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Of this issue of the Street Railway Journal 8000 copies are printed. Total circulation for 1905 to date, 400,350 copies, an average of 8170 copies per week.

The Location of Smoking Compartments on Interurban Roads

The novel arrangement of smoking compartments on interurban cars, suggested by a correspondent in our issue of Nov. 18, has elicited two interesting replies. In both, the writers express themselves as preferring the ordinary plan, and in the letter from Mr. Bacon this week some very convincing arguments are given as to the desirability of placing the compartment in one end of the car, as usual. The chief reason for one or two separate smoking compartments in the center of the car is that with a double-ended car passengers who enter from

the rear platform will not have to pass through this compartment when it is at the rear of the car. The objections to the arrangement, however, are considerable, and we do not believe that there is any serious objection to allowing passengers on interurban lines to enter and leave the car by the front platform when the conditions of the road permit.

Heating and Lighting Interurban Cars

The superintendent of transportation of a large interurban system which parallels steam railroads recently called attention to the importance of interurban roads giving more attention to the details of heating and lighting cars on long runs during the winter. His complaint is that interurban roads operating over long stretches of open country at high speeds have not got far enough away from street railway practice yet in the matter of heating, and the voltage is frequently so variable as to make it difficult to read continuously with comfort on account of the variation in light. We believe, as a rule, interurban cars are fairly well provided for in the matter of heat, although in extremely cold weather it may be possible that interurban cars of lighter construction and with windows not tightly fitted allow so much leakage of air around the windows as to make them hard to heat. At any rate, it is well to see that cars are provided with ample radiating surface from hot-water or electric heaters, and that windows can be made tight during the coldest weather. It may even be advisable to put on storm sash in some places, as is now done on two important city railway systems of this country. Cold cars cannot fail to be a source of much loss of revenue to an interurban road in the winter, as nothing is more discouraging to the prospective traveler than a poorly heated car.

The lighting of an interurban car is a matter entirely up to the electrical engineer, and the directors should authorize purchases of feed wire. It is to be regretted that the drop in voltage midway between sub-stations when two cars are near each other is frequently so excessive as to cause very annoying variations in the light. Of course, this annoyance is only one of the bad results of insufficient feed wire. As to loss of power and loss of time due to slow speed, it is even more important. It is all very well to say that such conditions ought not to exist. The fact is that they do exist in a great many places and need looking after.

Maxims on Courtesy

It is often said that politeness costs nothing, and in any corporation which enters so intimately into the daily life of the general public as do street railway companies there is every reason why the representatives of the company should make every effort to treat all passengers with courtesy. In fact, with the improvement of street transportation in other directions there is a notable tendency on the part of all companies to hold their employees more strictly accountable to the exercise of this virtue and to impress upon them its necessity. We realize that the employee is not always the recipient of that politeness which is required of him by the management, and we have

every sympathy for the man on the back platform who is expected never to lose his temper, but must return a mild answer to irascible complaints of matters for which he is often not responsible. Nevertheless, he may enjoy the satisfaction that this policy is not only much more desirable, but a much more dignified one for him personally to pursue, and the company which instructs its employees along these lines will raise itself very much in the esteem of its patrons. It is growing to be a common practice for railway companies to print on the margins of its general rule books or time-tables some maxims on the subject of politeness, so as to keep this point always in the mind of the trainmen. An instance of this kind is the general rule book of the Chicago City Railway Company, from which the following sentences are quoted: "Cars are run to accommodate patrons." "Use special courtesy to old people." "Do not run by would-be passengers." "Give passengers a safe and pleasant trip." "It is our duty to please our patrons." "Obligingly direct the passengers." "Make all requests in a civil manner." "Cultivate the good will of all passengers." "Do not give offense in making change." "Do not run away from transfer points." "Always be attentive and patient." "Do not quarrel with passengers." "Be civil and polite to passengers."

Handling Unusual Crowds

The sanguinary football season just closing has given the usual desperate task to the street railway fraternity. Managers have learned much about handling extraordinary rushes during the last few years, and the situation is steadily improved, but the fact remains that at any very big assemblage there is a tremendous problem in transportation to be solved. Ordinary congestion of traffic comes from the desire of everybody to have rapid transit at the same time of day. These extraordinary strains upon street car facilities are merely an exaggeration of the same situation. At a football game or a circus many thousand people want to arrive at a given point within less than half an hour, and the thing is well-nigh impossible of accomplishment. For instance, suppose that a crowd of 20,000 is to be handled. Assume sixty passengers per car and just figure what can be done at any practicable headway. To accommodate the throng with even scant standing room requires 333 cars. Even if one could despatch these at the rate of one every 10 seconds, it would take 55 minutes to get the throng under way, let alone the running time for the cars. At 20-second headway very nearly 2 hours would be required merely to get the last carful going. And this assumes no material delay from picking up passengers and that everyone gets aboard without causing a jam that delays the cars. By way of increasing the difficulty many roads are a little short of feeder copper, and the tremendous call for energy along a single line is hard to meet without considerably reduced voltage, and when a long procession of cars gets even momentarily stalled by something on the track ahead it takes a long time to get going again, and far longer to get up any speed. Considering the difficulties of the situation, it is little short of marvelous that the transportation companies can do the work at all, let alone doing it as well as they actually manage it.

The logic of the situation requires active co-operation between the road and the public. The principal thing is to give ample notice of all special arrangements which have to be made and to clear the route as far as possible. Happy is the company that can reach the scene of action over several routes. In case of such events in Boston like the annual Yale-Harvard football game, the battleground is fortunately reachable by

several lines, so that the situation is somewhat mitigated. At the Yale-Princeton game in New Haven, and in fact in most similar instances, the conditions are less favorable. Over a single line one may be able to get 8000 to 10,000 people under way in an hour, but even this cannot be done unless the track ahead can be kept moderately clear. Any blockade is fatal, and even the delay caused by a switch or cross line holds up the entire procession. A car crossing the line when the cars have been started on headway of 20 seconds or so is morally certain to bring a large group of cars to a full stop, from which it takes half a minute or more to recover. After this has happened a few times, the cars, no matter what their nominal headway, have closed up into a compact mass, and then every delay counts for still more. It would seem like a wise step to deflect crossing traffic into another route if possible and to make modification enough in the general schedules for the time being to clear the tracks a bit. Another possible ameliorating step is to send out cars in groups with a little extra headway between each group. Of course, this causes a slight delay at the start, but it is more than likely to be made up by keeping an enormous procession of cars from being closed up so closely as to cause a protracted blockade. It is a troublesome business at the very best, presupposing an indefinitely large car equipment and no shortage of power.

Standardization of Parts

While it sometimes seems to those interested that the standardization of anything pertaining to electric railway rolling stock is next to impossible because of the extremely varied conditions, as well as the varying ideas of men engaged in the business, it is none too soon to begin a work of this kind. At the time the American Railway Mechanical and Electrical Association was organized it was generally understood that one of the things toward which this association was working was a standardization of parts. The association has been so busy with other matters that nothing had been done in regard to standardization of parts until at the last convention, when the matter came up for discussion. There then developed a strong sentiment that it was time for the association to begin to name certain standard sizes for a few detailed parts, and from them, as necessity seemed to require, to standardize other more numerous parts. It is, of course, out of the question to adopt a standard which will cover all equipment as on the steam railroads. The most that can be done is to name a number of standards suited to different weights of cars or sizes of motors. For example, in the matter of axles, there is now an endless variety of combinations of sizes. Cars of the same weight do not, by any means, have similar axles. It would be a decided advantage if a series of axle sizes were made standard, so that instead of forty or fifty different axles we would have four or five. Out of these four or five, a selection could be made to suit the weight of the car. Standardization is desirable in connection with numerous other parts of a car. While, as said at the convention, it is not desirable to attempt any standardization of the motor equipments themselves, there are many parts going into the construction of a motor which should be standardized, and this would result in great reduction in the number of repair parts that must be kept in stock in any store-room. These things are sure to come in time, and it is none too soon to begin now in some of the directions where this reform can be most easily made. By the time these parts can be standardized there will be numerous others for which there is a great need of standardization.

The Sorrows of Municipal Ownership

Mayor Dunne is a man of many woes. After being placed in office by a wave of popular excitement, he has sorrowfully waked to the realization that his constituents did not quite know what they wanted and were not pleased with any explanation of their desires which he had to offer them. It has been a case of the morning after, with a vengeance. To begin with, the Mayor with somewhat misguided enthusiasm called into consultation a hard-headed, unsentimental Scotsman, who knew municipal ownership at first hand. Mr. Dalrymple came, investigated and departed. He doubtless gave the Mayor some very valuable, if unpalatable, advice, and incidentally acquired a thorough appreciation of those phases of American political life which are most nearly concerned with municipal ownership. In Scotland this expression denotes the operation of a public utility by the civic authorities for the public benefit. Does anyone dare to say that it was intended to mean just this and nothing more in Chicago politics? The Mayor was very chary about taking the lid off the report made by Mr. Dalrymple, and what leaked out was of a character to give a Chicago politician nervous prostration. For Mr. Dalrymple openly intimated that a municipal tramway service must be kept out of politics. This is the very rock on which the municipal ownership scow has split over and over again at the beginning of its malodorous voyage.

Analyze as we may the philosophy of public ownership of public utilities, whenever the populace rises under its self-appointed leaders to demand its "rights," in the background looms the Temple of Graft, and above the sonorous calls for "justice" rises in the distance a shriek for loot. Any public enterprise that is conducted without the fear of practical politics and upon a strictly business basis will succeed just as an honestly conducted private enterprise would, and on the other hand, any private business that is conducted on the basis of favoritism and graft will generally fail. There is no mystery about the matter. There is certain work to be done, and if it is conducted on a strictly business basis, with every man giving an honest day's work for an honest day's wages, it will be well and economically done. If it is carried out on the basis of a rake-off all around and a soft snap for all comers it will end in failure. Mayor Dunne, however honest his impulses, was called to face a condition which he could not ameliorate. He has failed dismally in attempting to devise a scheme of municipal ownership which should be at once acceptable to honest men and to grafters. He has no need to charge up his failure to corrupt influence or to the "capitalistic press," for its sources lie deeper. The latest phase of the situation is that the compromise over which the companies and the transportation committee of the Council have been working all summer has finally been reached, and an extended digest of the agreement, which covers both the Chicago City Railway Company and the Union Traction Company, is published elsewhere in this issue.

We trust that the experience of Chicago in the slough of the municipal ownership idea will carry a lesson to any other cities which may be now on the brink, debating the advisability of making a plunge. If it had not been for the tremendous interests involved we suspect that many advocates of private ownership would have been glad to have seen municipal ownership tried in Chicago. It is fortunate, however, for all concerned that more sensible counsels prevailed. The fact is that the project was never more in Chicago than a political issue with which to hoodwink credulous voters. The citizens have

now learned more about the subject than they originally knew, and as an issue in that city municipal ownership is practically dead. It is one thing to resolve that the tramways should be owned by the city and quite another to formulate a sane and logical plan for acquiring and operating them. As we noted recently, the Civic Federation has undertaken to investigate public ownership through a committee, and when the report is at hand Mr. Dunne, in the retirement of private life, and others who are interested in the subject, may receive some enlightenment. The subject is a very large one, and light upon it is badly needed. We have a strong suspicion that the searchlight of this committee will disclose some things which the advocates of public ownership will not hasten to applaud. Any enterprise, the success of which depends upon purity in politics, is at least open to the possibility of disaster.

Night Work in the Shops

An unexpected visit to their shops after 12 or 1 o'clock at night by many master mechanics would reveal a condition of affairs they little expected was in existence. Instead of being at their work, the car inspectors and cleaners might be found stretched out on the car seats asleep. The lonesomeness of night is largely responsible for such a state of affairs when they occur. It causes the night foreman to feel closely in league with his fellow workmen and he does not deny them a few hours sleep at the expense of the company. Probably the men have caught him sleeping a few times, and ever afterward, for fear of exposure, he is compelled to let them impose on him. At any rate, in many small shops, all the night men, from foreman down, get in several hours of sleep while on duty. If censured they will probably offer the excuse that they hurry with their work, get it finished and then have nothing more to do until the cars are sent out in the morning. Usually an inspection of the cars will show this statement to be true and that they have literally hurried with their work. The interiors may reveal the fact that the brush and broom have passed through them lightly. Brake-shoes, motor brushes, clearance of armatures and loose nuts and bolts likewise indicate that the motor and truck inspector has slighted his duty.

If the work is so heavy that the desired amount of sleep cannot be obtained by the crew, the men and their foreman may combine in an appeal for additional force on the plea that they are overworked. The shop superintendent is usually at their mercy. Not knowing the true condition of affairs, his natural sympathy for men compelled to work at nights leads him to provide the addition desired. An occasional quiet trip of investigation in the early morning, either by the shop superintendent himself or his assistant, will in many instances give good returns for the trouble.

In general, however, we believe as little work should be done at night as is absolutely necessary. When the schedule requires the use of all the cars on hand, the inspection and cleaning must be done at night. But where the road has several extra cars, much of it can be accomplished during the day. That the work can be done more satisfactorily at this time needs no argument. A car that appears clean under lamplight may have quite a different appearance in natural light. If more inspection work were carried on during the day no doubt the expense of repairs would be greatly lessened. It stands to reason that a wide awake man with the assistance of daylight will do work more satisfactory than one half asleep and who must feel rather than see what he is doing.

THE LEITH CORPORATION TRAMWAYS

The authorities of Leith, in Scotland, purchased last year from the Edinburgh Street Tramways Company the horse tramways in Leith. These tramways were the portion of the Edinburgh Street Tramways Company's property in the burgh of Leith. The greater part of this company's lines were



LARGE PIECE OF SPECIAL WORK IN LEITH

originally in Edinburgh, but about the year 1892 the corporation of Edinburgh purchased the lines in that city, and about 1896 converted them for cable traction. Since that time there has been a break in traffic at Pilrig Street, the boundary between Edinburgh and Leith, and passengers have had to change from the cable into the horse cars.

After the Leith Corporation had purchased by agreement the horse tramways in Leith, it approached the Edinburgh Corporation with a proposal to equip electrically the cable line from the boundary up to Princess Street to obviate the break in traffic at the boundary and so get the advantage of through running. This would have been a very great advantage to the inhabitants of both Edinburgh and Leith, as well as to the railway systems themselves, as it would render the half mile on each side of the boundary productive, which is not the case when passengers have to change cars. The Edinburgh Corporation, however, would not entertain the idea, and the break in traffic therefore remains. Under these circumstances the Leith Corporation resolved to reconstruct the lines within its own burgh and to make an extension for overhead electric traction, and appointed James More, Jun. M. Inst. C. E., the engineer for the scheme.

The total length of line purchased was about 5 miles of route, and with the extension the total route miles are $6\frac{1}{2}$, which are all double line, except at certain curves and one short length in a narrow street where double track was not feasible. The track is generally laid along the middle of the roadway. There are, however, two routes where the double track is laid with the nearest rail 5 ft. from the curb. These are the routes along the road from Commercial Street to Newhaven, where the north side of the road adjoins the railway or sea wall of the Forth, and also on the road adjoining the Leith Links or public common.

PERMANENT WAY

The rails, which are 7 ins. in height, are of a special section, as shown herewith. The weight is 106.7 lbs. per yard, and the standard length is 45 ft. The rails are connected by the Dicker

joint, in which the outside plate is mortised into and comes up flush with the rail head. The joint plates are 24 ins. long and are fastened with six 1-in. diameter steel bolts with lock nuts. Tie-bars are used every 6 ft. They are of the ordinary flat-bar type and have two bolt ends, with two nuts and washers at each end.

The excavation was made 14 ins. deep to allow for the depth of the rail, 1 in. of packing and 6 ins. of concrete. The latter is composed of macadam to pass through a 2-in. ring with the fine shivers left in, sharp pit sand and Portland cement, in the proportion of macadam shivers five parts and sand and cement one part. The packing is composed of crushed granite and Portland cement in the proportion of three parts of crushed granite to one of cement by measure. The packing was done before the concrete was quite set and only damped slightly. After it had been beaten in tightly under the rails it was watered from a can with a hose.

The paving is in some routes granite and in some whinstone. The paving blocks are 6 ins. x 4 ins. They are bedded on cement bedding of sharp pit sand and cement, three to one proportion. This bedding was only damped immediately before laying the setts, and these were racked and rammed immediately. The joints of the paving were racked with clean broken whinstone passed through a $\frac{1}{2}$ -in. sieve and stopped in a



VIEW ON NEWHAVEN ROAD, SHOWING SIDE BRACKET POLE CONSTRUCTION

$\frac{1}{4}$ -in. sieve. The grouting was of pitch, properly tempered with oil.

The switches and crossings are of Hadfield's "Era" manganese steel, and all the special junctions were put together at Hadfield's works with most satisfactory results. They are of the leg design, enabling standard fish-plates to be used throughout. The junction at the foot of Leith Walk is a particularly

difficult and rigid piece of work, which was put together in a remarkably short time. The excavation was started and the entire junction finished with all the lines in working order in twelve days. Hadfield rail drains are put in wherever necessary.

Under each pair of fish-plates two No. 0000 B. & S. Forest City flexible protected bonds are used. The two rails of each track and the two tracks are bonded by stranded bonds of the Forest City make at 120-ft. centers.

