colton Avenue, thence following the arroyo through old Spanishtown to North Orange Street, passing the Elliott Springs, which are one mile from Riverside, thence to the end of the double track of the Huntington system of Riverside.

CLEVELAND CROSS-TOWN ORDINANCE

Mayor Johnson, of Cleveland, has announced that a Woodland-Hills Avenue street car line extension ordinance has been drawn up in the rough, and that the ordinance is satisfactory to both parties. Solicitor Baker, representing the city, and Secretary Henry Davies, for the Cleveland Electric Railway, have been authorized to make a specific draft of the new ordinance, which will be formally accepted by the Mayor and Mr. Andrews as soon as completed, and will be submitted to the Council at the next meeting. The new ordinance is designed to meet the Mayor's desire for the Woodland-Hills crosstown road under safe restrictions, and follows to great extent the lines of the Felton ordinance which the Mayor vetoed.

From the very beginning of the agitation for a crosstown line on Doan Street and Woodland-Hills Avenue, Mayor Johnson has been for it. But he feared that the Felton ordinance which he vetoed would extend the life of other franchises, the company's attorneys having made the claim that a transfer clause in any franchise makes connecting lines take on new life. While the terms of the agreement are not fully made public, the chances are that there will be no mention of transfers in the new ordinance. But the right of the public to have transfers is guarded by a special and private agreement by which the company will give transfers just as though it were required in the franchise.

ANNUAL REPORT OF MANCHESTER TRAMWAYS

The tramways committee of the Manchester (Eng.) Corporation presented the following report for the year ended March 31 last. The report states that at the date of the last report the routes open for traffic aggregated 137 miles, 1602 yards of single track, and that the aggregate length of single track open for traffic on March 31, 1905, was 146 miles, 343 yards.

The revenue account may be summarized as follows:

	1904-05			1903-04		
	£	s.	d.	£	s.	d.
Traffic revenue	628,529	4	2	603,182	6	10
Other revenue	3,426	8	2	8,693	16	10
Total	631,955	12	4	611,881	3	8
Working expenses	411,597	3	11	391,853	13	11
Balance, being gross profit....	220,358	8	5	220,027	9	9
Add bank interest	1,869	9	1	3,079	10	6
Leaving a sum available of....	222,227	17	6	223,107	0	3
Out of which the following charges have been met:						
Interest on mortgage debt, etc.	52,120	7	11	52,711	2	11
Redemption of debt	35,379	6	5	26,902	16	4
Rent of tramways	10,000	0	0	20,000	0	0
Leaseholds—proportion of outlay	794	14	5	1,136	17	0
Income tax	2,983	5	1	550	13	9
	101,277	13	10	101,401	10	0
Leaving a net profit, which has been appropriated as under:						
Renewals and depreciation account	70,907	0	0	59,693	2	10
Contribution in aid of the rates.	46,000	0	0	50,000	0	0
Street improvements round Infirmary—interest, etc.	4,043	3	8	2,012	7	5
Total net profit	120,950	3	8	121,705	10	3

During the year the number of passengers carried was 126,900,875, an increase of over 6,000,000 on the previous year, when the figures were 120,722,368. The car mileage shows an increase of considerably over 1000 miles, the figures being 14,123,124 during last year, and 13,617,448 during 1903-04. The percentage of passengers' fares show that 71.94 paid 1d. for the journey, 11.01 paid 1½d., 7.10 2d., and 5.40 ½d. Of the total number of passengers carried 91,281,804 paid penny fares. The average traffic revenue per car-mile was 10.68d., against 10.52d., and the average traffic revenue per mile of single track was £4,299, as against £4,468 in 1903-04. The average working expenses per car-mile, including power cost, was 6.99d., against 6.78d. The amount of the sinking fund is now £60,987, against £27,224 in the previous year. The renewals and depreciation fund now amounts to £185,085, against £119,844 in the previous year.

