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Of this issue of the Street Railway Journal, 8300 copies are printed. Total circulation for 1906 to date, 410,300 copies, an average of 8206 copies per week.

Mounting the Car Body Low

If the car body is mounted high on its trucks, the low, squatty appearance of the car, as a whole, disappears, and its elevation a few inches higher than actual clearance necessitates has the further advantage that better access is given to the motors when the brushes are changed and the commutators are inspected from the outside of the car. Moreover, the motors probably get better ventilation, and, on account of its distance from the ground, the car body is, no doubt, kept cleaner.

But there are stronger arguments in favor of placing the body as low as the wheels and design of the trucks will permit. Probably the reason having the most weight is the fact that the center of gravity of the car body is kept low. This has several advantages. In the first place, it lessens the tendency for the car to tip over in rounding curves at high speed. Again, it reduces the swaying and swinging of the car body when passing over irregularities in the track. This latter condition occurs because when the wheels on one side of the truck fall into a depression in the track, the tendency is for the center of gravity of the car body over the truck to describe the arc of a circle with the rail opposite the depression as a center. The higher the center of gravity of the car body the longer of course is the radius of this circle and consequently the greater is the oscillation of the car body. The lessened tipping effect on curves is probably of the greatest importance, since it concerns the safety of the passengers, and this should always be given careful consideration by operating men. Aside from the benefits of a lower center of gravity, a car body close to the rail either requires a fewer number of steps or permits each step to be of less height. This is, of course, very advantageous, because it facilitates loading and unloading and of course indirectly permits of faster schedules. Again, if the car body can be mounted a few inches lower on the trucks, the trolley wire can be placed correspondingly lower and thus the cost of overhead construction is lessened somewhat.

But while many fully appreciate the advantages to be derived from a low car body, a more serious question is, how to get it low. With interurban cars having trucks with wheel bases of 6 ft. or more, the limiting feature is usually the clearance of the wheels. On account of the sharp curves that the cars must take, it is usually necessary to mount the body at such a height that the wheels will clear all of the sills. About 3 ins. is the minimum clearance that can be allowed with the car body light. With a 36-in. wheel having a ¾-in. flange, the body must necessarily be mounted with the sills at least 39¾ ins. above the rails. By employing wheels of smaller diameter, of course, this height may be decreased somewhat. But with the larger cars the motors are often of such a size as to prevent the car body being lowered to the limit which the wheel clearance permits.

Sometimes the design of the truck is such that it determines the minimum height of the car body. When extremely sharp curves are to be taken by the car the wheels will sometimes have such an extended swing that they strike the truss-rod, if it is dropped down direct from the bolster. But any difficulty at this point may usually be obviated by making the truss-rod anchor of such a design that the rod is brought up to the side sill a foot or more distant from the bolster. This usually raises the rod high enough to permit the wheel to pass under it.

The Fender Question

A recent test of fenders by the Massachusetts authorities again brings to the front the practical properties of such apparatus. One cannot attach too much weight to the conclusions derived from such a test, for after all a dummy is but an inert mass and it is not easy to judge from experiments upon it just what the effect of the fender would be upon a human being caught upon the track and trying to escape being struck. This particular element of motion is a very serious one indeed, and often explains the failure of fenders generally supposed to be useful. A standing dummy may be regularly dropped on the fender comparatively uninjured in circumstances where a man might go under the wheels. A standing dummy has its center of gravity high above the point of impact of any fender, and when struck sharply will topple over into the fender. A standing person, on the other hand, is nearly always trying to get away when struck, and in many cases would be more likely to be pushed over forward or sideways and ground under the wheel or the fender itself. Hence the importance of bringing the point of impact near to the rail. A fender capable of picking up a prostrate person or even a prostrate dummy is a good deal more difficult to design than one built on the assumption that the thing struck is relatively tall. It is, however, much less likely to ride over the unfortunate person struck by it. The depressable fender which normally rides clear of the track has this advantage, but on the other hand labors under the drawback that it requires action on the part of the motorman when his mind is occupied with the task of cutting off the current and stopping the car.

There are other points about fenders of which the public thinks little. A ten-ton car moving 10 ft. or 15 ft. per second strikes a very severe blow, and a person thrown against the dashboard is very likely to be injured. Even a glancing blow from it is likely to be serious, therefore the effort made in many fenders to provide effective cushioning between the scooping edge of the fender and the dashboard. On the whole the results are fairly satisfactory, but it should be constantly borne in mind that no fender can be expected to save every person run down from material injury. There again comes in the difference between the dummy and the person. The former may get a rather heavy blow with impunity where the other might be very badly hurt. But this much is evident from these tests as from others, that it is quite possible to get a fender that will considerably lessen the danger and that will work successfully in most instances. The rest depends on the skill of the motorman. One of the curious features of all fender tests is the fact that some fenders work well at fairly high speeds and fail at low, and vice versa. On the whole the operation at low-speed is the more important, since the motorman rarely fails to reduce the speed of the car considerably. If a fender is able to pick up a dummy on the track with success, up to say 5 m. p. h., it is capable of averting the majority of accidents arising from plain collision with a person. No apparatus can foresee and prevent some of the curious accidents from apparently impossible combinations of circumstances, such as may be culled from the records of an accident insurance company. Nor does it follow from the use of the best attainable fenders that there will be an immediate cessation of accidents causing personal injuries. We do not believe that the possession of a first-class fender will tend to make motormen relax their vigilance, for an accident is sufficiently unpleasant at best and few motormen are disposed to take chances. On the other hand, we believe that a fender inculcates carefulness on the part of the public, as it is a visible reminder of risk. In other words, the moral effect of the fender may be quite as large as the actual benefit secured in reducing accidents; and by the moral effect we include not only the constant warning given to pedestrians to keep clear of the cars, but also the continuous demonstration that the company is doing what it can to avoid accidents.

Inter-Suburban Traffic

On almost all large urban street railway systems an analysis of the direction of traffic at different hours of the day develops the fact that it is radial between the city and its suburbs. But a small proportion of the total volume of business is inter-suburban in character. None the less it is desirable to study carefully the needs of inter-suburban service, for it may be made decidedly profitable if handled intelligently.

Some companies pay little attention to their inter-suburban service, and make no efforts to stimulate this kind of traffic. The character of the different communities, of course, has an important bearing upon the car service which should be provided between adjacent or adjoining suburbs. If the standards of living are radically different; if each suburb is well provided with retail trade centers for family patronage; if there are no particular attractions in the way of recreation and amusement in one community as compared with its neighbor; and in general, if there is a lack of intercourse between the two populations there is not much advantage to be gained by putting extra cars in service or establishing new routes with the fundamental object of increasing the inter-suburban travel. The public pulse must be felt with special care in such cases.

On the other hand, there are plenty of cases where there is a real demand for greater facilities of transit. It is easy to overlook such situations in the stress of providing sufficient service over the radial trunk routes between the urban center and the various tributary residential districts. As a rule the distances between the originating and terminal points of inter-suburban journeys are much shorter than in journeys between suburbs and downtown sections, so that the inter-suburban rider is often a highly profitable passenger. Two, 3 or 4 miles are common distances covered in the former class of business, while from 3 to 10 miles are frequently traversed by passengers on radial routes upon the payment of a single fare. Any encouragement which can be given to short-distance riding is worth extraordinary efforts in its profitable results.

Few cities have done much thus far with suburban loop routes, but here is a field well worth looking into. The principal difficulty with inter-suburban service as generally given is its relative infrequency in comparison with the headway maintained on the direct lines between suburb and city. The traffic is rarely sufficient to warrant sending a car over the line oftener than every fifteen or twenty minutes, or possibly every ten minutes, and where transfer points and car changes are involved, waits for connections consume so much time that the actual period of transit on the cars may be less than

the delay. In such cases it may take half or three-quarters of an hour to travel between two points in adjacent suburbs only 3 or 4 miles apart in air line, and there is no doubt that many such fares are lost through the decision of would-be patrons either to walk, patronize rural steam connections, or ride in hacks or automobiles to their destinations.

Where inter-suburban service exists the traffic must be carefully watched to see that the facilities afforded are neither too numerous to be profitable nor too scarce to be equal to the demands of the traveling public. In this way the number of cars per hour can in some cases be adjusted to the situation, and the time table can be changed if it is unprofitable or inadequate. It is usually the case that an interurban line passes several important junction and transfer points before the end of its course is reached, and in such cases the necessary waiting for connections can be mitigated by the posting of time tables in conspicuous places. The expectation of a car at a definite time is worth bringing about, in contrast with the uncertain state of mind which results from ignorance as to the probable connection. When such transfer points exist it will frequently be found that the larger part of the passengers do not ride through the entire route, but change from car to car in the most flexible manner. An excellent solution of the inter-suburban traffic problem in many cases, therefore, is to carry the route finally into the city, enabling the cars of the inter-suburban line to help handle both the urban and suburban travel, but in large measure separately.

Some Phases of Street Congestion

Broadly speaking, there is no more important matter for consideration at the present time by the authorities of our large and medium-sized cities than the congestion of the public streets. The subject is also of vital interest to the street railway, for the reason that, although the most difficult portion of the surface line schedule on a great urban system is that which is executed in crowded thoroughfares, the trolley car is one of the most potent means of relieving the situation. It is a very serious question, after all, if the legislation which authorizes the construction of subways and tunnels at the expense of removing surface tracks from important thoroughfares is wisest. In Boston, for example, there is at present considerable agitation in favor of attempting to reduce the congestion of several lateral streets in the shopping district between the two longitudinal trunk thoroughfares of Tremont and Washington Streets, and a number of recommendations have been tentatively put forth by the Police Commissioner with respect to limiting the direction of vehicular traffic, etc. None of these streets most severely taxed is provided with either surface, elevated or underground electric routes, and no electric cars have been operated on Tremont Street between Scollay Square and Boylston Street since the present subway was placed in full commission.

In this particular case it is gratifying to note that the overcrowded condition of Winter Street and Temple Place is in no perceptible degree chargeable to the operation of surface cars thereon. It is far more likely that a contributory cause of the congestion of traffic on these lateral thoroughfares was the legislatively required removal of surface cars from Tremont Street itself. Reasoning from the particular to the general, it is hard to see how the removal of any double-track line from the surface of a busy street in a large city can do anything else but increase the congestion of pedestrian and vehicular traffic on account of the reduced facilities thus offered for the prompt removal of the large crowds of people who are delayed in transit on the sidewalks of the lateral thoroughfares. There is no question of the value of increased facilities for underground travel, but with the development which our great cities are undergoing it is a question if every possible avenue of car service will not soon be needed, if indeed it be not needed at the present moment. We believe that the movement of cars over a fixed path with definite stopping places, even on a heavily crowded street, tends to relieve rather than increase the congestion because of the vast number of persons which can be removed from the densely populated section in a given time by street car as compared with other means of locomotion.

Every new office building erected in the business district literally brings a small city full of people to a spot each day where formerly only a village had congregated, and the load which is thrown upon the street surface below is thereby enormously increased. The telephone, the pneumatic tube and the electric car are each working to relieve the situation, and to cut down the facilities offered by any one of these devices is to invite additional crowding, until finally the traffic saturation point of the street is reached, with resulting blockades and incalculable loss of valuable time. The removal of tracks from a longitudinal thoroughfare is, even in the event of substituting other tracks of greater capacity below or above the surface, a step of very doubtful far-sightedness. There is a strong public demand at the present time in some cities for the removal of surface tracks whenever subway or tunnel facilities are completed below, but such a view of the matter places in the long run a premium upon skillful pedestrianism and encourages the additional obstruction of the streets by dead-load merchandise hauled in ponderous truck wagons with all the unrealized inefficiency of horse traction. Far better would it be to retain the surface tracks on the longitudinals with the addition of such rapid transit underground routes for passengers and freight as the conditions dictate, supplementing the lateral street traffic facilities in certain instances with new underground or overhead lines and restricting the directional movement of vehicular traffic on certain streets in busy hours and removing it altogether from certain streets in the rush periods if necessary.

Beyond operating its card as close to the schedule as possible and endeavoring to influence public sentiment in favor of retaining well-tried lines of transit even though new ones be authorized, a street railway company can do little to help the situation. It is often a losing battle to retain a location in the face of political agitation of the popular mind against existing facilities, but the day is surely destined to come when the best interests of the great traveling public will sweep aside the present tenancy of valuable street space in hours of heavy traffic by mere merchandise. The interests of a car full of passengers are many times worth the rights of a coal wagon or a load of wool as regards transit over the public highways. Delays in street traffic are cumulative, and the smooth, steady operation of electric cars is the greatest palliative, whenever it is possible, of the present intolerable congestive conditions in certain districts of our great cities.

RECENT BRIDGE STRUCTURES ON THE SOUTH BEND & SOUTHERN MICHIGAN RAILWAY

The South Bend & Southern Michigan Railway Company has just completed a 35-mile interurban electric railway from South Bend, Ind., to St. Joseph, Mich., which required the erection of a large number of bridge structures. All of the waterways up to 24 ins. in diameter were built of double-strength vitrified or of cast-iron pipe. All structures above 24 ins. in diameter and up to and including those having a 30-ft. span were built of plain or reinforced concrete. Openings between 30 and 90 ft. wide are spanned by plate-girder bridges on concrete abutments. All the larger structures have Pratt truss spans designed to carry a 50-ton car having double trucks and a 27.5-ft. wheel base. The lower chord of each end panel and the vertical tie in that panel are built to receive compression as well as to carry tension stresses. Otherwise, these trusses are designed according to the specifications of the Massachusetts Railroad Commission for such structures.

The line crosses the St. Joseph River at the edge of South Bend on a 300-ft. span Pratt truss highway bridge. This bridge originally had an 18-ft. roadway, with a 6-ft. walk on each side cantilevered out from the floor beams of the bridge on brackets. The bridge was formerly carried on two trusses. The walk on one side was temporarily removed and a third truss erected on that side of the bridge, far enough from the existing truss on that side to give a clearance of 13 ft. between the new and old trusses. The floor beams of the bridge, which are built-up I-beam girders, were then extended to the new truss and the walk cantilevered out from the ends of the extended floor beams. The ties for the car track were laid on 18-in. I-beam stringers on the floor beams. The track is protected by steel guards which divert traffic from the portion of the span carrying the car tracks. The cost of making the addition to the old bridge was about $8,000, while the estimated cost of the entire new bridge was $14,000.

BRIDGE OF SOUTH BEND & SOUTHERN MICHIGAN RAILWAY, OVER ST. JOSEPH RIVER

A short distance beyond this steel bridge the electric line crosses under the South Bend branch of the Michigan Central Railroad in a reinforced-concrete tunnel, the internal angle between the two tracks being 20 deg. This tunnel is 70 ft. long and has a 15-ft., three-centered arch span, which has a rise of 3 ft. 2 ins. The base of rail in the track of the steam road is 18 ins. above the flat top of the arch. The arch is reinforced with 15-in., 42-lb. I-beams which are generally placed 2 ft. apart on centers. Owing to the extreme angle at which the track of the steam road crosses the structure the beams toward each end of the arch of the latter are laid radiating from a common central point. The track of the electric line is on a 5-per-cent grade at the crossing, but the roof of the structure is practically level, the difference in elevation being taken up in the bench walls of the arch, between which there is a clearance of 13 ft. at the base of the rail in the track. The extreme skew with the track of the steam road necessitated a wing wall, 66 ft. long, on one side at one end and a wing wall 88 ft. long on the other side at the opposite end.

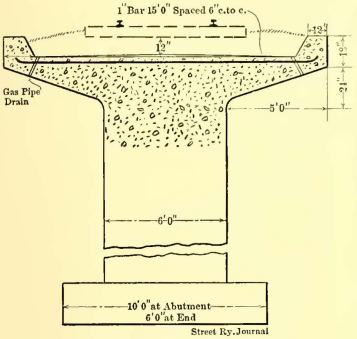
About 8 miles from this under-grade crossing of the Michigan Central Railroad that road crosses the Benton Harbor division of the Big Four Railroad on a timber trestle, and the electric line crosses both railroads at this crossing on a steel structure over the Michigan Central trestle. The track of the Big Four Railroad is on about a 4-deg. curve and is depressed 12 ft. below the surface at the crossing. The track of the Michigan Central Railroad crosses this track nearly at right angles, the trestle on which it is built clearing the track 18 ft. The electric line crosses the Michigan Central Railroad at an angle of 45 deg. on a through 84-ft. plate-girder span, with a 66-ft. viaduct at each end on steel towers. The structure of the electric line crossing clears the steam roads so they may both be double-tracked, and is 42 ft. above the track of the Big Four Railroad.

The electric line crosses the St. Joseph River at Berrien Springs on a steel bridge having eight 150-ft skew Pratt truss spans. This bridge makes an angle of 60 deg. with the stream and is built on concrete piers and abutments normal to the latter. A large dam which is built for a power development a half mile downstream from the crossing will raise the water level about 21 ft. above the normal stage at the bridge. The piers of the latter had to be built quite high on that account. Three of them have a total height of 38.5, 40 and 42 ft., respectively; two of the others have a total

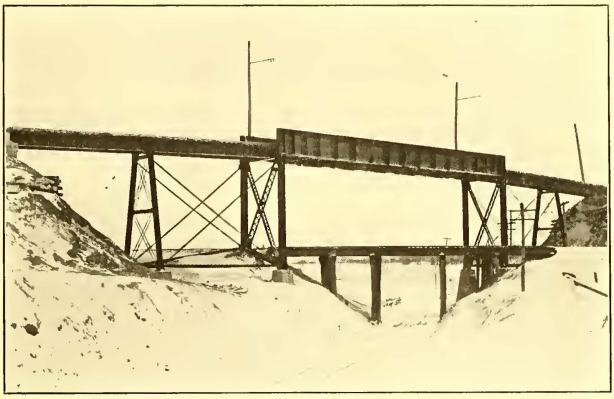
height of 31 and two of 36.5 ft. Both sides of all of them are battered 1 in. in 24 ins., but their ends are vertical and the upstream ends have heavy breakwaters.

One abutment of this structure is built as a T in plan, the stem of the T making an angle of 60 deg. with the cross. The cross of the T is the main part of the abutment and has a total height of 35.4 ft. The bank of the stream is good firm clay. It strikes the abutment 9.5 ft. above the bottom and rises on a 1-to-1 slope. The end of the T-wall is mortised into the rear face of the abutment. The bottom of the T-wall is 2 ft. below the ground surface at the abutment, and is stepped up as the surface rises. This wall is 40 ft. long and 6 ft. wide. The track of the electric line is carried on its top and on brackets cantilevered out 5 ft. from each side of the top. The details of this wall and the cantilevered brackets are shown in the accompanying cross-section. The manner in which this wall was built is estimated to have saved between $850 and $900 worth of concrete as compared with an abutment having two wing walls. The concrete was mixed in the proportion of one barrel of Portland cement to a yard of gravel.

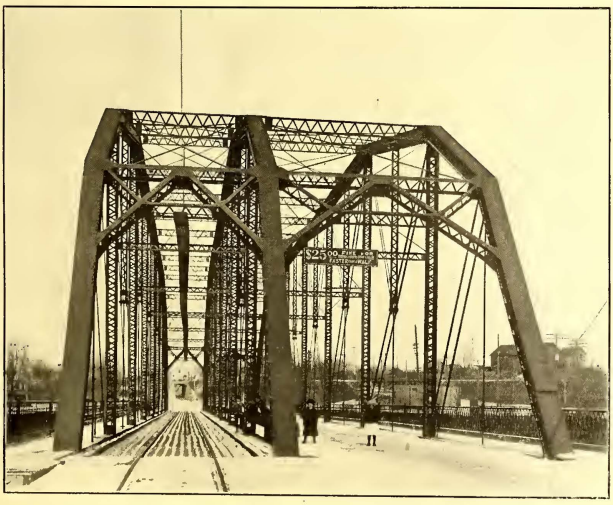
A number of heavy cuts and embankments also had to be made in constructing the electric line. The cuts all have a clear width of 18 ft. at the bottom, and the embankments are 14 ft. wide at the top. The track is built of 70-lb. rails laid on 2640 ties to the mile. Cedar ties are used, except on curves exceeding 3 deg., on which curves oak ties have been laid. The rails are laid on tie-plates when cedar ties are used on curves. The track is ballasted throughout with gravel which was obtained from pits along the right of way. Outside of towns the maximum curve is degs., and the maximum grade 2.5 per cent., except in a few extreme cases.



CROSS SECTION OF ABUTMENT ST. JOSEPH RIVER BRIDGE



A TRIPLE RAILWAY CROSSING



A RECONSTRUCTED HIGHWAY BRIDGE

The electric road has been built largely for passenger traffic, but as it passes through a very productive small fruit belt provision will be made to handle a large amount of freight. It is controlled by the Northern Indiana Railway Company, of South Bend. A. J. Hammond, of South Bend, designed the various structures built in connection with the road and acted in a consulting capacity to the railroad company regarding the other civil engineering work carried on during the construction.

June 1 is the date fixed for the opening of the Bucyrus extension of the Columbus, Delaware & Marion Railway. This extension is being built from Marion, Ohio, to Delaware, a distance of 18 miles. When the extension is completed the company proposes to put on a fast limited service between Columbus and Bucyrus, a distance of 66 miles, with stops only at Delaware and Marion. Two new parlor cars recently built at Youngstown will be used in this service. The cars were on exhibition at the Columbus convention. In anticipation of the high-speed service the company has been at work for several months grading its roadbed and putting it in first-class shape. This work will be continued through the winter.

RECORDS IN THE REPAIR SHOPS OF THE DETROIT UNITED RAILWAYS

It is universally acknowledged that permanent repair records of the work done in car repair shops should be preserved, but in many instances where effort has been made to keep such data the attempt had to be abandoned because of the clerical work necessary to file them.

A system of records which requires the expenditure of very little time, but which takes into consideration practically all the points of value, is in use in the offices of the Detroit shops of the Detroit United Railway. Through the courtesy of Sylvester Potter, master mechanic, this publication is enabled to present an account of its essential features.

Each car has assigned to it an envelope which measures 10 ins. x 4¾ ins. and is of heavy manilla paper. The envelopes are filed according to the car number, and on the front are the blank lines shown in Fig. 1. These lines are filled in with such data as will readily identify the car as belonging to a certain class or type. In the envelopes are kept separate cards for the data on the trucks and on the motors and any other miscellaneous matter regarding the car. The upper or printed part of the truck card is shown in Fig. 2 and that of the motor card in Fig. 3. Each is 4 ins. wide by 16 ins. long, and the lower or blank part folds over so that the card will fit in the envelope. The fact that the motors, trucks and controllers are at times changed makes it necessary to correct the data sheets at frequent intervals. This is done by sending out to foremen inventory blanks with the request that they be filled with the necessary information. The envelopes for "dead" car bodies or those not mounted on trucks are kept in a separate drawer.

In addition to affording a means of getting information on short notice concerning any car, the car record envelopes enable the annual car report to be gotten out without difficulty or delay. This report, in which the information relating to the different cars is classified according to their types, shows the date each car was put into service, the length of the car and the type of the trucks and motors under it. The car record system also includes a numerical list of the cars, showing the numbers vacant.

RECORD OF REPAIRS

The record of repairs consists mainly of blanks filled in by foremen or workmen. Armatures are changed and minor repairs are made in the division shops, but when extensive repairs are necessary and the car is sent to the main shops on Monroe Avenue, the inspector makes out a tag stating the trouble and ties the tag to the car. After repairs are made notation of what they consisted of as well as of the date they were completed is made on the back of the tag by the shop foreman. The foreman then sends the tag to the shop

FROM 372 6073

Detroit United Railway.

Inventory Blank. Car No.....

Location..... Date 19

Make.....

Single or Double End.....

Body Length..... Over Bumpers..... Width.....

Number Windows on a side.....

If open cars give number of benches.....

Seating Capacity.....

Rear Platform.....

Brakes.....

Headlight.....

Heater.....

Toilet Room.....

Kind of Service.....

TRUCKS: Make.....

How many.....

Wheel base.....

Spring Base.....

MOTORS: Make.....

How many.....

CONTROLLERS: Make.....

How many.....

Above details observed by.....

FIG. 4.—CAR INVENTORY BLANK

CAR No. 885

Make

Single or Double End

Body Length Over All Width

Number Windows on a side

If Open Cars, give number of Benches

Kind of Seats

Seating Capacity

Rear Platform

Brakes

Headlight

Heater

Toilet Room

Kind of Service

Began Service

Repainted

Varnished

FIG. 1.—FILE RECORD ON FRONT OF ENVELOPE

TRUCK

Make (series)

Rigid or Pivot

Wheels, Diam.

Wheel Base

Spring Base

Diam. Axles

Solid or Split Gear

When New

Service:—

DATE UNDER	CAR No.	DATE OUT

FIG. 2.—TOP OF TRUCK RECORD CARD

MOTOR No. 200

Make (series)

Axle, Diam.

Suspension

Inspected and Repaired

Service:— When New

DATE UNDER	CAR No.	DATE OUT

FIG. 3.—TOP OF MOTOR RECORD CARD

office, where it is placed in a file consisting of drawers with a compartment for each car. Other drawers contain similar compartments for armature and field repair cards, which are made out after the armature or field is repaired. In addition to the type and number of the part required the card contains a blank space for a short notation of the nature of the work done upon it and also for the check number of the man who

Form 69 **MONROE AVE. SHOP.**

Repairs made

Date Repaired By

Form 68

Inspectors Tag LINE

Car No. Truck No.