OVERHEAD EQUIPMENT

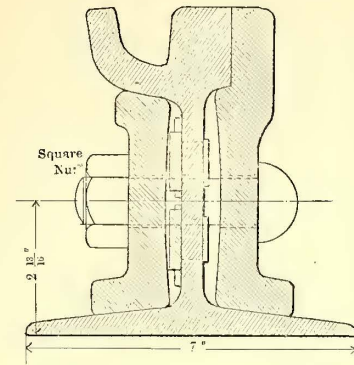
The poles used are the Mannesmann solid drawn, seamless, one-piece, stepped type. There are three different sizes of poles, the length of the steps being the same in all, namely: Lower step, 17 ft.; middle step, 7 ft., and upper step, 7 ft. The steps are of equal diameter throughout their length and are not tapered. They are as follows:

	Lower Step		Middle Step		Upper Step	
	Dia.	Thick-	Dia.	Thick-	Dia.	Thick-
	Ins.	ness	Ins.	ness	Ins.	ness
No. 1 size.....	7½	5/16	6½	5/16	5½	5/16
No. 2 size.....	8½	13/32	7½	13/32	6½	13/32
No. 3 size.....	9½	7/16	8½	7/16	7½	7/16

The usual tests were applied to a proportion of these poles at the works, and they gave most satisfactory results. The thickness is good as regards uniformity. They are particularly

The position of the trolley wire in relation to that of the track varies laterally. Where center poles are used each of the wires are 2 ft. 6 ins. inside of the middle line of each track.

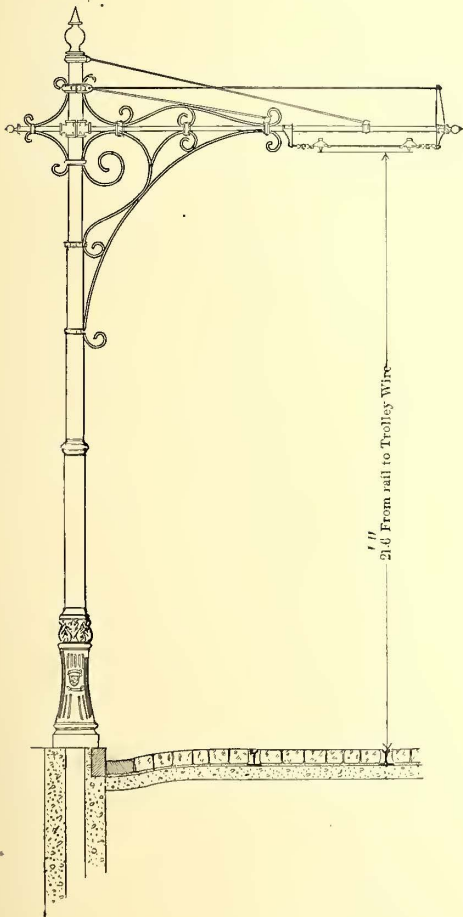
Where side bracket and span poles carry the wires they vary from the middle of the track to a maximum of 6 ft. outside. The height of the trolley wire from the rails is normally 21 ft. 6 ins. at the ears. It varies from this, of course, at the bridges, etc. Flexible bow-string suspension is used throughout with a strand 7/12 S. W. G. galvanized steel wire. The trolley wire is of the grooved section 0000 S. W. G. sectional area. It is to the



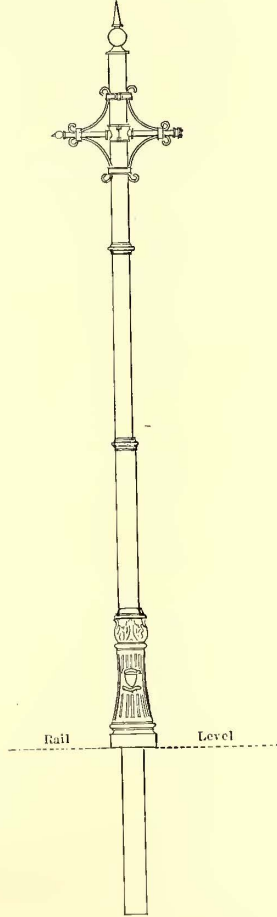
SECTION AT JOINT OF STANDARD 106.7-LB. GROOVED RAIL NOW USED IN LEITH

usual specification as to tensile strength and conductivity, and was supplied by the British Insulated & Helsby Cable Company.

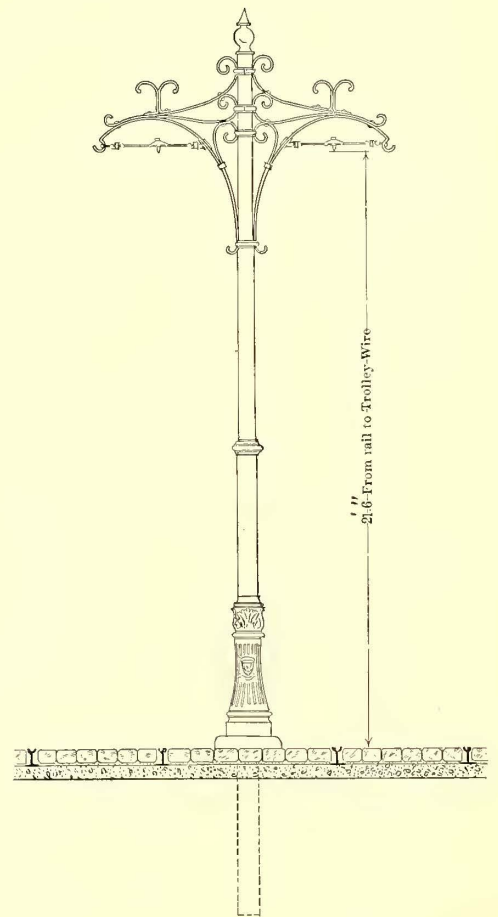
The ears are of the mechanical type, with a main and clamp-



SIDE BRACKET POLE



SPAN WIRE POLE



DOUBLE BRACKET CENTER POLE

straight throughout the entire length, and the finish and "skin" is exceptionally good compared with the usual pole or tube for this work.

Three different types of pole are in use, viz., center, side bracket and span, to suit local circumstances. The scroll work is of wrought iron, and in the side bracket and span poles the clamps are of cast malleable iron. In the center poles the top clamps are of mild steel forged. At the feeder poles a vertical slot 6¾ ins. x 1¾ ins. is cut to admit the fixing of a cast-iron inlet bend to carry in the line cables.

ing member to clip and hold the trolley wire by the groove. The clamping is done by snap-head slotted screw studs of steel. The ears used on the straight line are 18 ins. long with six studs; on easy angles or curves, 24-in. ears are used with eight studs, and on all curves less than 200 ft. radius, 36-in. ears are used with twelve studs.

The section insulators are of the Hewer type, with a lignum vitæ insulating strip, and are most satisfactory in every respect. All overhead fittings, ears, hangers, pull-offs, frogs, crossings, section insulators, etc., were supplied by S. Dixon

& Son, Ltd., Leeds. Johns-Manville insulating material is used, excepting in the section insulators, which is Ætna, and 3/4-in. suspension bolts are used in all hangers. The guard wire is the usual stranded 7/16 S. W. G. galvanized steel wire, which is earthed at every fourth pole.

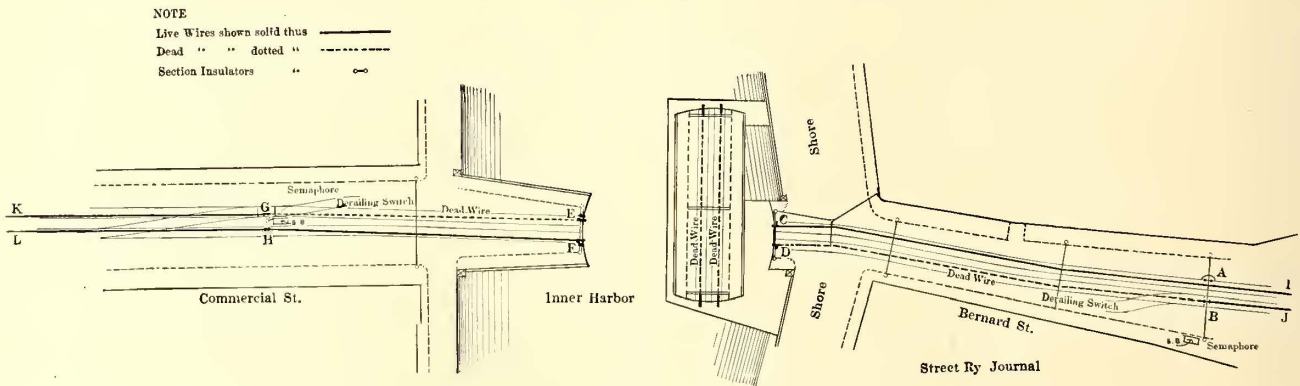
Eight sets of Turner's switch or point controllers, manufactured by S. Dixon & Son, Ltd., of Leeds, are in use and are giving very satisfactory results. Six are employed for the purpose only of moving the tongues of the track switches. Two others are used for operating signal arms and derailing switches on each side of the Bernard Street swing bridge, which will

BERNARD STREET SWING BRIDGE

The tramways cross a swing bridge over the inner harbor. The total length of the swinging portion of the bridge from heel to toe is about 98 ft., with a clear span of 40 ft. Three light lattice work arches or trestles have been erected to carry the trolley wire, which is No. 00 S. W. G. and of the grooved section. A plan of the bridge is shown on this page. Before being swung the bridge has a vertical tilting motion. The heel end at *C* and *D* drops about 4 1/2 ins., and the toe end *E* and *F* rises a proportionate distance. This tilting action allows the bridge to come down on to the turntable, and it is then ready



SWING BRIDGE ON BERNARD STREET, SHOWING METHOD OF MAKING CONNECTIONS



PLAN OF BERNARD STREET BRIDGE

be mentioned later. They are also applied for signals to block three single line curves, so that the motormen may know when a car coming in the opposite direction has entered the single line at the other end.

The feeders are paper-insulated, lead-covered, armored cables laid in wooden troughs and run in with pitch. There are, of course, positive and negative or return cables, and they vary in sectional area from 1 sq. in. to 0.15 sq. in. The largest return cable is 1 sq. in. in area, and the positive feeder has an area of 0.5 sq. in. There is also the usual three-core cable for telephone and pilot wires. The power is supplied to the tramways from the Corporation Electric Light Station, which is most conveniently situated as regards the layout of the system. The price per kw-hour agreed upon is 1 1/4 d. (2.5 cents) at the tramway 500-volt circuit.

for swinging. There are no gates to close against the traffic when the bridge is open, but derailing switches and signals are used, which are automatically worked by the tilting of the bridge before it is swung.

As will be seen from the diagram, when the bridge is closed the approaching length of trolley wire in Commercial Street is fed from the section box *A* in Bernard Street through the two vertical knife switches *E* and *C* on the bridge. The approaching trolley wire *B D* in Bernard Street is fed from the section box *H* in Commercial Street through the two vertical knife switches *F* and *D* on the bridge. The tilting action of the bridge before swinging opens the switches *E F* and *C D* on the bridge trolley wire, thus cutting out the current from the approaching lines on both sides *B D* in Bernard Street and *G E* in Commercial Street. By the same tilting motion of

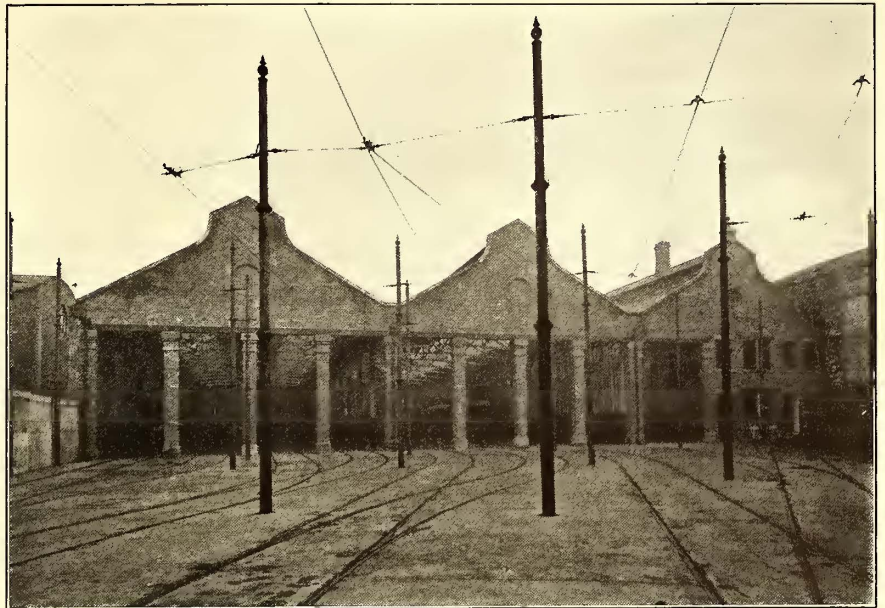
the bridge two of the Turner point controllers are brought into operation, and these actuate the semaphore arms and derailing switches at points *G* in Commercial Street and *B* in Bernard Street. The whole bridge equipment, safety signals, derailing switches, etc., were carried out by S. Dixon & Son, Ltd., of Leeds, under the personal superintendence of W. H. Turner, their chief engineer and the inventor of the automatic point controller.

CAR DEPOT

The car shed will house about forty-eight cars and the repair shop seven cars. There are ten sidings in the car shed, all with repairing pits under for practically their full length. Rails are laid in the bottoms of these repairing pits, on which run small bogies or trucks. These have a lifting jack for the purpose of carrying any part of the motor equipment from under the car. These trucks can then be run on to a transfer table in the pit at the end of the car shed along the gable into the repair shop, and vice versa. This saves a considerable amount of handling and the transfer table does not encroach on the storage capacity of the car shed. It is entirely under the overhang of the cars from the wheel to the fender or buffing bar. The trolley wiring of the car shed and repair shop is all suspended on span wires and no troughing is used. The floor of the shed has been laid with grano-

Electrical Engineering Company, each supplying fifteen ordinary double-deck cars and three covered top cars.

Two types of cars were supplied by the British Thomson-Houston Company, of Rugby, and differ from those supplied by the Brush Company. The bodies and trucks were made at Preston at the United Electric Car Works. The over all length



CAR HOUSE EXTERIOR



INTERIOR OF CAR HOUSE

lithic, as is also the entire yard to the entrance gates in Leith Walk.

CARS

The number and types of the cars are as follows: Ordinary double deck, thirty, and covered top double deck, six, making thirty-six cars in all. The contract was equally divided between the British Thomson-Houston Company and the Brush

of the bodies is 27 ft. 6 ins.; the over all width, 6 ft. 9 ins., and the height from the rail to the trolley plank, 9 ft. 7 ins. on the double-deck cars and 15 ft. 8 ins. on the covered top cars. Both have four side windows. The seating capacity of the double-deck cars is twenty-two inside and thirty-six outside, a total of fifty-eight; and of the covered top cars, twenty-two inside and thirty-four outside, a total of fifty-six.

The trucks are Brill 21-E type with wrought-iron center wheel with steel tires 31 $\frac{3}{4}$ ins. diameter, made by John Baker & Company, of Rotherdam. Ordinary ratchet spindle hand brakes are fitted, with a block to each wheel, and also Tidswell life guards. The wheel base is 6 ft.

The equipment consists of two motors, GE 54 type, with four-turn armatures, two controllers of the B-18 type, with rheostatic brake of five notches, with the neces-

sary resistances, circuit breaker, fuse, lightning arrester and trolley earth indicator, etc. On the ordinary double-deck cars there are eighteen 16-cp incandescent lights, and on the covered top cars, twenty-two lights. The covered top cars have sash side windows and sliding panels on the roof similar to those at Liverpool. The system is also supplied with one training car, which is equipped with B. T. H. type GE 54 motors and B-18

controllers, and one water cart and sweeper combined, equipped with GE 58 motors and B-18 controllers. The equipments for all the cars are double-motor equipments.

The cars supplied by the Brush Company were made at the company's works, Loughborough. The over all length of the bodies is 28 ft.; the width, 6 ft. 9 ins., and the height to trolley plank on the ordinary double-deck car, 9 ft. 10 $\frac{5}{8}$ ins., and of the covered top car, 15 ft. 8 ins. from the rail. The seating capacity of the double-deck cars is twenty-two inside and thirty-four outside, a total of fifty-six; and of the covered top cars, twenty-two inside and thirty-two outside, a total of fifty-four.

The wheel base is 6 ft. and the trucks are the Brush AA type. The wheels and brakes are the same as those already described, but the cars are fitted with Hudson & Bowring life guards.

The motors are of the Brush 1002-B type, with turn armatures. The controllers are of this company's 3-A rheostatic braking style, with five brake notches and the necessary



VIEW ON CRAIGHALL ROAD, SHOWING CURVE AND CENTER POLE CONSTRUCTION

resistance, circuit breaker, fuse, Garton lightning arrester and trolley earth indicator. The ordinary double-deck cars have eighteen 16-cp lights and the covered top cars 22-cp.

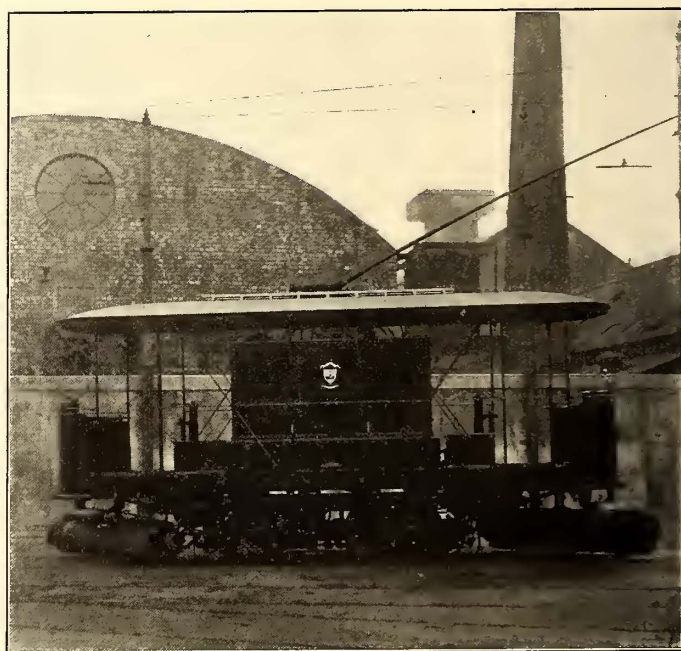
The sprinkler and sweeper car is also shown. The tank has a capacity of 1000 gals. of water. It has two GE 58 motors with six-turn armatures, two B. T. H. B-18 controllers and the other necessary B. T. H. equipment. It is fitted with two revolving brooms, snow plow and sprinkler. The body and truck was made by the United Electric Car Works, Preston, and the electrical equipment was supplied by the British Thomson-Houston Company, Rugby.