PITTSBURG RAILWAYS PURCHASES BEAVER VALLEY SYSTEM

The Pittsburg Railways Company has purchased the Beaver Valley Traction Company, and the following officers and directors representing the new control have been elected: President, J. D. Callery, vice Sydney L. Wright, resigned; vice-president, S. L. Tone, vice W. Frederick Snyder, resigned; secretary, W. B. Carson, vice Walter T. Bilyen, resigned; treasurer, C. J. Braun, Jr., vice Walter T. Bilben, resigned; assistant secretary and assistant treasurer, J. C. Lightfoot, Jr.; general manager, Gaylord Thompson; new board of directors, J. D. Callery, S. L. Tone, W. B. Carson, J. L. Foster, C. S. Mitchell, John M. Buchanan, William Redwood Wright, T. P. Simpson and Gaylord Thompson. The Pittsburg Railways Company pays approximately \$1,000,000 for the \$1,095,000 (par value) Beaver Valley Traction Company stock and guarantees principal and interest on outstanding bonded indebtedness, as follows: \$150,000 first mortgage 6s, maturing 1911; \$100,000 second mortgage 6s, maturing 1915; \$675,000 first consolidated 5s, maturing 1950; \$500,000 general mortgage 5s, maturing 1953. There are also \$75,000 of subsidiary 6 per cent bonds out. On Sept. 30, 1904, the company had loans outstanding amounting to \$235,000. Its fixed charges last year were \$79,791. The Beaver Valley Traction Company has 32 miles of track, and owns 50 cars with power houses, etc. It is a consolidation of several small properties with the old People's Traction Company, of Beaver.

THE QUESTION OF A TERMINAL FOR TRENTON

The practice in Trenton, N. J., of shifting cars from one track to another in the center of the city, which has become pronounced recently, is causing considerable discussion before the Council. The first foreign car ran upon the streets of Trenton in November, 1902, when the New Jersey & Pennsylvania Traction Company brought its Princeton cars off the private right of way into North Willow Street, and later to the corner of Warren and Hanover Streets, about two blocks from the City Hall. The Camden & Trenton lands its passengers at State and Warren Streets, a block further south, and one full block from the City Hall, while the Yardley, Morrisville & Trenton, Trenton, Newhope & Lambertville and Philadelphia, Bristol & Trenton Street Railways run their cars into the former's terminal, and the Trenton & New Brunswick Railroad into the latter's terminal. The Trenton Street Railway Company shifts its Princeton and Pennington cars, as well as those on the Princeton Avenue line (to city line only) at State and Broad Streets, opposite the City Hall.

East State Street is narrow at the point where the cars are shifted, while Broad Street, at a point around the corner, to the left, where the South Trenton and Yardville cars of the Trenton Street Railway are shifted, is quite wide. About ten cars an hour are shifted from one track to the other (trolley poles turned, etc.) on State Street, four on Broad, three on State and Broad, and eight on West Hanover Street, at Warren.

Very recently there was an agitation for a change, the City Council urging that there was no excuse for cars lying on the streets, and an ordinance was passed, which, among other things, prohibits cars from remaining at a terminal, in the street, more than four minutes. This did not quite satisfy the members who were playing to the grandstand, so they passed a resolution directing the Trenton Street Railway to lay curves at once at State and Broad Streets, and construct a connecting track between North Broad and North Warren Streets, two blocks further north, so that the Princeton and Pennington cars of the Trenton Street Railway might pass down Warren, into State, into Broad, up Broad to Perry, and through Perry to Warren again. This scheme was nipped in the bud early by a protest from the chief of the fire department, who said that a railway track through that section of Perry Street would very seriously handicap the department, owing to its headquarters being located there. Residents of the street also registered a kick, because no franchise had been sought, nor had any consents been given, as plainly required by the State laws, which the Council forgot in the excitement of pushing the thing through. The Trenton Street Railway Company hesitated, not unwilling to build the Perry Street loop, having already expressed a desire to do anything that would alleviate the trouble, but anxious to please the property owners and also doubtful of the legality of a street railway built under simple resolution of Council.