Trouble

Time Date

FIG. 5.—FRONT AND BACK OF INSPECTOR'S TAG

did the repair work. As the cards for each armature or field are all together, the number of the cards in the compartment is a rough indication of the frequency with which the part is being returned for repairs. A further examination of the cards serves to show how the work of each repair man is holding out.

Record of work done in the paint shop is also made on separate cards. These simply indicate whether or not the

Form 140 **ARMATURE.**

Type No.

Repaired

Rewound

By No. FOREMAN

FIG. 6.—REPORT ON ARMATURE REPAIRING

Form 158 **MONROE AVE. SHOPS**

CAR No. 190

PAINTED VARNISHED

WASHED REPAIRED

Signed Foreman.

Indicate by a cross (X) what was done to car and turn slip in at office when car leaves shop as completed.

Remarks

FIG. 7.—REPORT ON CAR PAINTED, VARNISHED, WASHED OR REPAIRED

car was painted or washed or varnished, and are made out by the paint shop foreman, who sends them to the office, where they are filed in the car envelopes.

The record system, it may be observed, does not go deeply into details. However, sufficient data are kept to enable details, should they be required for any period, to be obtained by following up requisitions, shop orders, and records of each department of the shop.

ELECTRICAL TEST FOR MOTOR BEARINGS

A subscriber writes that, having had considerable trouble with motor bearings after they had been put in service on a car, the following test was adopted. The motors were 40-hp machines mounted on double trucks. With the truck jacked up, one end at a time, to raise the wheels from the rail, and the motor jacked up to avoid cutting the axle bearings, an ammeter was used to measure the current taken by motors that had been in service some time, the motor being connected directly across the line. The current required to overcome the "free" losses of the motor was 16 to 17 amps. In installing a set of new bearings, they were not passed if the free current exceeded 18 amps. In some cases the current would be 20 to 25 amps. for some time after starting, but would gradually decrease to 16 to 18 amps. after a run of 10 to 20 minutes had distributed the gear grease and limbered all parts. During these tests all caps were screwed home to avoid the depot men screwing them tighter and thereby causing hot boxes. For a steady current exceeding 18 amps. the bearings were examined and those needing it were scraped.

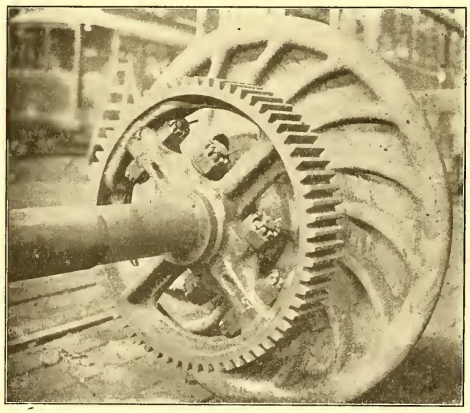
POWER INCREASE AND CHANGES IN ROLLING STOCK BY THE LACKAWANNA & WYOMING VALLEY RAILROAD COMPANY

The traffic on Pennsylvania's noted high-speed electric railway, the Lackawanna & Wyoming Valley Railroad, popularly known as the Laurel Line, has increased so rapidly that the company has found it necessary to install a 2500-kw turbo-alternator in its power station. To take advantage of its economy and add to the reliability of operation, the company will install a 1500-kw rotary to work with this turbo unit, this being about the proportion of direct current to the total load demanded of the power station.

To secure greater use from its rolling stock, the single-end cars which are now operated are being converted to double-end cars with multiple-unit control. The company is taking this opportunity to fireproof the cars at the same time. All of the material required for both the power and rolling stock changes has been purchased, so active work is now in progress.

SPLIT GEAR AND SPECIAL SIZE BOLTS USED BY THE METROPOLITAN STREET RAILWAY COMPANY, KANSAS CITY

Troubles due to the bolts of split gears breaking and getting loose have been practically eliminated on the Metropolitan Street Railway, Kansas City, by the adoption of a special gear with four 1½-in. bolts. The gear was designed by George J. Smith, master mechanic of the system, after continual trouble with gears having smaller bolts. A shop man in attempting to get the smaller bolts tight often slips a pipe over the handle of the gear wrench, and frequently strains the



SPLIT GEAR USED IN KANSAS CITY

bolts to such an extent that the least additional strain encountered in service causes them to break. Often, too, for fear of breaking them the bolts are not drawn up tight. The 1½-in. bolts of the new gears, however, may be pulled as tight as possible by one man without danger of breakage.

A total of 440 gears of the new design are in use on the Kansas City system, and none of these has loosened. The gears are bored three one-thousandths of an inch smaller than the axle, and the force applied to the nut is depended upon to pull the halves together.

CONTRACTS FOR THE USE OF TERMINALS—II

PREAMBLE OF CONTRACT

In the preamble to a contract between an interurban and a city company providing for terminal facilities it is customary to state that the interurban company is operating or has been incorporated for the purpose of operating an electric line from a certain junction point with the city company's tracks, mentioned in the text, to other outside localities which are also designated in the contract, and wishes to connect this line with a certain division of the city system, which is then also described in the agreement. In cases where municipal authority is required, the contract usually states that such authority has been secured, or if not, that the contract will begin when such authority has been obtained, and that the two companies will co-operate to secure such consent. If any expense is attached to securing the consent from the municipal authorities to running these additional cars, or if any additional taxes accrue from such operation, it would be well to specify in the contract to whom the expense or taxes are chargeable. The grant under the contract to the interurban company is understood to be that of tenant only, and limited to the passage of cars only over this designated route, but is sometimes expressly so stated, as in the subjoined clause from a contract of this kind:

> The grant hereby made by City Company to Interurban Company is subject to any and all franchise requirements contained in the various consents made by the city of..... or its local authorities of the right to construct, maintain and operate a street railroad in First Avenue, and also subject to the provisions of any and all mortgages given by City Company or its predecessors in interest now existing upon said railroad and franchise in said First Avenue, but nothing herein contained shall be deemed as obligating Interurban Company to pay any part of principal or interest of any such mortgages, all of which are to be paid by City Company. The City Company does not hereby grant Interurban Company any of the rights, privileges or franchises belonging to City Company or any title to its railroad, roadbed and tracks, except the right of passage.

COST OF CONNECTION

This clause should specify which company is to "furnish, install, maintain and keep in repair," as one contract expresses it, the connection between the two tracks, which will pay the taxes and with which the title for connection will rest. If the city company wishes the installation to be made under the direction of its chief engineer, it should so specify. Usually the cost of connection is made by the interurban company except where a short piece of trackage is required within the city. Here it is a common practice to divide the cost, leaving the title with the city company. In one case the connecting track has been built by the city company, which has agreed to supply the renewals, while the interurban company pays all assessments and taxes, defrays the expense of all ordinary repairs, including ties, and pays the city company 10 per cent on its outlay. In this case the interurban company is given exclusive use of the track except that the city company has reserved the right to operate local cars over it by paying 1 cent per car-mile. Possible desirability in the future on the part of the city company of using short sections of the track of the interurban company is provided for in another contract by the following clause:

> If at any time the City Company shall deem it wise or expedient to operate its cars to any point on second party's line, not more than 1 mile beyond the city limits of the city of ....., as the same are now or hereafter may be established, said party shall have the right to do so and to carry on its street railway business thereon, and to use for that purpose the tracks, apparatus, appliances, poles, wires and power of the second party to the same extent that Interurban Company is hereinbefore given the right to use the tracks, etc., of the City Company, and said City Company will pay to said Interurban Company reasonable compensation for the same. If the parties fail to agree as to such reasonable compensation for such use of the tracks, property and power of Interurban Company aforesaid, then the same shall be fixed and ascertained by an appraisement in the manner provided in paragraph "12" hereof. Whenever said City Company shall so run its cars over any portion of Interurban Company's tracks said Interurban Company shall have the same control and authority over them and the same rights respecting them and the employees operating them, while on its tracks, that the City Company has over the Interurban Company's cars and operatives when on its tracks, under the provisions hereinbefore set forth and all the provisions herein relating to the control, conduct and operation of Interurban Company's cars while running on City Company's tracks, shall, in that event, apply to the control, conduct and operation of the City Company's cars.

In another case where this plan was not considered sufficient, the city company reserved the right to purchase during the continuance of the agreement all tracks of the interurban company within the city limits "as they are now or hereafter may be extended, paying the then value thereof, estimated as free of liens and exclusive of any public franchise or easement value." If the parties fail to agree upon the value it is to be fixed by an action in the Circuit Court, and "upon payment to the clerk of said court of the amount fixed, the property will become the absolute property of the said city company, and thereafter during the continuance of this agreement such part of the line of railroad of the said interurban company shall be considered, as between said companies, to be a part of the line of street railroad of said city company herein described, of which said interurban company shall have the use as herein provided," etc.

In one contract a clause is found by which both parties agree to have their "tracks, poles, wires and appliances constructed, erected and completed" by a certain date so that the interurban cars can run upon the city tracks on that date.

SCHEDULES AND HEADWAY

This is of course an important question. If there is danger of congestion the city company is naturally interested in limiting the number of interurban cars. In cases where no congestion is feared, however, and the division of fare is favorable to the city company, it benefits from a short headway of interurban cars. This condition exists in the majority of cases. Most contracts provide, therefore, for a minimum number of interurban cars, an approval of the schedule by the city company's management, and provision for the non-interference of the interurban cars with the local city cars. One contract protects the city company against local competition by providing that all the interurban cars shall as part of their trips make trips out of the corporate limits to a certain town, "or a distance of at least 10 miles upon the railroad of said interurban company." Most contracts in which the headway is specified also contain a clause protecting the interurban company by providing for an increase in the number of interurban cars which can be run under the contract, if the exigencies of the service require. In one case where a maximum under ordinary conditions is mentioned in the contract, it is provided that this number may be increased by the interurban company when the earnings per car-mile are higher than those of the local cars of the city company operating over the same route, but if the receipts again fall off the extra cars must be removed. In some contracts the interurban company must secure special permission from the city company to run extra or "special" cars.

CHARACTER OF EQUIPMENT TO BE FURNISHED BY THE CITY COMPANY

A clause on this subject is usually inserted, and generally specifies that the city company will not be liable for failures or deficiencies in supplying electric power to operate the cars of the interurban company or for interruptions in the use of the line caused by strikes, breakages or mishaps to machinery or other appliances or by other unavoidable or unforeseen causes occurring without negligence of the city company or from interruptions caused by compliance with municipal ordinances. At times the character of the track and overhead line is specified, as in the following clause:

The tracks of City Company shall at all times be maintained by it in a suitable and proper condition for the operation of its own cars, and if, for any reason, the form or manner of construction of said track shall not be suitable for the operation of the cars of Interurban Company, and Interurban Company shall request changes therein, then and in that case the additional expense necessary to make the said track suitable for the operation of Interurban Company's cars shall be borne by said Interurban Company, provided, however, that no change shall be made other than will conform to the requirements of City Company and the authorities of the city of ..... And provided also that when any of the track used by Interurban Company shall be rebuilt by City Company of its own motion, such new track shall be of such size, pattern and construction as shall best accommodate the traffic of both companies.

To provide against interruptions of current on part of the line a clause is occasionally inserted that the city company will install a section insulator at a certain point so that current can be taken from the interurban feeder if necessary. In a few contracts special permission is given the interurban company to operate its snow plows over the portion of the line used by it to facilitate the running of its cars.

CHARACTER OF INTERURBAN CARS

This clause is intended to secure safe and convenient operation of the interurban cars over the city tracks. In some cases dimensions are specified, particularly of wheels, and in practically all contracts the interurban company is obliged to intall proper braking and other safety appliances on its cars. A typical clause of this kind reads as follows:

All cars furnished by the Interurban Company to the City Company under this agreement shall be of an approved style of construction, at least equal to the best type of interurban cars belonging to the City Company, of a kind suitable to run upon the tracks of the City Company, and shall be subject at all times to the approval of the City Company as to construction, maintenance, equipment and condition. All cars delivered to the City Company under this agreement shall be operated and propelled by electrical power only, unless by consent of all the parties hereto. Whenever in the judgment of the City Company it shall be necessary to install upon interurban cars operated over the tracks of the City Company appliances to secure the safe operation of said cars and such appliances are or are to be installed upon the cars of the City Company, the Interurban Company will forthwith install such appliances upon request of City Company.

REPAIR AND MAINTENANCE OF CARS

Clauses covering this point are frequently omitted from interurban contracts, although they are almost as important as the payment for the terminal privileges itself. All equipment is liable to break down, and it is to the interest of the city company even more than to that of the interurban company to have the car quickly taken to the nearest car house and thus avoid a blockade. One contract which very rigorously protects the interests of the city company, and clauses from which have been quoted above, practically ignores this contingency by saying:

In case agreements shall be made between said City Company and said Interurban Company for storing or repairing any of the cars of said Interurban Company in the barns and shops of said City Company, said Interurban Company shall have the right to pass for that purpose only to and from the barn or shop selected by said City Company by such other line or lines of railway of said City Company as shall be designated by said company, and in so doing shall be subject to all provisions of this contract that are applicable thereto, but nothing therein contained shall be construed as an undertaking or agreement by said City Company to store or repair or permit to be stored or repaired any of the cars of the Interurban Company in any of the barns or shops of the City Company, and any such storing or repairing is to be by special agreement.

Another contract provides for this condition as follows:

In the event it be necessary for any of the interurban cars to be cared for in the car houses of the City Company, the Interurban Company will defray the expense incident thereto, such expense to cover such charges as repairs, cleaning and inspection at cost.

Another contract reads:

In case the Interurban Company shall desire the City Company to do or make any repairs to its cars, motors or other equipment, the City Company agrees to do the same at exact cost of labor and material, with 10 per cent added.

Where the cars are taken over by the city company and manned by its crews, the clause relating to repairs usually reads that the city company will be responsible for the cars received by it and will return them at the point of delivery in as good condition as when received, wear and tear only excepted.

Where cars are exchanged between two companies the duties of each in regard to repairs should be defined either by stating that "the cost of renewals, repairs and replacements of car equipment shall be borne by the party on whose tracks, or in whose possession, the breakage, damage or destruction occurs," as one contract puts it, or that such expense shall be charged up to the company owning the car. Whichever plan is followed, provision should be made for preventing a blockade by a disabled car.

TERMINAL STATIONS

Several union passenger and more union freight stations have been erected by city companies for the use of interurban lines, and the rights secured by the tenant should be clearly defined. One contract uses the following expression:

The said passenger and freight terminals shall, respectively, be of such character and sufficient capacity and so arranged to comfortably, conveniently and expeditiously handle the traffic of all interurban and suburban companies entering the same and the charge to be paid therefor by the Interurban Company as hereinafter provided shall include the entire expense , maintenance, heat, light and the necessary employees for the proper handling of the passenger business of said Interurban Company, including the handling and exchange of passenger baggage, but not including and only excepting the labor necessary for the sale of tickets in the passenger station, should the Interurban Company decide to establish such a ticket agency jointly with the other companies having the use of such station and the handling, transfer, exchange and delivery of freight and express matter. The facilities of the passenger station to include a ticket office and necessary and commodious waiting rooms, retiring rooms, train sheds, tracks and platforms, etc. The City Company further undertakes and agrees to store each night in said terminal or at other convenient or suitable place for said Interurban Company, not to exceed two passenger cars and one express car, and upon special occasions, such as the Fourth of July or State Fair week, not to exceed four passenger cars, without other compensation than that hereinbefore provided, etc., such use, however, to be in common with like use of such passenger and freight stations and terminals by other interurban and suburban street railroad companies who are permitted to use the tracks of said City Company. * * * * * The use of both said passenger and freight stations and terminals shall be at all times afforded to said Interurban Company upon terms of equality, as to the extent and nature thereof and as to the regulations under which the same shall be had, among all interurban and suburban street railroad companies having such use and without discrimination in favor of or against either or any of said companies.

CREWS

It is customary to provide that the interurban crews shall be "subject to the operating rules and regulations of the city company" when on the tracks of the latter, or that they shall be subject to the orders and officials of the city company "in the same manner and to the same extent as if such cars were owned by the city company." There is the usual provision that any interurban employee who is objectionable to the city company shall not be employed to operate interurban cars over its line. Where cars are exchanged a clause may be inserted like the following:

All cars engaged in through service as in this instrument provided, together with their equipment and the motormen and conductors operating the same, shall, for the time being, be under the control of the party on whose tracks the same are operating, and no discrimination in the running and operation of said cars shall be made by either company against the cars so coming to it from the other company. Each party shall have the right and privilege of requiring the discharge of any employee of the other party engaged in or about its tracks, if for any reason such party or its officers shall be of the opinion that any such employee has violated any of its orders, rules or regulations; and each party hereby agrees thereupon to promptly discharge any such employee upon the request of the other party.

DAMAGES TO THE PUBLIC

A contract of the kind under consideration should clearly specify which company is to be responsible for damages for negligence caused by the operation of the interurban cars while on the city streets. This condition is somewhat complicated by the fact that the crews are always engaged and usually paid by the interurban company, but are operating under the orders and rules of the city company. A common practice under these circumstances is to provide that the

interurban company shall be responsible for such injuries, with sometimes the addition of the following clause:

...and shall indemnify and save harmless said City Company from all loss damage or expense, including costs and attorney's fees, by reason of the enforcement or attempted enforcement against it of any such claim,.... it being understood and agreed that the conductors, motormen and other employees of said second party are not to be held or construed in any event or in any respect to be the agents, servants or employees, at any time or in any manner, of said first party.

The damage clause in a case where there is an interchange of cars reads as follows:

Each company shall hold the other harmless for any and all claim or claims for damages made by any person or corporation for injuries or damages of any kind caused by the employees. And in case suit is brought upon any claim against either company caused by any act or negligence of the cars or employees of the other, such company shall defend said suit and pay all damages and costs which may be made against such other company in such suit or suits.

A contract which provides for the manning of interurban cars for city crews provides for this point in the following way:

That all claims for damages on account of injuries to persons and property happening on the tracks belonging to the City Company are to be adjusted and paid by the City Company, except such as may be caused by reason of defects in cars, apparatus or equipment furnished by the Interurban Company, for which damages said Interurban Company shall be responsible and shall pay.

DAMAGES AS BETWEEN EACH OTHER

Upon this point it is customary to provide that the city company will be responsible for the safe condition of its wires, tracks and stations. Other clauses sometimes provide that the city company will not be responsible for interruptions due to strikes or acts of the municipal authorities; others that it shall not be financially responsible for any delay to the cars, but shall make every effort to give a satisfactory service.

Responsibility for collisions between cars of the two companies is placed, in one contract, upon the owner of the rear car unless the front car was backed and it is clearly apparent that the collision would not have occurred if the front car had not been backed.

PASSES

Very few contracts provide for employees' or other passes. One which does so has the following clause:

The City Company passes are to be honored on the cars of the Interurban Company within the city limits, including conductors and motormen of the City Company while in uniform or other employees having proper badges as under the rules and regulations of the City Company providing for the free passage of its employees. The Interurban Company has the privilege of issuing a limited number of passes; number not to exceed fifty, good on its interurban cars when on the tracks of the City Company. A list of such passes issued by the Interurban Company is to be furnished to the City Company.

PAYMENT FOR THE USE OF CAR

As already stated, most contracts between interurban and city companies provide for payment for terminal privileges upon the basis of the division of the local fare according to an agreed percentage. In some cases, however, the city company takes the car and pays the interurban company a certain amount, varying from one cent to three cents per car-mile, for the use of the car. This amount might be considered as representing either in part or in whole the expense to the interurban company of the maintenance of the car and its equipment. This rate is fixed throughout the life of the contract in some contracts, and is subject to revision by a board of arbitrators at fixed periods in others.

A somewhat different arrangement has been adopted in cases where through tickets are sold by both the city and interurban companies. Here one contract provides for a division upon an agreed basis of 95 per cent of the fare received, and the remaining 5 per cent is left as a "floating" credit; that is to say, it is kept by the company selling the ticket. This encourages each company to advertise and otherwise push the sale of joint tickets.

PAYMENT FOR POWER AND OTHER SERVICES

Contracts are often drawn so that the services supplied by the city company, other than the use of the track and overhead construction, form the basis of a separate payment. These services are usually power, greasing, and the removal of ice and snow. Power is paid for in certain contracts upon an agreed rate per trip or mile, and in others upon the kilowatt-hour basis. Examples of the former method are shown in the following clauses:

Power is to be paid for by the Interurban Company for all cars operated by it under this agreement, at the rate of 35 cents per trip, in either direction. This figure is based on the class of equipment now in use and any existing equipments of a capacity equivalent to four No. 56 Westinghouse motors, car body not to exceed 33 ft. 3 ins. in length, 43 ft. over all, 9 ft. in width. Medium speed gearing.

The electric current or motive power for the operation of said cars is to be furnished by the City Company, for which the Interurban Company will pay the sum of 3 cents per car-mile on double-truck cars and 2 cents per mile on single-truck cars for each car run and operated. No car, however, to have more than two No. 3, 30-hp Westinghouse motors or their equivalent in power.

An example of a clause on the kilowatt-hour basis follows:

The party of the first part shall furnish electric current of a potential of not less than 450 volts nor more than 600 volts, the same to be delivered on the trolley wire along the aforementioned streets from 6 a. m. to 12 p. m., unless prevented from so doing by some unavoidable accident. * * * The party of the second part shall pay to the party of the first part the sum of 2 cents per kilowatt-hour for all electric current furnished as indicated by the recording indicating wattmeter. The recording indicating wattmeter is to be read at the end of each month by an agent of the party of the first part and of the party of the second part, and a bill rendered by the party of the first part to the party of the second part for the preceding month, at the above-named rates.

Where the companies wish to provide for a decrease of charge, based upon a reduced cost of power, the following clause from another contract, where the power for a certain section of track used by the city company is furnished by the interurban company, might answer:

The power so furnished shall be measured by a Thomson recording wattmeter, or such other form of meter as may be mutually agreed upon, and said meter shall be located and said power shall be measured at the abutting point between the trolley wires of said companies near the city's south corporation line. Said meter shall be provided and maintained by and at the expense of the Interurban Company, and shall be calibrated whenever requested by either party hereto, and if found to run slow or fast more than 3 per cent, shall be readjusted or replaced. The meter shall be enclosed and kept under lock and key. The readings of said meter shall be reported in writing daily by the Interurban Company to the City Company. For the power used in running the cars of both companies over the trucks of the City Company as measured by said wattmeter, the City Company agrees to pay the Interurban Company the sum of 2 cents per kilowatt-hour during the first six months of this contract and thereafter at a cost price to be determined at the end of each six months this contract remains in force, which said cost price shall be determined as follows: At the end of each six months this contract shall remain in force, the actual cost of operating and maintaining said power station of the Interurban Company shall be accurately ascertained. Said operating expenses shall include all indebtedness incurred during the preceding six months by the Interurban Company for said power house, including fuel, supplies of all kinds, repairs, maintenance and replacements which do not increase the capacity of said plant, wages and labor, to which shall be added the sum of $18,000, for interest and depreciation on the investment of the Interurban Company in said power house and equipment, the aggregate amount of said sum shall be the total cost of power for the preceding six months. The cost per kilowatt-hour shall be determined by dividing the aggregate of said cost so ascertained by total output of current from said power station for the preceding six months measured in kilowatt-hours, and the unit so ascertained shall be considered as the cost per kilowatt-hour for power at the power station; to said unit so ascertained 10 per cent shall be added for loss of power in transmission from the power station to the wattmeter hereinbefore mentioned. And said unit of cost with said 10 per cent added shall be the cost of power for the next period of six months under the terms of this contract, to be paid by the City Company to the Interurban Company; provided, however, that the Interurban Company has agreed and does now agree that said unit of cost so to be paid by the City Company shall not exceed the sum of 2 cents per kilowatt-hour.

To provide against interruptions of the service the following clause was inserted:

And the Interurban Company agrees that the voltage of such current furnished on any part of said route shall not be less, except momentarily, than 450 volts. The Interurban Company shall not be liable for any failure at any time or from any cause to furnish power, but the City Company shall have the same right at all times to take power from the wires along said route that the Interurban Company may have. And such power shall be

furnished during the hours which the Interurban Company may have its power station in operation, but nothing herein contained shall require the Interurban Company to operate its power station for longer hours than may be required for the operation of the cars of the Interurban Company.

Another power clause reads:

The power furnished to be the same as that provided for the cars of the first party and to be sufficient to propel second party's cars over the said route. It is understood and agreed that said first party is to furnish the electric power for and permit to be operated over its tracks as aforesaid, all cars that it shall have the legal authority to receive, but that nothing herein contained shall obligate said first party to receive any cars from second party in such manner as unnecessarily to interfere with its own business, or which shall violate any lawful statute or ordinance governing the operation of the street railways of first party, it being understood that first party does not guarantee, except as to itself, the right to second party to carry mail, baggage, express, freight or passengers, over the tracks of first party, etc.