GENERAL

The permanent way, overhead equipment and the car shed were all constructed by the corporation. The permanent way under the superintendence of J. R. Findlay, burgh surveyor. The car shed work was supervised by George Simpson, burgh architect, and the overhead equipment by A. Peden Rutherford, A. M. I. E. E., burgh electrical engineer. Mr. Rutherford also carried out all the work for the tramways in his electric light power station, including boilers, engines, switchboard, etc.

IMPROVEMENTS AT FORT WORTH

Improvements made to the property of the Northern Texas Traction Company extend to all departments of the company, and have been referred to previously in the *STREET RAILWAY JOURNAL*. An improvement recently completed is the extension of the Hemphill line to the Fort Worth Iron & Steel Works, a distance of about 5700 ft. In addition to this the company has renewed 4200 ft. of the old line, using 56-lb. T-rail for the entire distance of 9900 ft. The track construction consists of the above 56-lb. rail, 6-ft. x 8-in. x 8-in. burnetized ties, 2-ft. centers, and the usual span construction, using burnetized poles 12-in. butt, 7-in. top. The span construction consists of 5-16-in. cable span wire with $\frac{1}{2}$ -in. x 10-in. eye-bolt, each span insulated by cutting in wood strain 12 ft. from each pole. The trolley is 00 and feeder 0000, all furnished by Roebbling's Sons Company, of Trenton, N. J. The General Railway Supply Company, of Pittsburg, furnished the caps, cones and ears, and also 10-in. concealed bonds for bonding of the track. The company has also ordered 200 tons of 60-lb. T-rail and 30 tons



COMBINED SWEEPER AND SPRINKLER

of 70-lb. high T-rail from the Cambria Steel Company, of Johnstown, Pa., and 80 tons of 80-lb. 7-in. high T-rail from the Lorain Steel Company, of Lorain, Ohio. The 60-lb. T-rail and the 7-in. high section rail is for extensions in the city of Fort Worth into the populous Third Ward district, some 2 miles in extent. The 70-lb. rail is for improvements on the interurban between Fort Worth and Dallas. The trolley and feed for this extension has also been purchased from Roebbling's Sons, and the overhead material of like character as the Hemphill Street extension, from the General Railway Supply Company, of Pittsburg. On the interurban the company is replacing the old 4-in. mechanical trolley clip with a 9-in. clinch ear, furnished by the General Company, of Pittsburg.

T-RAIL FOR PAVED STREETS IN KANSAS CITY

The Kansas City Railway & Light Company has adopted 80-lb. standard A. S. C. E. section T-rail for brick paved streets, and is using that rail on track laid in such streets this year. No more girder rail will be used in the city. A special shape of brick is used for the flangeway. The track is laid on broken stone with concrete around, but not under the ties. The paved brick is laid directly on the concrete without any sand cushion.

MEETING OF THE OHIO INTERURBAN RAILWAY ASSOCIATION

The Ohio Interurban Railway Association held its November meeting at the Tod House, Youngstown, on Nov. 23. The meeting was called for this busy iron manufacturing city, which lies in the northeast corner of the State, in order to interest managers of interurban roads in that district, who heretofore have never attended meetings of the association, and in this it was successful. The attendance was about forty, including a number of operators from that district who were proposed for membership. Future meetings will probably be held either in Dayton or Columbus, as these points are most conveniently situated for bringing out a large attendance.

President E. C. Spring announced that the plan of the appointment of a permanent secretary and the formation of a publication and publicity bureau was meeting with considerable encouragement, but that it could not be definitely acted upon until more roads had been conferred with, and he said that he hoped to interest the Indiana roads in this proposition. He asked that all roads reply to his communication on this subject by Dec. 15, so that some action might be taken at the meeting to be held at the Chittenden Hotel, Columbus, Dec. 21.

Plans are being made for a magnificent banquet and gathering at the annual meeting to be held Jan. 25 at the Algonquin Hotel, Dayton. Prominent traction and public men from all over the country will be invited. Committees on entertainment and reception were appointed from among members in the Dayton district. A nominating committee, composed of Robert Dittenhaber, Toledo; F. G. Green, Springfield; F. D. Carpenter, Lima; J. O. Wilson, Cleveland, and J. R. Harrigan, Newark, was appointed to select a ticket of officers for the coming year.

INTERLINE TICKETS

J. H. Merrill, chairman of the transportation committee, announced that since the last meeting the Richmond Street & Interurban Railway, the Indianapolis, Columbus & Southern Railway and the Kokomo, Marion & Western Railway had agreed to adopt the interchangeable coupon book of the Ohio Interurban Railway Association. A communication was also received from the Muncie, Hartford & Fort Wayne Railway indicating its intention of joining the agreement. This increases the number of Indiana roads in the agreement to ten, and the total number to thirty-five. The bureau has issued 3000 card bulletins advertising the names of the roads. These will be sent to the various roads, and each manager was asked to have a number of them framed and placed in hotels and ticket offices in his district.

The subject of a revision of the present form of interline ticket was first discussed. It will be remembered that at the Dayton meeting a year ago the association adopted the so-called skeleton form of interline ticket. The ticket contains a contract, an agent's stub, together with coupons for the various roads over which the ticket is sold. This ticket is now used by many of the roads in Ohio and Indiana. Theodore Stebins, of the Appleyard system, who introduced the subject, said that while this form of interline ticket was satisfactory under certain conditions, it incurred considerable work for the agent, and there were many errors through ignorance and careless work on the part of agents. In large terminal cities it is found difficult to secure satisfactory service because the system is slow. In Columbus, for instance, seven roads all have cars leaving on the hour, and at that time the agents are rushed with work of selling local tickets and answering questions, and it is frequently impossible for them to fill out a lot of interline tickets and do the work properly. He suggested a form of multiple destination ticket used by some steam roads, in which the agent folds the coupons and punches the routes and destinations with one operation. Such tickets are good

from the point stamped on the back over routes and to the destination indicated by punch marks. He said he thought well of this plan until he conferred the evening before with F. J. J. Sloat, of the Cincinnati Northern, who, he said, had a still better plan.

Mr. Sloat said that while the skeleton form of ticket at present in use was largely used by steam roads, he felt that the interurbans must work out some improvement. The traction lines are called upon to handle a much greater volume of short-haul business and must handle it in quicker time than the steam roads; and usually they have 50 per cent to 75 per cent smaller force to handle it with. He thought interurban roads had too many varieties of tickets; his 50-mile road had about 175, the Lake Shore Electric 350, the Appleyard lines over 400, etc. To secure low prices, they bought tickets in big lots and frequently have large stocks of tickets that are never used. To eliminate many varieties of card tickets and to simplify the issuing of interline tickets, he suggested the use of a device similar to one recently adopted by a number of interurban roads for issuing cash-fare receipts. This is known as the "Closed System," and by its use the receipt is issued in duplicate, the duplicate section remaining in a locked box, so that it is impossible for the conductors to manipulate the receipts. Having no visible record of cash collections, the conductor settles on balances, deducting his change and turning in the balance to the auditor, who compares it with the receipt stubs remaining in the box. It has been the experience of all roads using the device that the overages exceed the shortages by from \$3 to \$5 per month for each conductor. He felt satisfied this plan could be used in ticket offices for selling tickets. On the individual road it would necessitate four or perhaps six varieties of boxes and tickets, viz.: single-trip full fare, round-trip full fare, single-trip half fare, round trip half fare, with perhaps two other varieties for special excursions. These tickets could be distinguished by different colors. The same variety of box could be worked out to take care of interline business. On interline routes frequently used, such as Dayton to Indianapolis, or Cincinnati to Toledo, the coupons and stations could be printed out, while on interline routes not frequently used, he thought it possible to work out a multiple destination ticket, the agent filling in the route and the final destination. A Cincinnati-Toledo form, for instance, would have all the names of the stations on this route printed out. These names would be in duplicate, side by side, with rates of fare arranged in the same manner in the upper portion of the ticket. Pointers or notchers on the ticket box would move vertically between the rows of figures and names of the points between which the ticket was sold, and the amount would be notched in the ticket, the duplicate record remaining in the box. On the right-hand side of this ticket would be a set of coupons for the conductors of the roads over which the ticket was routed. He thought this would be a great advantage over card tickets, which are not issued in duplicate. Railroads find that conductors frequently hold out card tickets and sell them over again to passengers or to ticket scalpers, and in some cases even work up a collusion with the ticket agent to sell them over again. An Ohio interurban road suffered from this scheme a short time ago. It would prevent selling half-fare tickets to adults and would enable passengers to settle disputes against conductors, because the receipt portion of the ticket would remain in the passenger's hands, each conductor simply lifting his proper coupon.

F. W. Coen, of the Lake Shore Electric Railway, said that the present form of interline ticket was largely used by all steam roads, and he believed that if it could be improved upon, the steam people would have worked it out long ago. He thought the most important objection to Mr. Sloat's scheme was that in order to use the ticket issuing box and notchers it would be necessary to use very thin paper. He thought that a

ticket which was to be handled by passengers and conductors a number of times would necessarily be a long ticket, and it should be on good heavy paper, so that it would not become torn and mutilated. He did not see that Mr. Sloat's plan provided for a contract or a time limit on the coupons, which he thought was important in order that the collecting road might know what the issuing road had issued.

A. L. Nereamer, of the Columbus, Delaware & Marion Railway, said he had been a passenger traffic man on steam roads for fifteen years and had seen many experiments with so-called multiple destination and routeing tickets. At one time many roads adopted what was known as the Wameldorf ticket, but after six months it was abandoned as too complicated, as it forced conductors and ticket agents to become practically expert rate clerks. It did not work on steam roads, and was much less liable to on electric roads, where ticket agents and conductors are usually of an inferior class. He thought that with Mr. Sloat's ticket the coupons would necessarily be so small that conductors would be apt to lose them. Also, there was nothing on any of the coupons to show that a man might be going to an intermediate point, the coupon simply showing that the party rode over that road. For example, a ticket sold in Cincinnati by the Cincinnati Northern for Worthington, on the Columbus, Delaware & Marion, would contain coupons for the Cincinnati Northern, the Dayton, Springfield & Urbana, the Columbus, London & Springfield and the Columbus, Delaware & Marion, but there was nothing on the coupon to show that the passenger should be carried only to Worthington and not through to Marion. The receipt portion showed these features all right, but not the coupons, so that neither a man checking the car, nor the auditor of the Columbus, Delaware & Marion could tell that the passenger had a ticket for Worthington only. Consequently, the auditor of the Columbus, Delaware & Marion would have to wait until the end of the month until he heard from the auditor of the Cincinnati Northern before it could be determined how far that passenger was entitled to ride. He said that in any interline arrangement to which his road was a party he wanted to know immediately where a passenger came from and where he got off, and the first and the last coupons at least should show these features. Without casting any reflections against electric road managers, whom he believed were all honest, he had been taught by a long steam road experience to require full explanations from the other fellow. One big steam system had been boycotted by other roads because it had a trick of selling tickets to one point and reporting on another. Another road had sold large quantities of mileage at a discount and then went to the hands of a receiver, and the receiver repudiated the claims of other roads. He thought the interline business on the electric roads could be worked out so that everything would be above board, and so that the collecting road could know the full transaction without waiting until the end of the month.

Mr. Sloat thought that the advantage of giving the passenger a receipt and retaining an exact duplicate in the office of the selling company more than compensated for the disadvantages mentioned. He thought it an easy matter to hold the earnings in suspense for a month if an accurate copy of the transaction was received at the end of that time.

Mr. Nereamer wanted something that could be checked and watched daily. With the plan described, he said a passenger could buy a short-haul ticket, slip the conductor a quarter to carry him through, and it would be impossible for anyone checking the car to prove anything against the man until the other company reported.

Mr. Coen said the coupons could be printed with the names of all the stations on each road and the agent punch the points "from" and "to" on each coupon. Certain Chicago roads do this.

Mr. Sloat took up Mr. Nereamer's point about checking, and

said he thought it impossible to accurately check cars where 200 or 300 passengers got on and off in 50-mile run. He said that men were frequently charged with more than they really did. As for checking ticket collections against agents' reports, he thought that few roads carried this out, although many pretended to do so. This ticket would be an absolute check, because each section would bear the same number and would fit together, showing the amount paid and the points between which the passenger rode. It would be a check on cash fares, local tickets and interline tickets. He admitted the present proposed form might have some objections, but he thought that the general scheme of selling tickets by means of the "closed system" presented food for a great deal of thought. He was very anxious to secure a satisfactory ticket immediately, because his road will soon commence selling long-distance interline tickets.

On motion, the chair appointed F. J. J. Sloat, Theodore Stebbins and J. H. Merrill as a committee to work out an improvement on the present form of interline ticket.

STEEL-TIRED WHEELS

W. E. Rolston, master mechanic of the Dayton & Troy Electric Railway, introduced the subject of steel-tired wheels. He said they had been using these wheels four years. They have secured an average of 200,000 miles to 250,000 miles with 2½-in. tires, and they are now putting on some 39-in. wheels with 3½-in. tires on which they expect to get 400,000 miles. On the first equipments they allowed them to run 97,500 miles and then turned off 7-16 in. At present they believe they get greater economy by turning off less and doing it oftener. On some they are now running 40,000 miles and turning off ¾ in., and on others 60,000 miles, turning ½ in. They have not fully decided which is the better plan. Their wheel has 1⅝-in. throat, 1-in. deep flange and 3⅝-in. tread. Their road has numerous curves and cars run at a speed of 60 m.p.h. on limited runs. He believes a chilled wheel unsafe for such service. Troubles with flat wheels have been practically eliminated, as flat spots work themselves out instead of growing worse. They have reduced the cost of turning by using the best imported steel tools. The cost per pair of wheels is about \$1.10, employing a 20-cent per hour man. He strongly recommended steel-tired wheels for city service, and they are using them on some of their small city cars. One city road he mentioned saved 30 per cent on its wheel account.

W. C. Elmersdorf, master mechanic of the Youngstown & Sharon Railway, said their first steel wheels had cast-iron centers and they came loose. Now they are using a steel center with steel tire, and it is giving good service. They have used some of them 127,000 miles and turned off ½ in., and they are good for 60,000 miles more. He has had very good success with rolled-steel wheels and favors them because the flat spots roll out, and they cost less than steel-tired wheels. He had some wheels rolled from solid ingots which have made 60,000 miles and show hardly any wear.

W. H. Abbott, of Roberts & Abbott, Cleveland, said there was a great difference in rolled-steel wheels. He had used some which were made from low carbon steel and which had soft spots and did not wear uniformly. Others were more satisfactory. Larger wheels seemed to stand up better than small ones. He found that if these wheels were allowed to run too low the flanges became sharp and wore out quickly. They should not be run more than 50,000 miles without returning. He described a rolled forged-steel wheel made by the Schoen Company, of Pittsburg, which gave excellent results.

F. J. J. Sloat said he had used steel-tired wheels, but still favored cast-iron wheels. He said he had to get four times the mileage to equalize the cost, and he could not do it. He thought that if tracks and special work were designed with plenty of throat or flange room there would be no trouble with chipped flanges.

J. A. Paul, superintendent of the Youngstown & Sharon Railway, comparing steel-tired with rolled-steel wheels, said he had fitted a car with the former on one truck and the latter on the other. At 80,000 miles the steel-tired wheels had to be turned, while the rolled-steel showed little or no wear. This was a wheel rolled from a solid ingot. The material seemed to be as hard at the center as on the tread. Cast-iron wheels were out of the question for their service, as they were ready for the scrap heap at 37,000 miles.

Theodore Stebbins, of the Appleyard system, found steel-tired wheels much safer and in the end less expensive than cast iron. They are using them exclusively.

J. D. Cunningham, of the National Car Wheel Company, said that out of thirty interurbans in Ohio, thirteen were using steel-tired wheels. This included nearly all the roads using heavy cars and operating at speeds above 40 m.p.h. He spoke of one road which is using a special cast-iron wheel composed largely of charcoal iron reannealed, and said these wheels would wear nearly as long as steel-tired wheels. He said the great trouble was that roads demanded cast-iron wheels so cheap that they could not use the proper material and care, and he admitted many of them broke down with 35,000 miles, but said that better grades of cast-iron wheels would show 100,000 miles.

Mr. Rolston said that proper care of trucks made a great difference in the wear of wheels. A rigid bolster increases wear on tires, especially on crooked roads. He has placed oiling devices on bolster plates and side plates and believes it increases the life of wheels 20 per cent to 30 per cent.

F. W. Coen, of the Lake Shore Electric Railway, said cast-iron wheels were more economical, but steel-tired wheels were undoubtedly safer. They run over 11 miles of city tracks over which they have no control, and cast-iron wheels become badly chipped. They use a $\frac{7}{8}$ -in. flange with $1\frac{1}{8}$ -in. throat $3\frac{1}{2}$ ins. thick. They are using a spoked steel-tired wheel having a special shrunk-on fastening, made by the Woodworth & Engert Company, and have never had a loose tire.