Councilman James Buchanan, a recent candidate for Mayor in opposition to Frank S. Katzenbach, Jr., who is counsel for the New Jersey & Pennsylvania Traction Company, came forward with a complicated loop scheme, which proposed tracks through various

streets and alleys for the joint use of all the electric railways centering in the city. Aside from the dangers and delays of narrow streets, sharp curves and numerous crossings of each other's lines, three different gages would have had to be provided for—the Trenton Street Railway and all the Pennsylvania lines are 5 ft. 2¼ ins.; the Camden & Trenton 5 ft., and the Princeton line of the New Jersey & Pennsylvania Traction Company 4 ft. 8½ ins. The Liberty Street line of the Camden & Trenton Railway is also 4 ft. 8½ ins., to permit the cars of the Trenton & New Brunswick Railroad to run over it.

One of the daily papers is acting as sponsor for the terminal advocates, and the fusillade keeps up without intermission. The New Jersey & Pennsylvania Traction Company has an extensive terminal of its own upon West Hanover Street, and arrangements will be made shortly to run the cars direct into a station to be erected, so that the street will not be occupied, and this company will, probably, have less to fear than any of the others, although a regular mystic maze of curves has been suggested for the use of its cars running into the center of the city.

Trenton streets do not offer much room for the electric cars, most of those in the center of the city being narrow, with the exception of North Broad Street for two blocks, and East Hanover Street for about two blocks. East Hanover Street has no car tracks, probably will not have if the property owners can prevent it, as it lies one block away from State Street, and is considered an especially desirable location, because of its proximity to and at the same time freedom from the electric cars.

AFFAIRS IN CHICAGO

The local transportation committee of Chicago has agreed to accept the offer made by the Chicago City Railway Company in the way of a settlement between the company and the city of existing controversies over the question of compensation for operating rights. The agreement finally decided on requires the company to pay the city \$35,400 in full settlement of all claims for past compensation, and a flat rate of \$5,000 per month in future, beginning July 1. The company refused to pay compensation from March 20, the date Mayor Harrison executed his famous coup abrogating all existing agreements with the company, and attacking its rights in the streets. One of the agreements abrogated required the company to pay \$100 per annum for each car in use. The committee will attempt to make an agreement with the Union Traction Company similar to that of the Chicago City Company, substituting the flat rate of compensation for the payment of a car license of \$50 a car, as it is now doing under the ordinance of 1883. The committee regards the license system as tending to restrict the number of cars put into service.

As has been previously stated in these columns, the negotiations between the city and the companies looking to a settlement of the entire question of street railway service is to be resumed on Aug. 14. With the approach of that date interest in the problems in hand is aroused. Naturally opinion diverges as to what will be the outcome. Receiver Lampsell, of the Union Traction Company, seems to be of the opinion that a settlement will be effected along the lines proposed by Mayor Dunne in his contract plan. At least, the "Inter Ocean" quotes Mr. Lampsell to this effect. The contract plans provide that, instead of organizing a company composed of five citizens, the companies form a corporation for the purpose of rehabilitating and reconstructing their lines and then turn them over to the city at the end of five years.

The directors of the Metropolitan Elevated have decided not to accept the ordinance passed by the City Council July 10, giving the company the right to carry express matter. The reason given was the amendments requiring the company to place an arc lamp under its structure at each street crossing, and pay 10 per cent of its gross receipts to the city by way of compensation. The directors said the express business is a new thing for elevated roads, an experiment at best, and that they cannot assume the burdens imposed by the ordinance.

A special dispatch to the East from Chicago dated July 26 says that on that date the Chicago City Railway Company filed a bill in the United States Circuit Court for an injunction to restrain the City of Chicago from interfering with any of the company's lines. The municipal ownership ordinance passed by the City Council last March, so the dispatch says, is declared to be unconstitutional. The court is informed that the company now has possession of 119 lines within the bounds of the city, on which the franchises run until 1958.