There remain the two items of greasing and snow removal. Clauses covering these points between two companies which run over each other's tracks are as follows:

Calculation of cost on the greasing is to be based upon actual time and material used by men employed. A daily statement of such cost is to be rendered by each company to the other, and bill rendered for same monthly, and settlements made on account of same on or before the 15th of the following month.

Calculation of and distribution of cost on snow and ice account is to be based upon the cost of snow-fighting equipment to be either sweeper or plow, $2.50 per sweeper or plow-hour when sweeper or plow is furnished by the City Company. When snow-fighting equipment is furnished by the Interurban Company, a charge of 50 cents per equipment-hour (either sweeper or plow) is to be made by the City Railway to the Interurban Railway for power. A daily statement and monthly settlement are to be made as provided for above.

SETTLEMENTS

This is another clause in which a great variety of practice exists. Four points may be considered in connection with the settlement, viz: (1) The date at which the payment is due, (2) the rate of interest on the payment in case of default, (3) the date at which the terminal privilege ceases in case of continuous default, and (4) the procedure to be followed by the creditor company for collecting payment in case it is not tendered.

As regards point 1, the date, the usual practice is to designate the 15th to the 20th of each month for the charges which have accrued during the preceding month, these settlements to be based upon daily or weekly statements rendered during the previous month. In a quite large number of cases, however, a date as early as the 5th has been set, and in some cases under penalty of immediate forfeiture of privileges. This date seems unreasonably early. It imposes unnecessary hardship upon the debtor company and its accounting force to prepare and approve the vouchers, and secures no substantial resulting benefit to the creditor company.

As regards point 2, interest, when allowed, is usually reckoned at 6 per cent. It is more common, however, to have the terminal rights cease if payment is not made upon the day designated for the settlement. Where default with interest is allowed, cancellation of privileges usually follows thirty or sixty days after a written notice of default from the creditor company.

Various methods of expressing the cancellation clause follow:

The use hereby permitted of said lines of railway and passenger and freight stations and terminals is upon condition that each of said accountings, settlements and payments shall be made by said Interurban Company as and when herein provided, and that upon any failure or omission to do so, and as long as such failure or omission shall continue in whole or in part, the right to use such lines and stations and terminals shall cease and be at an end, and said City Company may exclude the cars of said Interurban Company therefrom.

The City Company, its successors and assigns, may, at its option, prevent further use of its tracks by the Interurban Company until payment shall have been made.

....Then the said City Company shall have the right to declare this contract forfeited and cancelled, such forfeiture and cancellation to take effect sixty days after notice in writing, but any such forfeiture and cancellation shall not cancel the right of City Company to recover by proper action the amount due and to become due, whether such notice of cancellation is given or not.

....And in such case, the party to whom such payment is due shall have the right, at its option, to refuse to receive or permit the cars of the other party upon its tracks until the sum or sums then due or payable is or are paid, but nothing herein shall be construed as preventing either party from proceeding at law or in equity to enforce any rights which said parties have under this instrument.

....Then at the option of said first party all rights of the said second party under this contract may be forfeited, but the failure on the part of the said party of the first part to declare a forfeiture of the rights of said second party for any such breach shall not prevent it, in case of similar breach occurring subsequently, or if there is a continuation of such breach, from then declaring such a forfeiture, and neither party shall be liable in damages under this contract, if unable to secure necessary franchises.

....And in case default in such payments shall continue for thirty days, then and in that case, and as often as such defaults shall occur, first party, at its option, shall have the right to exclude second party from the use of the tracks and power of the first party, until all the sums then due or payable have been paid first party in full, in accordance with the terms of this agreement. And second party agrees that if it shall, at any time, fail to pay any sum of money which it shall become able to pay under the terms of this agreement, and shall remain in default for a period of thirty days (and in this respect time is of the essence of this contract), it shall at once, upon request in writing by the first party, cease to use the tracks of first party, and in every respect cease the operation of its cars upon the tracks of first party until the amount then due and payable has been fully paid to first party. Nothing herein contained shall be held or construed to prevent any party from proceeding, either at law or in equity, to enforce any rights which said parties have, or may have under this agreement, but this right to suspend the use of said tracks is in every respect to be held to be continuous and cumulative and in addition to other legal rights and remedies for enforcement and performance of this agreement.

AUDITING

Most contracts provide for auditing. One of the simplest clauses is as follows:

The City Company shall have at all times free access to the books, forms, papers, tickets and such other records of the Interurban Company to permit of the correct and complete auditing of the sale and collection of all tickets and other fares pertaining to this traffic agreement.

A more elaborate form reads:

Said first party shall provide its cars with suitable and proper fare registers, or other devices or apparatus for checking fares, upon which the conductors and employees of second party shall correctly register the fares received, showing the number of fares received and the kind, class or classes of fares, as provided in this contract, and shall also cause to be kept way-bills and vouchers, giving correctly the amount received by said second party for all mail, baggage, express and freight which is carried into or out of the city of ——, or between any points within said city, over the tracks of said first party, and said second party shall keep correct and complete books of account of all its business over first party's lines. Said first party shall have the right at all times to inspect the said fare registers, devices, or apparatus for registering fares, way-bills, vouchers, and accounts, and the said books of the second party showing all receipts by it of fares, payments for mail, baggage, express and freight, and all passengers carried over first party's lines, or any part thereof, and each party hereto shall be entitled to receive of the other any and all information, of every name and nature, necessary to properly carry out the terms of this agreement. Said first party shall also have the right, at all times, but at its own cost and expense, to place inspectors upon the cars of second party, who shall be carried free within the city limits.

One contract provides that the city company may provide inspectors who "shall be entitled to free passage on all of the cars of the other party, with the right to count or otherwise ascertain the number of passengers carried and fares collected on the line of the first party employing such inspectors, and of obtaining such other information as shall be desirable from time to time in respect to the performance of the provisions and obligations of this contract."

COMPETITION

Most contracts provide that each company will not build additional lines to compete with the other company during the life of the contract, and also will not make similar traffic contracts with any company competing with the other. In addition, the interurban company usually agrees that it will not seek local business on its cars while they are on the city company's tracks, and that no cars other than those operated by itself shall be run over the city tracks under the agreement. These two latter points are sometimes covered by providing that all of the interurban cars shall come from a point at least 10 or 15 miles (or whatever distance may be agreed upon) on the interurban tracks.

Typical agreements of the kind described to protect each other from competition follow:

The Interurban Company during the continuance of this contract will not make any effort to obtain a street surface railroad franchise within said City of ——, except with the consent of City Company, and will not within such term, without like consent, build any road within said city, except as provided for herein, or operate any road within the City of —— except over the tracks hereinabove described, without the consent of City Company, and Interurban Company agrees that the tracks of City Company to be used by Interurban Company, as aforesaid, shall not be used for the passage of the cars of any other company except with the consent of City Company.

The second party agrees for itself, its successors, lessees and assigns, that it will not ask for any or secure any franchise or franchises or aid or assist any person or corporation whatever in securing any franchise or franchises within the city limits of the City of —— during the term of this contract without written consent of the first party, and if said second party, its successors, lessees, or assigns should make application for any such franchise within the limits of the City of —— without written consent of the first party, then this contract can be terminated at the election of the first party; and the party of the first part agrees not to extend its lines outside the City of —— into any of the territory served by party of the second part, without the written consent of the latter, and agrees not to make without like consent any traffic or other agreement admitting into the City of —— over its lines any competing or parallel road.

In consideration of the premises, Interurban Company agrees not to enter or attempt to enter the City of —— with its proposed railroad, except by virtue of this contract, and City Company agrees not to construct or attempt to construct any extension of its railroad in competition with proposed railroad of Interurban Company, it being intended that this provision will not permit the construction of a railroad or the extension of a railroad by City Company, which shall at any point be within five miles of Interurban Company's proposed railroad.

FREIGHT AND EXPRESS CARS

The future operation of freight and express cars is usually provided for in the contract, even if there is no immediate intention of conducting such a business. A traffic contract between a city and an interurban road is drawn to last a long term of years, and such a clause is extremely advisable.

Where it is the purpose of the interurban company to operate freight and express cars from the start or in the immediate future, the terms of payment for trackage rights should be stated in the contract. Those of existing contracts providing for this feature vary almost as widely as in the case of passenger cars. They are usually on the trip basis, say 75 cents or more a trip, depending upon the length of the city tracks traversed, but in some cases are on a car-mile basis with an additional terminal charge for freight-house facilities, or the receipts may be divided upon the same basis as the passenger receipts

A clause covering future operation at an indeterminate rate reads:

The provisions of this agreement hereinbefore contained are intended to apply solely to passenger cars and passenger service, but it is declared to be the intention of the parties to operate, so far as they lawfully may, cars for the carrying of goods and property by mutual agreement over the lines herein before specified, and it is declared to be the intention of the parties that any revenues received from other sources than passenger traffic in the earnings of which said parties participate shall be apportioned between the parties hereto in such proportion as may be mutually agreed.

LENGTH OF AGREEMENT

In this important feature of the contract another wide variation is also found. One contract calls for a life of five years with privilege of termination by either party on giving six months' notice in writing. Another contract can be terminated after a year's notice in writing by either party, and another by a year's notice from the interurban company or six months from the city company. In most cases, however, the life is set for the year in which the franchises expire. One contract sets a terminating date five years after the expiration of the franchise, with the provision that the contract will lapse if these franchises are not renewed. The advisability of this plan is obvious. At the time of the expiration of the franchises the managers of the company will have sufficient on hand to demand their attention without making their traffic contracts co-terminous with their franchises. If the franchises are renewed there will then be ample time to take up the operating agreements. Another suggestion is to make the date of termination different from that of the maturity of the bonds. The reason for this is the same as that for making the expiration of the contract differ in time from the expiration of the franchise. Many contracts also provide for review of the terms at stated periods.

ARBITRATION

Practically all contracts include a clause providing for the arbitration of all questions in dispute under the agreement. Sometimes this clause also includes for arbitration of the terms under which the contract may be renewed. A typical clause, in which the latter point is also embodied, follows:

At the end of any ten-year period dating from the beginning of operation hereunder, either party may notify the other that it desires a readjustment of the various money compensations between the parties hereto, and if the parties shall fail to agree upon such readjustment within thirty days, such question shall be submitted to a board of three arbitrators, one of whom shall be chosen by City Company and the other by Interurban Company, and the third selected by two thus chosen, and a decision of a majority of the board thus chosen shall be final and binding upon the parties hereto until the next period of adjustment. Upon neglect or failure of either party to select an arbitrator as above provided within ten days after such written notice of the name of the arbitrator chosen by the other party, the party so selecting its arbitrator and serving such notice shall fix such money compensations which shall control until the next period of readjustment hereunder, and in the event the two arbitrators first chosen as above provided shall fail to agree upon the third arbitrator within fifteen days after their selection, such third arbitrator shall on application of either party to this agreement, on five days' written notice of application therefor, be selected by a justice of the Supreme Court of the State of —— residing in the —— Judicial District.

Occasionally a clause will be inserted to the effect that "any and all requests for arbitration are to be sent in writing by registered mail to the president or general manager for the time being of the company addressed, and should state fully the question or questions to be arbitrated."

Occasionally also provisions for the continuance of the status quo and for the expense of the arbitrators are covered by a clause like the following:

But it is expressly agreed that no controversy which shall arise shall interfere with or suspend the operation of the railways of either of the parties hereto over the lines of the other; and the question or questions submitted to the arbitrators, and all business and settlements and payments, which are to be transacted or made under the terms of this instrument, shall continue pending the arbitration, and shall be transacted and made in the manner and form existing prior to the arising of such question or questions, as if no controversy had arisen. All expenses connected with any such arbitration, including a reasonable compensation to the arbitrators, shall be subject to the result of such arbitration, and shall be borne and shared by the parties hereto in such manner, or in such proportion, as the arbitrators shall award.

There is, in some States, an advantage in introducing in the contract the names of the arbitrators for each side. It has been held in Pennsylvania, for instance, that where the parties to a contract have agreed to a prospective submission of disputes to a particular referee named, the courts will take no jurisdiction of the matters in dispute; but it is otherwise where there is a general agreement to refer to arbitrators to be chosen at some future time. Where there is a provision for a submission to arbitrators to be mutually chosen by the parties, an action will nevertheless be sustained unless the defendant proves that he offered to choose arbitrators. But where there is an agreement to submit to an arbitrator named, no action will be sustained without proof that the plaintiff offered arbitration before bringing suit. Suit may be brought if the arbitrator dies or is absent, and the provisions for arbitration may be waived by acts of the parties.

An arbitration clause drawn to cover this point reads as follows:

If difficulties arise between the parties hereto under this agreement, and which require an impartial decision, a Board of Arbitration is hereby provided for, as follows: Each party hereto shall be represented in said Board by two members, consisting of the following-named persons, to wit: John

Doe and Richard Roe; or as alternates, James Smith and Harry Jones, both of the City of ——, for the first party, and Peter Robinson and James Wilson, or as alternates, Robert Brown and William Black, of the same city, for the second party, and these four in event of a deadlock shall choose a fifth member. The decision reached by said Board of Arbitration shall be final and binding upon both parties hereto. Both parties to this agreement shall have the right to substitute arbitrators or alternates for those above named.

MISCELLANEOUS CLAUSES

Besides the general clauses mentioned above, which appear in nearly all contracts of the character under discussion, many include special agreements which may have come as suggestions to the minds to one or other. Thus, in one case provision was made for a division of any future license fees which might be charged by the city for the operation of the interurban cars. In another case that the operation of the interurban cars should not obstruct or delay the operation of the city cars longer than would be necessary to discharge and load passengers. In another that breaches of the contract by either company "cannot be adequately compensated in damages recoverable in any action at law, and that the performance of such covenant may be specifically enforced by injunction or other appropriate remedy."

CONCLUSIONS

Any contract of the kind under consideration in this article is entered into because it is, or should be, beneficial to both parties, and although the actual terms agreed upon must in all cases be the result of compromise, this fact of mutual interest and benefit should not be lost sight of. While it is difficult to state which company—that operating the city system or that conducting the interurban service—receives the greater benefit for a contract of this kind, all will admit that each is necessary to the other. But if there is any preponderance of benefit it would seem to be on the side of the city company. While it is important to the interurban company to convey its passengers directly to the center of its chief terminal city, such a plan can hardly be considered essential to its existence. A change of cars for passengers at the junction of the tracks of the interurban and city roads can be enforced in case the terms of the latter company for running rights are too onerous and it is hard to conceive of a city company not making provision for handling such traffic. Again, the interurban company always has the possibility of gaining an independent entrance.

On the other hand, any great future growth of most of the modern city systems is largely dependent upon their interurban feeders. These roads furnish a continuous though long-haul patronage both from the country districts into the city and from the city districts out into the country. This traffic is in all cases practically created and could not be obtained in any other way. If a city company cannot build and own its own interurban feeders it should certainly encourage the construction of such lines by others. This policy will not only increase its own traffic, but if the company is protected in its interurban contracts by clauses similar to those cited above under "Competition," it may often be saved considerable trouble in the future.

CONNECTICUT RAILWAY & LIGHTING COMPANY ORDERS ROLLING STOCK FOR THE NEW YEAR

The Connecticut Railway & Lighting Company has ordered for delivery early next year fifteen 30-ft. closed cars from the Cincinnati Car Company, and for delivery next spring thirty-one fifteen-bench open cars from the J. G. Brill Company. All the cars will be mounted on Brill trucks and will have Westinghouse equipment.

THE TRACTION SITUATION IN INDIANA

Statistics just compiled show that 1650 miles of electric roads are in operation in Indiana, and that there is now under construction in the State 746 miles. A number of projects was commenced during 1906, but none of them is yet in operation. In fact, only one new road has been started since July. This is the Indianapolis, Huntington, Columbia City & Northwestern. Work on the Huntington road is going forward between Vauter Park at the south end of Wawausec Lake through Benton to Goshen, the grade being nearly completed and some thirty thousand ties upon the ground. This road is reported to just have been financed for a distance of 60 miles between Huntington and Goshen, with the understanding that the same parties will take the bonds on the road from Huntington to Indianapolis, making a distance of 156 miles. The roads opened for business since July are the extensions from Rushville to Connorsville, and Shelbyville to Greensburg, operated by the Indianapolis-Cincinnati Traction Company, and the line between Garrett and Kendallville connecting with Ft. Wayne, and the line between Bluffton and Marion. By next July lines will probably be completed between Indianapolis and Louisville, Indianapolis and Terre Haute, Lafayette and Logansport, Peru and Wabash, Indianapolis and New Castle, Indianapolis and Crawfordsville, Rockport and Evansville, Princeton and Vincennes, and by Jan. 1, 1908, it is expected roads will be in operation between Crawfordsville and Danville, Ind.; Shirley anl Anderson, Greenfield and Maxwell, New Castle and Muncie, New Castle and Richmond, New Castle and Winchester, and Winchester and Portland. During the year the Indianapolis-Cincinnati Traction Company will extend from Connersville eastward to effect their connection for Cincinnati. The proposed road between Wabash and Rochester has been abandoned, as has also the line between Amo and Danville, Ind.

There are a number of roads projected for 1907, including the New York-Chicago Air Line, a line from Lafayette to Crawfordsville, Greencastle and Bloomington, known as the Educational Route, and a line from Lafayette to Covington and to connect at Clinton for Terre Haute with branches running from Attica to Kankakee, Ill., to connect with the Reed Line into Chicago, and another from some point on the main line to Danville, Ind., to connect for Indianapolis. This line is being projected by Daniel W. Bolan and associates. Exclusive of the New York-Chicago Air Line there are projected 570 miles of road.

At this time there are ten traction roads whose lines run directly into the Traction Terminal Station, Indianapolis, and during the year three more will enter, the Indianapolis, Crawfordsville & Western, the Indianapolis, New Castle & Toledo, and the Indianapolis & Western, making a total of thirteen main line tracks. The following lines and their divisions indicate the territory covered, tributary to Indianapolis, as follows: Indianapolis & Eastern, to Richmond, Dayton, Columbus, Cincinnati, Toledo and all Ohio points; Indianapolis & Eastern, New Castle Division; Indianapolis-Cincinnati, Rushville Division, to Rushville and Connersville; Indianapolis-Cincinnati, Shelbyville Division, to Shelbyville and Greensburg; Indianapolis-Martinsville Rapid Transit, to Mooreville, Martinsville, Indianapolis and Plainfield; Indianapolis-Danville; Indianapolis & Northwestern, Lafayette Division; Indianapolis & Northwestern, Crawfordsville Division; Indianapolis & Northern, Kokomo Division; Indianapolis & Northern, Logansport Division; Indianapolis & Northern, Peru Division; Indianapolis & Northern, Ft. Wayne Division; Indiana Union Traction Company, Anderson Division; Indiana Union Traction Company, Anderson-

Marion-Wabash Division; Indiana Union Traction Company, Middletown Division; Indiana Union Traction Company, Muncie Division; Indiana Union Traction Company, Muncie-Winchester-Dayton Division; Indiana Union Traction Company, Muncie-Portland Division; Indiana Union Traction Company, Muncie-Hartford-Ft. Wayne Division; Indianapolis, Columbus & Southern, to Seymour.

The Louisville & Northern Traction Company is building from Sellersburg to Seymour, which will connect with the Indianapolis, Columbus & Southern and the Louisville, Indiana Southern Traction companies, making a direct line to Louisville.

The Indianapolis & Western Traction Company is now building between Brazil, Ind., and Plainfield, which will connect at Terre Haute with the Terre Haute Traction Company, making a direct line and connecting at Terre Haute with Clinton, St. Mary's-of-the-Woods and Sullivan.

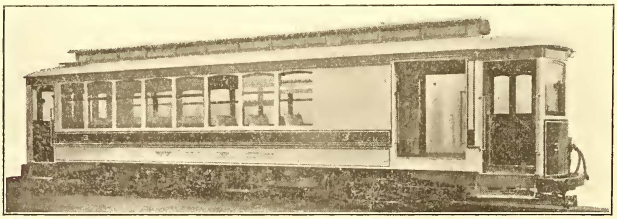
The line now building between Princeton and Vincennes will be finished within a few months, and it only remains for the link to be constructed between Vincennes and Sullivan to make a through route by electric lines from Evansville to Indianapolis and at Evansville connect for Mt. Vernon, Boonesville, Rockport, Richland and Grand View.

Another electric railway line will soon be ready for operation between Logansport and Lafayette; also the line between Warsaw and Peru, between Ft. Wayne and Decatur, between South Bend and Laporte, and LaGrange and Angola.

Owing to the activity in electric railway affairs in Indiana the American Engineering Company, of Indianapolis, has announced that it will shortly publish a map of the State showing all of the proposed lines to date.

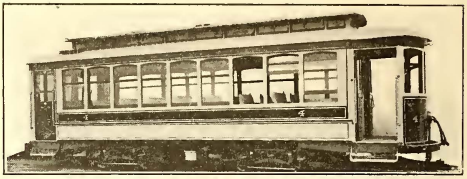
SEMI-CONVERTIBLE CARS FOR WALLA WALLA, WASHINGTON

In the spring of this year the Northwestern Gas & Electric Company, which operates the street railway system in Walla Walla and also an interurban line, 13 miles long, to the cities of Milton and Freewater, Ore., placed on its lines its first semi-convertible grooveless-post car built by the J. G. Brill Company. Subsequent orders for this type of car have followed, a shipment consisting of three passenger, two combination passenger and baggage and two trail cars having lately gone forward to Walla Walla from the works of the American Car Company. The passenger cars in the present instance differ from their predecessors only in the matter of size. They measure 25 ft. 4 ins. over the end panels and 34 ft. 9 ins. over the crown pieces. The other dimensions of the new passenger cars are: Width over the sills, including sheathing, 7 ft. 11½ ins.; over the posts at the belt, 8 ft. 2 ins. The framing consists of side sills 4 ins. x 7¾ ins., plated with ⅜-in. x 12-in. steel; end sills, 5¼ ins. x 6⅞ ins. The truck employed is the No. 27-G1, whereas the Brill cars were equipped with the No. 21-E single truck.



SEMI-CONVERTIBLE COMBINATION PASSENGER AND BAGGAGE CAR

The road between Walla Walla and Milton runs through a fruit and garden belt for the entire distance, the belt having an area of about 35 square miles. Most of the freight carried in the baggage compartments of the new combination cars, therefore, will consist of fruit and vegetables. The chief



SEMI-CONVERTIBLE CAR FOR WALLA WALLA, WASH.

dimensions of the combination cars correspond generally to the passenger cars, except in the matter of length, the former cars measuring 31 ft. 8 ins. over the end panels and 41 ft. 1 in. over the crown pieces; the baggage compartment is 9 ft. 2 ins. in length. The baggage compartment is fitted with the familiar seats, arranged to fold up, for the accommodation of smokers.

The trail cars present no unusual features, being of the ordinary twelve-bench open type and mounted on the Brill No. 27-G1 trucks. Their length is 34 ft. ⅜ in.; width over the sills, 7 ft. 7½ ins., and over the posts, 8 ft. 2 ins.

NEW SOUTH WALES TRACTION REPORT

The report of the Railway Commissioners of New South Wales for the quarter ended Sept. 30, 1906, shows the following results compared with the same period of the preceding year:

	1906	1905
Miles open	126½	125¾
Revenue	£205,248	£194,598
Expenditure	£167,988	£160,033
Train miles run	4,077,524	4,035,595
Earnings per train mile	1s 0d	11½d
Expenditure per train mile	9¾d	9½d
Percentage—		
Expenditure to earnings	81.85	82.24
Number of passengers carried	35,141,791	33,288,264

JOINT FREIGHT RATES IN IOWA SINCE 1902

H. H. Polk, president and general manager of the Inter-Urban Railway Company, of Des Moines, Iowa, has written this paper calling attention to the fact that an electric road in Illinois referred to in this paper as having been the first to establish a freight tariff and to interchange freight with a steam railroad, was antedated by the Inter-Urban Railway Company. The latter company has had joint tariffs with the Chicago Great Western Railway ever since 1902, and also has joint rates with the Minneapolis & St. Louis road and with the Illinois Central Railroad.

NEW LINE INTO TOLEDO

The Toledo, Port Clinton & Lakeside Railway Company is now operating cars into Toledo over its new line, having made a satisfactory traffic arrangement with the Toledo Railways & Light Company. Ballasting is about completed and a new sub-station is being erected near the city limits.

SURFACE EXPRESS SERVICE IN PITTSBURG

The experiment of an express service on a surface line in a busy city, with free transfers to all intersecting lines, is being made by the Pittsburg Railways Company. It is the idea of President James D. Callery, who is striving to relieve the congestion of cars down town.