Mr. Paul said they had fitted a car with roller bearing center and side bearings with which the flange wear had been reduced to a minimum.

Mr. Abbott reported good results with the use of wheel truing brake-shoes instead of turning steel-tired wheels.

RECORDING AND OTHER INSTRUMENTS

W. H. Abbott, of the Roberts & Abbott Company, then gave an interesting talk on the use of "Recording and Other Instruments." He divided his subject into steam and electrical, and the electrical into portable and stationary. The use of portable instruments has been neglected in the past, but its importance is becoming recognized. A high-tension voltmeter was very important. No matter how carefully a system was designed, there were liable to be accidents, or changes in the system, which made it necessary to determine the voltage in any particular district or point. Low-voltage instruments were also necessary for the same reason. A millivolt-meter was also a necessity for testing joints, armatures, fields, etc. In connection with owning such instruments it was necessary to employ skilled men to use them; men who understand what readings mean and how to correct defects after they have been discovered. Every road should have portable wattmeters to test out cars. Cars frequently take 50 per cent more current than they should without showing it. Controller connections and leads should be tested after repairs. Car house men should also have ohmmeters to measure resistance of field coils and armature coils. Frequently coils which appear uniform take unequal current. Fields burn out, insulation breaks down and commutators spark because the parts were not properly tested when they were put together. These are among the instruments which are needed the most but used the least. Every

road loses current at joints, and joint testers in the hands of competent men will save a great deal of coal and improve the service. Car wattmeters should be placed on cars at regular intervals, and green as well as experienced motormen should be instructed how to feed properly and shown how much current they are using or wasting. The majority of power station switchboards are lavishly equipped with instruments, many of which are never used. Some of them ought to be taken down and given to the men on the road. A wattmeter on a switchboard is of no value unless the output is balanced against the amount of coal used or the car mileage. Every house should be equipped with coal scales or the cost of current cannot be accurately determined. Recording watt and voltmeters are very nice, but they are seldom made use of, and are not nearly as valuable as meters for the shop and line men. Recording pressure gages are desirable for boiler rooms where only one or two men are employed. Thermometers are coming into use and are necessary where superheated steam is used. Recording thermometers are desirable in large plants, but are not needed in small ones. Recording water gages will tell if firemen are not careful, but are not necessary. Water meters are desirable, but it is hard to find an accurate one, hot-water meters especially. The Venture meter is fairly accurate, but it is not integrating and does not show the number of feet consumed per day. A water meter is useless unless a record is also kept of the coal weight. A draft gage is little used, but very convenient. It will frequently show why certain boilers are doing better than others because of weather conditions and position of boilers.

Mr. Rolston, of the Dayton & Troy, said they used a number of portable instruments for testing work in the shops, showing condition of cars and instructing men in the use of controller. They use wattmeters in station and have daily records of power consumption, car mileage, coal and water. Free use of meters in the station enables them to locate trouble promptly and gives a close check on expenses.

Mr. Sloat, of the Cincinnati Northern, said they used wattmeters on cars and took readings on the same car on different trips for a week or ten days. In the matter of acceleration, he thought it necessary to accelerate rapidly in order to make time. Cars in Cincinnati apparently have but two points, yet the car-mile expense is comparatively small.

This led up to a discussion of the use of automatic devices for preventing rapid acceleration, and the general sentiment was against their use. Several serious accidents were attributed to them.

Theodore Stebbins, of the Appleyard lines, had a good word for such devices. He said they saved a great deal of current if properly handled by experienced men, but should not be placed with green men. He thought that every car should be equipped with meters, showing the current used, and meters should be read frequently. If a car was using more than another on the same service it should be pulled off and the trouble located. In lighting practice they put meters on every customer if he even uses 50 cents worth a month, while our cars consume thousands of dollars worth of current, and usually all we know is the amount of the coal bill for the month. He thought that stations should keep accurate record of coal, and asked about accepting coal companies' weights. He said these weights were usually 5 per cent to 7 per cent short. This opened up an interesting line of discussion. One manager said they charged off 8 per cent, another 10 per cent, and one unfortunate said 15 per cent.

Mr. Nereamer, of the Columbus, Delaware & Marion, said the only safe way was to take the railroad company's weights, which are usually about 1000 lbs. to the car less than the coal company's weights.

J. M. Walker, of the Pennsylvania & Mahoning Valley Railway, said they kept a coal sheet showing the amount used each

month. Fuel is carried in an outside storage with usually about 500 tons on hand, and the amount is determined by cross sectioning the pile. They use a plan showing the cross section, and by stretching a rope over the pile and allowing 40 cu. ft. per ton an accurate record is made each month.

Mr. Sloat said he had a statement each month showing coal on hand, consumed and coal received, and he used the railroad weights as a basis.

Mr. Stebbins said he had his bins partitioned off and had each shipment put into a separate bin. He kept a record of what went into each bin and how much was taken out, and checked the coal man's figures against the engineer's figures. He thought the only satisfactory way was to buy a track scale.

Mr. Coen said that for a time they kept the coal company's weights, and one day struck a balance which showed they had \$2,000 worth on hand, when as a matter of fact they did not have any. He thought the best plan was to figure coal in dollars without regard to weight.

CHARGES FOR CARS ON FOREIGN ROADS

The question of charges for cars on foreign roads, which was discussed a year ago, but never satisfactorily settled, was brought up again.

Mr. Sloat proposed a schedule of rates which allowed for different weights of cars and different sizes of motors. On his road it cost 13½ cents per car-mile to operate, interest bringing it up 17 cents. He allows the foreign company 2½ cents to 3 cents per car-mile, according to size of car, furnishes the pilot and pays the crew. After deducting his expenses and paying the car mileage, he proposes to keep at least \$12 for his profit.

Mr. Stebbins said they had chartered car rates and charged the foreign company these rates, allowing them \$5 for the use of the car while on their road. If this was not satisfactory they pro rated with the other road on the mileage basis. In fact, they had no fixed plan.

F. W. Coen said the roads in the Cleveland district had a flat rate of 30 cents per car-mile. "We assume the liability and pay the pilot, and they pay their own crew." In the cities of Toledo and Cleveland there is a terminal charge of \$7.50. Mr. Coen thought this matter ought to be settled and agreed upon immediately. "Steam road managers know that if they want to run over the tracks of another company it will cost 50 cents per mile. We don't know anything about it. If we want to send a car over another road we have to telephone and find out. Some charge on the mileage basis, others on an operative basis, some on per capita basis, and others want a flat rate, regardless of circumstances. Often we could do business with another road, but its rates are prohibitory."

Nothing was done about the matter.

REASONABLE TENDER FOR FARES

Mr. Nereamer asked, "What is a reasonable payment in tender of fare?" They have a 10-cent haul and men frequently tender \$20 bills. In one instance a conductor took the money and gave the man an order on the general office for his change, which caused the man considerable trouble. His general counsel says that California has a law specifying \$5, and New York State \$2.50. Ohio statutes say nothing on the point.

Mr. Spring said one of his men had put a man off in a rather strenuous manner because he had no change for a \$20 bill, and the act cost the company \$250. The court did not decide on the debated point.

Mr. Sloat said he had a notice posted in cars stating that conductors carried \$2 change. In one case several men made a practice of bluffing conductors with large bills, and he broke up the game by loading several conductors with small change. He said the courts of some States had decided that making change was a matter of accommodation and that a company was not obliged to make change.

Mr. Paul, of the Youngstown & Sharon, said that the courts of Illinois had so held, and he thought if a person presented an unreasonably large bill he could be put off.

It was voted to bring this matter to the attention of the legislative committee and ask that a suitable law be framed in Ohio.

The meeting adjourned at 5 p. m. and the majority of the members accepted the invitation of Secretary Rogers and Superintendent Paul, of the Youngstown & Sharon Railway, to make a short inspection trip over this road. A very handsome freight and passenger station was first visited and then a run was made to the Pennsylvania State line, where the car house and shops were inspected. The property is a modern high-speed road, having excellent equipment and comparing favorably with roads in the central part of the State. The trip was made in a fine new car recently furnished by the Niles Car & Manufacturing Company, a feature of which was a square smoking compartment. Another notable feature was the two varieties of alarm signals with which all cars were provided—a ratchet gong, resembling a fire department gong, for city service, and an organ whistle, which closely resembles a Mississippi River steamboat whistle, for country service. The latter was made by the Crosby Steam Gage & Valve Company, of New York, and it made a great hit with members from the southern part of the State.

MEETING OF THE NEW ENGLAND STREET RAILWAY CLUB

At the regular monthly meeting of the New England Street Railway Club, held at the American House, Boston, Nov. 23, W. S. Bartholomew, of Chicago, Western manager of the Westinghouse Air Brake Company, read an instructive paper upon air brakes for electric cars. After pointing out the economy of operation, saving of time in maintaining schedules and increased safety resulting from the use of air brakes, Mr. Bartholomew emphasized the tendency of interurban roads toward the use of medium sized cars in trains rather than toward very large and heavy single units, which are uneconomical to operate during hours of light traffic, more or less awkward of access on account of the height of the floors above the pavement, too long for 35-ft. and 40-ft. radius curves, and are burdened by having wheel treads and flanges unsuited to urban track. Further, the better handling of heavy currents by multiple-unit control apparatus located beneath the car instead of on the platforms, tends toward the operation of cars in trains. The fitting of the train length to the traffic requirements is another point of importance.

Discussing various methods of operation, from single car equipments to motors and trailers in different combinations, the speaker showed that a single standard air brake schedule could not be used for all these separate conditions and then considered the general requirements of electric car braking. Some of the objections to the use of standard steam railroad automatic air brakes on electric roads are found in the facts that the applications on electric cars are so frequent that not enough time elapses to permit the proper recharging of the auxiliary reservoirs; that the graduated release of the brakes is absolutely necessary in electric cars for smooth stops; and that a prompt response of the brakes in application or reaplication after a release is very essential.

Mr. Bartholomew then considered in detail the variations of air brake equipment which would be recommended in different methods of car operation, bringing out a number of new features and systems which have been developed by the Westinghouse engineers for the purpose of meeting all the conditions possible in commercial service. A summary of these equipments follows:

Schedule SM.

Straight Air Equipment.—Suited to single car operation under almost all conditions. With very heavy cars at speeds of

50 m.p.h. to 65 m.p.h. and upward, it is necessary to have an additional braking effort to stop the armature rotation at these speeds. It should also be possible in such cases to immediately apply the maximum braking pressure in emergencies and to reduce it as the car slows down and the coefficient of friction between the wheels and shoes becomes larger.

Schedule SME.

Straight Air Equipment with Automatic Emergency Application.—Suited to motor-trailer service where trailer is little used. Small triple valve on each vehicle operates to apply the brakes if a hose pipe ruptures or if the emergency brake valve position is taken. Prevents the motorman from using an excessive amount of air and has increased factor of safety on account of automatic feature.

Schedule AMS.

Automatic Air Brake System with straight air release of the brakes from the brake cylinder of the head car. Provision for rapid repetition of applications without danger of depleting auxiliary reservoir pressure. Suited to operation of two-car trains where trailer is hauled continuously behind motor car. Advantage over straight air in that brake applications are made practically simultaneously on each car. Braking effort on motor car slightly exceeds that on trailer, to give a smooth stop. Equipment gives the high factor of safety of automatic brakes and very smooth operation. Generally preferable to Schedule SME.

Schedule AMT.

Automatic System with a graduated release of the brakes at the triple valve. Suited to short multiple-unit trains or motor-trailer trains of two and three cars. Equipped to prevent train line overcharge and give quick brake response at all times. Furnished with either single or double hose lines, the latter being preferable when pneumatic doors, etc., are operated, to give reserve pipe line in case of pump failure.

Schedules AMQ and AMR.

These are both automatic systems, suited to any length of train. They are equipped for the division of pump labor, with independent compressors and brake valves on each car. Adapted specially to four or more car multiple-unit service. These schedules represent the most advanced type of purely pneumatic brakes, and comprise in a single equipment the features of graduated release, quick recharge of auxiliary reservoirs, quick serial service application, no overcharging of brake pipe, prompt response of triple valve after full release, independent operation of all compressors in train, and a single hose pipe. The production of these characteristics in one equipment is a marvelous achievement in engineering design. On the Metropolitan West Side Elevated, Chicago, 418 cars have been equipped with these schedules, as well as 175 Long Island Railroad cars on the electric division and trains on the New York and Boston elevated roads.

Schedule ET.

Automatic system suited to locomotive train operation. Particular features are independent control of the locomotive brakes, a holding position to retain locomotive brakes when releasing train brakes and maintained pressure in the locomotive brake cylinder at whatever point desired. Also has quick recharge and graduated release, as in Schedule AMT; the regular Westinghouse quick-action triple valves, and a new quick-service feature in the triple valves, which is an arrangement of ports in the triple valve to secure the use of brake-pipe pressure to aid in raising the brake-cylinder pressure and reduce the time of serial action throughout the train at least one-half.

Electro-Pneumatic System No. 3.

The latest development in air brakes. Consists briefly in the application of multiple-unit train-control principles to the previous automatic brake schedules. Suited especially to elec-

trically-operated roads running trains of varying length. Brake valves fitted with electric tops, electro-pneumatic application and release magnets, and electric jumpers and sockets for carrying a two-line electric circuit through the train, constitute the main features. The equipment refines the application and graduation of the release of the brakes beyond previous mechanical results, and secures instantaneous and uniform results on each car, regardless of the train length. The pneumatic side of the equipment is left intact, and is complete and in reserve at all times, ready for immediate use. The electric contacts being in full release position of brake valve, the triples are in release position and the auxiliary reservoir fully charged with the triple-valve exhaust open to the atmosphere.

The first movement of the brake-valve handle electrically closes the valves in the exhaust pipes. This is electric lap position. The next movement opens the electro-pneumatic valves, which permit auxiliary reservoir pressure to flow into the brake cylinder through the triple-valve exhaust pipes, applying the brakes. If the brake-valve handle is brought back to lap, the pressure is still held on the shoes, as the atmospheric exhaust valve does not open until full release is reached. The graduations of release are made by moving the brake-valve handle to the starting point, and these graduations of release and application can be made with any frequency and degree of fineness desired. The air consumption is about half that with ordinary automatic brakes, and there is no time element in the serial action from car to car. The use of air cannot be sufficiently rapid to get ahead of the maintenance of pressure through the train pipe, and experience has shown that the auxiliary reservoir pressure remains practically constant. The equipment gives practically straight air on each vehicle, a deceleration curve that is practically a straight line, and requires no waste of air to secure a brake application. It is specially suited to the abilities of inexperienced motormen, gives exceedingly smooth and uniform stops, and points the way toward automatic deceleration apparatus, without the use of any judgment on the part of the motorman. Its forthcoming adoption in important electric railway service seems an assured fact, and, coupled with the pneumatic features, the electric schedule appears equal to every commercial electric railway, not to mention its availability in steam railroad service.

HAND REVERSE FOR TYPE M CONTROL AT KANSAS CITY

The fifty-four cars which were used on the Intramural Railway at the Louisiana Purchase Exposition and were after the Exposition purchased by the Kansas City Railway & Light Company have been in service in Kansas City for some time. These cars were equipped with type M multiple-unit controllers of the General Electric Company. These controllers, it will be remembered, are provided with reversing switches, which are electrically operated, which makes it impossible to throw the reversing switch in case the trolley is off the wire. As experience in the operation of these cars on the hills in Kansas City has demonstrated that it is desirable to be able to throw the reverse switch when the trolley comes off the wire, so as to secure the braking effect of the motors acting as generators. These cars with the type M control have been equipped at the company's shops with a system of levers connecting the reverse switch under the car, with handles on the platforms, whereby a motorman can throw the reverse switch by hand if a car starts to run away with the trolley off.

The Winona Interurban Railway Company, of Goshen, Ind., has awarded a contract for a complete electrical equipment, including generators and motors, to the Allis-Chalmers Company. The line connects Goshen with Warsaw and Winona Lake, and is about 30 miles in length.

CORRESPONDENCE

THE LOCATION OF TOILET AND SMOKING COMPARTMENTS ON INTERURBAN CARS

Edgewater, N. J., Nov. 29, 1905.

EDITORS STREET RAILWAY JOURNAL:

I have noticed the novel plan of an interurban car suggested by Mr. Gonzenbach in your issue of Nov. 18, but question the advisability of making two separate smoking compartments in the center of the car instead of the usual end compartment. It is true that the arrangement proposed secures the one decided advantage of not obliging passengers to pass through the smoking compartment when this compartment is in the rear of the car, which is the case 50 per cent of the time. Nevertheless, except in very severe weather, a large majority of passengers might be allowed to enter and leave the car by the front platform—that is, providing the conditions of the road will permit and the motormen are properly instructed.

On the other hand, the arrangement proposed by Mr. Gonzenbach has several distinct disadvantages from an operating standpoint. Those which occur to me are as follows: The conductor will be seriously hampered in the handling of his passengers, as he will not have as clear a view of his entire car. With ordinary traffic he will not be able to collect his fares as quickly, which is a most important factor when a car is passing from one zone to another; neither will he be able to locate passengers boarding cars with as much accuracy, as the car, relatively speaking, is divided into four sections. Again, it would not be desirable to have the conductor practically isolated from his car, as he would have to be when it became necessary for him to go into one of these compartments to make fare collections. It would also require double the care to attend to the doors, which are almost invariably left open by passengers. The different stations and streets could not as easily be announced by the conductor in each of these compartments, and this fact might put many passengers to inconvenience by being carried beyond their point of destination.