STONE & WEBSTER MAKE SOUTHERN PURCHASE

The public service utilities of Paducah, Ky., controlled by the Paducah Steam Heating Company, have been purchased by Stone & Webster, of Boston. The purchase price is said to have been \$1,440,000, divided as follows: The Paducah City Railway Company, capital \$300,000, bonds \$650,000, 14.9 miles of track; Paducah Gas & Fuel Company, capital \$200,000, bonds \$100,000; Paducah Steam Heating Company, capital \$100,000, bonds \$50,000. The new owners are said to plan improvements that will aggregate several hundred thousand dollars.

CANADIAN POWER INTERESTS IN RAILWAY SCHEME

Toronto Niagara Power Company interests have in contemplation a pretentious scheme for the development of electric railway lines in the Niagara Peninsula with St. Catharines as a center. Frederick Nichols, president of the company, and Col. Pellatt, a director, have recently been in consultation with the Mayor of St. Catharines, and have outlined to him their plans as far as they have been matured. The company will build between St. Catharines and Stony Creek to connect with Hamilton, and eventually Toronto, while the main line will run from Stony Creek to Buffalo, touching at Allanburg. A line also will be built south from St. Catharines to Pelham Township and the town of Welland. In order to get into St. Catharines from the west the company will construct a high level bridge for railway, foot and vehicle traffic over the old canal, something St. Catharines has been agitating about half a century.

BAY CITY CAR STRIKE ENDS

The strike of the employees of the Bay City Traction & Electric Company in Bay City, Mich., inaugurated seven weeks ago, was ended July 23 at 1:30 o'clock, when an adjustment of the matters in dispute was reached. The adjustment applies only to Bay City, and does not include the Saginaw and Interurban lines.

OUTING OF NEW ENGLAND STREET RAILWAY CLUB

The July outing of the New England Street Railway Club was held Thursday, July 27, 1905, at Canobie Lake Park, Salem, N. H. The event was known as ladies' day, and for this occasion the committee arranged a most elaborate itinerary. Through the courtesy of the New Hampshire Traction Company, the party were taken from Haverhill to Canobie Lake Park, where they were entertained. The start was made from the North Station, Boston, over the western division of the Boston & Maine at 9:25 a. m. At 10:50 the special train reached Haverhill, and at 11:00 o'clock the party boarded special cars of the New Hampshire Traction Company for transportation to the park. En route a brief stop was made at Salem, N. H., to give the party an opportunity to inspect the car house, rotary converter station and car shops of the New Hampshire Traction Company. Dinner was served at the Canobie Lake Park Restaurant about 12:15. At 3:15 the party attended "The French Maid," given in the theater on the shore of Canobie Lake. The return to Boston was made at 5:15 p. m.

AN IMPORTANT INDIANA PROJECT

The Huntington, Columbus City & Northwestern Railway Company has in contemplation a pretentious plan for building an electric railway out of Indianapolis. The road as projected will extend from Indianapolis through Elwood, Marion, Huntington, Columbus City, Syracuse and Goshen. The plan is to begin the work of grading this fall, and to push the actual work of construction early next spring. The company has been voted 10 successive subsidies amounting to \$122,500 on 60 miles, and has deeds to 40 miles of private right of way 50 feet wide. The company also has favorable county and city franchises. Construction will be up to the standard of modern practice. Wawasee, the largest lake in the State, which is upon the line, will be converted into a pleasure resort. The contract for engineering, financing and building the road has been placed with the American Engineering Company. The officers of the company are Benjamin Raupfer, Columbia City, president; J. P. Dolan, Syracuse, vice-president; W. H. Magley, Columbia City, secretary; W. F. McLallen, treasurer; Melvin Blain, auditor; A. F. Weist, Jr., Columbia City, general manager; John A. Shafer, Indianapolis, chief engineer.