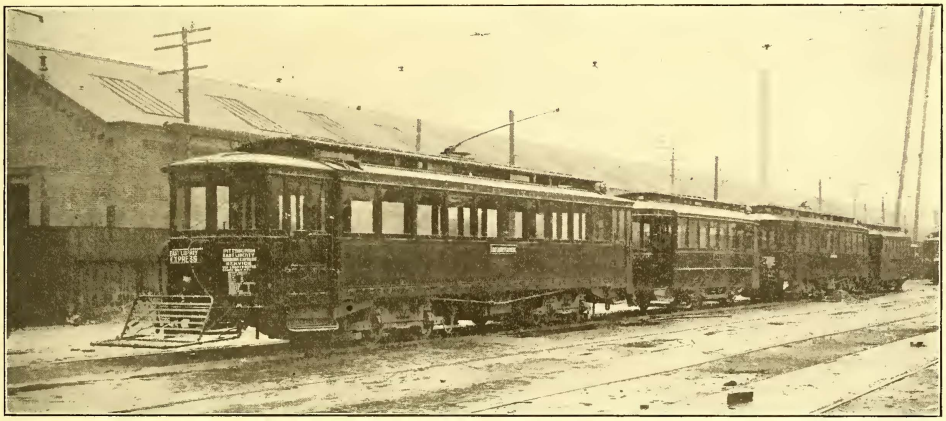
Pittsburg is peculiarly situated, lying between the Monongahela and Allegheny Rivers, which, coming together, form the Ohio. The down-town streets run into a narrow neck of land. All the East End trunk lines reach the shopping section via Fifth Avenue and Sixth Avenue. During the rush hours cars have to drift on both streets, and as it was impossible to put out more cars, new residence section outlets had to be made. Alongside the Pennsylvania Railroad tracks runs Liberty Avenue, on which the company operated two East End routes.

Mr. Callery conceived the idea of changing these routes, which were not profitable, to a transfer service and giving up Liberty Avenue for express cars. The latter were put into operation Dec. 3, as noted in the STREET RAILWAY JOURNAL for Dec. 8. The route is from Liberty Avenue and Cecil Alley out Liberty to Center, to Penn, to Highland, to Center, back to Liberty, to Seventh, to Penn to place of beginning. This makes a loop covering 10 miles the round trip. It was the intention to run four-car trains every ten minutes, but owing to delays in getting high-speed gear, couplings and other equipment it was decided to put on twelve two-car trains—a double-truck motor car seating forty-four and a trailer seating twenty-eight people. These are run on five-minute schedules during the rush hours and ten minutes during the middle of the day. Stops are made at certain points only.

Until teamsters and the public get used to the new service very fast schedules will not be put on. The running time at present is one hour for a round trip until 7 p. m., and fifty minutes after that hour. This time will be cut down gradually to forty minutes. City officials and newspapers are cooperating with the company and urging teamsters to give the express cars the right of way.

Within a week or ten days President Callery expects to put on the four-car trains. Several trains of this kind have been tested on different routes. Each train is made up of a motor car, trailer, motor and trailer. The Westinghouse multiple-control system with Westinghouse automatic brakes is included in the equipment. Motor cars are each equipped with four 56's. At present low gear is used, but this is being changed.

Mr. Callery and other officials are pleased with the express service, and it will probably be made permanent. It has relieved the crush on other East End routes.



FOUR-CAR TRAIN FOR SURFACE OPERATION IN PITTSBURG

CAR HEATING SITUATION DISCUSSED IN DETAIL BY THE BOSTON ELEVATED RAILWAY COMPANY.

The Boston Elevated Railway Company has issued an interesting letter in regard to its efforts to secure additional power during the year in reply to an inquiry by the Massachusetts Railroad Commission touching the matter of car heating. Within the past year the company has made provision, either by the installation of generating apparatus of its own or by the purchase of power from another company (the Edison Electric Illuminating Company, of Boston,) for an addition to its power supply of between 7000 and 7500 kw, which is an increase of its supply of last year of 20 per cent, although its traffic increased but 6.2 per cent. Of this additional capacity 3675 kw is obtained by the erection of two new stations and the addition of a 2000-kw generator to an existing plant, 3600 kw being purchased from the Edison company. It was expected that all of this power would be available in November, but this has not been the case and the road is short about 2800 kw of its contracted power. It is expected that all the delayed machinery will be delivered shortly and the power produced. In the emergency the road has endeavored to buy more direct current, but has found none available.

During the year Messrs. Stone and Webster and Bion J. Arnold have been independently employed to investigate the entire system and recommend the best method of still further augmenting comprehensively the power supply. The reports of these engineers will shortly be received and acted upon. In spite of the partial failure in the production of contemplated extra power there has been a lack of heat in the cars only when there have been temporary power plant breakdowns, and then only for short periods in the latter part of a few afternoons, on week days, with one exception.

LEGAL DEPARTMENT*

INJURIES TO DOGS

There have been considerable casuistry and quibbling over the question whether a dog is property. Some courts have held that a dog does not constitute property; other courts have said that he constitutes a qualified kind of property; while the courts of some of the newer States, that are least embarrassed by precedent, have looked upon the dog as property in the ordinary sense. We think the latter view is the only rational one. (See the discussion of Earl, J., in Mullaly vs. People, 86 N. Y. 365). Of course the fierce disposition of certain dogs, and the tendency toward dangerous disease of all dogs, render the species particularly liable to summary destruction, under the police power, in the interest of public safety and comfort. But it is absurd to argue that this factor should take dogs without the legal pale of property. Private ownership, with all its incidents, is recognized and upheld in many things, which are liable to destruction in the public interest, up to the time when such destruction takes place.

The judicial tendency everywhere now seems to be towards admitting property rights in dogs, in like manner as in horses, cows and other domestic animals. The State of Minnesota is one in which the general property right is upheld, and a recent decision by its Supreme Court is interesting upon the liability that may be incurred by street railroad companies for the killing or injury of dogs. (Harper vs. St. Paul St. Ry. Co., 109 N. W. 227). It was held that "when dogs are engaged in fighting upon street railway tracks, and are apparently oblivious of an approaching car, the motorman, upon discovering them in a position of peril, is required to exercise reasonable care by using proper signals or checking the speed of his car, to avoid their injury." Upon facts that authorized the jury to find that the motorman did not use reasonable effort to avoid running down two dogs that were fighting, a verdict of $50 for damages against the company was sustained for the killing of one of the animals. This decision refers to and reaffirms a previous decision of the same court (Smith vs. St. Paul St. R. R. Co., 79 Minn. 254) wherein, with excellent common sense, it was held that a motorman is not required to stop his car, if running at a legal or reasonable rate of speed, to avoid collision with dogs under ordinary conditions; that because of their superior intelligence and quickness of movement a street railway company should not be held to the same degree of care as to dogs as with regard to other animals running at large, such as cattle. But in the case first above cited, in which the verdict against the company was sustained, it appeared that the car was running at about 12 or 15 miles an hour, that the motorman made no attempt to check the speed and did not blow any whistle or ring any bell. Moreover, as the dog in question was engaged in a fight, the motorman was held to have been under obligation of considering that probably ordinary sounds and signals would be disregarded. Under the circumstances, it was only just and proper to hold a company liable in damages for the destruction of a valuable dog. The duty is to use reasonable care to avoid injury, under the facts of the particular case, and the question whether such care was used will be one for the jury.

CHARTERS, FRANCHISES, ORDINANCES, ETC.

ARKANSAS.—Carriers—Ejection of Passenger—Exemplary Damages—Evidence—Excessive Damages—Trial—Admission of Evidence—Cure of Error—Instruction—Conformity to Pleadings—Requested Instruction—Modification by Court.

1. Exemplary damages may be awarded against a street car company for malicious acts of its servant in ejecting a passenger from a car.

2. In an action for ejection of a passenger from a car, evidence held sufficient to sustain a finding that the act of the conductor in ejecting the passenger was wanton, wilful and malicious, so as to justify the imposition of exemplary damages.

3. An award of $500 compensatory damages and $250 exemplary damages for the ejection of a passenger from a street car, with rude and insulting language by the conductor, and for causing a passenger's arrest for alleged disorderly conduct, was not excessive.

4. Where one paragraph of a declaration claimed damages for the ejection of a passenger from a street car, and another paragraph claimed damages for causing a criminal prosecution against him for disorderly conduct, error in the admission of evidence of the prosecution was cured, where a demurrer to the paragraph claiming damages on that ground was afterwards sustained, and the jury was instructed that the passenger was not entitled to recover for his arrest and prosecution, and no request was made for an instruction warning the jury not to consider the evidence in determining the question submitted on the other paragraph.

5. In an action for the ejection of a passenger, where allegations of the complaint that the plaintiff was a passenger were not denied, and the evidence showed that he entered on the defendant's car and paid his fare, which was accepted by the conductor, defendant was not entitled to an instruction that, if he went on the car with the intention of continuing a previous controversy with the conductor, he did not become a bona fide passenger, even if he paid his fare.

6. In an action for the ejection of a passenger, where defendant requested an instruction that, if the plaintiff went on the car with the intention of continuing a previous controversy with the conductor, he did not become a bona fide passenger and could not recover damages for such ejection, the defendant was not prejudiced by a modification of the instruction to the effect that, if he went on the car with the expectation of being put off, he did not become a bona fide passenger and could not recover damages for wounded feelings and pain of mind for being ejected.—(Little Rock Railway & Electric Co. vs. Dobbins, 95 S. W. Rep., 788.)

ARKANSAS.—Evidence—Relevancy—Res Gestæ—Witnesses—Examination—Deaf Mutes—Trial—Conduct in General—Inspection by Jury—Carriers—Ejection of Passenger—Instructions—Conduct of Passenger—What Constitutes Ejection—Damages—Humiliation of Plaintiff—False Imprisonment—Malicious Prosecution—Authority of Street Railroad Conductor to Cause Arrest.

1. In an action for the ejection of a passenger, testimony as to the conduct of the conductor towards other passengers shortly after the alleged ejection was not admissible, not being a part of the res gestæ.

2. It was not error to take the testimony of deaf mutes through an interpreter by signs, though the evidence could have been written, where there was no showing that the interpretation by signs was not the better method.

3. In an action for the ejection of a passenger for interfering with the controller of a car, where the testimony showed that all the summer cars owned by the defendant were built exactly alike, and that the controllers were the same, it was proper to permit an inspection of a car and the controller thereon by the jury, to determine whether the interference was intentional.

4. Instructions that it was the duty of a passenger to conduct himself in an orderly manner and to refrain from interfering with the apparatus of the car, and that, if the passenger wilfully interfered with the apparatus and conducted himself in a disorderly manner the conductor was justified in ejecting him, were not ground for reversal because of indefiniteness, where it was not shown that they were not cured by the evidence of other instructions.

5. A regulation forbidding passengers to stand on the front platform of a street car is a reasonable and proper one, and where the conductor requested a passenger to go inside the car, and there was standing room therein, and plaintiff refused to comply with the request, the conductor was justified in ejecting him.

6. Where several cars were waiting at a station to be loaded with passengers, and a passenger, after voluntarily leaving one car, was told by the conductor that he could not ride on that car, but was directed to take passage on another car, there was no ejection.

7. In an action for the ejection of a passenger from a car, where the evidence shows that plaintiff was not ejected, he is not entitled to recover damages for humiliation or feelings injured because of insulting and abusive language by the conductor.

8. A street railroad company is not liable for false imprison-

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ment and malicious prosecution of a passenger by its conductor, which was beyond the scope of his employment and not authorized or ratified by the company.—(Dobbins vs. Little Rock Ry. & Electric Co., 95 S. W. Rep., 794.)

OHIO.—Carriers—Street Cars—Wrong Transfer Ticket—Ejection of Passenger—Evidence.

1. A passenger on a street railway, who has paid fare and is entitled to ride over another line belonging to the same company, and who, having asked for a transfer ticket over such other line, is given, by mistake of the conductor, a transfer which is not good over such other line, may, nevertheless, if he has exercised such care about the receiving and making use of the transfer ticket as persons of ordinary prudence are accustomed to exercise under the same or similar circumstances, lawfully insist upon being carried over such other line without further payment of fare; and if such passenger, without fault on his part, is ejected from a car for refusing to pay fare other than by such transfer ticket, he may recover damages for the tort, and cannot be restricted to damages for breach of the contract to carry him.

2. A failure by the plaintiff to make a statement or explanation before he was put off the car, would not of itself defeat his right to recover; but such fact is admissible in evidence as part of the res gestæ as bearing upon the question of the plaintiff's good faith in accepting and using the erroneous transfer, and as affecting the amount of damages.—(Cleveland City Ry. Co. vs. Conner, 178 N. E. Rep., 378.)

PENNSYLVANIA.—Street Railroads—Paving Streets—Failure to Pave—Action by City.

1. The portions of streets occupied by a street railway company must be kept in good condition by it, though there is no express contract or satutory direction to that effect.

2. In an action against a street railway company by a city to recover for paving a portion of a street with asphalt, the city must show that the repairs were necessary, that notice had been given by the city to the defendant to repair the tracks by paving them with asphalt, and that the repairing was reasonable, necessary and proper.—(City of Reading vs. United Traction Co., 64 Atl. Rep., 446.)

WISCONSIN. — Railroads — Crossing Other Railroads — Collision of Right—Compensation—Amendment—Necessity of Crossing—Manner of Crossing—Review.

1. Rev. St. 1898, Sec. 1828, Subd. 6, provides that a railroad corporation shall have power to cross, intersect, join, and unite its railroad with any other railroad, and that if the two corporations cannot agree upon the amount of compensation to be made therefor, or the points and manner of crossing, the same shall be ascertained by commissioners to be appointed by the court, etc. Held, that the railroad desiring to cross is not required by such section to do any particular act in furtherance of an effort to agree on a crossing, and, hence, the lapse of nearly a month without any response to petitioner's proposition for a crossing was sufficient to justify a finding that the parties were unable to agree.

2. Under Rev. St. 1898, Sec. 1828, providing that any railroad corporation "shall have power to cross, intersect, join, and unite its road with any railroad heretofore and hereafter constructed at any point on its road and on the grounds of such railroad corporation," the necessity of the crossing petitioned for is a matter to be determined by the Legislature, and is not within the power delegated to the court or commissioners authorized by such section to determine compensation, etc.

3. Where an interurban electric railroad could not enter a certain city over its proposed route without crossing the tracks of a street railway company, the necessity of such crossing sufficiently appeared, notwithstanding the latter's offer to permit petitioner to use certain portions of its track in entering the city under a contract.

4. Laws 1905, p. 912, c. 497, provides that commissioners appointed in railroad crossing proceedings shall have power to determine the place at, and the manner in which, grade or other crossings shall be made, and, on appeal from determination and award of such commissioners to the Circuit Court, the latter shall have power to review, revise, modify and affirm such award both as to the amount of compensation and as to the manner of making such crossing, etc. Held that, the manner of crossing being reviewable on appeal to the Circuit Court from the determination and award whether petitioner was entitled to a grade crossing was not reviewable on appeal from an order fixing its right to a crossing, and providing for the appointment of commissioners, etc.—(In re Eastern Wisconsin Ry. & Light Co., 107 N. W. Rep., 496.)

LIABILITY FOR NEGLIGENCE.

ALABAMA.—Street Railroads—Personal Injuries—Pleading—Allegations of Negligence—Instructions—Negligence—Willful and Wanton Misconduct—Injury to Person on Track—Failure to Look and Listen—Proximate Cause—Trial—Ignoring Evidence.

1. In an action against a street railroad company for personal injuries, an allegation that defendant's servant in charge of the car so negligently conducted himself as to run the car against plaintiff's intestate was sufficient, and not objectionable as a conclusion of the pleader, or for failure to set forth facts from which negligence could be inferred.

2. In an action against a street railroad company for personal injuries, instructions that whether or not the motorman was guilty of negligence depended upon whether he acted as a reasonably careful motorman would have done under the same circumstances, and that if a motorman should, by reason of excitement or otherwise, do something or fail to do something which an ordinarily prudent motorman would not have done or failed to do under the circumstances, he would be negligent, while perhaps misleading, were not reversible error.

3. In an action against a street railway company for personal injuries, an instruction that, even though deceased went on the track so near the car that the motorman could not stop in time to avoid knocking him down, yet if the motorman, after he became aware of the peril, could have avoiding killing intestate, the act of the latter in going on the track would not be the proximate cause of the injury was correct in principle, and, if objectionable as abstract, was not cause for reversal.

4. In an action for negligence causing death, contributory negligence of deceased is no defense, if defendant was guilty of wanton or wilful misconduct, and he may be guilty of such misconduct without any actual intention to inflict injury.

5. If a person goes on a street railroad track in close proximity to an approaching car without stopping, looking, and listening, and is run over and killed by the car, it must be presumed that his conduct contributed to his death.

6. The mere fact that a person is guilty of negligence in going on a street railroad track in close proximity to an approaching car does not, as a matter of law, show that his conduct was the proximate cause of his being struck by the car.

7. In an action against a street railroad company for negligence, causing the death of a pedestrian crossing the track, in which there was evidence that the car was operated at a rapid rate of speed over a populous crossing without signals of approach, and that the motorman knew the character of the place and the frequency with which people were accustomed to pass, charges ignoring the question of wanton and wilful misconduct of defendant's motorman were properly refused.—(Birmingham Ry., Light & Power Co. vs. Ryan, 41 Southern Rep., 616.)

ALABAMA.—Trial—Order of Proof—Rebuttal—Appeal—Misconduct of Counsel—Assignment of Error—Right to Allege Error—Carriers—Street Railways—Injuries to Passenger—Failure to Take Seat—Contributory Negligence.

1. Where, in an action for injuries to a street car passenger, after defendant had proved that plaintiff was on the car next day after her alleged injuries, plaintiff was reintroduced in rebuttal and testified that she went to church the next morning, not knowing the extent of her injuries, a question as to how long after that before she went out from home again was objectionable as not proper rebuttal.

2. Where the court sustained an objection to arguments of defendant's counsel, and defendant excepted, plaintiff was not entitled to assign the same for error on appeal.

3. Where plaintiff consented to the giving of an instruction asked by defendant, which had been refused, plaintiff could not thereafter assign the same for error.

4. Where an injury to a street car passenger was alleged to have resulted from defendant's negligence in starting the car with a sudden and unusual jerk, plaintiff was not guilty of contributory negligence as a matter of law in failing to take her seat before the car started, though she had time to do so and there were vacant seats.—(Cutcliff vs. Birmingham Ry., Light & Power Co., 41 S. Rep., 873.)

ALABAMA.—Street Railroads—Collision with Vehicle—Personal Injuries—Action — Complaint — Appeal — Pleading — Harmless Error—Travelers on Highways—Injuries—Care Required—Trial—Requests to Charge—Travelers in Highway—Injuries—Last Clear Chance—Duty of Motorman—Trial—Instructions Given—Drivers of Vehicles—Death—Contributory Negligence.

1. In an action for injuries to plaintiff's intestate in a collision

between his buggy and defendant's street car, an allegation in the complaint that intestate was in a vehicle on a public highway on which defendant's cars were moving, near the intersection with another public highway, was sufficient to show the relation of the parties from which a duty to exercise care could be inferred.

2. Where an affirmative charge in favor of defendant was given with reference to a count in a complaint, any error with reference to a ruling on a demurrer to such count was harmless.

3. It is the duty of operators of street cars to always keep their cars under reasonable control and keep a diligent lookout for persons who may go or be on the tracks in the streets, and on seeing any person on the streets in danger of being run upon to use reasonable diligence to avoid injuring him.

4. Where an instruction on a material issue is correct, if the party desires any further explanation as to the facts, it is his duty to request explanatory charges.

5. If, after the driver of a vehicle by his own negligence has driven within the zone of danger from a street car, the motorman realizes his danger and negligently fails to do all reasonably within his power to avoid a collision, and a collision occurs from which the driver of the vehicle is killed, the driver's negligence would not be the proximate cause of his death, and would, therefore be no defense to the negligence of the motorman.

6. The motorman of a street car is entitled to presume that a person traveling on a street will remain on that part of the street not occupied by the railway, at least until he shows by his actions that he is going to attempt to cross; and if the traveler, without looking to see whether a car is approaching, turns onto the track so suddenly that it is impossible to check the car in time to prevent an accident, the railway company is not liable for the consequences.

7. An instruction that a motorman was not required to anticipate that intestate would turn his vehicle before he actually attempted to do so, and if, after he first made such attempt, and when he got on the track on which defendant's car was running, the vehicle was so close to the car that it could not have been stopped by the motorman properly using all the means at hand to prevent the injury, and proper signals were given as the car approached an intersecting avenue, the jury should find for defendant, did not cover a request to charge that the motorman was entitled to presume that intestate would remain on the right side of the street until he gave some outward indication that he was going to cross to the left-hand side, which instruction was erroneously refused.

8. Where deceased drove across a street railway track in front of a moving stret car, without stopping to look, and was killed in a collision which immediately followed," he was guilty of contributory negligence precluding a recovery.—(Birmingham Ry., Light & Power Co. vs. Clarke, 41 S. Rep., 829.)

GEORGIA.—Writ of Error—Harmless Error—Exclusion of Evidence—Witnesses—Discretion of Trial Court—Examination of Witnesses—Leading Questions—Evidence—Admissions—Offers of Compromise—Corroboration—Consistent Statements—Res Gestæ—Statements—Trial—Instructions—Weight of Evidence—Carriers—Injuries to Passenger—Action—New Trial—Grounds—Surprise—Writ of Error—Review.

1. Where the jury found that the plaintiff was not entitled to recover any amount as damages, the rejection from evidence of tables of life expectancy, and charge on the subject of the measure of recovery for diminished capacity to earn money on the part of a woman who married after the injury, will not require a reversal, whether erroneous or not, unless it appears that such rulings were in some way calculated to affect the finding of the jury on the qusetion of liability or non-liability.

2. The allowance of questions somewhat leading in form is a matter within the discretion of the presiding judge, and it will not be controlled unless abused.

3. If a person who claimed to have been injured while alighting from a railroad car, in answer to a question by an employee of the company as to how it occurred, made an admission tending to show that the injury resulted from the accidental slipping of her foot in getting off the car while it was standing still, and not from any negligence on the part of the company's employees; and if such statement was freely and voluntarily made, and it did not appear to be an admission or proposition made with a view to a compromise, it was admissible in evidence, although after making it she proposed to the agent of the company that a compromise be made.

4. The mere fact that admissions of a party to a suit may have been proved, and that they do not accord with the testimony given by him as a witness, examined by interrogatories, does not render evidence admissible for the purpose of showing that he had previously made to another witness statements consistent with his testimony.

5. Where a young woman 19 or 20 years of age claimed to have been injured by the sudden jerking of an electric car of a street and suburban railway while she was in the act of alighting, throwing her against the side of the car, and she testified that after this she walked into the station and sat down for a few minutes, and then walked to her destination, which was a house 200 or 300 yds. distant, and where the evidence showed that upon arriving there she was observed to look pale, and to be trembling, and was asked what was the matter, and made a statement as to the manner in which she claimed to have been injured, such statement constituted no part of the res gestæ, and was properly excluded.

6. There was no error in charging that it was the duty of the jury to scan admissions, if proved, with care, but that, so scanning them, the jury should give them such weight as they thought such admissions entitled to.

7. While the charge of the court touching the continuance and termination of the relation of passenger and carrier between the parties may not have included all possible cases, either as to the commencement of such relation or its termination, yet, as applied to the facts of the case on trial, there was no error in charging that if the plaintiff boarded one of the cars of the defendant and paid her fare, under the law she became a passenger of the defendant, and the relation of passenger would exist from the time she boarded the car until she had reached the place of her destination, and had been allowed a reasonable time and opportunity to alight from the car in safety, and that during the continuance of such relation the law imposed upon the company the duty of exercising for the protection of her person extraordinary care.

8. That a plaintiff testified by answers to interrogatories, and was not present at the trial, and that she was surprised by the fact that the defendant introduced evidence to show an admission on her part, furnishes no ground for a new trial.

9. None of the other rulings complained of are such as to necessitate a reversal.—(McBride vs. Georgia Ry. & Electric Co., 154 S. E. Rep., 674.)

INDIANA.—Carriers—Injury to Passenger—Pleading—Complaint—Question for Jury—Contributory Negligence—Damages—Pleading—Evidence—Special Damages—Appeal—Presentation of Question on Trial—Sufficiency of Evidence—Declarations—Physical Condition—Carriers—Injury to Passenger — Evidence — Sufficiency — Appeal — Review — Invited Error—Trial—Instructions—Ignoring Issues—Injury to Passenger—Leaving Conveyance.

1. In an action against a street railway for injuries to a passenger, the complaint alleged that defendant negligently and carelessly failed to provide a platform or safe and convenient place and means of leaving the car at the point where it was stopped for plaintiff to alight, and that it negligently failed to stop the car at the usual place, but ran it to a point where there was a distance of about 2 or 3 ft. from the step to the ground, negligently informed plaintiff when the car stopped that she had arrived at her destination, and failed to assist her in alighting. Held, that in respect to the failure to provide a platform in the street, and in running the car beyond the usual place, the complaint showed no cause of action, but the remaining allegations taken together constituted a showing of negligence.

2. In an action for injuries to a passenger on alighting from a car, evidence considered and held, that the question of contributory negligence was for the jury.

3. In an action for personal injuries, aggravation of an existing condition is not special damages, and need not be specially pleaded in order to admit of evidence thereof.

4. Where testimony was received in response to a hypothetical question, on undertaking of counsel to follow up the question by proof of facts sustaining the hypothesis, a question as to whether such facts had been shown could only be reviewed on appeal by saving the question by a motion, after plaintiff had rested her case, to strike out the answer.

5. In an action for personal injuries, plaintiff's attending physician testified that on the night of the accident he was called, and, being asked to describe plaintiff's condition, stated that he found her in bed, and that she told him that she had an injured ankle. Held, that it was proper to overrule a motion to strike the answer as to what plaintiff said, as the declaration was evidently but introductory to the witness' treatment of the case and made to one competent to judge as to its truth of falsity.