With the usual arrangement, in which the smoking compartment is separated from the rest of the car by glazed doors, and when the car is crowded, I have frequently observed women occupying the smoking compartment to a considerable extent. I do not think that this same condition would prevail in a car built according to Mr. Gonzenbach's design, for women would not care to ride in such a cramped compartment. I might add that I do not believe that the center smoking compartment with the side seat would be as popular even with the smoker as the regular cross-seat smoking compartment.

F. W. BACON.

ELECTRICAL EQUIPMENT FOR THE SIMPLON TUNNEL

It has been authoritatively stated that Ganz & Company have received the contract for the electrical equipment of the Simplon line between Switzerland and Italy, and that the system to be used is three-phase at 15 cycles and 3000 volts on the trolley wires. As is well known, this line connects the southeastern portion of Switzerland with the northern part of Italy, and saves considerable distance between Berne and Paris over the St. Gothard route. It involved the construction of a tunnel about 16½ miles in length, the longest railway tunnel in the world. The line is to be operated by both the Italian and Swiss Governments, and the latter has accepted the offer of the former to place part of the locomotive equipment supplied by Ganz & Company for the Valtellina Railway at the disposal of the Swiss Government for the operation of the Simplon tunnel.

It is thought that the Simplon line will be open for traffic about May 1, 1906.

THE QUESTION BOX

Now that the annual conventions are over, and in response to numerous requests, it has been decided to introduce again an open Question Box in the columns of the STREET RAILWAY JOURNAL. The Box will appear from time to time as the answers on hand may warrant. An urgent invitation is extended to every reader of the paper to send in answers to any of the questions or discussions on any of the topics presented, and the editors bespeak the assistance and co-operation of all in increasing the value of the Question Box. It is realized that it requires something of an effort for a busy man to find the time necessary to write out answers to questions, but it is believed the profit and assistance derived from reading the opinions and experiences of others will be compensation for the time and trouble incident to sending in one's own answers. In other words, the STREET RAILWAY JOURNAL offers the facilities during fifty-two weeks in the year for a free and open exchange of ideas, opinions and experiences on the thousand and one problems that are constantly arising in electric railway work.

The following is the first batch of questions in the new series. Any reader who can answer any of them is urged to send in his answers promptly to the Editor of the Question Box, STREET RAILWAY JOURNAL, 114 Liberty Street, New York City:

MANAGEMENT

INCREASING WINTER TRAFFIC

A 1.—A number of methods for creating traffic during the summer months have been tried with success. What can be done in this same direction during the winter months? What schemes for encouraging travel in winter, such as ice skating, inducing theater traffic, etc., have you tried or have in contemplation?

THE SNOW PROBLEM

A 2.—What special plans are you making for fighting and handling snow this coming winter? What particular changes are you making in your snow-fighting methods or apparatus, based upon your previous experience?

A 3.—Should the responsibility of keeping curves, crossings, switches and special work clear from ice and snow during snow storms be placed in charge of the track department, or should the snow-plow crews attend to this matter?

TRANSPORTATION

SCHEDULES

B 1.—In what form do you make up your schedules for operating purposes? (Please send copies of typical schedules with full information.)

B 2.—How do you determine if your schedule is suitable for the traffic on any particular line? Do you obtain records of passengers carried per car at different intervals, and if so, how do you obtain these records, and are readings taken at different points along the line? Ideas and suggestions on the theory and practice of making schedules are wanted and needed.

B 3.—What methods do you take to inform crews regarding the details of the schedules, and how do you insure that employees know and understand the schedules?

B 4.—What steps do you take for suiting the schedules to the weather and other changeable influences? For instance, suppose a given schedule has been decided upon for a park line for a pleasant Saturday afternoon and it begins to rain early in the afternoon. What is your system for calling in the cars that are not needed, in order to save useless mileage? In other words, how do you bend the service given to suit the probable traffic, and how do you secure flexibility and promptness in changing quickly from one schedule to another?

MECHANICAL

AVOIDING BREAK-DOWNS IN STREETS

C 1.—What percentage of the total cars in service on your road during the average day have to be pulled in from service owing to defects or break-downs developing while the car is on the street? What are you doing to reduce the number of cars that have to be taken from service on this account?

BRAKE-SHOES

C 2.—What are you doing with the brake-shoe question? What type of shoe are you now using, and what mileage are you getting? What have you done to reduce the cost of brake-shoes per 1000 miles?

CAR PAINTING

C 3.—What is your general system of car painting? How have you been able to reduce the cost of painting cars? (Suggestions on car painting and itemized statements of labor, material and costs of car painting are requested in this connection.)

DIGGERS

C 4.—Do you know of any satisfactory "home-made" or other device to be attached to each car for cleaning the groove of girder rails? (Please give description with sketch or photograph.)

THE POWER HOUSE

CYLINDER LUBRICATION

D 1.—Have you had any experience in using graphite for engine cylinder lubrication? What have been the results of your observations or experience in this connection?

STATION ECONOMY

D 2.—What economy are you getting at your power house, expressed in pounds of coal per kw-hour? (In this connection please describe briefly your station equipment and state what kind of coal you are using.)

D 3.—What have you found to be the comparative economy, including operation and maintenance, of automatic stokers and hand firing?

D 4.—Can you put your finger on one or two particular things you have done at your power house that have appreciably reduced the cost of producing power per kw-hour? You will be conferring a favor on the industry by telling about them.

LINE

SLEET ON WIRE

E 1.—What is the best method of overcoming trouble caused by sleet on the trolley wire?

LINE CAR

E 2.—Please give description, with photograph or drawing if possible, of your line repair car, or cars, including particularly any novel or especially desirable features.

TOOLS IN LINE CAR

E 3.—Please give a list of tools it is your practice to carry on the line repair car, or wagon, in order to enable the crew to do everything in the ordinary run of line repair work.

TRACK

TESTING BONDS

F 1.—How do you test your rail-bonds?

F 2.—What is the best method of keeping records of individual rail-bond tests?

SANDING

F 3.—What is the character of sand you use for sanding track?

F 4.—Is it a good idea to mix salt with the sand in winter?

F 5.—How do you dry your sand? (Please send description of drying apparatus, with sketch or photograph if possible.)

WRINKLES

F 6.—What means, machines, devices or special rigged cars are you using for expediting or cheapening the work of the track department? (Please send description and sketch or photograph if possible.)

CAUTIONING EMPLOYEES FOR CHRISTMAS TRAVEL

As one means of keeping employees in close touch with the management, James Gunn, superintendent of the Toronto Railway Company, has adopted the policy of issuing at frequent intervals and on special occasions general bulletins to the men. Although these notices are printed in large type in the form of placards or posters at the car houses, they are in reality open letters from the superintendent to the operating force, explaining some particular phase of the work or directing attention to some especially timely topic.

For instance, early in December the accompanying bulletin

was issued in anticipation of the Christmas season, calling the attention of conductors and motormen to the more than ordinarily heavy traffic expected, and emphasizing the necessity

CHRISTMAS SEASON, 1905

Notice to Motormen and Conductors

During the present month it is expected that the traffic will be more than ordinarily heavy.

A great number of visitors will be coming into and going out of the city.

Women with children and parcels of all descriptions will be travelling on the cars.

The ordinary vehicular traffic at this season of the year is also very greatly increased.

MOTORMEN

Are therefore warned to take every care, and use every precaution against accidents.

Take no risks, and use every means in your power to insure safety to the passengers and the public.

Give any assistance you can to passengers, but do not neglect your own duties in order to do so.

CONDUCTORS

Be prompt in the collection of fares, and do not fail to collect for all children properly chargeable, and see that you carry a proper supply of coppers for change.

Call "FARES, PLEASE" and your streets in a distinct voice.

Give all the assistance possible to your passengers, especially to women with children or parcels, or aged and infirm people.

Exercise every precaution against accidents; never give bell until your passengers are safely on or off and take all other steps necessary to insure against casualties of any description.

BY ORDER,

JAMES GUNN,

Superintendent.

December, 1905.

SPECIAL BULLETIN CAUTIONING EMPLOYEES OF THE TORONTO RAILWAY COMPANY REGARDING THE HANDLING OF CHRISTMAS TRAFFIC

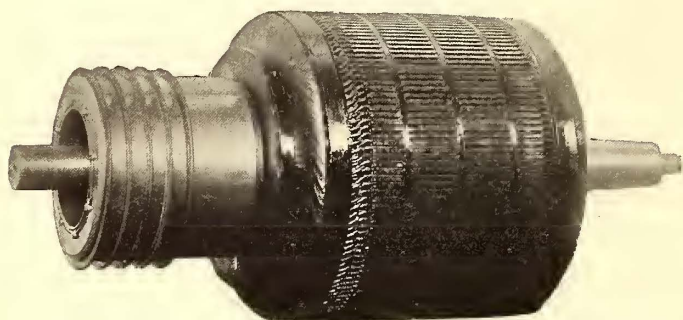
for extraordinary care and attention in the performance of duties at this season of the year.

INSPECTION OF PHILADELPHIA SUBWAY

Members of the Engineers' Club of Philadelphia, and engineers from New York, Baltimore and other cities inspected the Market Street subway in Philadelphia, as guests of the Philadelphia Rapid Transit Company, on Dec. 2. The visitors spent two hours in thoroughly inspecting that section of the underground passage between Fifteenth and Twenty-Fourth Streets, which is nearing completion. The tour of inspection was made under the direction of Chief Engineer William S. Twining, of the Rapid Transit Company, assisted by several members of his staff. They were Charles M. Mills, principal assistant engineer; Stephen Harris and J. D. Jacques, assistant engineers, and Frank R. Fisher, resident engineer. E. E. Smith, president of the contracting company building the subway, also assisted in piloting the visitors. The visiting engineers assembled at the portal of the subway at Twenty-Third and Market Streets at 3:30 p. m. President Silas G. Comfort, of the Engineers' Club, introduced the guests to Chief Engineer Twining, after which the visitors were divided into squads of twenty-five and taken in charge by traction company engineers. The section of track between the bridge over the Schuylkill River and the portal was first viewed, after which the trip through the subway was begun.

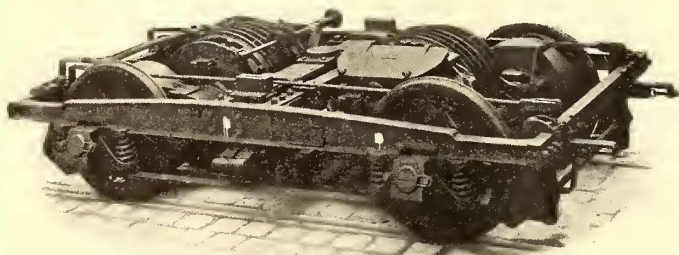
THE FIRST GANZ THREE-PHASE RAILWAY IN AMERICA

An electric railway, which will use three-phase alternating current, is now being equipped between London and Port Stanley, Ontario, Can., and it is expected one part of the line will be ready for service in about two months. This railway, besides being the first example here of the Ganz three-phase



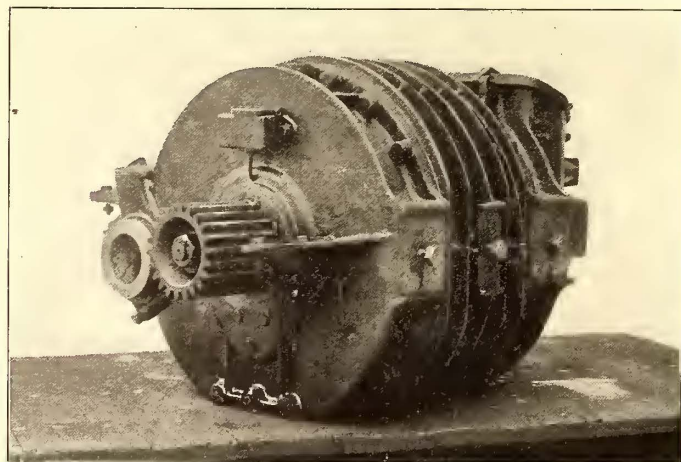
ROTOR OF THREE-PHASE, D. C. MOTOR, SHOWING SLIDING CONTACT RINGS AT COMMUTATOR END

system, has another special feature which will be of special interest. The length of line now under construction is 27 miles, split into two sections of 18 miles and 9 miles, to be run with three-phase current. Between these two sections there is a third one of about 2 miles, belonging to the St. Thomas City



TRUCK CARRYING TWO THREE-PHASE, D. C. MOTORS

Railway, and run by direct current. The cars of the interurban road will run over the direct-current section too, being furnished with a special equipment permitting this. The armature of this motor is shown in one of the accompanying illustrations. The stator has a three-phase winding arranged in such a way



COMPLETE THREE-PHASE, D. C. MOTOR AND PINION

that it may be fed with 1000 volts alternating current or 500 volts direct current. The rotor has a commutator and four sliding contact rings, it being a two-phase armature when running with alternating current.

The line will be equipped with motor cars, each having two of these motors, of an aggregate rated horse-power of 130. The series-parallel control will be used for direct-current work, and the single-cascade control for alternating-current running.

The trains to be hauled will weigh 35 tons and run at a maximum speed of 30 m.p.h. The line has several very heavy and long grades up to 5 per cent. The transmission voltage distribution is 10,000 volts, three-phase.

This railway represents a novel application of the Ganz system, as it is a combination of alternating current and direct current that will enable the interurban road to enter the cities, passing over the street railway lines. It is expected that the railway company will soon extend its line east as far as Hamilton, a distance of 85 miles, using the same system. The Ganz system is exploited in Canada by Bruce Peebles & Company, Ltd., of Edinburgh; and in the United States, Mexico, etc., by the Railway Electric Power Company, of New York.

AUTO-CAR FOR DISTRIBUTING NEWSPAPERS FROM DAYTON

For years past the news companies and great metropolitan dailies have followed the custom of sending out the first or "country" edition to the surrounding communities by means of early morning express trains. Of course, in large cities, such as Boston, New York, Philadelphia and Chicago, there is little difficulty in securing transportation facilities during the early morning, but in the smaller cities the newspapers are greatly handicapped in their efforts to secure a large out-of-town circulation owing to the more infrequent service of both the steam and electric railways.

Some three months ago the management of the Dayton "Journal" thought it could overcome this difficulty by running a regular automobile. Several trips were made to the neighboring town of Springfield, but the pace set was too fast for the automobile and the roads too slippery; besides there were too many break-downs, and it was realized that in rainy and stormy weather the trip would be a failure. Finally the management decided to try an Oldsmobile auto-car of the type used by track inspectors. The car, as delivered, came simply with a seat and the platform. A carriage maker put on a substantial



TRACTION NEWSPAPER CAR READY TO BE PLACED ON THE RAILS

frame with a glass front, awnings and other fittings; track sanders and a headlight were installed, and then the converted vehicle was placed in charge of one of the motormen of the Dayton, Springfield & Urban Traction Company. This motorman has learned to operate the car and to look after ordinary repairs, etc. A short account of the first trip of the car was published last week, but it is thought that some views and a description of its equipment would be of interest.

The car can be changed into a regular automobile by putting on wheels with rubber tires and slightly changing the mechanism. This car, of course, has no steering gear, as none is necessary. Its general appearance is evident from the accompanying illustrations, which show the car just after it has been taken from the garage to start on its trip. Heretofore the car has been pushed over the pavement for a few rods until it reached the street railway tracks, but in the future it will be



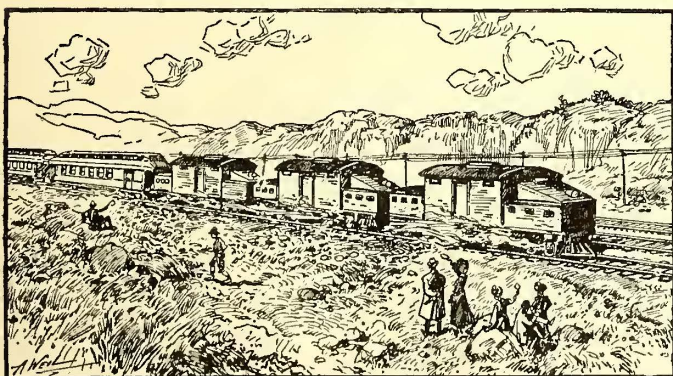
REAR VIEW OF THE FIRST TRACTION NEWSPAPER CAR

kept in the traction company's car house and will be run on the car track within half a block of the "Journal" office.

The auto-car thus far has been a great success. There are nine traction lines in Dayton, but as there is no union traction depot as yet the first cars do not leave until 6 in the morning because they have to be kept in the car houses outside of the city. By taking 3000 papers out at 3 a. m. each morning, the Dayton "Journal" is enabled to beat the Cincinnati and Columbus papers from one to three hours in fifteen to twenty cities and towns. This result would be impossible if the ordinary electric or steam cars were used.