FEATURES OF THE PROPOSALS AND SPECIFICATIONS FOR BUILDING THE NEW YORK & WESTCHESTER IN THE BRONX

The revised route of the New York, Westchester & Boston Railroad as approved by the Board of Estimate of New York on June 14, between West Farms Road and the northern line of the city, is a material improvement over the original route, in that it gives an almost direct line from Bronx Park to the city line at Mt. Vernon. This will facilitate the operation of the road, and make it possible to maintain very high speeds. As already announced, contracts will be let shortly for the construction of the entire Westchester line in the Bronx, including the section running up to Mt. Vernon. William A. Pratt, chief engineer of the company, has supplied blank proposals and articles of agreement, the specifications including grading, clearing and grubbing, ditching and drainage, masonry and brick work, tunneling, concrete, timber, iron, etc. It is made a part of the specifications that all work under the contracts to be let by the end of this month shall be commenced within ten days. Another paragraph in the specifications of interest is that which states that "the contractors will be required to construct all viaducts over streets and tunnels under streets, and all bridges necessary to carry the streets over the railway in such a manner as not to interfere with the ordinary use of the street or road as a public highway; and shall protect and keep in service all sewers, conduits, gas, water and other pipe line, and all street railway tracks and appurtenances."

STREET RAILWAY PATENTS

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

UNITED STATES PATENTS ISSUED JULY 18, 1905

794,719. Railway Rail; Emil F. Krell, Detroit, Mich. App. filed Aug. 15, 1904. The rail has projecting flanges to rest upon a suitable foundation and a depending web projecting downward from beneath the flanges to be embedded in the foundation and anchor bolts embedded in the foundation and engaging the flanges of the rails.

794,740. Wheel; Henry H. Porter, Jr., Chicago, Ill. App. filed March 17, 1902. A shiftable flange for a car wheel directly attached thereto, and so mounted upon the wheel that it may be thrown into and out of operative position as an active flange, and a non-rotating bearing for the flange having means to shift and fix it in place.

794,869. Means for Operating Tramway Points; Jacob Levy, Johannesburg, Transvaal. App. filed Nov. 28, 1904. Engaging means on the roof of the car whereby a lever in the path thereof is actuated to throw the switch point in advance of the car.

794,871. Device for Increasing the Adhesion Between Wheels and Rails; Robert C. Lowry, Seattle, Wash. App. filed Oct. 19, 1904. The wheels are magnetized by electro-magnets arranged adjacent thereto.

794,964. Attachment for Trolley Poles; Paul H. White, Indianapolis, Ind. App. filed Aug. 24, 1903. A diamond-shaped clip attached at one end of the trolley pole, and at the other end of the retrieving cord prevents the trolley from catching over the wire when being retrieved.

795,016. Trolley Ear; Montraville M. Wood, Schenectady, N. Y. App. filed Jan. 15, 1903. A rigid frame has a pair of longitudinal slightly inclined grooves therein, and a pair of jaws for gripping the trolley wire having correspondingly inclined or cam surfaces so that the wire is gripped when the jaws are moved longitudinally by a suitable rack and pinion engagement.

795,035. Street Car Brake; Joseph Hastreiter, Morgantown, W. Va. App. filed May 26, 1905. The operating shaft has a bevel-gear connection with a shaft under the car to which the brake chain or cable is attached, the last named shaft being provided at the end opposite its bevel-gear connection with a peripheral flange provided with pawls adapted to engage grooves in a stationary stud thereby to lock the brake in any position.

795,157. Railway Switch Mechanism; Henry B. Nichols, Philadelphia, Pa. App. filed Jan. 16, 1905. Comprises a movable switch tongue, a rod rigidly attached thereto, a lever pivoted at one end and connected to a spring-pressed plunger at the other, the lever engaging the rod intermediate its ends and a pivoted cylinder in which the plunger is slidably mounted, the pivots of the cylinder and lever being in the same plane, whereby the spring-pressed plunger tends to hold the lever and rod in either of their extreme positions.

795,158. Railway Switch Mechanism; Henry B. Nichols, Phila-

delphia, Pa. App. filed Jan. 16, 1905. A movable switch-tongue, a pivoted lever having a connection at one end with the tongue, and at the other end with a tilting weight adapted to act through the lever upon the tongue to maintain the same in position, and means for retarding the movements of the weight.