6. In an action against a street railway company for injuries to a passenger, a witness for defendant testified that he was employed by defendant and in charge of the car in question. Held,

that the jury was warranted in finding that the car was operated by defendant.

7. An appellant cannot complain of an erroneous instruction, where the error was invited by an instruction tendered by him.

8. In an action for injuries, the court instructed, after referring to the issues, that, if plaintiff had proved the material allegations of the complaint, "then she is entitled to recover." The jury were charged in other instructions that contributory negligence would defeat a recovery, and that, while the burden of proving it was on defendant, it might be made out by plaintiff's evidence. And other instructions which were framed on lines not essentially different from the first instruction were qualified by the statement that plaintiff was entitled to recover, unless contributory negligence was shown by a preponderance of the evidence. Held, that the first instruction was not erroneous for ignoring contributory negligence, as the jury could not have been misled.

9. A passenger on a street car has a right, when the car stops for him to alight, to assume that the car has been stopped at a place where by the exercise of due care he may alight in safety.—(Indiana Union Traction Co. vs. Jacobs. (No. 20,873.) 78 N. E. Rep., 325.)

MASSACHUSETTS.—Street Railways—Elevated Railroads—Pedestrian on Street—Obligation to Exercise Care—Personal Injuries—Cause of Injuries—Question for Jury—Negligence—Proof of Negligence—Sufficiency—Injury to Pedestrian on Street—Negligence—Findings—Effect—Statutes—Amendment — Construction — Regulation — Statutes — Certificate of Railroad Commissioners—Effect—Care Required—Sufficiency.

1. A pedestrian, on the surface of a street, is not bound to wait until a train on the elevated road over the street has passed, or until no train is passing overhead, the surface of the street being supposed to be safe for travel, notwithstanding the structure and trains overhead.

2. Evidence in an action against an elevated railroad for injury to a pedestrian on the street, in consequence of a piece of metal falling from the elevated road into the pedestrian's eye, examined and held to warrant a finding that the particle which entered the pedestrian's eye came from the operation of the contact-shoe on the elevated road.

3. One suing for a personal injury negligently inflicted is not bound to exclude the possibility that the accident might have happened in some other way than alleged, but is required only to satisfy the jury by a fair preponderance of the evidence that it occurred in the manner in which he claimed it did.

4. Evidence in an action against an elevated railroad for injury to pedestrian on the street, in consequence of a piece of metal falling from the elevated railroad into the eye of the pedestrian, examined, and held to warrant a finding of actionable negligence on the part of the railroad in failing to provide protection for pedestrians having occasion to use the street.

5. In an action against an elevated railroad for injury to a pedestrian on the street, in consequence of a piece of metal falling from the elevated railroad into the eye of the pedestrian, the jury, in response to the question, "Was the negligence of the defendant in the failure to use a different contact-shoe, or in failure to apply to the Railroad Commissioners for approval of the pan, or both?" found that the negligence was in the failure to apply to the Railroad Commissioners for approval of pan. Held, that the finding was a finding that a pan was needed for the proper protection of pedestrians using the street, for otherwise there would have been no occasion for the railroad to apply to the Commissioners.

6. Where a statute is an amendment of and an addition to a prior statute, both statutes must be considered together.

7. Rev. Laws, c. 112, Sec. 44, makes a street railway liable for injury sustained in the management and use of the tracks, etc. St. 1894, p. 767, c. 548, Sec. 18, requires the Railroad Commissioners, on it appearing that an elevated railroad is in a safe condition for operation, to give a certificate to that effect and the company shall then be authorized to operate it. St. 1897, pp. 499, 502, c. 500, Sec. 2, provides that the company may construct lines of elevated railway according to the plans approved by the Railroad Commissioners. Sec. 21 provides that the company shall be subject to the liabilities imposed on street railways. Held, that the Railroad Commissioners be required to approve the plans of an elevated railroad before the railroad can be constructed and operated, and their approval is conclusive on the right of the company to construct and operate the road; but it is bound to exercise reasonable care in the construction and operation of the road.

8. The certificate of the Railroad Commissioners is not within Rev. Laws, c. 111, Sec. 20, which provides that no advice of the commissioners shall impair the obligation of railroad corporations or relieve them from the consequence of negligence, but is in the nature of a condition precedent, without which an elevated railroad company cannot proceed to construct or operate its railroad, and for want of which it could be restrained from proceeding with the construction or operation of the road as authorized by St. 1894, p. 768, c. 548, Sec. 29.

9. Where a pan, to prevent the falling of sparks from an elevated railroad on persons in the street, was reasonably necessary, it was the duty of the elevated railroad either to apply to the Railroad Commissioners for their approval of a pan, or to proceed to put up one without approval.

10. Where there was an appliance, which, in the reasonable operation of an elevated railroad, could be used to prevent them from falling to the street and injuring pedestrians there, it was the duty of the railroad to avail itself thereof, and it was not enough for it to do all that could be reasonably required to prevent sparks, but it was bound to do all that it reasonably could, if it was impossible to prevent sparking, to see that no one was injured by the sparks.

11. In an action against an elevated railroad for injuries to a pedestrian on the street in consequence of a piece of metal falling from the elevated railroad into the eye of the pedestrian, the evidence showed that it was feasible to construct a pan which would prevent the falling of sparks on persons in the street, and that it was known that there was a good deal of trouble from sparking after the road begun operation in June, 1901, and that nothing was done to remedy it prior to the accident, January, 1902. Held, to warrant a finding of negligence on the part of the railroad.—(Woodall vs. Boston Elevated Ry. Co., 78 N. E. Rep., 446.)

MASSACHUSETTS.—Carriers—Injury to Passenger—Means of Transportation—Safety—Cars.

A woman carrying a baby, having boarded defendant's train, was about to enter the smoking car, when the brakeman told her to cross quickly over into another car, and in attempting to do so she fell between the cars and was injured. Plaintiff testified that the child prevented her from seeing the space betwen the platforms, and defendant's evidence showed that the curves of the platform were determined by the shortest curve at which it was necessary for the cars to pass, and that the best device known for covering the space between the cars had proved impracticable. Held, that there was no negligence on the part of the defendant; it not having been bound to warn the passenger or to assist her in crossing.—(Hawes vs. Boston Elevated Ry. Co., 78 N. E. Rep., 480.)

MASSACHUSETTS.—Street Railroads—Vehicles—Rights in Street—Care Required—Action for Injuries—Burden of Proof—Negligence—Contributory Negligence—Question for the Jury.

1. In general, a street railway company stands in respect to the use of the street on exactly the same footing as the driver of any vehicle; each being bound to use due care to avoid collision, and neither being entitled to assume that the other will keep out of the way.

2 In an action for injuries to plaintiff while riding in a wagon by collision with a street car, the burden was on plaintiff to show due care on his part and negligence on the part of the street car company.

3. In an action for injuries to plaintiff by collision between the wagon in which he was riding and a street car, evidence held to require submission of defendant's negligence and plaintiff's contributory negligence to the jury.—(Halloran vs. Worcester Consolidated St. Ry. Co., 78 N. E. Rep., 381.)

MICHIGAN.—Carriers—Injury to Passengers—Crowded Platform—Contributory Negligence—Negligence.

1. It cannot be said, as matter of law, that one who had been taken by a street railway company to an amusement park conducted by it was guilty of contributory negligence in taking a position near the track in the front rank of the 7000 people about the platform, after the close of the entertainment, waiting for cars, from which position she was pushed under a car.

2. Whether a street railway company which conducted an amusement park, at which after the close of the entertainment one, who had taken her place in the front rank of the 7000 persons waiting for cars, was pushed under a car, was guilty of negligence in not making adequate provision by way of railings, barriers, and policemen to furnish protection from the dangers incident to such a crowd, is a question for the jury.—(Cousineau vs. Muskegon Traction & Lighting Co., 108 N. W. Rep., 720.)

MICHIGAN.—Master and Servant—Injuries to Servant—Fellow Servants—Negligence—Question for Jury.

1. Linemen employed by an electric company were the inspectors and repairers of poles, and a pole, which was defective when put in on the original construction of a line of wiring, broke, injuring a lineman. The defect was not discoverable by the tests ordinarily used. Held that the master was not relieved from liability on the ground that the negligence was that of a fellow servant, in the absence of any showing that any of the linemen in the company's employ at the time of the accident were employed in that capacity at the time the pole was set in the original construction.

2. In an action against an electric company for injuries to a lineman, owing to the breaking of a pole when a feed wire was being strung along it. Held, that the question whether plaintiff was negligent in assuming that the pole would stand the strain and whether the breaking was caused by stringing the wire in a negligent manner was for the jury.—(Livingway vs. Houghton County St. Ry. Co., 108 N. W. Rep. 662.)

MINNESOTA.—Street Railroads—Injury to Pedestrian—Contributory Negligence—Evidence.

1. A pedestrian, about to cross two street car tracks on which he has seen two cars approaching in opposite directions at a rapid rate of speed, who passes behind one and undertakes to cross in front of the other advancing toward him, is not bound to anticipate negligence on the part of the motoneer; but he is not absolved from the duty of exercising reasonable care to avoid being struck by the advancing car.

2. His failure to exercise such care constitutes contributory negligence, and bars his right to recover for consequent personal injuries.

3. Under the circumstances of this case, the conduct of the plaintiff is held to have constituted contributory negligence as a matter of law.—(O'Brien vs. St. Paul City Ry Co., 108 S. W. Rep., 805.)

MISSOURI.—Street Railroads—Collision with Vehicle—Discovered Peril—Evidence—Questions for Jury—Appeal—Second Appeal—Law of the Case—Instructions—Harmless Error—Trial—Multiplicity of Instructions—Operation—Care Required of Motorman.

1. In an action against a street railroad company for injuries caused by a collision between a car and a milk wagon, evidence held sufficient to require submission to the jury of the question whether the motorman had an opportunity to prevent the accident after having discovered plaintiff's danger.

2. Where, on a second appeal, the evidence is substantially the same as that involved in the first appeal, a previous ruling as to the sufficiency of the evidence to require submission to the jury will be treated as res adjudicata.

3. In an action for personal injuries, an instruction that the burden was upon plaintiff to prove by the evidence that defendant was guilty of negligence, while objectionable because failing to state that plaintiff must prove this by a preponderance of the evidence, nevertheless was not cause for reversal, where various other instructions on the same subject required proof by a preponderance of the evidence, and a view of the fact that defendant submitted no evidence whatever.

4. Where, in an action for personal injuries in which the issues were few and simple, the court gave eleven instructions presenting every possible phase of the defendant's theory of the case, a refusal to give a twelfth instruction was sustainable on the ground that further instructions would tend rather to confuse than enlighten the jury.

5. The duty of a motorman to check the speed of his car to avert a collision with a vehicle on the track is not limited to the time when the vehicle is on the track or in actual danger of collision if the car goes forward, but it is the motorman's duty to exercise ordinary care by checking the car as soon as he sees, or by the exercise of due care may see, a person in a vehicle approaching the track with the apparent intention of crossing.—(Barrie vs. St. Louis Transit Co., 96 S. W. Rep., 233.)

MISSOURI.—Death—Actions For—Physical Condition of Decedent—Effect—Release—Damages for Personal Injury—Consideration—Effect—Settlement by Decedent.

1. The fact that an injured person was, prior to his injuries, suffering from a disease of which he subsequently died, and that the injuries only hastened his death, does not preclude a recovery for his death by the persons entitled thereto.

2. An employee, while driving a wagon for his employer, collided with a street car. The employee and employer executed a release of their claims against the street railroad in consideration of a specified sum which was paid to the employer. Held, that the release of the employee was supported by a sufficient consideration and was binding on him in the absence of fraud, inadvertence, or mistake.

3. An action by minor children for the death of their father, whether under damage act, Sec. 2 (Rev, St. 1899, Sec. 2864), providing for an action when a person shall die from an injury resulting from the negligence of any servant, while running a car, etc., or under Sec. 3 (Rev. St. 1899, Sec. 2865), providing that when the death of a person shall be caused by a wrongful act, that would, if death had not ensued, have entitled the party injured to maintain an action therefor, the person liable for the death shall be liable in an action for damages, notwithstanding the death is barred by the father, before his death, making a settlement with the wrongdoer.—(Strode vs. St. Louis Transit Co., 95 S. W. Rep., 852.)

MISSOURI.—Parties—Plaintiffs—Action by Curator—Want of Capacity—Objections—Manner of Raising—Pleading—Failure to Deny Allegations—Trial—Inconsistent Instructions—Street Railroads—Collision—Injury to Traveler—Negligence.

1. Under Rev. St. 1899, Secs. 598, 599, 602, authorizing a defendant to demure to the petition where it appears on the face thereof that plaintiff has no legal capacity to sue, which demurrer shall distinctly specify the ground of objections, and providing that when the matters enumerated in Sec. 598 do not appear on the face of the petition the objection may be taken by answer, and if not so taken, the same is waived, etc., the capacity of plaintiff assuming to sue in a representative capacity can be put in issue by special demurrer where the petition fails to state facts sufficient to show the capacity, and by special denial where the facts showing the capacity are sufficiently stated, but the question is not raised in either case by a general demurrer or a general denial.

2. A petition alleged that plaintiff was a minor, and that a third person, by whom, as his curator, he sued, was his legally appointed and duly qualified curator. There was no special denial of the allegation. Held, that the appointment of the curator would be assumed, and proof thereof was not necessary.

3. Where an action for a personal injury, consisting of a fracture of plaintiff's leg, was tried on the theory that there could be a recovery for a second fracture occurring some time after the accident if the same was not caused by plaintiff's own negligence, an instruction that defendant was not liable by reason of the second fracture if the same was caused by the negligence of plaintiff, and that before damages could be allowed plaintiff on account thereof the jury must be convinced that such condition was due to the injury, was not in conflict with an instruction authorizing a recovery for all injuries suffered by plaintiff in consequence of the second fracture, if at the time of sustaining it, plaintiff was exercising ordinary care.

In an action against a street railway company for injuries to a traveler in a collision with a car, the testimony showed that the traveler's wagon was driven for a distance of 600 ft. near the track, and that the motorman could have seen the wagon for at least that distance before he collided with it. The car ran at a speed of 25 miles an hour on a downgrade. No signal was given by the motorman, and he made no effort to check the speed of the car until the collision occurred. Held, that the traveler, though guilty of contributory negligence, was entitled to recover because of the negligence of the company.—(Baxter vs. St. Louis Transit Co., 95 S. W. Rep., 858.)

MISSOURI.—Death—Right of Action—Street Railroads—Negligence—Personal Injuries—Statutory Provisions—Applicability—Street Railroads—Collision With Team—Absence of Light on Car—Evidence—Excessive Speed—Contributory Negligence—Sufficiency of Evidence.

1. Rev. St. 1899, Sec. 2864, provides that whenever any person shall die from the negligence of any officer, agent, or employee whilst running or managing any locomotive, car, or train of cars, etc., or of any driver of any public conveyance whilst in charge of the same as driver, the master or he who owns such railroad, locomotive, car or other public conveyance at the time, shall forfeit for every person or passenger so dying the sum of $5000. This was amended by the act of 1905, which specifically mentioned street cars. Held that, irrespective of the act of 1905, said section applied to street railroads.

2. In an action against a street railroad for death occasioned by a collision between defendant's car and decedent's wagon, evidence that prior to the collision the lights on the car were extinguished by the trolley pole leaving the wire, thereby divesting the car both of light and motive power, was of itself insufficient to show negligence.

3. In an action against a street railroad for death caused by a collision between defendant's car and decedent's wagon, evidence that the car was going at a speed of from 6 to 8 miles an hour, was insufficient to show negligence, in the absence of evidence concerning the character of the place of the accident, the amount of travel on the streets there, and of the crossings.

4. In an action against a street railroad for wrongful death occasioned by a collision between defendant's car and decedent's wagon, evidence held to show contributory negligence on decerent's part.—(Higgins vs. St. Louis & S. Ry. Co., 95 S. W. Rep., 863.)

MISSOURI.—Street Railroads—Injuries to Person on Track—Action—Evidence—Sufficiency—Issues and Proof—Contributory Negligence — Children — Instructions — Damages — Personal Injuries.

1. In an action against a street railroad for injuries, held a question for the jury whether the motorman saw, or by the exercise of ordinary care could have seen, plaintiff standing on the track in time to have stopped the car.

2. In an action against a street railroad for injuries, contributory negligence must be pleaded by defendant.

3. In an action against a street railroad for injuries to a child, he is to be held responsible only for such care as children of his age, experience and discretion ordinarily use under the same similar circumstances.

4. In an action against a street railroad for injuries to a child, it appeared that he was standing on a track at a street crossing waiting for a car to pass on another track when he was struck by a car, and the court was requested to instruct that the phrases "first appearance of danger" and "becoming aware of the danger," used in an ordinance read in evidence, and which required motormen to keep a "vigilant watch," did not mean that plaintiff was seen approaching the track by the motorman, but mean that the plaintiff was then in a position of danger of being struck, from which he could not extricate himself by the use of ordinary care, and if the plaintiff had not then reached the track, or a point so near the same as to come in collision with the car, then the motorman had the lawful right to assume that the plaintiff would not go on or so near the track as to come in collision with the car. Held, that the instruction was properly refused as inapplicable to the facts.

5. It was proper to refuse an instruction that plaintiff could not recover if his injuries were due to mere accident or misadventure.

6. In an action for injuries, where it appeared that plaintiff, a boy seven years of age, had both bones of his right leg broken, that his leg was crooked by the injury, and that he sustained a concussion of the brain which rendered him unconscious for nine days and which affected his nervous system, an instruction authorizing damages for impairment of earning capacity after majority was proper.—(Wise vs. St. Louis Transit Co., 95 S. W. Rep., 898.)

MISSOURI. — Appeal — Verdict — Conclusiveness — Carriers—Injury to Passenger—Evidence of Relation of Carrier and Passenger—Sufficiency.

1. Where the court believes that a verdict was the result of passion or prejudice, and that the instructions of the court were disregarded, it is the duty of the court to set the same aside.

2. In an action against a street railroad company for injuries received by an alleged passenger, evidence examined, and held insufficient to support a verdict because of the evidence showing that plaintiff was not a passenger at the time he was injured, but that he was injured while attempting to board a car while in motion.—(Lehnick vs. Metropolitan St. Ry. Co., 94 S. W. Rep., 996.)

MISSOURI.—Carriers—Street Railroads—Injury to Passenger—Petition—Causes of Action—Trial—Instructions—Submission of Issues Raised by Pleadings and Evidence—Actions—Instructions.

1. A petition in an action against a street railway company for injuries to a passenger which alleges that the company neglected to stop the car a sufficient length of time for the passenger to board it, whereby she was injured in consequence of the sudden starting of the car as she had one foot on the lower step of the car and held on to a handhold, and that the company, by the exercise of ordinary care, could have seen her hanging by the handhold and could have stopped the car by the exercise of ordinary care in time to have avoided injuring her, sets forth two causes of action, one for starting the car while the passenger was attempting to get aboard, and one for negligence in failing to stop the car after the discovery of her peril, and on proof of either the passenger was entitled to recovery.

2. Where, in an action against a street railway company for injuries to a passenger while attempting to board a car, the petition charged negligence in failing to stop the car after the discovery of her peril, and the evidence showed that the conductor saw her peril, and could have, by the exercise of proper care, stopped the car in time to have avoided the injury, and the testimony of the company was directed to the point as to whether its conductor did all he could to stop the car after the discovery of the peril, an instruction authorizing a verdict for the passenger on a finding that the conductor knew that the passenger was hanging to the handhold, and was being dragged by the car, and could, by the exercise of ordinary care, have caused the car to be stopped in time to have avoided the injury to the passenger, was not erroneous as authorizing a verdict on a charge different from that alleged in the petition, and shown by the evidence.

3. An instruction in an action against a street railway company for injuries to a passenger while attempting to board a car, requiring the passenger to prove in order to recover that she attempted to board the car while it was at a standstill, and that the employees suddenly started it before she had time to get on board, was properly modified by adding, unless the jury found that the conductor in charge of the car saw the passenger hanging to the car after it had started, and failed to exercise ordinary care to stop the car, and thereby prevent injury to the passenger.

4. An instruction in an action against the street railroad company for injuries to a passenger attempting to board a car while in motion, declaring that if the passenger got on the car after it had started she was not entitled to recover, was properly modified by adding unless the jury found that the conductor in charge of the car saw the passenger hanging to the car and failed to exercise ordinary care to stop it and thereby avoid injury to her.—(Foland vs. Southwestern Missouri Electric Ry. Co., 95 S. W. Rep., 958.)

MISSOURI.—Carriers—Passengers—Contributory Negligence—Question for Jury—Damages—Loss of Earnings—Petition—Sufficiency—Trial—Instructions—Evidence—Repetition of Instructions—Injury to Passengers.

1. A passenger standing on the platform of a street car, though there is room inside of the car, is not guilty of negligence as a matter of law; but the question of his negligence is for the jury.

2. A passenger, while standing on the platform of a street car, was thrown therefrom by the jerking of the car. The passenger, when within about 300 ft. of his destination, went to the platform to be ready to step off on the car reaching the point of destination. It was the custom for passengers to leave the car by way of the platform. Held, that the passenger was not guilty of contributory negligence as a matter of law, precluding a recovery, though there were unoccupied seats in the car.

3. A petition in an action for personal injuries, which alleges that, by reason of the injuries sustained, plaintiff has been permanently disabled from his labor and his avocation as merchant and druggist, and has lost or will lose the earnings of his labor and business, sufficiently pleads loss of earnings.

4. In an action for personal injuries, plaintiff did not testify directly as to the value of his earnings, loss of which was caused by his injury, but his testimony showed that he was compelled to employ a man to perform the work he was engaged in at the time of the injury, and that the value of the services of the person so hired did not exceed $50 per month. Held to authorize the inference that during the time plaintiff was incapacitated for work the loss of his earnings was at least equal to the amount he paid another to fill his place.

5. A requested instruction is properly refused in the absence of evidence on which to predicate it.

6. Where, in an action against a street railway company for injuries to a passenger, the court charged that it was the passenger's duty to exercise ordinary care for his own safety, and that if he failed to do so, and such failure contributed to his injury, he could not recover, it was not error to refuse to charge that if the passenger voluntarily exposed himself to danger, and while in that position he was injured, he could not recover.

7. A passenger on a street car was injured by being thrown from the car by a sudden lurch. The passenger at the time was standing on the front platform of the car. Prior to the accident he had experienced lurches at the place of the accident, but the shock at the time of the accident was more severe. He also knew of the defective condition of the track at the place of the accident. Held, that the passenger did not voluntarily expose himself to danger by standing on the platform; he having a right to rely on the implied contract of safe carriage.—(Wellmeyer vs. St. Louis Transit Co., 95 S. W. Rep., 925.)

MISSOURI.—Pleading—Defects—Objections to Evidence on Ground of Insufficiency of Pleading—Trial—Instructions—Sufficiency as to Subject Matter—Damages—Personal Injuries—Instructions—Requests — Modification—Applicability to Evidence—Instruction Partly Erroneous.

1. The objection that a petition in an action for personal injuries is bad because it alleges injuries for which the wrongdoer is liable, as well as injuries for which he is not liable, without specifying the amount of damages in consequence of the injuries for which the wrongdoer is liable and for which he is not liable, cannot be raised by an objection to the introduction of evidence under the petition.

2. Where a petition in an action for personal injuries claimed damages for which the wrongdoer was not liable, an instruction submitting to the jury for their determination the injuries which plaintiff claimed to be the direct result of the wrongful act was erroneous, for failing to state what the issues were, because it left the jury to form their own conclusions as to the injuries of which plaintiff complained.

3. An instruction in a personal injury action authorizing the jury to assess as damages such sum not exceeding the sum demanded, as they might believe will compensate plaintiff for the injuries sustained, and declaring that in determining the amount they might take into consideration the physical condition plaintiff was in before the injuries, the physical pain and mental anguish he had suffered as the result of the injuries, and the physical pain and mental anguish that they believed he would suffer in the future in consequence of the injuries, etc., was not objectionable as permitting the jury to assume that injuries for which the defendant was not responsible were the direct result of the wrongful act complained of, and, if it embraced an item of damages not allowed, it was the duty of defendant to have asked an instruction restricting plaintiff's recovery to the damages recoverable.

4. Where there is no evidence on which to predicate an instruction requested, there was no error in modifying it and giving it as modified.

5. Where there was no evidence on which to predicate an instruction, there was no error in refusing to give it.

6. A requested instruction, stating the law correctly in one paragraph and erroneously in another, is properly refused.—(Fisher vs. St. Louis Transit Co., 95 S. W. Rep., 917.)

MISSOURI.—Negligence — Evidence — Presumption of Negligence—Application of Rule—Allegations of Negligence—Necessity of Strict Proof—Master and Servant—Injuries to Servant—Operation of Street Car—Failure to Give Signals—Evidence—Contributory Negligence.