ANOTHER CONTRIBUTION ON THE NEW HAVEN ELECTRIFICATION

The accompanying drawing appeared in an issue of the Boston "Journal" of last week as a three-column engraving to



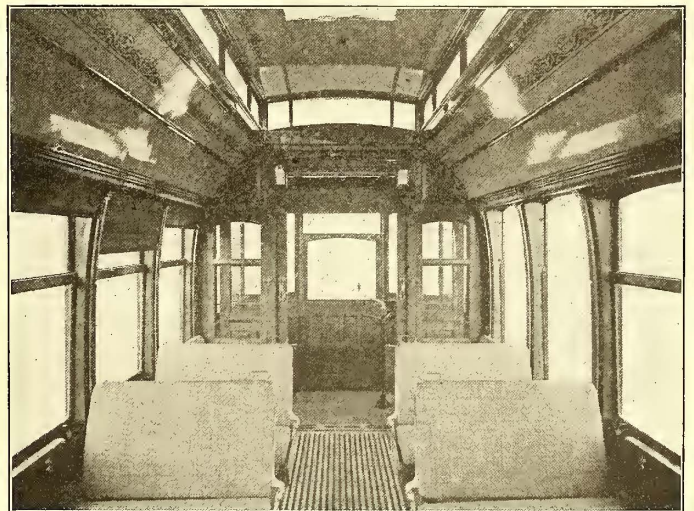
A NEWSPAPER ARTIST'S CONCEPTION OF A FOUR-HOUR TRAIN BETWEEN NEW YORK AND BOSTON

illustrate the appearance of an "electric train on the New York, New Haven & Hartford Railroad running from New York to Boston in four hours." According to this usually veracious paper, the new locomotives, for which orders have been placed already, and with which the entire New Haven system is to be

equipped, have a draw-bar pull of "250 tons" when traveling at a rate of from 70 m.p.h. to 90 m.p.h., and several of these new locomotives are already at work between New Haven and New York. The artist declares that the train is depicted as running from New York to Boston, and this undoubtedly explains to his mind, as a patriotic Bostonian, the neglect of the engineer to stop long enough to cool down the hot boxes, which are plainly visible on the locomotives. Unfortunately, the artist neglected to indicate any third rail, overhead conductor or collecting devices of any kind, or even to state whether the motors now running between New York and New Haven are direct or alternating current, so that the public still remains in ignorance upon these much-debated questions.

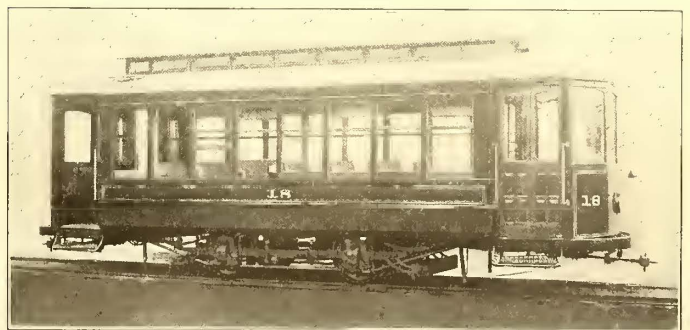
SINGLE-TRUCK SEMI-CONVERTIBLE CARS FOR ASHEVILLE, N. C.

Asheville, the famous health resort in the western part of North Carolina, in the Blue Ridge Mountains, was one of the first places in the country to have an electric railway system. The first electric cars were operated there on Jan. 21, 1889. The system was installed by the Sprague Electric Railway & Motor Company, and the line was at that time 2 miles in length. The system now has about 15 miles of track, and the equip-



INTERIOR VIEW OF THE ASHEVILLE SINGLE-TRUCK CAR, SHOWING THE CROSS-SEATING IN THE MIDDLE OF THE CAR AND THE LONGITUDINAL SEATS NEAR THE DOORS

ment has kept pace with the times in every respect. About two years ago the company placed in operation several convertible cars of the Brill patented type, which have proved highly satisfactory. The J. G. Brill Company has lately delivered a number of semi-convertible single-truck cars, one of which is illustrated. These cars include the "grooveless-post"



SINGLE-TRUCK, SEMI-CONVERTIBLE CAR OPERATED BY THE ASHEVILLE ELECTRIC COMPANY

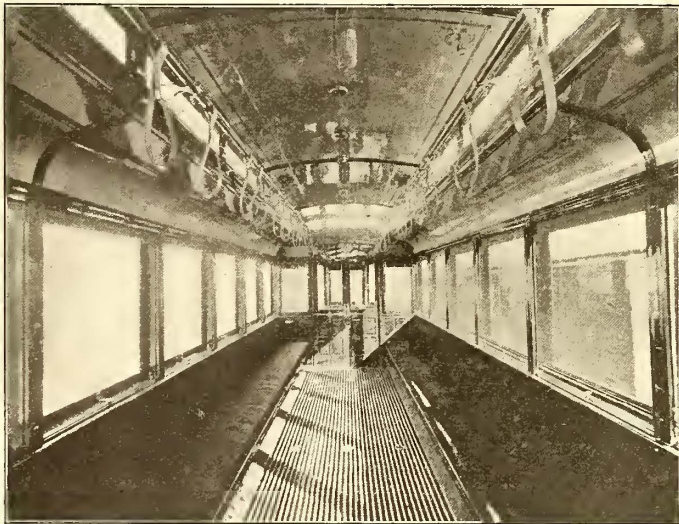
window system. The interior illustration shows the appearance of the posts to good advantage. By close observation it will be seen that there are no grooves in the posts and that the only cutting necessary is for the sash lock stops, four of which

are provided in each post. The window openings measure 3 ft. $6\frac{3}{8}$ ins. from the window sill to the center of the arch, under the letter board; from floor to top of window sill the distance is 25 ins. The trap in the door head is lowered to show the mutually operating door device. The seats, which are of the Brill manufacture, have push-over backs and tilting cushions. They are 35 ins. long. As the seat ends are introduced between the posts and against the side linings, a maximum interior width is obtained for seats and aisle, the aisle being 22 ins. wide. The interior finish of cars is of cherry in natural color.

The length of the cars, measured over the bodies, is 20 ft. 8 ins., and over the vestibules, 29 ft. 8 ins., and over the bumpers, 31 ft. 4 ins.; width over sills, 7 ft. $8\frac{1}{2}$ ins., and over posts at belt, 8 ft.; sweep of posts, $1\frac{3}{4}$ ins.; centers of posts, 2 ft. 5 ins.; height from track to under side of side sills, 2 ft. $6\frac{5}{8}$ ins.; from under side of sills over monitor deck, 8 ft. $11\frac{1}{4}$ ins.; from track to platform step, $15\frac{1}{4}$ ins.; from step to platform, 13 ins., and from platform to car floor, $6\frac{3}{8}$ ins.; width of door opening in the body ends, 40 ins.; height of doors, 6 ft. $4\frac{7}{8}$ ins. The cars are mounted on No. 21-E trucks, having 7-ft. 6-in. wheel base, 33-in. wheels and 4-in. axles. The weight of car and trucks, without motors, is 17,800 lbs.

NEW VESTIBULED CARS FOR PITTSBURG RAILWAYS

The Pittsburg Railways is now receiving from the St. Louis Car Company 100 fine vestibuled cars for city service of the type shown in the accompanying illustrations. The principal dimensions of these cars are as follows: Length



LONGITUDINAL SEATING IN NEW VESTIBULED CARS FOR PITTSBURG

over the body, 30 ft. 8 ins.; length over all, 44 ft. 6 ins.; width over all, 7 ft. 10 ins., and height from the under-side of the sill to the top of the roof, 8 ft. 6 ins. The track gage on which these cars will be used is 5 ft. $2\frac{1}{2}$ ins. The truck center is 18 ft. 6 ins. All of the cars have an interior finish of cherry, natural color. To allow extra large capacity, the seats, which are covered with green plush, have been placed longitudinally.

The side sills are made of yellow pine, 5 ins. x 8 ins., reinforced with a steel angle, 4 ins. x 6 ins., the entire length from the end sill to the end sills. The center sills are of yellow pine,

4 ins. x $6\frac{3}{4}$ ins., extending from the end sill to the end sill, and securely bolted to the end sills by heavy steel angles. The end sills are of oak, $4\frac{1}{2}$ ins. x 10 ins., reinforced by a steel plate placed on the outside of the end sill, $\frac{5}{8}$ in. thick x 10 ins. wide. The platforms are supported by two oak sills plated with steel, $\frac{1}{2}$ in. thick x 8 ins. wide, and securely bolted. The center of the platform is supported by two angles, 4 ins. x 4 ins. x $\frac{1}{2}$ in., extending from crown to end sills, then bent up and continued along the center sills through the body bolsters. The bolsters are constructed of trussed steel plates, 9 ins. wide.

The side windows of these cars are arranged to drop. Vestibules are at each end, with three drop sash in the ends and folding doors on each side hung on pin hinges, made removable so that folding gates can be used during the summer months. One of the St. Louis Car Company's illuminated signs is placed above the center vestibule window.

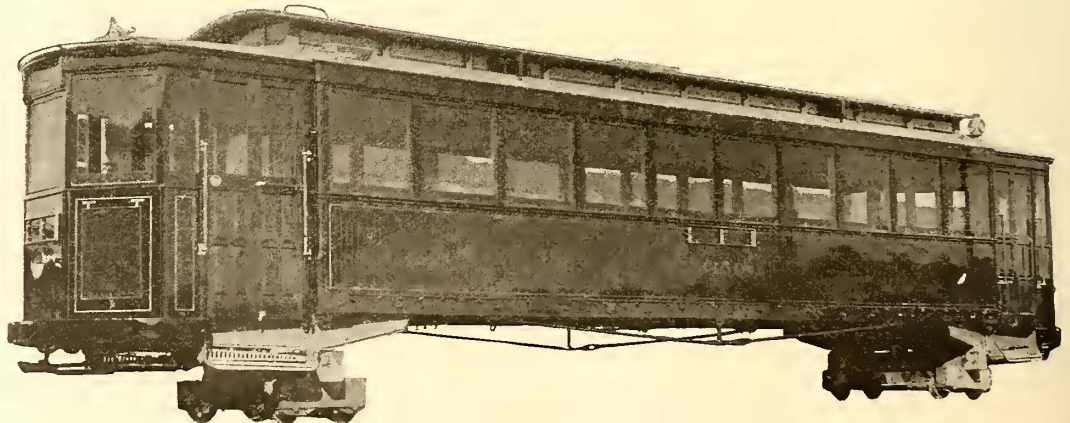
All of the cars are equipped with radial draw-bars, Pittsburg Railway Company's standard enameled signs, the car manufacturer's sand boxes, and arranged for double trucks with 4-ft. wheel base and two motors per car.

IMPROVEMENTS AT BUFFALO

The International Railway Company, of Buffalo, is completing extensive additions to its Cold Springs shops. The new buildings will give much needed increased facilities for handling the general repair work on the cars, as well as additional storage and operating capacity. The shops are being laid out with the idea of enabling the company to build its own cars in the future, and the intention is to turn out about two cars complete each month.

The International Railway Company has just ordered 100 cars from the J. G. Brill Company. This new rolling stock is to be of the same type as the Main Street cars formerly designed and built at the company's Cold Springs shops. The cars will have 6-ft. platforms and seat forty-four people. Each will be equipped with Brill No. 27 trucks and four motors.

T. W. Wilson, general manager of the company, states that with this order for new cars the company has decided to change the color scheme of all the cars on the Buffalo division. The present standard color is a dark wine, somewhat similar to a Pennsylvania red, but hereafter all cars will be painted an olive green, with small yellow stripes for the decorative effects. It has been found that the wine color does not wear satisfactorily and requires almost constant varnishing in order to hold its finish. The olive green has been selected as standard after considerable experimenting and correspondence with other roads throughout the country, the results of the inquiries seeming to indicate that of all the colors for car painting the



ONE OF THE NEW PITTSBURG CARS BEFORE BEING MOUNTED ON ITS TRUCKS

greens stand in highest favor among electric railway managers on account of the wearing qualities and the capacity for retaining the finish with a reasonable amount of varnishing.

NEW CONTROLLER SYSTEM

A new system of car control, by which the main controller is carried under the car and its movements are directed by a master controller on either platform or from the platform of the front car of a train, has recently been invented by Charles A. Mudge, of New York. The general wiring diagram of the system is shown in Fig. 1, in which *CB* is the master controller, which is developed in the usual way, at the upper right-hand corner of the diagram. *MC* is the main controller, which is revolved by means of a shaft, rack and pinion by a solenoid *MM* operating in oil. *MR* is called a "combiner," and is also operated from the same shaft. It is shown developed, and is used for connecting the motors in circuit, for reversing them and for changing them from series to parallel combination. Fig. 2 shows the solenoid or master magnet enlarged.

To operate the car the small handle on the master controller *CB* is first turned into position for "ahead" or "back" running. This turns the combiner *MR* to a position for the proper connection of the motors. The small magnet, shown in the developed master controller at the right, becomes energized and draws the finger *C* opposite it away from its contact strip until the combiner is in its proper position. The control current is then broken at the combiner, allowing the finger *C* to fall down and make contact with its strip on the master controller cylinder, giving potential to the fifth finger. The function of this magnet in the master controller is that of a safety device, as it prevents the operation of the motor current controlling devices until the motors are properly connected for either forward or reverse running. The combiner never interrupts the motor currents, consequently it does not need a blow-out.

The large handle *H* of the master controller is now operated through the four running positions 1, 2, 3 and 4.

Position 1 closes a release valve *V* in the master magnet *MM*. At position 2 the master magnet advances far enough

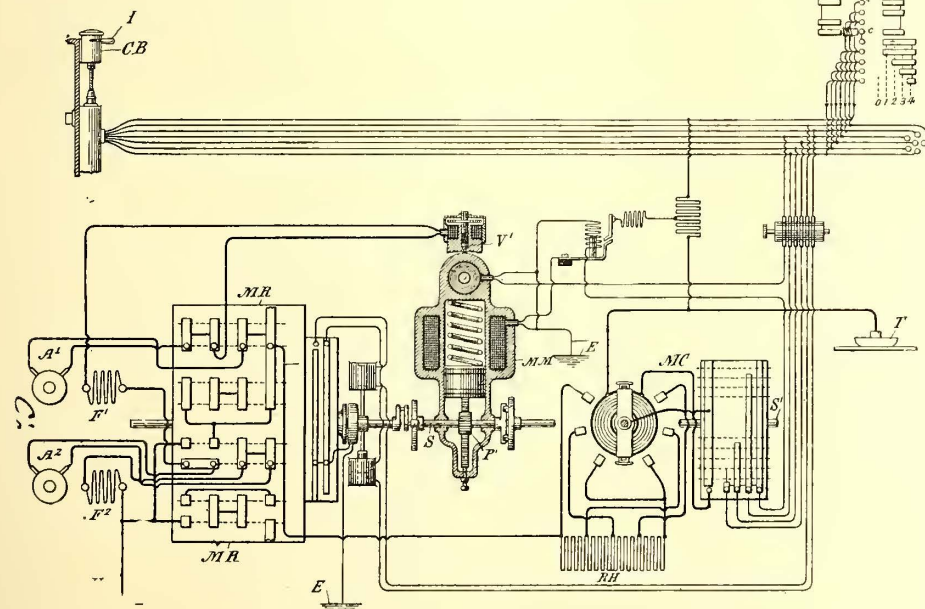


FIG. 1.—GENERAL WIRING DIAGRAM OF NEW CONTROLLER SYSTEM

to turn the main controller *MC* to step 1, which cuts all of the main resistance *RH* in the motor circuit. At position 3 the contact arm of the main controller advances to the fifth contact, having cut out gradually the resistance in the motor circuit, until in this position all resistance is out and the motors are in series combination.

At position 4 the main controller first cuts in the main resistance again, reducing the current, after which the motor circuit is opened, and the combiner is thrown to parallel combination. The master magnet turns the controller quickly into

the parallel position, giving the same current value, and hence the same torque per motor which the previous series positions had; then the different parallel positions are passed through until all the resistance is cut out and the motors are running at full potential.

The rapidity with which the resistance is cut out of circuit is determined by the speed of the piston in the master magnet, which in turn depends upon the flow of the liquid through the small regulating valve *V'*. (See Fig. 2.) This valve is gov-

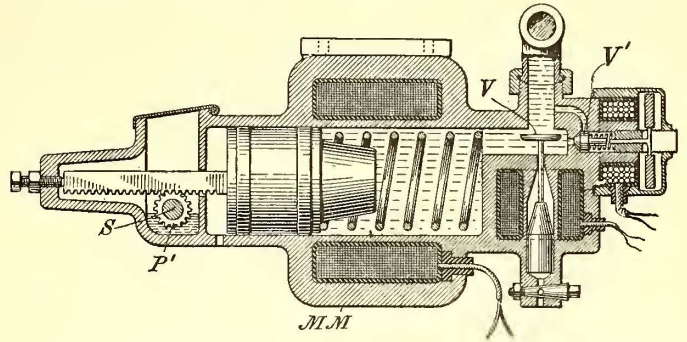


FIG. 2.—CROSS-SECTION OF MASTER MAGNET, SHOWING VALVE WHICH REGULATES THE RAPIDITY WITH WHICH RESISTANCE IS CUT OUT OF CIRCUIT

erned by the current in the motor circuit, and closes when this current becomes too great and opens when it becomes too small or ceases. It thus regulates the flow of the liquid through the valve, and thereby the rapidity with which the resistance in the motor circuit is cut out. As it operates automatically, the current in the motor circuit is kept at a predetermined value, thus giving a constant torque during acceleration.

To run on any desired resistance step other than those obtained by turning the master controller handle to position 2, 3 or 4, this handle is returned to position 1 when this step has been reached. This arrests the further movement of the master magnet and holds it in this position.

If the current to the motors should cease for any reason, as, for instance, by the blowing of a fuse, opening of a circuit breaker, etc., the master magnet, main controller and combiner return immediately to the "off" position, interrupting all circuits the same as if the master controller had been turned to its "off" position. This is effected by the release valve *V* in the master magnet opening, since the magnet holding it shut becomes de-energized. When the motor current is re-established again, the apparatus returns automatically to the position corresponding to the speed of the car at the time of such re-establishment, if the motorman, in the meantime, has not turned the master controller out of the position it was in when the current was interrupted.

The claims made for the system are removal of working currents from the platform, adaptation to light multiple-unit service, simpler car wiring and reduction in cables, elimination of grounded controller frames and automatic acceleration. The German patents on this system are owned by the Allgemeine Electricitäts Gesellschaft.

President Rhodes, of the City & County Contract Company, of New York, which is building the New York, Westchester & Boston Railway, is to let contracts for sixteen steel bridges.