795,159. Railway Switch Mechanism; Henry B. Nichols, Philadelphia, Pa. App. filed Jan. 16, 1905. A switch mechanism comprising a moving part for switching, a lever moving with the same to move or be moved by it, and a flask or vessel containing liquid and so connected to the lever that movements thereof are accompanied by shifting bodily the liquid in the flask.

795,170. Electric Brake; William G. Price, Pittsburg, Pa. App. filed Aug. 17, 1904. Comprises an actuating spring for operating the brakes, and an electric motor having a rotating armature for compressing the spring and releasing the brakes, the motor being reversed by the action of the spring when the brakes are to be applied.

795,201. Electrically-Heated Handhold; Fred S. Davis, Robertsville, S. C. App. filed Dec. 29, 1904. An incandescent lamp mounted within the hollow handle of a brake or other operating lever.

795,232. Slot Switch; John H. Pflieger, Johnstown, Pa. App. filed March 10, 1904. A slot switch having a tongue-supporting point, a surface-flush movable tongue or point having its base portion extended beyond its point proper and received beneath the flanges of the slot rails.

795,243. Railway Brake Apparatus; Granville T. Woods and Lyates Woods, New York, N. Y. App. filed April 10, 1903. Under certain conditions in a motor-control system the current is directed through the coils of a magnetic brake.

795,247. Current Collecting Shoe; William M. Brown, Johnstown, Pa. App. filed Jan. 26, 1903. The collecting shoe is made very long in order to bridge over spaced contact plates, and comprises a plurality of separately-movable electrically-independent contact sections or units, a conductor adjacent to, but normally separated from, the sections, and elastic members interposed between the sections and the conductor.

PERSONAL MENTION

MR. L. A. POOLE has been appointed assistant manager and purchasing agent of the Philadelphia, Bristol & Trenton Street Railway Company, of Bristol, Pa.

MR. FRED J. ACH has been elected to succeed the late Dr. J. E. Lowes as president of the Dayton & Muncie Traction Company, and Mr. Harry Kiefaher has been elected president of the Dayton & Northern Traction Company as the successor to Dr. Lowes.

MR. WALTER A. PEARSON, electrical engineer of the New York City Railway Company, was presented with a silver punch-bowl by the employees of the company at the Hotel Belleclaire Thursday evening, July 25. Mr. Pearson will, on Aug. 1, become engineer of the Canadian Electric Company at Niagara Falls.

MR. WARREN GREGG, heretofore trainmaster of the Cleveland division of the Lake Shore Electric, has become superintendent of the Lorain Street Railway Company. This is the Lorain and Elria branch of the Lake Shore Electric. Mr. Gregg succeeds Mr. Edward O'Hara, who has held the position for the past eighteen months.

MR. HENRY E. HUNTINGTON, after staying in Los Angeles about two weeks, returned to New York on July 16, planning to be back in Los Angeles within four or five weeks. He says new plans and extensions for Southern California electric railway enterprises make it necessary for him to return to Los Angeles as soon as possible.

MR. SMITH HOOD has been made assistant to Mr. A. L. Linn, general manager of the Fairmont & Clarksburg Traction Company, of Fairmont, Va. The appointment was made in order to give Mr. Linn more time to look after the construction work of a new line being built to Clarksburg. Mr. Hood has been with the company for a long time.

MR. WILLIAM S. REED, of Townsend, Reed & Company, has announced that the members of the firm, Mr. Geo. Townsend and Mr. Reed, have dissolved partnership, and that he is now located in the First National Bank Building, Chicago, to engage in the building, financing and general engineering of electric interurban and street railways. Mr. Reed has had more than 16 years experience in building, owning and operating roads, and is prepared to handle all kinds of railway projects.

MR. F. E. FROTHINGHAM, for three years manager of the Whatcom County Railway & Light Company, owning the street rail-

way and gas plant in Bellingham, Wash., has resigned to resume on August 1 his former employment as expert in investigating properties considered for purchase by Stone & Webster, who own the Whatcom County property. Mr. L. H. Bean, superintendent of the underground and overhead department of the Seattle Electric Company, will succeed Mr. Frothingham at Bellingham.