1. Where, in an action for personal injuries, the facts are such that inference that the accident was due to a cause other than the negligence of defendant could be drawn as reasonably as an inference that the accident resulted from defendant's negligence, the doctrine of res ipsa loquitur does not apply, and plaintiff cannot rely upon mere proof of the facts and circumstances, and require defendant to show that he was not negligent.

2. Where, in an action for personal injuries, plaintiff charges specific acts of negligence, the proof must support these allegations, and recovery can only be had on the ground of the specific negligence pleaded.

3. In an action for the death of a servant alleged to have been caused by negligence of the operatives of a street car in failing to give warning signals as the car approached the place where deceased was working on the track, evidence held insufficient to show that signals were not given.

4. In an action for the death of a servant who was killed by a car while working at night repairing defendant's railroad track, the evidence showed that the headlight of the car was burning, that deceased was standing facing the car as it approached, that a workman who was about 10 ft. behind deceased called to him to look out, and that another workman, who was closer to the car than deceased was, also warned him and himself escaped. Held, that as a matter of law deceased was guilty of contributory negligence, causing the accident.—(McGrath vs. St. Louis Transit Co., 94 S. W. Rep., 872.)

NEW YORK.—Appeal—Presumptions—Appeal from Nonsuit—Street Railroads—Collision with Cyclist—Contributory Negligence—Question for Jury.

1. Where plaintiff suffers an involuntary nonsuit, he is entitled on appeal to have all questions of fact involved in the evidence and all inferences which may be legitimately drawn therefrom construed most favorably to him.

2. Where a person riding a bicycle upon the street in the usual way reaches a point 20 ft. from a street car track, and sees a car approaching 150 ft. distant, his failure to stop and wait until the car passed is not contributory negligence as a matter of law.

3. In an action against a street railway company for death caused by a collision between a car and cyclist at a street crossing, evidence held to require submission to the jury of the question whether deceased was guilty of contributory negligence.—(Brooks vs. International Ry. Co., 98 N. Y. Supp., 765.)

NEW YORK.—Electricity—Negligence—Evidence—Contributory Negligence—Question for Jury.

1. In an action for the killing of a horse by electricity by coming in contact with a wire which had been thrown over and hung from the feed wire of a street railway, where the evidence did not show how the wire had been placed there, or how long it had remained, except that it was not there eight minutes before the accident, the evidence was insufficient to show the railway company guilty of negligence.

2. In an action for the killing of a horse by electricity by coming in contact with wire thrown over the feed wire of a street railway while being driven by the plaintiff, whether the plaintiff was guilty of negligence was a question for the jury.—(Jones vs. Union Ry. Co., 98 N. Y. Supp., 757.)

NEW YORK.—Carriers—Injury to Passenger—Negligence—Evidence—Question for Jury—Contributory Negligence.

1. In an action against a street railroad company for injuries to a passenger, who, while standing on the running board immediately after the car started was struck by the footboard of a wagon standing in the street, evidence held to require submission to the jury of the issue of defendant's negligence.

2. Where a passenger stepped upon the running board of a street car, and before he could leave the running board was struck by the footboard of a wagon standing near, the passenger was not guilty of contributory negligence.—(Walsh vs. Interurban St. Ry. Co., 98 N. Y. Supp., 656.)

NEW YORK.—Judgment—Default—Setting Aside—Street Railroads—Operation—Collision with Vehicle.

1. On a motion to open a default judgment, based not only on affidavits, but on all the proceedings and pleadings and the inquest taken by the plaintiff against the defendant, the testimony given at the inquest will be examnied, and where it does not show a cause of action the judgment will not stand.

2. Where plaintiff, while standing with his cab 3 yds. from a street car track, saw a car approaching at half speed, but turned and drove on the track, and was struck by the car, he is not entitled to recover for the injuries.—(Costello vs. Forty-Second St., M. & St. N. Avenue Ry. Co., 98 N. Y. Supp., 648.)

NEW YORK.—Release—Validity—Instructions—Evidence.

Where evidence showed that a release of claims for personal injuries was signed after considerable discussion as to the amount to be paid, and there was no excitement, and no threats were indulged in, and the signer had full opportunity to read the instrument, an instruction that, if there was fraud or imposition or undue influence in obtaining the release, it would not bar a recovery, was error, as not based on the evidence.—(Blair vs. Utica & M. V. R. Co., 99 N. Y. Supp., 614.

NEW YORK.—Carriers—Street Railways—Injuries to Passengers—Negligence.

1. Where, in an action against a street railway company for injuries to a passenger occasioned by the rear and forward cars coming in contact on their rounding a curve, there was no proof that the cars were improperly constructed or lacked any guard which could prevent the accident, or that such a contact of cars had occurred under similar circumstances, or that any accident had happened from that cause, the use of the cars did not justify an imputation of negligence on the company's part.

2. Nor did it justify a finding that the accident was the probable result of the conditions shown.

3. Where there was no proof in such a case that the running of the cars around the curve at the speed attained, or at any speed, was likely to result in contact of connected cars, nor proof of any lack of due care in the management of the cars, but there was evidence, based on experience and experiments, that such a contact under such conditions was physically impossible, a finding of actionable negligence was unauthorized.—(Gott vs. Brooklyn Heights R. Co., 96 N. Y. Sup., 945.)

NEW YORK.—Street Railways—Injuries to Person on Track—Contributory Negligence—Question for Jury.

1. While one has a right to walk along an electric car track on a country highway, he is bound to be ordinarily vigilant with eye and ear to know of the approach of a car, and to get out of its way, so as not to stop it, or even make it slow up.

2. Where plaintiff's intestate, while walking along an electric car track on a country highway on a clear night, was run over and killed by a car approaching from the rear, fully lighted and with a head-light, it could not be said, as a matter of law, that deceased was negligent in not knowing of the approach of the car in view of the facts that no bell was rung or warning given, that electric cars ran over that track about once an hour only, and that at the time of the accident, a freight train was passing on a parallel track, about 16 ft. from the electric car track, in the opposite direction, laboring up grade, and making much noise. —(Neary vs. Citizens' R., Light & Power Co., 97 N. Y. Sup., 420.)

NEW YORK.—Street Railways—Collision with Team—Contributory Negligence.

Evidence that, when the driver of a covered van was about the middle of the block driving south, he looked back and saw a car about 200 ft. away, coming rapidly in the same direction, and, after continuing to drive in the same direction for some distance, he turned, and when about three-quarters of the length of the van was across the track, was struck by the car, fails to show the driver was free of contributory negligence.—(Kiley vs. New York City Ry. Co., 97 N. Y. Sup., 375.)

NEW YORK.—Street Railways—Collision with Team—Contrlbutory Negligence.

Recovery for collision of a street car with a team is barred by contributory negligence, the testimony showing that the driver saw, or could have seen, the car coming in ample time to avoid a collision, but kept on and drove directly in front of it, when it was but 15 ft. or 20 ft. away, and rapidly approaching.—(Williams vs. New York City Ry. Co., 97 N. Y. Sup., 393.)

NEW YORK.—Carriers—Street Railways—Negligence—Injuries to Passenger.

Evidence that while plaintiff, a passenger on defendant's street car, started to alight after the car was stopped in response to a signal given by some one, she was thrown down by the car suddenly starting, it not appearing that the conductor knew that she was alighting, or that a signal to start was given by the conductor or any one, established a prima facie case of negligence on defendant's part.—(Gregorio vs. New York City Ry. Co., 97 N. Y. Sup., 373.)

NEW YORK.—Carriers—Injury to Passenger—Proximate Cause —Negligence.

1. Opening for only two-thirds its width of the sliding door of a subway car when it stopped at a station to take on passengers, the door being operated by the guard by means of a lever, if negligence, was not the proximate cause of injury to a passenger, who, while following others into the car, being crowded, put his hand against the casing of the door to prevent his falling, whereupon the door was opened wide and crushed his finger.

2. For the guard of a subway car, into which passengers were coming through a door opened only two-thirds its width, to open it its full width, whereby a passenger, who, being crowded, had just put his hand on the casing of the door, had his finger crushed, was not negligence; it not appearing that the guard knew or could have seen where the passenger's hand was, and there being nothing to show that it was common for passengers to place their hands on the door for support.—(Maillefert vs. Interborough Rapid Transit Co., 98 N. Y. Sup., 207.)

PENNSYLVANIA.—Street Railways—Injury to Person Crossing Track with Wagon—Contributory Negligence.

Under the law of Pennsylvania, as settled by decision, it is the duty of the driver of a wagon to look and listen immediately before attempting to cross the tracks of an electric street railway, and a plaintiff driving a wagon having a hood, which prevented him from seeing on either side, who looked on first entering the street, and then, although he saw a car approaching, drove upon the track without again looking, is guilty of negligence per se, which precludes his recovery for an injury resulting from a collision with such car.—(Berger vs. Philadelphia Rapid Transit Co., 141 Federal Rep., 1020.)

TEXAS.—Carriers—Passengers—Injuries—Question for Jury—Damages—Evidence—Cause of Injury—Instructions.

1. In an action against a carrier for damages for injuries alleged to have been received by plaintiff while alighting from a car, evidence of contributory negligence. Held sufficient to warrant the submission of that issue to the jury.

2. In an action for damages for injuries alleged to have been caused by being thrown from defendant's car. Held that there was no evidence to conect plaintiff's impaired condition with an injury previously received.

3. In an action for personal injuries by defendant's negligence, there was evidence that plaintiff had previously been injured, but there was an absence of evidence showing that there was any connection between the former injury and his present impaired condition. The court instructed, at defendant's request, that if plaintiff's injury or impaired condition, if any, was "the result of other cause or causes than that charged in the petition" the jury should return a verdict for defendant. Held that such instruction was calculated to lead the jury to give effect to the previous injury, and was erroneous.—(Nix vs. San Antonio Traction Co., 94 S. W. Rep., 335.)

TEXAS.—Carriers—Injuries to Passengers—Contributory Negligence—Instructions—Writ of Error—Intermediate Appeal—Sufficiency of Evidence — Determination — Misconduct of Counsel—New Trial—Newly Discovered Evidence—Review—Remand.

1. Where, in an action for injuries to a passenger while alighting from a street car, defendant claimed that plaintiff jumped from the car while it was still in motion and offered evidence to such effect, an instruction that, if plaintiff was guilty of contributory negligence in alighting from the car, and such negligence proximately caused the injury, plaintiff was not entitled to recover, was not erroneous as submitting as an issue the question whether the supposed negligence of plaintiff, if established, necessarily contributed to his fall about which there was no question.

2. While the Supreme Court cannot review objections that the verdict is against such an overwhelming preponderance of the evidence and is so excessive that a new trial should be granted, appellant is entitled to have such questions determined by the Court of Civil Appeals before its appeal has been finally decided.

3. Assignments of error objecting to improper remarks of plaintiff's counsel in his closing argument to the jury, and to the denial of a new trial for newly discovered evidence, while presenting matters which the Supreme Court may review so far as to determine whether or not they are such as to entitle defendant to a new trial as a matter of law, can only be passed on by the Supreme Court after the Court of Civil Appeals has determined how far such misconduct influenced the verdict, and whether the newly discovered evidence was of sufficient importance to justify a new trial.

4. Where the Court of Civil Appeals failed to determine how far certain misconduct of plaintiff's counsel, assigned as error, affected the verdict, and whether newly discovered evidence was sufficient to justify grant of a new trial, and such objections were further insisted on on a writ of error to the Supreme Court, the cause will be remanded to the Court of Civil Appeals, with directions to make conclusions on such points and return them with the record to the Supreme Court, under the statute providing that, if the Court of Civil Appeals has failed to file a conclusion of fact on any material issue properly assigned, and, by reason of such failure, the Supreme Court is not able to pass on the argument, the record should be returned to the Court of Civil Appeals, with directions, etc.—(Parks vs. San Antonio Traction Co., 94 S. W. Rep., 331.)

TEXAS.—Street Railways—Injury to Pedestrian—Negligence—Question for Jury—Trial—Instructions—Requests—Necessity—Applicability to Evidence.

1. Evidence in an action against a street railway company for injuries to a pedestrian in a collision with a car examined, and held to justify a finding of negligence in failing to stop the car after discovering the peril of the pedestrian.

2. In an action against a street railway company for injuries to a pedestrian in a collision with a car, the court charged that a violation of an ordinance limiting the speed of cars was negligence. Another instruction stated that the jury could not find for the pedestrian on this issue, unless they found that the excessive speed was the proximate cause of the injury. Held, that as the error in the instructions, if any, was one of omission, it was the duty of the company to request a more specific instruction on the question of proximate cause, if it desired one.

3. Where, in an action against a street railway company for injuries to a pedestrian in a collision with a car, the evidence showed that had the car not been running at a prohibited speed the pedestrian would either have gotten across the track without being struck or the motorman could have stopped the car in time to have avoided the injury, an instruction that the violation of the ordinance limiting the speed of cars was negligence, was not erroneous, as not based on evidence that the excessive speed of the car caused the injury.—(Northern Texas Traction Co. vs. Thompson, 95 S. W. Rep., 708.)

FINANCIAL INTELLIGENCE

Wall Street, Dec. 12, 1906.

The Money Market

Decided strength characterized the local money market during the past week, rates for both call and time accommodations ruling at extremely high figures. The strengthening was due to the extraordinary demand for money in connection with the phenomenal activity in all branches of trade, the transfer of currency to San Francisco and to Southern points, and the continued absorption of money by the Federal treasury through collections of customs. As a result of this heavy drain the local banks sustained a loss of upward of $12,000,000 cash, which not only wiped out the surplus reserve, but created the largest deficit reported by the clearing house banks since the panic of 1893. The announcement by the Secretary of the Treasury at the close of last week that he would anticipate the payment of interest on all Government bonds up to May 1 next, payment to be made on Dec. 15, was rather disappointing, as it offered no immediate relief. The extremely heavy losses in cash by the banks above referred to, however, was followed by a second anouncement from Washington that the Treasury Department would deposit $10,000,000 cash in depository banks at the principal cities, and would also purchase $10,000,000 of the Government 4 per cent bonds of 1907. This, together with the prepayment of the $12,000,000 Government bond interest will release about $32,000,000 in all, the greater part of which will eventually find its way to this center. The action of the Secretary of the Treasury was well received in banking circles, and it is generally believed that further relief would be forthcoming should the necessity develop. The money market at the close developed an easier tendency, call loan rates declining from 20 and 25 per cent to 7 per cent. Time accommodations, however, held decidedly strong at 8 and 8½ per cent for the short periods, and 7 and 7½ per cent for four to six months. The opinion prevails, however, that rates will gradually work lower. Mercantile paper has been extremely quiet and unchanged, 6 and 6½ per cent being the minimum for the best names. A feature of the week was the sharp break in sterling exchange, resulting from the high rates for money and free offerings of commercial bills. Rates of exchange are now at a point where gold can be imported at a profit, but the situation abroad is such as to make it practically impossible to secure any considerable amount of the yellow metal for shipment to this side. During the week $250,000 gold was engaged in London for import to New York, but no further engagements are anticipated, as our bankers are not disposed to disturb conditions abroad by withdrawing gold from the European centers.

The bank statement published on last Saturday was about as expected. Loans decreased $3,853,500. Cash decreased $12,365,600, but as the reserve required was $4,114,300 less than in the preceding week the surplus reserve was reduced by $8,151,300, thus eliminating the surplus reported in the previous week, and leaving a deficit of $6,702,175. The deficit compares with a deficit of $1,246,525 in the corresponding period of last year, a surplus of $9,365,200 in 1904, $8,077,975 in 1903, $8,386,900 in 1902, $5,455,025 in 1901, and $5,701,125 in 1900.

The Stock Market

The conspicuous feature of the stock market during the week has been the unyielding strength in the face of conditions and developments, which ordinarily make for lower prices. While speculation has been very largely professional, this has been qualified by the fact that while the selling represented simply contracts, the buying was of a different character and implied accumulation in certain directions. The important influence on the side of pessimism was the firmness in the money market and the high rates on both call and time, supplemented by the very unfavorable bank statement. This condition, however, is usual at this season of the year, and it is hardly probable that there will be any really material change for the better before the middle of January, notwithstanding the relief measure proposed by the Treasury. The collapse of the somewhat wild speculation in mining stocks following the break in the stock of one of the Cobalt properties, will serve to direct attention more closely to the speculative possibilities of the stock market. The technical position is undeniably strong, owing to the concentrated manner in which stocks are held by important interests and wealthy individuals, and the absence of any liquidation on the part of these holders is an indication of confidence and expectation on their part that higher prices will prevail later on. The announcement of the increased dividend on New York Central was followed by a profit-taking in that stock, but this increase seems to emphasize the new policy on the part of railroad management in giving to stockholders a more proportionate share of the large profits resulting from the phenomenal business and the great prosperity of the country. The crop situation, present and prospective, promises continued heavy tonnage for the railroads. The Government report on cotton indicates a yield of 12,546,000 bales, and some private estimates make the total even larger. This means an enormous business for the Southern roads, a large export movement of the staple and a corresponding increase in our credit balances abroad, and this is one reason why money should work decidedly easier after the turn of the year. The Government estimate on winter wheat indicates a yield of over 503,000,000 bushels, based on a Decemoer percentage condition of 94.1, with an increase of a little over 1 per cent in the area planted. Conditions in the iron and steel trade show no change of any importance, and according to current estimates the earnings of the United States Steel Corporation are equal to nearly 17 per cent on the common stock. There is no apparent abatement in the demand from consumers, and conditions in the metal trades are equally favorable. The high price for copper and the enormous demand, especially for electrolytic, has increased earnings of the copper producing companies to an extent which justifies expectation of an increase in the dividends on both Anaconda and Amalgamated. The stock market developed pronounced strength on the announcement of Treasury relief to the money market, through the medium of redemption of $10,000,000 of 4 per cent Government bonds of 1907, and a deposit of a like amount of public money in the national banks depositories, and also anticipation of interest payment on all bonds up to May 1, 1907.

The local traction situation is attracting much attention, and the statements made to the State Railroad Commission for the last quarter indicate that all these companies are being operated in a very conservative manner, with favorable financial results. The Brooklyn Rapid Transit has increased its power facilities, and this has enabled a very large addition to the amount of equipment in service. The fluctuations in these stocks have not been of especial moment, and the attack upon the legality of the Interborough merger is not seriously regarded in financial circles.

Philadelphia

Extreme dullness characterized the market for local traction issues during the past week. The demand for stocks was unusually light, but in the absence of any pressure to sell prices, as a rule, held steady. Philadelphia Rapid Transit, which has furnished the bulk of the business of late, was unusually quiet, about 1000 shares of the $25 paid stock selling at 22½ and 22, while a few hundred shares of the $30 paid stock sold at 27 and 26¼. Philadelphia Company common brought 48¼ to 48½, and the preferred sold at 48. Small amounts of Philadelphia Traction changed hands at prices ranging from 96¼ to 97, and odd lots of Consolidated Traction of New Jersey brought 76 and 76¼. Union Traction sold at 62½ and 61⅛ regular, and at 61½ ex. the quarterly dividend. Other transactions included Lehigh Valley Transportation preferred at 25, United Companies of New Jersey at 254¾ and 254½, United Traction of Pittsburg preferred at 50¼, and Railways General at 6¾.

Baltimore

The dullness in the general securities market was reflected to a considerable extent in the dealings in traction issues. Trading included a fairly large number of issues, but in nearly every instance the transactions involved small amounts. Several hundreds shares of United Railway deposited stock brought 15⅛ to 15, while the free stock changed hands at 14⅞. The 4 per cent bonds sold 88⅞ and 89, and the income bonds sold at from 60¼

to 57¼. The new funding 5s changed hands, prices ranging from 87¾ to 86½, and back to 87¼. Other transactions included Macon Railway & Light 5s at 98, Norfolk Railway & Light 5s at 97⅞, and Lexington Railway 5s at 100⅛.

Other Traction Securities

The feature of the Boston market was the sharp rise in Boston & Worcester common from 25 to 29½, on the exchange of about 1000 shares. The prefered stock failed to reflect the strength in the common, and ruled weak, transactions taking place at 80 and 78. Massachusetts Electric common showed early strength by advancing to 20, but subsequently there was a reaction to 19. The preferred stock held steady at 70. Boston Elevated sold at 153 and 152, and West End common and preferred brought 93½ and 110 respectively. In the Chicago market trading was very light. West Chicago sold as low as 22, a decline of several points, and $40,000 5 per cent bonds brought 90. Other transactions were: Chicago & Oak Park Elevated at 5¼ and 5⅜, preferred at 15⅛ and 15, South Side Elevated at 90. The various securities of the Washington, Baltimore & Annapolis, including the pooling certificates on the first mortgage bonds amounting to $3,000,000, have been listed on the Cleveland Stock Exchange. Stock of the Baltimore Terminal Company amounting to $1,250,000 was also listed. Considerable trading in the stock pool certificates of the Washington, Baltimore & Annapolis has been done at 13½, about the same as on the curb market a week ago. Some small lots of Cleveland Electric were sold at 66⅛, an advance of ⅛ since Saturday.

Security Quotations

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

	Dec. 5	Dec. 12
American Railways	51	51
Boston Elevated	—	152½
Brooklyn Rapid Transit	79¾	80⅝
Chicago City	150	160
Chicago Union Traction (common)	4¾	4¾
Chicago Union Traction (preferred)	16½	16
Cleveland Electric	63½	63½
Consolidated Traction of New Jersey	77	77
Detroit United	81¾	80
Interborough-Metropolitan	37	36½
Interborough-Metropolitan (preferred)	76⅛	74¼
International Traction (common)	—	—
International Traction (preferred), 4s	—	—
Manhattan Railway	143⅛	143
Massachusetts Electric Cos. (common)	—	19
Massachusetts Electric Cos. (preferred)	—	69¼
Metropolitan Elevated, Chicago (common)	26½	26¾
Metropolitan Elevated, Chicago (preferred)	70¼	70⅛
Metropolitan Street	106	106
North American	91	90
North Jersey Street Railway	30	40
Philadelphia Company (common)	48¼	48
Philadelphia Rapid Transit	22½	†26¼
Philadelphia Traction	95¾	97
Public Service Corporation certificates	65	65½
Public Service Corporation 5 per cent notes	95	95½
South Side Elevated (Chicago)	90	89⅝
Third Avenue	123	121
Twin City, Minneapolis (common)	109	105½
Union Traction (Philadelphia)	62½	*60½

* Ex-div. † $30 paid.

Metals

According to the "Iron Age," the pig iron production for November, a short month, was within 9000 tons of the record-breaking total for October. The feature of the market in the past week has been the cropping out of demand for iron for the second half of 1907, and in some districts a good beginning has been made in contracting for such deliveries. Throughout the finished material market the changes are still rung on unparalleled conditions, from which, week after week, there is no sign of relaxation. Chicago reports $1 a ton advance in light rails and $3 in angle bars. Higher prices have been paid for the heavier sheets, and there is a prospect of a general advance.

Copper metal continues strong at an advance of ⅛ to ¼ cent a pound. Quotations are: Lake, 22⅞ and 23⅛c.; electrolytic, 22½ and 22¾c.; castings, 22¼ and 22½c.

A SUGGESTION FOR THREE-CENT FARES IN TORONTO

It has been suggested at Toronto that the city give up its percentage of the company's revenue on condition that the company sell eight tickets for 25 cents or three for 10 cents all day long and seven days a week, instead of at special hours only, as is now being done. Under the present contract between the city and the railway company the company pays to the city, first, a flat rate of $800 per mile of track, and, second, a graded percentage of the gross receipts, which, it is estimated, will this year net the city $360,000. It is admitted that the mileage payment is only sufficient to meet the cost to the city of keeping the track allowance in repair, so that it must still be paid. But the percentage now goes to reduce the tax rate and actually did reduce the rate last year by about 2 mills.

The advocates of this new proposition claim that this lowering of the tax rate is effected at the expense of the people who can least afford to pay it—the great mass of the working people who are obliged to take the cars to their work. It is figured that the payment made by the company to the city increases the price of every ride by almost half a cent; that the present average price of a ride is a little over 4 cents, and, therefore, that on the proposed basis the company could afford to sell three for 10 cents and make the same profit as it is making now.

It is also called to mind that last year the gross receipts of the railway came to almost $3,000,000, and that when the three million mark is past, the city's percentage rate is substantially increased. So that almost by the time arrangements could be made the eight-for-a-quarter ticket would, provided the city gave up its percentage, be nothing more than a business proposition which would leave the railway company in exactly as good a position as it is now and the mass of the working people of the city in a much better one.

NEW YORK TRANSPORTATION FIGURES FOR QUARTER ENDED SEPT. 30

The report of the New York State Railroad Commission for the quarter ended Sept. 30, covering street railway operation in Greater New York, given out last week, shows that of an average of 3,529,142 passengers carried daily in the five boroughs, 2,076,385 are carried daily by the Interborough-Metropolitan lines.

The figures by boroughs, as compared with the same quarter of last year, were:

	1905.	1906.
Manhattan	179,185,431	191,027,482
Brooklyn	105,703,723	113,072,393
Bronx	7,415,446	9,061,647
Queens	6,992,069	7,945,129
Richmond	3,038,841	3,574,473
Totals	302,335,510	324,681,124

The Bronx leads in the percentage of increase, with a gain of 22.2 per cent. Richmond comes next with an increase of 17.6 per cent; Queens, 13.6; Brooklyn, 6.9, and Manhattan, 6.6 per cent. The average gain in traffic for the entire city was 7.4 per cent. The detailed figures for Manhattan show that the increase of business has been divided nearly equally between the elevated and the subway, the surface lines showing only a small increase, though carrying a larger total of passengers than the other two put together.