IMPROVED SELECTIVE SIGNALING SYSTEM

The dispatcher's selective semaphore signal system used by the Boston & Worcester Street Railway and manufactured by the Blake Signal & Manufacturing Company, of Boston, has been improved in several particulars since its first description in the *STREET RAILWAY JOURNAL* of June 4, 1904. It may be remembered that this system makes it possible for the dispatcher to summon quickly the crew of any car which is on

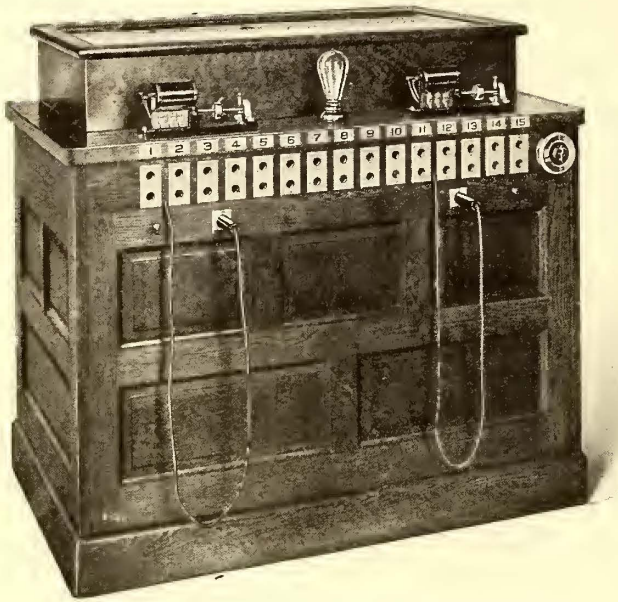


FIG. 1.—DISPATCHER'S SIGNALING DESK

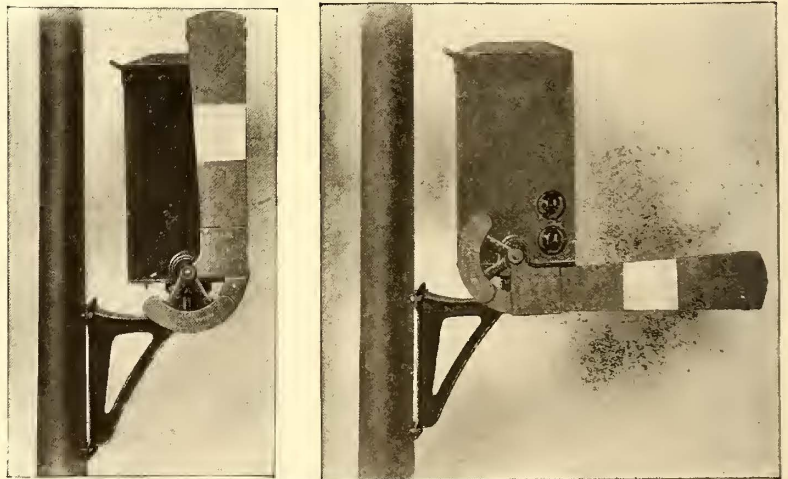
the road by a system of selective signals actuated from a special desk in his office.

For the dispatcher's office equipment, instead of using a constant-speed motor driving a shaft on which different toothed discs were placed, which opened and closed the circuit and sent impulses over the line for actuating the various signals, a desk-like box (Fig. 1) containing fifteen pendulums of different lengths is now used. Each of these pendulums corresponds in length to a pendulum in one of the line signals, and is latched back out of the perpendicular position. When the dispatcher wishes to set, say, No. 9 signal, he inserts a plug similar to that of a telephone into No. 9 hole. This releases the No. 9 pendulum, and also connects the line with the 500-volt current which is brought to the dispatcher's desk. As the pendulum swings, it opens and closes the signal line circuit, sending impulses over the line, synchronous with its vibration. These impulses act upon the electromagnets, and through them upon the pendulums of all the signals which are in series upon the single line wire. The impulses, however, are only synchronous with and therefore cumulative in their effect upon the pendulum of No. 9 signal, which has a pendulum of just the same length as the No. 9 pendulum in the dispatcher's office. At the end of thirteen seconds this line signal pendulum swings through an arc wide enough to trip a lock and drop the semaphore arm. When the semaphore arm has reached the horizontal position it closes the local signal lamp circuit, and also closes a circuit to ground, which causes the relay on the dispatcher's desk to draw up and give him an indication that the signal has been set. The question of varying voltage is provided for by three relays located on the dispatcher's desk, which cut in and cut out resistance automatically as the voltage which is supplied to the signal line at the dispatcher's office rises or falls. The advantage of this method over the constant-speed motor is obvious, since it is absolutely

positive, and the signal desired to be set must be set, irrespective of varying voltage.

The line signals are practically the same as before, each containing an electromagnet and pendulum, the pendulum in each signal differing in length from those in the other signals and corresponding in length to one of the pendulums in the dispatcher's office. There have been, however, improvements made in the detail of the signals, such as using a simple form of universal joint between the signal base and bracket, which permits the signal to be readily leveled for varying angles of set or other irregularities in trolley line poles. The electromagnet coils also have been electrically strengthened to a break-down test of over 10,000 volts, and a simple form of lightning arrester added so that troubles from lightning, so far as the signal mechanism is concerned, have been practically eliminated. These changes and improvements have increased the reliability of the signals, which had already proved unusually efficient and reliable in constant and active service, and have also reduced the already small cost of maintenance.

The following points will especially appeal to all signal and operating railway men: When properly set up and adjusted, it is physically impossible for any other signal than the one desired to operate. There is a positive indication to the dispatcher showing that the semaphore arm has been set in the horizontal position, and until the arm has reached an angle of about 45 degs. it is a physical impossibility for him to get this indication, and the danger of a false indication is thus eliminated. The power for operating the signal is obtained entirely through the dispatcher's office, and there is no local circuit at each signal other than the signal lamp circuit. There are no electrical contacts in series with the operating magnets at the various signals. The signal line is electrically continuous throughout, from the dispatcher's office to the return circuit at the end of the line. If one signal lamp burns out, a second lamp is automatically cut in circuit. This second lamp is an interrupted circuit and gives a flashing light, so that any crew can report same and a new lamp can be put in the following day. This detail removes the necessity of having a daily inspection of all lamps, as well as danger from a new lamp



FIGS. 2 AND 3.—SHOWING SEMAPHORE ARM IN CLEAR AND STOP POSITIONS, RESPECTIVELY

being defective and burning out a very short while after it has been put in. The widely varying voltage of trolley lines is taken care of by relays which draw up at different voltages, and cut in or cut out resistance as the voltage which is supplied at the dispatcher's office rises or falls. With this system it is possible to take care of voltage variations between 300 volts and 700 volts.

Fig. 2 shows the semaphore arm in vertical or clear position, and Fig. 3 in the horizontal or "stop" position.

LEGAL DEPARTMENT*

LEGISLATIVE ALTERATION OF CORPORATE CHARTERS AND FRANCHISES

One of the most famous landmarks in American jurisprudence is the decision of the Supreme Court of the United States in what is known as the Dartmouth College case (4 Wheat., 518). The charter of Dartmouth College had been granted in Colonial times, and after the Revolution the Legislature of the State of New Hampshire assumed to pass acts dealing with the management and property rights of that institution, which infringed upon certain provisions of such charter. The authority of the Legislature was questioned upon the ground that the charter of the corporation constituted a contract and that the Constitution of the United States forbade any State to pass a law impairing the obligation of a contract. After protracted litigation the Supreme Court of the United States upheld the contention of the college. This determination that a corporate charter constituted an inviolable contract led to the custom in all the States of the Union of prescribing, either expressly in particular charters or by constitutional or legislative provisions applying to corporate charters generally, that the State shall have the right from time to time to modify or repeal them. Such reserved authority, while proving in the main of benefit to the public, has, incidentally and in extreme cases, produced hardship and injustice.

Vested rights, or what substantially amounted to vested rights, have been impugned through changes in the powers and liabilities of corporations and in the relations and privileges of stockholders. The courts have quite generally upheld the right to modify or amend even in the face of considerable individual oppression, not, however, without some dissent and considerable protest. A recent example was in the decision of the Appellate Division of the New York Supreme Court, First Department, in *Hinckley vs. Schwarzchild & Sulzberger Company* (95 N. Y. Supp., 357). It was held that a statute of New York (Chap. 354, Laws 1901), dispensing with the previous requirement of unanimous consent for the issuance of preferred stock in a corporation (Laws 1892, chap. 354), and allowing such issuance on a two-thirds vote of the stockholders, applies to pre-existing corporations, impairs no contract or vested right of a protesting minority shareholder, and is a valid exercise of the power reserved by the constitution (art. VIII., sec. 1) to alter or repeal charters of corporations. It was further held that the rights of a minority holder of stock, bought in 1893, are controlled by the statute of 1901, which takes away the power which he previously had of preventing the issue of preferred stock.

It seems quite clear from the attitude of the judges in that case that they made the decision through the force of what they considered controlling authority, and that if the question had been an original one it would have been decided the other way.

It is true that a few courts have sought to limit the power to alter on repeal. In *Zabriskie vs. Hackensack Ry.* (18 N. J. Eq., 178), for example, a New Jersey court held that, while the Legislature may, within limitations, prescribe alterations thought to be necessary for the public good, it may not validate changes in the contract among the stockholders without their unanimous consent. There are other decisions on the general line that the power to alter or repeal exists solely for public benefit, and that changes will not be permitted if they disadvantageously affect the contract of the stockholders, unless some obvious public end is promoted. (See, for example, *Blatchford vs. Ross*, 54 Barb., 42; *State vs. Greer*, 78 Mo., 188.)

As a general rule, however, a broad power of amendment is recognized, and the possibility of its exercise should be constantly kept in view by corporate officers and shareholders. An illustration of exercise of the authority as to a street

railroad franchise was offered in *Marshalltown Light, Power & Ry. Co. vs. City of Marshalltown*, in the Supreme Court of Iowa (103 N. W., 1006). A statute of that State provides that the articles of incorporation, by-laws, rules and regulations of domestic corporations shall at all times be subject to legislative control, and that every franchise obtained by such corporations may be subjected to conditions imposed on the enjoyment thereof whenever the General Assembly shall deem it necessary for the public good. It was held that a section of the statute law, providing that all street railway companies shall be required to make, reconstruct and repair all paving between the rails of their tracks and 1 ft. outside thereof at their own expense, is not repugnant to the constitutional inhibition against the impairment of the obligation of a contract merely because it was made applicable to a corporation that had been granted a franchise, prior to its enactment, purporting to exempt from liability for street paving.

CHARTERS, FRANCHISES AND ORDINANCES.

CALIFORNIA.—Nuisances—Public Nuisances—Abatement by Individual—Experience of Special Injury—Pleadings—Instructions.

1. Civ. Code, sec. 3479, declares anything which unlawfully obstructs the free passage or use of a public street a nuisance. Sec. 3480 defines a public nuisance as one affecting an entire community or any considerable number of persons. Sec. 3493 provides that a private person may sue for a public nuisance only if it is specially injurious to himself. Plaintiff was the owner of a lot abutting on a city street, and defendant street railroad, in violation of its franchise, constructed its track away from the center of the street and over on plaintiff's side thereof, so that it came within about 4 ft. of the sidewalk. The maintenance of the track in this position was claimed by plaintiff to deprive her and her tenants of the use of the street, to obstruct the use of the sidewalk, to obstruct access to plaintiff's property, to endanger the safety of plaintiff, her family and tenants, and to depreciate the rental value of plaintiff's property. Held, that the injury claimed by plaintiff to result from the obstruction of the street was not different in kind from that suffered by the public at large, and she was not entitled to have the same abated as a public nuisance specially injurious to her.

2. A complaint, alleging the existence of a nuisance consisting of the obstruction of a street in front of plaintiff's premises by the tracks of a street railroad, and further alleging that it had depreciated the rental value of plaintiff's property in a certain sum, and praying that the tracks be adjudged to be a nuisance and that they be abated, and demanding damages equal to the depreciation in the rental value of the premises, could not be held to be one for compensation for damaging private property, within the rule that authorizes an abutting owner to sue for damages suffered through the occupation of a street by a railroad, but was one for the abatement of a nuisance.—(*Reynolds vs. Presidio & F. R. Co.*, 81 Pac. Rep., 1118.)

ILLINOIS.—Dedication—Streets—Defective Plat—Sales Under Plat—Effect—Adverse Possession—Evidence—Deed—Description—Sufficiency—Property Conveyed—Erasures—Appeal—Freehold Involved—Constitutional Question—Street Railroads—Franchise to Individuals—Ordinance—Amendment—Petition to Council—Assignment—Injunction—Construction of Street Railroad—Pleading—Street Railroads—Petition—Franchise—Commercial Railroad—Use of Streets—Eminent Domain.

1. Rev. St. 1845, chap. 25, sec. 17, provides that whenever any person wishes to lay out a town, or an addition or subdivision of outlots, he shall cause the same to be surveyed and a plat or map thereof made by the county surveyor, and that it shall be acknowledged by the owner. Held, that where a plat was certified by a deputy county surveyor instead of the county surveyor, and was not certified to have been laid out by the owner, but merely by his agent, the plat was invalid as a statutory dedication of streets shown thereon.

2. Where a plat of a city addition was insufficient to create a statutory dedication of the fee in the streets shown thereon, the title remained in the dedicator until he sold lots by reference to the plat, when the title to the soil in front of the lots to the center of the street passed to the grantees.

3. Where plaintiff acquired title to a lot in question by warranty deed, and occupied the same as his homestead thereunder as color of title for seventeen years, and paid all taxes assessed thereon for fifteen years, he had title to the land by limitations.

4. Where a deed recited that it was made on a certain date between G., of the city of Chicago, county of Cook and State of Illinois, of the first part, and H., of West Aurora, in the county

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

of Kane and State of Illinois, of the second part, and described a parcel of land lying in sections 21 and 22 of township 38 north, of range 8 east, of the third principal meridian, and known as "Gale's Addition to West Aurora," it was not objectionable for failure of the description to state the State or county in which the premises conveyed lay.

5. Where a deed conveyed the whole of a city addition, except lot 8 in block 10 and lot 12 in block 13, it conveyed lot 9 in block 19 of such addition.

6. Where a second deed was executed in the place of a quit claim, and a warranty deed form was used for the purpose, the mere erasure of such words as were necessary in order to make the deed correspond with the original quit claim deed was immaterial.

7. Where an original bill averred that complainant was the owner in fee of a certain city lot, and that such ownership extended to the center of W. Street in front of such premises, subject only to the use of the public as a public highway, and defendant denied that complainant was the owner in fee of any part of W. Street described in the bill, but averred that the fee in such street was in the city, a freehold was directly involved in the litigation, warranting a direct appeal to the Supreme Court.

8. Where a bill to restrain defendant's construction of a railway in a street in front of complainant's premises alleged that complainant was the owner of the fee to the center of the street, and that defendants were about to construct a commercial railroad without affording complainants compensation and in violation of complainant's constitutional rights, the bill presented a constitutional question, warranting a direct appeal to the Supreme Court.

9. Under Sess. Laws 1899, p. 331, providing that any company which has been or shall be incorporated under the general laws of the State to construct, maintain or operate any street railroad may enter on and appropriate any property necessary for the construction and operation of its road, and City and Village Act, art. 5, sec. 63, par. 90 (1 Starr and C. Ann. St. 1896, 2d Ed., p. 712), providing that the City Council shall have no power to grant the use of or right to lay down any railroad tracks in any street of the city to any railroad company, whether incorporated under general or special law of the State, except on petition of property owners, etc., an ordinance granting a street railway franchise to individuals was void.

10. Where, after the passage of void ordinance granting a street railway franchise to individuals, the City Council passed another ordinance amending the former ordinance, but complete in itself, granting to a certain corporation, its successors and assigns, a franchise to use the streets for a certain electric railroad, such latter ordinance was not invalid because passed as an amendment to a void act.

11. Where a petition by property owners for the passage of an ordinance granting a street railway franchise as required by City and Village Act, art. 5, sec. 63, par. 90 (1 Starr and C. Ann. St. 1896, 2d Ed., p. 712), was for the grant to certain individuals, their representatives and assigns, and not to defendant corporation, and an ordinance granting such franchise to such individuals was void, an assignment of their rights thereunder to a subsequent corporation did not operate as an assignment of the petition, so as to entitle the City Council to pass another ordinance thereunder granting a new franchise to the corporation.

12. Where, in a suit to restrain the construction of a railroad in a street in front of plaintiff's property, the bill alleged that there was on file in the city clerk's office a petition from abutting owners filed prior to the enactment of the first franchise by the City Council to four named persons, a copy of which was attached to the bill, and that no other or different petition of voters had been filed with the Council authorizing the enactment of an amending franchise ordinance, the fact that the latter ordinance recited that it had been petitioned for by the owners of the land representing more than one-half of the frontage of each and every mile of streets sought to be used by the traction company, etc., did not justify a conclusion on demurrer to the bill that the amendatory ordinance had been petitioned for.

13. Where a petition of abutting owners for the grant of a street railroad franchise prayed that such grant should be for a term of forty years from the passage of the ordinance, an ordinance granting authority to a traction company for a term of thirty-eight years from the passage thereof did not conform to the petition.

14. Where an electric street railway company was organized under the railroad law, as distinguished from the street railroad act, and by the terms of its charter was authorized to operate through several counties and transport passengers, their ordinary baggage, United States mail, express and milk, it was a commercial railroad, and was not entitled to lay its tracks in a street, the fee of which was in the abutting owners, without condemning a right to

do so.—(Wilder vs. Aurora, De K. & R. Electric Traction Co., 75 N. W. Rep., 194.)