MR. H. V. SCHREIBER has resigned as chief engineer and electrician of the Augusta-Aiken Railway & Electric Company, of Augusta, Ga., controlling the Augusta Railway & Electric Company, North Augusta Electric & Improvement Company, Augusta & Aiken Railway Company, North Augusta Hotel Company and North Augusta Land Company, to tour the country to acquaint himself with the latest engineering practice in his line.

MR. LORENZO BENTLEY, of New London, Conn., has been appointed to the position of superintendent of the New London & East Lyme Street Railway, now building between New London and East Lyme. Mr. Bentley was formerly superintendent of the New London Street Railway Company. He entered the service of that company more than 14 years ago, and remained in its employ until February, 1905, when the New London, Norwich and Montville Street Railways, all controlled by the Consolidated Railway, acting for the New York, New Haven & Hartford Railroad, were placed under one management. Construction work on the New London & East Lyme Railway is rapidly nearing completion, and it is expected that the road will be placed in operation within a few weeks.

MR. MANUAL M. REID has resigned as master mechanic of the Appleyard properties in Ohio. Mr. Reid has a thorough knowledge of steam railroad practice, and some five years experience in high-speed interurban railroading. In addition to this he has had considerable general railroad experience. He recently was acting superintendent of the Dayton, Springfield & Urbana Electric Railway, operating 65 miles of line. Mr. Reid was born in June, 1848, at Manila, and was educated at Everton Academy, Liverpool, Eng. He entered railway service in March, 1864, and was until 1869 apprentice machinist at Waterford & Limerick Railway shops, Limerick, Eng. From June, 1869, to 1871, he was machinist of the Grand Trunk Railway shops at Montreal, Can. Then he entered the service of the Central Pacific Railroad at Sacramento, Cal., and subsequently was connected with car building and railroad operations in Great Britain and the United States. From 1899 to 1901 he was master mechanic of the Southern Railway (Norfolk division) with headquarters at Lawrenceville, Va. From 1901 to 1905 Mr. Reid has been with the Appleyard lines in Ohio. He has been in charge of all rolling stock at Medway and Glen Echo, and has superintended overhead construction of Columbus power station. He has made weekly trips of inspection and reported to general managers as to the condition of power stations, overhead construction, rolling stock and roadbed. He has also been acting superintendent of the Dayton, Springfield & Urbana Railway, Springfield & Western Railway, and Urbana & Bellefontaine Railway, and has done considerable construction work. Mr. Reid has not decided upon his plans for the future.

MR. WALTER E. HARRINGTON has just resigned his position as vice-president and general manager of the New York-Philadelphia Company, and of its affiliated companies, the Camden & Trenton Railway Company, Trenton & New Brunswick Railway Company, New Jersey Short Line Railway Company. Mr. Harrington, who is a member of the executive committee of the American Street Railway Association, was for eight years general manager of the Camden & Suburban Railway Company, which greatly prospered under his direction. Upon the lease of this company to the Public Service Corporation of New Jersey last year, Mr. Harrington resigned his position as manager and took charge on March 14, 1905, of the New York-Philadelphia Railway and its allied properties, in which Stern & Silverman, of Philadelphia, are largely interested. These lines extend from New Brunswick to Camden, and through a traffic agreement with the Public Service Corporation at the north and south terminals furnish a through service from Jersey City to Philadelphia. During his connection with this line, Mr. Harrington has introduced a large number of improvements, particularly on the Camden & Trenton division, among the most important being the installation of a block signal system, relaying a considerable portion of the track, reconstruction of the trestle work and rolling stock, addition of shop equipment, feeders, bonding and one unit at the power station, and a revision of the schedules. Mr. Harrington's plans for the future are not announced, but it is stated that he retains his stock interest and remains a director in the company. His resignation was the occasion of most complimentary articles last week in the Trenton and Camden papers which testified to the value of the improvements introduced by him during his incumbency of the office of manager of the company.