The gain of the Brooklyn Rapid Transit system was slightly in excess of that of the Manhattan elevated or subway, namely, 6,539,943. The system carried an average of 1,099,031 passengers a day. The Coney Island business, however, caused the Brooklyn Rapid Transit to pass the 2,000,000 a day mark frequently during July and August.

The report shows an increase in the number of transfers issued of 31.2 per cent, the biggest increase being in Brooklyn. The total number issued in all five boroughs during the quarter was 96,186,878, an increase of 22,871,095 over the total for the same quarter last year. The figures on transfers follow:

	1905.	1906.
Manhattan	42,869,075	48,120,781
Brooklyn	24,206,379	40,748,369
Bronx	4,645,340	5,225,168
Queens	1,214,729	1,555,676
Richmond	290,260	536,884

REPORT OF MASSACHUSETTS ELECTRIC COMPANIES FOR YEAR ENDED SEPT. 30

The Massachusetts Electric Company has just issued its seventh annual report, covering the year ended Sept. 30, 1906. The consolidated income account from operations of the controlled companies compares with previous years as follows:

	1906.	1905.
Gross earnings	$7,518,240	$6,734,127
Expenses	4,883,552	4,456,303
Net earnings	$2,634,688	$2,277,824
Charges	1,594,503	1,543,514
Balance	$1,040,185	$734,310
Dividends	710,406	372,448
Surplus	$329,779	$361,862

The profit and loss account of the Massachusetts Electric Companies compares with previous years as follows:

	1906.	1905.
Dividends on stock owned	$710,498	$372,540
Miscellaneous interest on notes	66,651	77,029
Total income	$777,149	$449,569
Total expenses	18,395	17,170
Net income	$758,754	$432,399
Interest on notes	157,500	127,400
4 per cent on preferred stock	.....	.....
Surplus	$601,254	$304,999
Total surplus	778,173	*176,919

* After $157,500 has been charged out for discount on coupon notes.

The general balance sheet of Sept. 30, 1906, compares with the two previous years as follows:

ASSETS

	1906.	1905.
Sundry stocks in treasury	$32,860,420	$29,913,784
Stock deposited to secure notes	4,375,000	7,086,000
Cash	183,180	35,938
Notes and accounts rec.	1,063,819	1,305,350
Due from operations	687,366	349,408
Cash to pay dividends	2,209	668
Total	$39,171,994	$38,691,149

LIABILITIES

Preferred stock	$20,557,400	$20,557,400
Common stock	14,293,100	14,293,100
Coupon notes	3,500,000	3,500,000
Accounts payable	1,737	2,187
Accrued interest on notes	39,375	39,375
Dividends uncalled for	2,209	668
Discount reserve	.....	121,500
Surplus	778,173	176,919
Total	$39,171,994	$38,691,149

President Gordon Abbot says: Favored by a winter of unusual mildness and by average summer weather, the gross earnings showed an increase of $784,113, or 11.6 per cent, the gain coming from all portions of the system. As the earnings per car mile shared this increase, the gain in net was marked, and if the charges to operating account of maintenance, accidents, etc., had borne the same ratio to gross earnings as last year, the final net figures would have been far larger. It was decided, however, that a portion of the increase should be put back into the properties, and so laid up for years in which winter or general conditions might be less favorable. The average winter expenses for six years, from 1900 to 1905, inclusive, were $63,000. The actual winter expenses for 1906 were $24,523; the difference of $38,476 was charged into operating expenses and reserved as the nucleus of a fund for removal of snow and ice.

The amount spent for maintenance was increased by $210,583 over the expenditure of the previous year, and 6 per cent of gross receipts, instead of 5 per cent as heretofore, an increase of $70,638, was credited to reserve for accidents. As a result of this and of the policy of hastening the trial of damage suits, the amounts to credit of accident reserve was increased by $9,342, while the number of outstanding suits was diminished by 8 per cent.

The condition of the property is better than at any time in the past history of the companies.

In last year's report the trustees stated the opinion of experts to be that $3,555,044 would put the operating companies in first-class condition. Nothing has occurred in the past year to make the Board believe these figures will substantially be changed, and $1,540,999 of the above amount has been spent, divided as follows:

Track construction	$295,612
Track reconstruction	518,293
Cars and electrical equipment	372,059
Wire and bonding	88,979
Power stations	161,095
Land and buildings	74,233
Sundry equipment	30,724
Total	$1,540,999

By this expenditure 11 miles of track have been built, 47 miles rebuilt, 35 new cars, eight plows, etc., purchased and 15 miles of new wire strung.

The depreciation found by the Railroad Commissioners amounted to $185,370, which was charged off to profit and loss.

From the amount of reconstruction work done and planned for this year, it is estimated that $200,000 must be charged off at the end of the year on this account.

Against the expenditures of the year properly chargeable to capital, application was made and granted by the Railroad Commissioners to issue 1999 shares of stock and $400,000 bonds. The bonds, together with the $1,390,500 authorized but not issued at the date of the last annual report, were sold by the operating companies during the year.

In May, 1904, the Lowell & Boston Street Railway Company, running from Billerica to Woburn, went into the hands of a receiver, and its operation was discontinued. As it connected at each end with the lines of the Boston & Northern, it could be operated to much better advantage by that road than independently; your trustees, therefore, purchased the securities of the company at an advantageous price. As its earnings proved satisfactory, application was made for permission to consolidate it and the Georgetown, Rowley & Ipswich Company with the Boston & Northern, and these consolidations went into effect Sept. 28.

Since the last annual report a new and shorter line suitable for high speed has been completed between Lynn and Salem. Its earnings since it was opened in May have been most satisfactory.

The first serious loss by fire since the formation of the Massachusetts Electric Companies occurred on the night of Sept. 27, when the car house of the Boston & Northern, at Chelsea, was totally destroyed, together with sixty-two cars. Both cars and car house were fully insured. New equipment has been ordered to replace that burned, and the car house is being rebuilt and will be ready for use in February, 1907.

In conclusion, your trustees repeat the statement made last year, viz.: that the operating companies are in better position than ever before to handle their business safely and economically. The trustees have decided, however, that it is wiser not to resume now the payment of dividends on the preferred shares, wishing, for financial reasons, to see the work of reconstruction and the supply of new equipment carried further, in order that when dividends are begun there may be no reasonable doubt of their continuance at the full rate. The trustees are of the opinion that the resumption of current dividends, and the liquidation of accumulated dividends on the preferred shares, should if possible be dealt with simultaneously, and they hope that a plan can be devised which will be satisfactory to the holders of both preferred and common shares.

The annual meeting of the stockholders of the Massachusetts Electric Companies will be held Wednesday, Dec. 19. Five trustees for the three-year term will be elected.

CONTRACT PLACED FOR EQUIPMENT OF INDIANA ROAD

The Indianapolis, Crawfordsville & Western Traction Company, of Crawfordsville, Ind., has placed contracts for its power generating and electrical equipment with the Allis-Chalmers Company, Milwaukee, as follows: For its main station, two 20 and 42-in. Reynolds horizontal cross-compound Corliss engines, two 700-kw Allis-Chalmers generators, six 250-kw transformers, 50-kw motor generator set, three 300-kw rotary converters, nine 110-kw transformers, ten Allis-Chalmers 75-hp railroad motor equipments and ten air brake equipments.

DEVELOPMENTS IN CHICAGO

Developments in Chicago this past week include the valuation placed by the city's commission of engineers on the properties of the Union Traction Company and the Chicago City Railway Company, plans for expediting the progress of elevated trains around the loop, and the announcement by representatives of the Union Traction and the City Railway Companies that a total of 250 extra cars, all but 50 of which are new, will be added to the service early in the coming year.

The valuation placed on the properties of the Union Traction and the Chicago City Companies is $50,994,782, and upon this basis the negotiations for franchises for both companies will be concluded. It is stated in some sources that it is even possible that the matter may finally be thrashed out before Jan. 1. The full report of the commission was made to the City Council Monday, Dec. 11. It marks more than six months' work, by B. J. Arnold, M. E. Cooley, A. B. Dupont and their assistants. The original valuation as placed by the companies on their properties was placed at $73,555,776. One point, over which there seems likely to be trouble in agreeing, is the question of division of the receipts between the city and the company. It is said now that this may eventually have to be submitted to a referendum, in which case matters would be delayed somewhat. Briefly, the figures give these valuations: Chicago City Railway Company, without paving, $20,536,510, with paving, $22,369,968; Chicago Union Traction Company, without paving, $26,116,237, with paving, $28,625,714. In the STREET RAILWAY JOURNAL for Dec. 22, the figures will be given in detail.

The plan for better conditions on the loop was submitted to Mayor Dunne at a conference with the presidents and representatives of the four elevated railway companies. The railroad men declared that it would be impossible to run more trains around the loop unless the surface crossings at the junction point were abolished. President Leslie Carter, of the South Side Company, made a statement of the difficulties now in the way of adopting through routeing, and the inconvenience which would result to patrons. He said that at present it is not practical. In an attempt to meet the situation, B. J. Arnold, for the city, will prepare designs for crossings of double elevations at the junctions where certain lines connect with the circles of the loop.

In regard to the new cars, of the total number of 250, 100 will be brand new coaches, delivered to the Union Traction Company, and 100 to the South Side Company, the other 50 will be cars rebuilt by the Chicago City Railway Company. President Mitten, of the latter company, said that cars were already arriving at the rate of three to five a week, and that before the new year is much advanced the complete order will be filled. W. W. Gurley, general counsel of the Union Traction Company, said the new cars contracted for by that corporation would begin to arrive about Jan. 10. In the meantime the company will place in operation a number of cars thoroughly overhauled and re-equipped.

THE SITUATION IN CLEVELAND

In overruling the demurrer of the Forest City Railway Company to the petition of the Cleveland Electric Railway Company asking protection to its lines and an injunction on the grounds that the grants to the former are null and void Judge Phillips, of the common pleas court in Cleveland, foreshadowed the final decision to be given in the case, which will be heard on December 17. The court also sustains the right of the Cleveland Electric Railway Company to bring an injunction suit for the protection of its property. In other words, the company has a right to take such steps as will give it justice in the face of the attacks that have been made by the Mayor and the new companies in which he has manifested such a lively interest.

The court starts out with the question as whether the alleged financial interest of the Mayor in the new company would invalidate the franchises granted, and after stating that it has been shown that the Forest City Railway Company is endeavoring to interfere with property claimed under right of franchise by the Cleveland Electric Railway Company, he reviews the grants themselves. The first two ordinances were grants to Albert E. Green, one of them being a franchise on Denison Avenue and the right to joint use of tracks of the Cleveland Electric in certain places, and another was an extension of the first grant and rights. Both were assigned to the Forest City Railway Company. Then followed an ordinance giving the Forest City Railway Company a further extension of franchise. In one of the cases, No. 99073, it is alleged that shortly after his election, the Mayor undertook to obtain from the city a franchise for a street railway, and that he procured Green to make application for a franchise on Denison Avenue, and for the extension applied for later; that he procured the incorporation of the Forest City Railway Company and that he also procured Green to make an assignment of the grants allowed him to the company. The allegations are also to the affect that he procured further grants and entered into a conspiracy with sundry persons to secure franchise and rights for the company.

Charges of personal and financial interest being admitted in the demurrer, the court then discussed the relation of the Mayor to the company and the people of the city. His office is in the nature of a fiduciary relation and every rule of jurisprudence forbids that he should place himself in a position antagonistic to his trust. This rule is accentuated in its application to officers and agents of a municipality. A public officer represents the people and all his acts should be for their benefit. The public is represented only through the Mayor in this instance. When a public officer acts in his own interests, and without public sanction, then the public is not bound by his action. This is on the assumption that when acting in his own interests he is acting against public interests.

Following this is the story of the organization of the Municipal Traction Company, the lease of the Forest City property to it, and the deal with E. W. Scripps, by which they bound themselves to indemnify stockholders of the Forest City Railway Company against loss on their stock, and agreed to purchase the stock within a certain specified time, at the option of the holders.

The court then discussed the facts as outlined. He said that the effort of the Mayor to obtain cheaper fares for the people of the city is commendable, but that when he allowed himself to become personally and financially interested in any company, his position became antagonistic to the public welfare.

The second question considered by the court is whether the plaintiff company has a right to assert the invalidity of the franchises of the Forest City Railway Company for the protection of its private property. The arguments of attorneys for the Forest City Railway Company was to the effect that, with the interest of the Mayor admitted, the franchises received yet gave the right to go ahead and do the things that are granted by them. The courts says that, without a doubt, a franchise granted by a City Council gives a company the right to proceed under its terms. The decisions of higher courts were referred to in this matter, but the question is based upon valid franchises. If, as has been assumed, the Mayor is personally and financially interested in the company and is incompetent to give the grants attention as a city officer, they are not binding and give no authority. From this, the court says that the plaintiff has a right to set up the invalidity of the franchises as a protection to its property. The Cleveland Electric Railway Company owns the rails, poles, wires and other property in certain streets, where it is claimed that the franchises have expired, and the new company has endeavored to take possession of these streets. The Cleveland Electric set up this plea to the demurrer that it has a right, through the invalidity of the franchises of the Forest City, to protection to this property.

This decision on the demurrer, while showing the attitude of the court, places the case where it will be tried on its merits. The admissions of the Mayor as to the interests mentioned have been made, but before a final decision can be reached, there must be proof given in this respect. The overruling of the demurrer rests on the evidence given by the Mayor and admitted in the demurrer itself. However, the court has not held the Mayor and the new company guilty with all the charges brought against them, and the matters mentioned must be brought out in court before anything can be done.

Last Tuesday W. B. Colver, representing the Forest City Railway Company, bid a 3-cent fare on Giddings Avenue from Woodland to Quincy. J. J. Stanley offered a 2-cent fare on the entire length of Sibley and East Prospect Streets, while C. F. Emery bid for the line from the Superior Street hill to the boat landing at 2-cent fare. The village Council of Newburg Heights has granted the franchise on Marcelline Avenue to C. F. Emery, who offered a 2-cent fare in the village, provided he can make arrangements with the Cleveland Electric for transfers where a 5-cent fare is paid on the local line. The Forest City was successful in its bid for a line on Erie Court, none of the other bidders caring to submit an offer.

The alleged charges of bribery against some of the city councilmen have been under investigation the past few days by the grand jury. President Andrews, of the Cleveland Electric, has been summoned to appear before the grand jury and give evidence.

RESULTS OF MASSACHUSETTS FENDER TEST IN RAILROAD COMMISSIONERS ANNUAL REPORT

Now that the Massachusetts Railroad Commission has finished its investigation of the efficiency of the street car fenders and life guards that are at the present time available, there remains only the work of giving the results of the inquiry to the Legislature in some form of report. It was the Legislature that started this special investigation, through a request that the Railroad Commission take the matter up; and it was generally supposed that the Board would be likely to offer a special report of its findings when the new Legislature comes to the State House at the opening of the new year. There is now reason for believing, however, that the Railroad Commission will make no special report, but that it will embody what it wishes to say on the subject of fenders and life-saving appliances in its annual report, which is due to go to the Legislature, in the routine course, sometime before the end of January. It was in this manner that the Board made its report on the subject of signals and other devices intended to prevent accidents on steam railroads a year ago; and the arrangement was not only apparently satisfactory, so far as time of appearance of the matter was concerned, but it was also of general advantage, for the reason that it allowed the Commission's findings and recommendations to go out in the annual bound volume, containing the statements of condition of railroads and railways along with the Commission's general statement regarding the work of their Board for the year. As already noted in the STREET RAILWAY JOURNAL the Commission gave several separate days to the outdoor tests and demonstrations on the tracks of the Newton & Boston Street Railway Company at the Walnut Street car houses in Newton.

TRANSFER TROUBLES IN BROOKLYN

The passenger transportation figures of Greater New York for the quarter ended Sept. 30, 1906, as given elsewhere in this issue, are, in one particular, remarkable. This is in the increase in transfers issued in Brooklyn for the period covered by the report. The figures show an increase in passengers carried of 17 per cent, but an increase in transfers issued of 67 per cent. At the same time the net earnings per passenger have accordingly increased 12 per cent. Allowing for the natural increase, due to additional traffic and the increase in transfers resulting from the recent extension of the transfer system, the figures show a general wholesale abuse of transfer privileges. A careful study of the situation by the company disclosed this fact, also that the employees were in league in some cases to defraud the company and that street urchins were trafficking in the slips. One boy who acted as go-between for conductors of the Gates, Nostrand, Tompkins, Halsey and other lines confessed in court last week that he sold transfers for a cent each and another transfer in return, to conductors all along the lines which he frequented and thus cleared something like $5 a day. Four arrests of conductors were made as a result of the boy's confession.

To return to figures of traffic, the total of transfers for the quarter was 39,050,868, as against 22,634,195 for the same period last year, an increase of 16,416,673. For the quarter ending Sept. 30, 1905, the cash fares were 94,570,931, and for the same months this year they were 101,110,874. This was an increase of 6,539,943. The startling increase in transfers on the Brooklyn Rapid Transit, in relation to the increase in cash fares, can be appreciated when compared with the figures of the Coney Island-Brooklyn Railroad Company for the same periods. The cash fares of this company increased 798,187, for the quarter ending Sept. 30, over the corresponding quarter of last year, while the transfers increased only 48,549. On the Coney Island-Brooklyn Railroad only one transfer was turned in for every 7½ cash fares, approximately, while on the B. R. T. lines a transfer was turned in for every 2½ cash fares.

In discussing the Brooklyn transfer problem one of the officials of the company said that the main trouble is with the geography of the city. There can be no one general direction of travel as, for instance, New York, where starting on the East Side at the southern end of the city one can travel north and west on the longitudinal and crosstown lines, or starting west at the upper end of the city travel east and south. It is possible in Brooklyn for a person coming from Manhattan via the Brooklyn Bridge so to transfer to lines operating over the Williamsburg Bridge as to return to Manhattan, the time limit of the transfers giving the opportunity for doing business before their expiration. It is a common practice for women in the uptown sections of the borough to come down town, do their shopping or make calls and return to their starting point for a nickel. Nor, is this all. Many of them, when they leave a car, get a transfer, and after eating their dinner take a car again on this transfer, go to the theater and return again to their homes; and the sum total of their transportation for the 12 hours is only 5 cents.

As concerns the company's own employees, the operation from the same house of lines transferring to each other makes it a simple matter for dishonest conductors secretly to exchange transfers and turn them in in lieu of cash fare. With the hope of doing away with this evil, the practice was followed for a time of distributing transfers at the last moment, but this was found not to work well. The company is now planning to install two registers in each car, one for transfers and one for cash fares, and in this way hopes to insure itself against dishonesty on the part of its employees.

NEW YORK RAPID TRANSIT COMMISSION DOINGS

At a meeting of the Rapid Transit Commission last week, the chief engineer to the Commission stated that he had forwarded his plans for the depression of the Eleventh Avenue tracks to the New York Central officials about three weeks ago, and as yet had not heard from them regarding their ideas of the proper disposal of these tracks. The secretary was instructed to write to the railroad officials requesting them to notify the Board promptly what they proposed to do.

The committee passed a resolution that all plans for proposed subways should have provisions for pipe galleries, to contain the pipes for the necessary street service. The contracts to be advertised for the construction of subways will contain two sections: one for the construction of the subway proper, and the other for the construction of the pipe galleries. This will be done so that in figuring the rental for operating purposes, the cost of building the pipe galleries will not be included.

The Board of Estimate and Apportionment having authorized a bond issue of $675,000 for that purpose, the construction of the Van Cortlandt Park extension to the present Broadway subway will be commenced at once. It was stated that even if the initial steps were taken immediately of advertising for bids for the three new lines to be built in the near future, bids would not be received before March 15, 1907.

SOUTHERN PACIFIC TO INSTALL ELECTRIC TRACTION ON A SAN JOSE LINE

Following the announcement of the plan to install electric traction on the Alameda mole local train system of the Southern Pacific Company, as mentioned in the STREET RAILWAY JOURNAL of Dec. 1, 1906, comes the official announcement by General Manager Calvin that one of the two existing parallel steam roads now running between Oakland and San Jose on the east side of the bay will be converted into an electric railway. This proposed plan will be carried out in connection with the construction of the Dumbarton cut-off across the lower end of San Francisco Bay. This will reduce the land route into San Francisco by 46 miles, and avoid the necessity of twice ferrying freight trains, once at Benicia and once at Oakland, and save a lot of time in delivering freight to San Francisco merchants. At the same time one of the two steam roads to San Jose will be done away with, and the present route by way of Niles will be converted into an electric road. The new trolley road will be 45 miles long, and will run through a rich fruit section, which is rapidly thickening in population. At first the electric road will run from the Alameda mole to San Jose. It will be completed and ready for business within a year from now. The old converted narrow-gage line to San Jose will be maintained as a steam road, running by way of West San Leandro. It is reported that the Dumbarton cut-off will be completed in six months, or, at the outside, a year from now. The actual distance across the bay at Dumbarton Point is only a mile and an eighth at high tide. On the stretch of nearly 2 miles of marsh land to be traversed, but on the west side of the bay there is a very narrow width of marsh. They will put in a large drawbridge at midchannel. There the water is about 45 ft. deep. On each side of the large central column supporting the bridge there will be a clear space 125 ft. wide, allowing ample room for passage of all manner of craft that may in the future navigate that end of the bay.

CONSTRUCTION WORK BEGUN ON THE LINES OF THE JOLIET AND SOUTHERN TRACTION COMPANY

The Joliet & Southern Traction Company has begun the construction of 10 miles of track in the city limits of Joliet, Ill., and of 48 miles of interurban track, paralleling the Chicago & Alton Railroad from Joliet to Dwight, Ill. At Dwight connections will be made with the single-phase system operating between Pontiac and Dwight and with branch lines to Coal City and South Wilmington. The new line to Dwight will consequently make the coal districts south of the city tributary to Joliet.

The Joliet & Southern Traction Company has, under the general railroad law, a fifty-year franchise covering four principal streets in Joliet. These streets radiate in four directions from the center of the city to the manufacturing districts, and the lines constructed on each one of them will furnish an inlet for an interurban line. The Joliet, Plainfield & Aurora Railroad, which has been in successful operation nearly three years, and which will be consolidated with the Joliet & Southern Traction Company, will enter Joliet over one of the new city lines, and the terminal charge which is now being paid to the Chicago & Joliet Electric Railway Company will be saved. One division of the city system will extend in a southwesterly direction through a thickly settled portion of the city to Rockdale, where connection will be made with the Illinois Valley Traction Company, now operating to Ottawa and La Salle. What is called the Des Plaines Street division, which will extend south to the city limits, will make connections with the interurban line to be built to Wilmington, Braidwood, Braceville, Gardner and Dwight. The division directly east out Jackson Street will extend to Highland Park. This park is owned by the city of Joliet, and up to the present time has not been provided with street railway facilities. At Highland Park connection will be made with the Illinois Central Railroad to Blue Island, and this connection will give a short line between Joliet and Chicago. The project was financed locally on the "Cleveland plan," a syndicate of about thirty of the best and most prominent and wealthy citizens of Joliet and Aurora subscribing a sufficient amount to carry the project successfully through to a point where a comparatively small bond issue only will be required.

A site for a terminal station will be selected on Van Buren or Scott Streets, in the vicinity of the postoffice and the new city hall, where a six-story building will be erected. The ground floor and second floor will be used by interurban railway companies, while the four upper floors will be fited up for offices. In this connection it is pertinent to say that the growth of the city at the present time is very rapid, and in the last ten years has been 38¼ per cent. The natural increase in population and the completion of the various interurban projects in the vicinity of Joliet will tend soon to make it one of the most important interurban railroad centers in the Middle West.

SEVEN NEW SUBWAY ROUTES APPROVED FOR MANHATTAN, BROOKLYN AND THE BRONX

The Board of Estimate approved seven subway routes at its meeting Friday, Dec. 7. The subject of rapid transit came before the board through a resolution offered by Controller Metz. It was brief and to the point, as follows:

We report that alternative bids be invited; first, for construction alone, and, second, for construction and operation as follows:

1. Seventh and Eighth Avenues route.
2. Lexington Avenue route.
3. Third Avenue route.
4. Jerome Avenue subway.
5. Fourth Avenue route and Bensonhurst route, in the Borough of Brooklyn.
6. The so-called tri-borough route south of 138th Street, including in addition to the Third Avenue route, Manhattan Bridge route, part of route 9-C, in Brooklyn; part of route 11-EL, in Brooklyn, and routes 11-A, 11-B and 11-F (Bensonhurst route).
7. West Farms and White Plains route.

By this action of the board the Rapid Transit Commission now has authority immediately to advertise for bids on both propositions of construction alone and for construction and operation.

Borough President Coler assured Mayor McClellan that he had no doubt that there would be bidders for his tri-borough route.

The Long Island Railroad Company asked for a franchise to operate a street railroad in Atlantic Avenue, Brooklyn. The road's representative said it would pay what the franchise was worth. The application was referred to a select committee.

THE COMING ANNUAL MEETING OF THE CENTRAL ELECTRIC RAILWAY ASSOCIATION

Preparations are being made for the annual meeting and banquet of the Central Electric Railway Association, to be held in January in the Claypool Hotel, Indianapolis. Effort is now being made to bring to Indianapolis a number of prominent speakers. The Governors of Ohio and Indiana will be urged to respond to toasts and invitations have been sent to T. E. Mitten, president of the Chicago City Railway Company; H. H. Vreeland, president of the New York City Railway Company, and W. A. Bancroft, president of the Boston Elevated Railroad Company. A committee has been appointed by President Spring to make nominations at the January meeting. This committee is composed of J. O. Wilson, Cleveland; Frank D. Norviel, Indianapolis; G. H. Kelsey, Anderson; C. M. Paxton, Dayton, and S. D. Hutchins, Columbus, Ohio.

THE CLOVER LEAF RECOGNIZES THE ELECTRICS

The Clover Leaf has issued a new junction tariff sheet, for both passengers and freight traffic, which formally recognizes the so-called merger traction lines of Indiana, and provides for an interchange of business with them. Special permission to issue the new tariffs was given the Clover Leaf by the Interstate Commerce Commission. The action of the Clover Leaf is regarded by other steam roads as being revolutionary in character, as both the Western and Central Passenger Associations have passed resolutions declaring that the steam roads shall not recognize their electric competitors, either by issuing joint tariffs with them or exchanging business by traffic agreements. Under this new agreement the Indianapolis & Northwestern Company shipped the first carload lot of goods to Toledo, Ohio, via Indianapolis and the Clover Leaf on Dec. 6.

COOPERATIVE INSURANCE MEETING

A meeting of representatives of a number of the leading street and interurban railway companies and electric lighting companies was held at the office of the American Street & Interurban Railway Association, 60 Wall Street, New York, on Dec. 7, to consider the report of the insurance committee of the American Street & Interurban Railway Association, and the plans of insurance recommended by the committee. The following companies were represented: Cleveland Electric Railway Company, Rochester Railway Company, Syracuse Rapid Transit Company, Utica & Mohawk Valley Railway Company, Schenectady Railway Company, Rochester & Eastern Rapid Railway Company, Rome City Railway Company, Oneida Railway Company, Northern Ohio Traction & Light Company, Toledo Railway & Light Company, Canton-Akron Railway Company and others, Detroit United Railway Company and others, Bangor Railway & Light Company, East St. Louis & Suburban Railway Company, Alton, Granite & St. Louis Traction Company; Grand Rapids Railway Company, St. Joseph Railway, Light, Heat & Power Company and others, Columbus Railway & Light Company, Lake Shore Electric Railway Company, Cleveland & Southwestern Traction Company, Cleveland, Painesville & Eastern Railway Company; Brooklyn Rapid Transit Company, Detroit Edison Company, Cleveland Electric Illuminating Company, Interstate Railways Company, Philadelphia, Pa.

In addition to these companies a number of others of equal importance have signified their intention to co-operate in the movement, but were unable for various reasons to send representatives to the meeting.

It was the opinion of all the railway and lighting men present that their companies could successfully carry their own risk through their own insurance organizations. It was decided that, sufficient capital having been subscribed to the American Railway Insurance Company to warrant the writing of insurance on traction and lighting properties, the organization be completed and a resolution to that effect was adopted.

A meeting of the subscribers to stock will be called at once, and directors and officers will be elected. The subscribers expect to be ready to write policies by Jan. 1 or soon thereafter.

HUDSON & MANHATTAN COMPANY TO ISSUE $100,000,000 MORTGAGE—IMPORTANT STATEMENT ABOUT EQUIPMENT BY PRESIDENT McADOO

The State Railroad Commission has granted permission to the Hudson & Manhattan Railroad Company, which is constructing tunnels under the North River, to issue a mortgage of $100,000,000. It was explained by Charles A. Collin, who appeared for the company, that it desired to refund the mortgages of the companies which had been combined into the Hudson & Manhattan Company, and that the assent of 90 per cent of the stockholders had been received. It was proposed that the mortgage should be issued to cover 4½ per cent bonds to the same amount. Of these, $43,000,000 will be held in reserve to meet the needs of the future development of the company, and the other $57,000,000 are to be used to cancel the outstanding obligations of the constituent companies, which bear interest at the rate of 5 and 6 per cent.

President William G. McAdoo, who appeared before the Commission for the company, made some very interesting statements regarding work on the company's property. He said:

"The two tunnels under the Hudson to Morton Street, on what we term our uptown line, are already completed. Between these, up Greenwich, Morton and Christopher Streets to Sixth Avenue, both tubes are practically finished, with the exception of 500 ft. in the southern tube. Work is also going on rapidly between Twelfth and Eighteenth Streets on Sixth Avenue. Work on the downtown tunnels is very expensive. It is necessary to bore our way through solid rock, but good progress has been made. We are working only from the New Jersey side, and have already punched out 3000 ft. We hope to have finished the other 2000 ft. by the time the terminal at Church, Fulton and Cortlandt Streets is ready. This terminal is 400 ft. x 175 ft., and a coffer-dam has had to be built all around it, which was driven down 65 ft. into the solid rock. Uptown, at Sixth Avenue and Thirty-Second and Thirty-Third Streets, where the terminal will be placed, we had difficulty in getting possession of the property, but we have now under control most of what we want. We shall need there an area 200 ft. x 400 ft.

"We shall probably use the third rail, and our cars are to be fireproof and of steel. They will be of the latest construction, and we are using every effort to devise means to avoid crushes on the platforms and in the cars themselves. There will be doors in the middle of the cars as well as at the ends, and at the terminals we intend to provide separate platforms for loading and unloading the cars. The history of New York traffic has shown that accommodations are overtaxed as soon as they are provided, and we wish to be ready to handle the great increase in the number of passengers to New Jersey which is sure to occur."

TOLEDO & WESTERN PROPERTY SOLD

J. R. Nutt, of the Citizens' Savings & Trust Company, of Cleveland, bid in the Toledo & Western property at the up-set price of $337,574.75 at receiver's sale in Sylvania, a few days ago. Mr. Nutt represents a syndicate made up of men from various portions of the country, whose subscriptions amount to $500,000. A call of 10 per cent of this amount was issued to provide for the deposit and first payment and the remainder will be called for within a short time, if the court confirms the sale. At present the property will stand in the name of W. L. Nutt, of Toledo, and the management will be in the hands of C. F. Franklin. Later an operating company may be formed to take charge of the business.

Three trust mortgages are assumed by the purchasers. One of them is for $1,250,000 and covers that portion between Toledo and Fayette, and the other is for $250,000, the bonds being issued to build the Pioneer extension. These are underlying securities, and the third is a consolidated mortgage for the purpose of taking up the underlying mortgages. Interest amounting to $38,000 is due and the purchasers will, of course, take care of this. The road is in fair shape, but the new owners will probably spend about $100,000 in betterments; new freight cars and some other things of the kind. It is said that the road, as it is, will take care of the interest charges.

Mr. Nutt was the only bidder on the property, although it was thought that several other bids would be submitted. Others present at the sale were as follows: Matthew Slush, former president of the Detroit, Monroe & Toledo Short Line; Harry Daugherty, of Columbus, representing some of the minority stockholders; Leonard F. Hotchkiss, representing Charles W. Scranton & Company, of New Haven; C. W. McGuire, of Chicago; H. H. and M. B. Johnson, of Cleveland, representing the creditors' committee; Judge Carlos M. Stone, of the Toledo & Western, and a number of others. It is said that Harry Dougherty stated he would ask the creditors to set aside the sale, but gave no grounds for such intended action.

J. R. Nutt, representing his syndicate, made two different offers for the property some time ago, but neither of them was accepted. Cleveland stockholders seemed willing to dispose of their holdings on the basis proposed each time, but the Toledo stockholders were opposed and no agreement was reached. Realizing the impossibility of getting the stockholders together, the property was allowed to go to sale under the hammer.

This road has been doing a large freight business. In fact, it was built with the purpose of making a freight road of it. It extends from Toledo to Pioneer, by way of Morenci, Mich., with a branch to Adrian.

THE SAN FRANCISCO SITUATION

Since the fire in San Francisco there have appeared in the Street Railway Journal from time to time numerous articles dealing with the situation that confronted the United Railroad, and treating of the methods adopted by the company to restore service. Naturally the methods adopted, of dealing with cases individually, for the most part, has afforded those unfamiliar with the city little opportunity to judge just what the conditions are there now and how far towards completely restoring the service the work of rebuilding the lines has been carried. To supply just this information was it that a brief statement has been secured covering the situation.

Roughly some 2500 blocks of street railway line figured as single track were rendered inoperative by the earthquake and the fire. Of this the company now has 2150 blocks restored to regular operation, a very large number of them new trolley lines converted from what were, up to the time of the fire, cable systems. Of the 350 blocks of track yet to be restored, the company will complete the Powell Street cable lines by Dec. 15, and thus reduce the unrestored roads by thirty blocks of double lines. This distance will further be reduced soon by restoration of a section of the Hayes Street line, thus leaving uncompleted only eight blocks. By Christmas the remaining 142 blocks of unoperated lines will be reduced by nineteen blocks, with the completion of the work of converting the Haight Stret cable line into a trolley route. Early in February, says Mr. Mullally, vice-president of the company, the entire remaining trackage will be restored or converted for the service of regular cars. In the burnt district alone there are 850 blocks of the company's car lines.

A little more than 2800 laborers have been at work on the new track, supplemented by 160 teams and wagons. The completion of the Polk, Larkin and Kent Street Crosstown trolley lines, extending from Lombard and Polk Streets on the north, forty-four blocks, to Twenty-Sixth and Mission Streets on the south, has given the burnt district a new route to relieve the congestion of the Filmore line. In some instances temporary switch-overs have been made to combine parts of two different lines into one new route, but these are merely makeshifts to give car service of some sort pending the completion of other sections of road. So it is with the Polk and Larkin line now diverging to Grove and winding round and going across Market so as to connect with the Tenth Street line. A force of 250 men is at work on Ninth Street between Market and Mission, rushing the road work so that the Larkin Street route may be diverged from Grove and extended straight across Market Street to Mission, and down Tenth till the rest of the Ninth Street road shall have been completed.

One thousand men have been hard at work on Polk Street alone, and now they are to be shifted to some other street. The city's slow and much-delayed work on a sewer being laid in Haight Street has kept back tracklaying on that line. Soon Hayes Street will be done, so that cars can operate from the ferries, out Market, out Hayes, south on Fillmore, and then out Oak to Stanyan Street. They will return by way of the same streets except that the inbound cars will run on Page Street instead of Hayes.

O'LEARY PATENTS ON SEMI-CONVERTIBLE CARS

The St. Louis Car Company has purchased the right to construct cars under reissued patent No. 11,992, known as the O'Leary patent. This patent was sustained in the decision of the United States Circuit Court of Appeals for the Second Circuit, in the suit of John O'Leary and Leroy Vermilyea against the Utica & Mohawk Valley Railway Company.

MEETING OF THE CANADIAN ASSOCIATION

The semi-annual convention of the Canadian Street Railway Association was held at the King Edward Hotel, Toronto, Friday and Saturday of last week. There was a goodly collection of representatives present from companies throughout the Dominion, the only company of importance not represented being the Hamilton Radial Railway, whose employees are on strike. Among the papers presented was one entitled "Some of the Methods in Vogue in Modern Railway Shops," by W. B. McRae, master mechanic of the Toronto Railway. This paper treated generally of shop methods.

NEW YORK CENTRAL STARTS ITS ELECTRIC TRAINS OUT OF NEW YORK

Four passenger trains operated by electricity were run from the Grand Central Station Tuesday afternoon, Nov. 11, marking the inauguration of the electrification of the New York Central's suburban lines out of New York. The four trains were Yonkers locals, over the Harlem division, and they were run by electricity as far as High Bridge, where a locomotive was attached. From High Bridge to Yonkers, steam was used, as electrification beyond High Bridge is not complete. The first train left the station at 12:11 p. m. During the afternoon, approximately an hour apart, three other electric trains were sent out. The last train of the day left a few minutes after 5 o'clock. There was no attempt made to use the new electrical equipment for the train service to High Bridge during the heavy evening rush, nor were any of the suburban expresses run otherwise than by steam. It will be some little time before the new system will be applied to the regular rush-hour trains, and for some days to come only eight trains a day will be run by electricity, and all of these will be Yonkers locals.

ADDITIONAL POWER EQUIPMENT FOR BROOKLYN

The Brooklyn Rapid Transit Company is reported to have just placed a contract with the Westinghouse Company for five 10,000-kw turbines for installation in its New Kent Avenue plant. This station was designed with the end in view of installing ultimately nine turbo-units with a total capacity of more than 65,000 kw, and though the first machine installed in the plant was placed in operation only a few months ago, there have since been added two 7500-kw machines, one of which was placed in service last Monday. Thus, the equipment so far installed and in operation, totals 20,500 kw in three units—one of 5500 kw installed by the Allis-Chalmers, and two of 7500 kw installed by the Westinghouse Company.

STREET RAILWAY PATENTS

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

UNITED STATES PATENTS ISSUED NOV. 27, 1906

836,682. Air-Brake System; George R. Henderson and Walter V. Turner, Topeka, Kan. App. filed Nov. 13, 1902. By means of this invention the supply of air to the train line when it is desired to recharge while the brakes are applied is automatically regulated, so that the train-pipe pressure may be increased at substantially a predetermined rate regardless of the length and capacity of the train-pipe or the amount of leakage therefrom, which rate of increase will be less than that required to release the brakes.

836,705. Air-Brake Signal System; Thomas J. Quirk, Buffalo, N. Y. App. filed June 20, 1906. The combination with the brake and signal pipes of a valve which has differential faces exposed to the brake and signal pipe pressures, and which is operated by the brake-pipe exhaust opening between said valve faces and apply the brakes upon a reduction of pressure in the signal pipe.

836,720. Regulator Valve for Air Brake Systems; Walter V. Turner, Topeka, Kan. App. filed Jan. 2, 1903. Provides a regulator valve with supplementary controlling valve mechanism to govern the inlet and exhaust of fluid pressure to and from the regulating reservoir.

836,870. Track Sanding Apparatus; Nathaniel B. Dodge, Fitchburg, Mass. App. filed March 1, 1905. Comprises a chamber provided with a sand supply port and an exit port, an air nozzle projecting into the chamber and directed toward but not entering said exit port, a shelf projecting from the wall of the chamber above the exit port and extending over the end of the air nozzle, a cut-off valve located at the top of the chamber.

836,895. Electric Block Signal; Walter E. Sands, Brooklyn, N. Y. App. filed Dec. 29, 1905. A block signal system in which a depending rod passes between spring plates to thereby close circuits to audible and visible signals.

836,898. Car Brake; Ollie F. Smith, Valley Head, Ala. App. filed Feb. 16, 1906. Comprises a push-rod connected to the brake-shoes and co-operating with the car or engine ahead to apply the brake when the speed of the train slacks. Means are also provided for rendering the brake inoperative to permit the car to be backed or shifted around.

836,973. System of Motor Control; George H. Hill, Schenectady, N. Y. App. filed May 20, 1905. The controller is provided with an engineer's valve adapted to control the ports of a pair of small pistons in the controller which move the sliding valves for the pilot train pipe pressure.

836,981. Train Control System; Charles E. Lord, Cincinnati, Ohio. App. filed Oct. 1, 1904. Comprises a plurality of separate pneumatically actuated contacts forming a motor controller, means for producing an automatic progression of said contacts, a master controlling valve, and means connected with said valve for checking the progression of said contacts without affecting the contacts already operated.

836,982. Emergency Brake; George Macloskie, Schenectady, N. Y. App. filed March 21, 1903. Provides a normally closed relay valve which controls the operation of the brakes, together with a small normally closed controlling valve, which when operated by the mechanism in the controller causes the relay valve to operate to perform its intended function.

836,997. Rail Brake; William C. Schulz, Indianapolis, Ind. App. filed April 13, 1906. Details of a combined wheel and rail brake.

837,022. Safety Apparatus for Railways; Granville T. Woods and Lyates Woods, New York, N. Y. App. filed Oct. 5, 1904. A pneumatic control system in which the controller must be operated in a predetermined way so that in case of any irregular movement caused by incapacity of the motorman the train would be instantly stopped.

837,037. Motor Control Apparatus; Frank E. Case, Schenectady, N. Y. App. filed April 17, 1905. A motor controller of the separately actuated contact type and a pneumatically actuated reversing switch, some of the separately actuated contacts being operated electrically and others pneumatically, and all being controlled by a master valve through the mechanism of the reversing switch.

837,154. Railway Signaling System; Louis H. Thullen, Edgewood Park, Pa. App. filed May 22, 1905. Pulsating currents are sent over the closed track circuits to operate the signals.

837,167. Car Axle; Oscar Williams, Charleston, Wash. App. filed March 27, 1906. The axle is made in two sections, the abuting ends of which are secured in a suitable casing, so that the wheels on the opposite end portions rotate independently of one another, whereby the respective wheels in passing around a curve in the track can travel at different speeds.

837,175. Adjustable Rail Brace; Frank C. Anderson, Cincinnati, Ohio. App. filed March 23, 1906. Consists of a brace adapted to bear against a rail, a wedge-plate, a wedge adapted to be interposed between said brace and wedge-plate to adjust said rail laterally and means for holding said wedge and brace in adjusted position.

837,192. Means for Preventing Creeping of Rails; Charles Hayes Caspar, Wilkesbarre, Pa. App. filed April 6, 1906. A base plate is placed under the rail, said plate having openings therein spaced apart a distance less than the width of the base of the rail. The spikes have cutting ribs or tongues on their inner sides whereby the rail base is grooved when the spikes are driven home through the openings in the base plate.

837,227. Railway Signaling System; Joseph G. Horazdovsky.

Cleveland, Ohio. App. filed May 21, 1906. The flanges of the locomotive wheels displace a supplemental rail to close an alarm circuit.

837,242. Car Step; John F. Myers, Hiawatha, Kan. App. filed May 6, 1905. An extensible car step designed for slidable and adjustable connection with the ordinary car step and adapted when in lowered position to serve as an additional or lower step for the convenience of passengers.

837,244. Railroad Signal; John C. Naginey, Bremen, Ohio. App. filed April 9, 1906. The flange of the car wheel actuates a slidable cam which has a flexible connection with a shaft on which a sprocket is mounted, and sprocket-chain and rod connection with a distant signal.

PERSONAL MENTION

MR. B. F. STANTON, of San Jose, Cal., has been appointed general manager of the San Jose & Santa Clara Interurban Railway, to succeed Mr. C. C. Benson, who died recently.

MR. F. B. ROYSTER, formerly master mechanic of the Virginia Passenger & Power Company, of Richmond, Va., has been appointed superintendent of the Montgomery Traction Company, of Montgomery, Ala., in charge of the entire operation of the system. Mr. Royster has already entered upon his duties.

MR. FRANK H. TAYLOR, formerly vice-president of the Westinghouse Companies, has been elected vice-president and a director of the Yale & Towne Manufacturing Company, of New York, his duties to relate equally to the manufacturing and commercial sides and ultimately to include many matters now receiving the personal attention of President Henry R. Towne.

MR. C. L. BAKER, passenger and freight agent of the Dayton & Richmond division of the Indiana, Columbus & Eastern Company, will sever his connection with the company Dec. 15, to accept a position with an electric railway in New Jersey. Mr. Baker has been connected with the Indianapolis, Columbus & Eastern for several years, having worked up from the position of a motorman to one which he now holds.

MR. W. F. KELLY, general manager of the Oakland Traction Company and the San Francisco, Oakland & San Jose Railroad (Key Route), of Oakland, Cal., was married Dec. 1 to Miss Edna Wickson, daughter of Professor and Mrs. E. J. Wickson, of Berkeley, Cal. The marriage took place at the home of the bride in Berkeley. Mrs. Kelly is a graduate of the University of California, class of 1898. Mr. Kelly is a graduate of the Ohio Wesleyan University.

MR. R. C. TAYLOR, whose appointment to the position of superintendent of motive power of the Indiana Union Traction Company, of Anderson, Ind., was noted in the Street Railway Journal of Dec. 8, has been engaged in street railway work about ten years, that time divided between the Twin City Rapid Transit Company and the Brooklyn Rapid Transit Company as master mechanic and mechanical engineer, respectively. Mr. Taylor was born in Brechin, Scotland, forty-two years ago, and graduated from the science and art school at South Kensington, London. When a very young man he came to America, and was for five years master mechanic of the West Superior Iron & Steel Company. His next position was with the Robinson & Cary Company, of Minneapolis, for which he acted for six years as mechanical engineer. Following his work with this company came in succession his connection with the Twin City and Brooklyn companies already mentioned. While Mr. Taylor was in Brooklyn the elevated roads of the Brooklyn Rapid Transit were changed from steam to electric traction, involving the rebuilding of steam coaches to electric motor cars, equipped with multiple-unit control. Mr. Taylor has obtained, or has pending, the following railway patents: Electric block signal system, air brake apparatus for multiple-unit trains, brake hanger for electric motor trucks, multiple-unit control for surface cars, curtain fixture for open cars, method of electric car heating and combined electric and hot water car heating.

R. C. TAYLOR

MR. C. LOOMIS ALLEN, general manager of the Utica & Mohawk Valley Railway Company, the Rome City Street Railway Company and the Oneida Railway Company, has been elected vice-president and general manager of the Utica & Mohawk Valley Railway Company, the Rome City Street Railway Company, the Oneida Railway Company and the Syracuse Rapid Transit Railway Company, succeeding Mr. John J. Stanley, who has held that title since Mr. E. G. Connette resigned to go to Worcester. These appointments were made Dec. 6, by the directors of the four companies interested. This places Mr. Allen in charge of the electric railway properties from Syracuse on the west to Little Falls on the east, including the electrification of the West Shore Railroad between Syracuse and Utica. Mr. Allen is a native of Syracuse, and was educated at Alfred and Syracuse universities. He adopted civil engineering as a profession and was first employed with the Norfolk & Western Railway Company. In 1892 he went to Syracuse to engage in private practice as a civil engineer, being a member of the firm of Mather & Allen. In 1895 he was appointed civil engineer of the Syracuse system and had charge of the reconstruction of the track and overhead line on some 64 miles of road. Three years later he became assistant general manager, and in February, 1899, he became general manager of this company. He resigned from Syracuse Dec. 31, 1899, to accept the position of general manager of the Lorain Street Railway in Lorain, Ohio, where he remained a year and a half. When the Andrews-Stanley interests acquired the property of the Utica & Mohawk Valley Railway, Mr. Allen was offered and accepted the position of assistant general manager of that company with Mr. Stanley, and when Mr. Stanley in May, 1902, returned to Cleveland, Mr. Allen was made general manager of the Utica & Mohawk Valley Railway Company and the Rome and Oneida properties. In 1904 Mr. Allen was president of the Street Railway Association of the State of New York.

MR. F. A. HEALY, who has been auditor at Atlanta, Ga., of the West Point route since 1899, has accepted the position of secretary and treasurer of the Indiana, Columbus & Eastern Traction Company, of Cincinnati, the Lima & Toledo Traction Company and underlying organizations, succeeding Mr. F. A. Deverill, who has returned to the service of the Cincinnati, Hamilton & Dayton Railroad Company. Mr. Healy was born in Moline, Ill., in June, 1861, moved to Kansas in 1870 with his parents, and spent his boyhood on a farm. In March, 1880, he entered the office of the Atchison, Topeka & Santa Fe Railroad, at Topeka, Kan., and remained with the company until 1888, working his way up to chief clerk. In that year he was called upon to go to Los Angeles as chief clerk to the auditor of the Santa Fe lines in California, where he remained until 1893, when he was appointed auditor, paymaster and general freight and passenger agent of the Santa Fe, Prescott & Phœnix Railway, with headquarters in Prescott and Phœnix, Arizona. In December, 1895, Mr. Healy became connected with Chas. Parsons & Company, of New York, as auditor and special accountant, and in connection with the law firm of Hornblower, Byrne, Taylor & Miller, of New York, held the position of general auditor of the South Carolina & Georgia Railway, auditor of the Ogdensburg & Lake Champlain Railroad, auditor of the Augusta Southern Railroad, auditor of the Cincinnati, Cumberland Gap & Charleston Railway, and expert examiner of all of the several railroad properties in which the above firms were interested. On the sale of the South Carolina & Georgia Railway to the Southern Railway, Mr. Parsons retired from active business life, and Mr. Healy was made assistant auditor, with headquarters in Washington, with full charge of all prior accounts of all the old consolidated and receivership lines. He was appointed auditor of the West Point route in December, 1899, and has been the head of its accounting department since that date. Mr. Healy organized the Southeastern Accounting Conference and the Southeastern Claim Conference, composed of all lines east of the Mississippi and south of the Ohio Rivers. He has been prominent for years past in affairs of the Association of American Railway Accounting Officers, serving on the passenger committee two years, disbursement committee two years, freight committee six years, and was last year elected a member of the executive committee for two years. Mr. Healy was the first and only secretary and treasurer of the Transportation Club of Atlanta, and was re-elected for the fifth consecutive year Nov. 6, last.