ILLINOIS.—Eminent Domain—Railroads—Land Owned by Railroad—Use in Business—Question of Fact—Evidence—Parallel Lines—Constitutional Provision—Appeal.

1. Petitioner in condemnation proceedings sought to condemn two tracts of land. The owner interposed a motion to dismiss the petition as to both. The motion was sustained as to the first, and judgment dismissing the petition as to that tract was entered, while the motion as to the second tract was overruled, and a judgment fixing the amount of damages was rendered. The petitioner appealed from the judgment of dismissal. Held, that the owner was not entitled to assign as cross errors that the court erred in overruling the motion as to the first tract.

2. A railroad company, after having acquired a 25-ft. right of way, on which it operates a railroad track, may condemn land of another railroad company for an additional right of way up to the statutory limit of 100 ft. in width, on which it may lay as many tracks as it sees fit.

3. The condemnation of such tract for the purpose of laying an additional track, to be operated, in conjunction with the existing track, as a double-track railroad, does not violate Const. 1870, art. 11, sec. 11, forbidding a railroad from owning a parallel or competing line.

4. A railroad company which purchased from another company a right of way 25 ft. in width, on which a railroad track was constructed, has the power to locate an additional track on land adjacent to the right of way, and may for that purpose condemn an additional strip.

5. A railroad company cannot condemn longitudinally the right of way of another railroad company of the width of 100 ft., authorized by the statute, but may condemn a strip adjoining the statutory right of way.

6. In proceedings by a railroad company to condemn land belonging to another railroad company, the question whether the strip sought to be taken is necessary for the present or immediate future uses of the railroad company owning it, in connection with the business of operating its railroad, so as not to be subject to condemnation, is a question of fact.

7. In proceedings by a railroad company to condemn land for a right of way belonging to another railroad company, evidence examined, and held that the land sought to be taken was not necessary for the present or immediate future uses of the latter railroad in connection with the business of operating its railroad, and was subject to condemnation.—(Chicago & M. Electric R. Co. vs. Chicago & N. W. Ry. Co., 71 N. E. Rep., 1017.)

ILLINOIS.—Eminent Domain—Evidence of Value—Benefits—Rebuttal Evidence—Jury—Second Venire—Appeal—Harmless Error—Eminent Domain—Award.

1. In a suit to condemn land for a railroad right of way then in possession of a traction company, which had constructed and placed in operation its line of railway over the same, evidence that the best use to which the land in its then condition was adapted was for railroad purposes, and the value of the land for such purposes, was admissible; defendants being entitled to the highest fair cash market value of the land actually taken, for the best use for which it was adapted.

2. Where, in a suit to condemn land for a railroad right of way, located at a distance from any populous center, it was claimed that land not taken was valuable as a factory site, evidence that the building of the road would be a benefit and not an injury to such factory site was admissible, though the witnesses were unable to estimate the benefit in money.

3. Where, in a proceeding to condemn land for a railroad right of way, located at a distance from any populous center, defendants claimed that the land was especially valuable for factory sites, and at the time the case was tried a line of electric railroad was operated over the land, the maintenance of such road should be taken into consideration in estimating damages and benefits to land not taken.

4. Where land at a distance from a populous center was sought to be condemned for a railroad right of way, on which an electric railroad was then being operated, and defendants, on the same day the condemnation petition was filed, subdivided the land, which was agricultural, and filed a plat for record, showing the railroad track, and the lots could only be bought and sold with the expectancy that they would be along the car track, so as to render them accessible, the plat of such subdivision was properly admitted in evidence.

5. Where, in a suit to condemn land for a railroad right of way, defendants claimed that the taking of the land would deprive them of switch track connections with a railroad, and in support thereof offered evidence that the railroad officials refused to connect a

switch with the main line at a distance less than 3000 ft. west of a tunnel, no part of which could be on the railroad's right of way, plaintiff was entitled to show in rebuttal that fifteen years prior a switch had been placed on the right of way of the railroad company, connecting with the main line 1762 ft. west of the tunnel, for the purpose of shipping clay on a part of the land not taken.

6. Hurd's Rev. St. 1903, p. 909, chap. 47, sec. 3, provides that, if a petition to condemn land be presented to a judge in vacation, he shall note thereon the day of presentation and the day when he will hear the same, and shall order the issuance of summons to each resident defendant, and the publication. Sec. 6 requires the court, at the time of issuing the summons or making publication, to write the names of sixty-four disinterested freeholders on separate slips of paper, and, in the presence of two disinterested freeholders, select twelve persons to serve as jurors; and sec. 7 declares that, if a panel be not full, the judge hearing the petition shall designate by name the necessary number of persons of proper qualifications to serve as jurors. Held, that since a condemnation proceeding is a proceeding in court, whether instituted in vacation or interim time, where the judge before whom the petition was first presented was unable to preside at the trial, and a challenge to the array was sustained, it was the duty of the judge to issue a new venire in the same manner as the first one had been issued.

7. Where, in condemnation proceedings, after challenge to the array of jurors had been sustained, the presiding judge erroneously designated twelve persons, by name, to act as jurors, instead of issuing a new venire, but defendants did not claim that the jury before whom the case was tried after a challenge to the array had been denied were prejudiced against them, or that they were not qualified, the error was harmless.

8. In proceedings to condemn land for a railroad right of way, facts held insufficient to show that the damages awarded were grossly inadequate.—(Hartshorn et al. vs. Illinois Valley Ry. Co., 75 N. E. Rep., 122.)

NEW YORK.—Street Railroads—Franchise—Conflicting Grants—City Council—Powers—Statutes—Consent—Conditions.

1. In the absence of statutory restriction, a City Council has power to grant a right to construct a street railroad over substantially the same route as that embraced within the franchise of another corporation.

2. Railroad Law, Section 102 (Laws 1892, p. 1405, c. 676), provides that no street surface railroad corporation shall construct, extend, or operate its road or tracks in that portion of any street, avenue, road, or highway in which a street surface railroad is or shall be lawfully constructed, except for necessary crossings, without first obtaining the consent of the corporation owning or maintaining the same. Held, that the consent of an existing railroad to the use of streets occupied by it by a competing company was not a condition precedent to the right of such competing company to obtain the consent of local authorities to the use of such streets.—(Electric City Ry. Co. vs. City of Niagara Falls et al., 95 N. Y. Sup., 73.)

NEW YORK.—Street Railroads—Paving—Taxing Power—Exemptions—Contract—Immunity From Paving Streets—Gratuity—Revocation—Rights of Lessee.

1. Laws 1890, p. 1112, c. 565, Section 98, as amended by Laws 1892, p. 1404, c. 676, requiring street surface railroad companies to pay for paving between their tracks, is an exercise of the taxing power of the Legislature.

2. An exemption from taxation will not be sustained unless the intent of the Legislature clearly appears.

3. Railroad Law 1850, p. 211, c. 140, required the consent of a municipality for the construction of a street railroad. Held, that a municipality had no power to contract away or limit the taking or police powers of the Legislature under such act.

4. The Rochester & Brighton Railroad Company, incorporated in 1868 under the railroad law of 1850, acquired by purchase at foreclosure sale the franchise of a prior company organized under the same act. Held, that the immunity from contribution to the expense of new pavements in the city of Rochester, conferred by Laws 1869, p. 54, c. 34, on such railway company, was not a contract right of which the company could not be deprived by subsequent legislation.

5. The immunity from contribution to expense of new pavements in the city of Rochester, conferred by Laws 1869, p. 54, c. 34, on a street railway company, being without consideration, was a mere gratuity, revocable at the pleasure of the Legislature.

6. Laws 1884, p. 309, c. 252, Section 9, the provisions of which were re-enacted in the general railroad law (Laws 1890, p. 1112, c. 565, Section 98, as amended by Laws 1892, p. 1404, c. 676), imposed on all street surface railroads operating in cities the cost of repavement. Held, that a contention by the lessee of the railroad in the city of Rochester, exempt, under Laws 1869, p. 54, c. 34, from contribution for new pavements, that such law did not apply to

streets in which the lessor had constructed its lines before its enactment, and that as to these a contract of immunity existed, the obligation of which could not be impaired by subsequent legislation, is untenable.

7. Where a street railway company was, by statute, exempt from the expense of repaving between its tracks, the right to an exemption did not pass to the lessee, it being personal under the statute (Laws 1869, p. 54, c. 34), providing that "said company," not "said company, its successors and assigns," shall not be required to bear such expense.—(City of Rochester vs. Rochester Ry. Co., 74 N. E. Rep., 953.)

NEW YORK.—Street Railroads—Consent to Construction—Statutory Provisions.

Railroad Law, Laws 1890, p. 1108, chap. 565, sec. 91, provides that a street surface railroad shall not be built unless the consent of the owners of one-half of the assessed value of the property "bounded on" the street shall have been obtained. Property relied on toward making up the one-half of the value of the property abutting on a street on which a railroad was contemplated consisted of an entire block fronting on the street and extending 800 ft. to a street in the rear. The block was improved and used for an academy, and was assessed as a single tract. Held, that the manner of assessing the property did not deprive the court of the power to determine what part of it should be deemed as "bounded on" the street, and in determining the voting power of the tract it should neither be taken as a whole nor regarded as a tract fronting on the street and extending back 100 ft., but the court should make such an apportionment of the value thereof as would result in giving justice to the railroad company and an objecting property owner.—(Fox et al. vs. New York City Interborough Ry. Co., 95 N. Y. Sup., 252.)

PENNSYLVANIA.—Street Railroads—Leases—Forfeiture—Return of Property—Set-Off—Equitable and Legal Rights.

1. A consolidated electric railway company, composed of several independent companies, leased its lines to defendant; the lease providing that defendant, in addition to rentals, should expend \$100,000 for improvements within two years, so that at all times the roads and rolling stock should be at least of equal efficiency and value as at the date of the lease; and at the termination of the lease defendant agreed to return the property to the consolidated companies in as good condition and repair as it was at the date of the lease, together with all the improvements, additions, betterments, enlargements, and extensions which were made during the lease. Held, that on defendant's insolvency and cancellation of the lease, the receivers were bound to return equipment to each subordinate company equal in value and efficiency to that which was received, and not merely equipment equal in value and efficiency to that received under the lease as a whole.

2. The excessive value of equipment returned to one of such companies could not be set off against the claim of another company for return to it of cars of equal value and efficiency.

3. Where a lease of the lines of a consolidated street railway company to defendant provided for a return of equipment, on cancellation of the lease, to each company, of equal value to that received by the lessee, the lessor's claim for return of specific cars on behalf of certain of the consolidated companies on termination of the lease by the insolvency of the lessee was an equitable right enforceable against property in the hands of its receivers by petition for surrender of specified cars; but the lessor's claim, under a betterment clause in the lease, for a share of cars purchased by the lessee which had not been appropriated to such lines, was a legal claim, allowable only as a claim against the proceeds of a sale of all of the insolvent's property by the receivers.—(Johnson vs. Lehigh Valley Traction Co., 138 Fed. Rep., 601.)

SOUTH CAROLINA.—Carriers—Expulsion of Passenger.

Where a passenger entered a special street car chartered by a particular person, and tendered the amount of his passage, and kept his seat with the knowledge and consent of the conductor, who intended to transport him to his destination, the carrier thereupon waived the right to insist that he was not a passenger, and was liable for his subsequent expulsion.—(McCarter vs. Greenville Traction Co., 51 S. E. Rep., 545.)

TENNESSEE.—Condemnation Proceedings—Parties—Lessees—Appeal—Assignment of Errors—Cross-Examination of Witness—Determination of Value—Condemnation Proceedings—Determination of Value—Rental Value—Damages—Determination—Examination of Witnesses—Condemnation Proceedings—Value of Property—Lease as Criterion—Rebuttal—Reopening of Evidence in Chief—Value of Property—Admissibility of Evidence—Appeal—Review—Questions Considered—Exclusion of Evidence—Evidence of Value—Competency of Witness.

1. In condemnation proceedings a lessee of the land is a necessary party.

2. On appeal in condemnation proceedings, an assignment that the court committed error in permitting a lease to one of the defendants to be used as an absolute criterion for value could not be entertained because too general.

3. Where, in condemnation proceedings, a witness testified that the property in question was worth a specified sum, it was proper on cross-examination to permit him to be asked what he would consider the fair cash value of the property in view of the fact that it was leased for a certain sum per year; the witness having also previously stated that a fair rental value would be 6 per cent of the value of the property.

4. In condemnation proceedings the rental value of the property is one consideration to be looked to in determining the value.

5. Where a judgment of condemnation was passed, the question as to whether one of defendants, who claimed an interest under a lease, was entitled to any damages, was not examinable at a subsequent term, when the court has under consideration merely the question of the amount of damages.

6. Where counsel stated that he did not hope to obtain anything by certain cross-examination that he was about to enter upon, there was no error in refusing to permit him to go on with it.

7. In condemnation proceedings it was error not to permit petitioner to show that a lease of the property held by one of the defendants was not obtained with a view to use and enjoyment of the property, but as a means of speculation in the expected condemnation proceedings, and hence that it should not be taken as a spontaneous expression of value.

8. Where it appeared on the examination of a witness in rebuttal that, if the examination were allowed to proceed, the court would again have to go at large into testimony in chief, it was proper to refuse to permit the examination to so proceed.

9. In condemnation proceedings it was error to refuse to allow petitioner to show the price for which other lots in the neighborhood of the lot in question sold within a reasonable time prior to the taking of the land involved.

10. Assignments of error on the court's refusal to allow witnesses to answer cannot be considered where it does not appear what the witness would have stated.

11. The rule that an assignment of error on the court's refusal to allow a witness to answer cannot be considered where it does not appear what the witness would have stated, does not apply where the trial court rules out an entire line of competent evidence, or where he holds that a witness is incompetent, and refused to hear him at all.

12. Where, in condemnation proceedings, a witness testified that he had knowledge of two rental contracts of neighboring lots within a short time before the taking, and that, though he had no specific information of any other contract in the neighborhood, he was acquainted with property there, and had had many years' experience as a real estate agent, it was error not to permit him to testify concerning the rental value of the property involved.—(Union Railway Co. vs. Hunton, et al., 88 S. W. Rep., 182.)

TEXAS.—Contracts—Penalty—Liquidated Damages—Construction of Contract—Intention of Parties—Instructions—Harmless Error.

1. The question whether money contracted to be paid on the non-performance of a covenant is as liquidated damages, or as a penalty to be controlled by an assessment by a jury, is to be determined by the intent of the parties.

2. Where a contract provides for the payment of a certain sum as liquidated damages on non-performance of a specific act, which may produce damages of an uncertain character, and no language is used that such damages shall be considered only as a penalty, the same is to be regarded as liquidated damages.

3. A street railroad company, in consideration of \$3,481.07 paid to it by the owner of property fronting on its line, agreed that during one-half of the period named in the company's charter the road should be maintained and operated during its entire length, and that, in the event of the road's failure to do so, it would pay the property owner the sum of \$3,481.07, with interest. Held, that the sum specified in the agreement was not a penalty, but liquidated damages, which the property owner was entitled to recover on a breach by the railroad.

4. Where a street railroad company agreed with a property owner on its line to operate the line for half of the period of the company's charter, which was for fifty years, it meant that the road was to be operated continuously from the time of the contract until the expiration of twenty-five years, and did not mean that it should be operated any twenty-five years of the fifty covered by the charter.

5. Where a contract provided that, in a suit thereon, reasonable attorney's fees might be awarded, an instruction that the jury might find 10 per cent on the amount recovered, though erroneous, because there had been no evidence that such an amount was

reasonable, was harmless, where it was admitted by the parties that the amount awarded was reasonable.—(Santa Fe St. Ry. Co. et al. vs. Schutz, 83 S. W. Rep., 39.)

LIABILITY FOR NEGLIGENCE

ALABAMA.—Carriers—Collision—Injury to Passenger—Evidence—Complaints of Pain—Demonstrative Evidence—Witnesses—Cross-Examination—Evidence—Opinions—Speed of Car—Trial—Direction of Verdict—Appeal—Harmless Error—Damages—Instructions—Physician's Services.

1. Under a complaint ascribing plaintiff's injuries to the wanton negligence of defendant's employees in charge of a street car on which plaintiff was a passenger, and alleging that such negligence consisted in their causing a car to cross a railroad crossing without stopping, knowing that a train was approaching and that there would probably be a collision, etc., evidence that the street car was at the time crowded with passengers, and "that there were many people on the car," was admissible as supporting the alleged probability and defendant's appreciation that passengers would be injured by the collision.

2. In an action for injuries, complaints of pain and suffering on the part of the person alleged to have been injured are admissible as original evidence tending to prove the existence of the condition or sensation complained of.

3. In an action for injuries to a passenger, it was not error to permit plaintiff to walk as best he could before the jury.

4. Where, in an action for personal injuries, it appeared that defendant's attorney had sent witness (a physician) to examine plaintiff, witness was properly asked on cross-examination what defendant's attorney said to him, at the time he sent him to see plaintiff, for the purpose of showing bias favorable to defendant.

5. In an action for injuries to a passenger by a collision between a street car and a railroad train, an answer to a question as to the rate of speed at which the car approached the railroad crossing that it would be hard for the witness to judge because the car had just started and could not have been running very fast, was properly stricken for vagueness and as a conclusion of fact from another fact.

6. Where, in an action for injuries to a passenger in a collision between a street car on which he was riding and a railroad train, the jury could come to but one conclusion on the evidence, and that was that plaintiff was injured through the negligence of defendant's employees in bringing the car in collision with a railroad engine, the court properly directed the jury to find a verdict for plaintiff, if they believed the evidence.

7. Where, in an action for injuries to a passenger, the court properly gave the affirmative charge on the case generally in favor of plaintiff, the court's refusal to charge in favor of defendant on one of the counts of the complaint, averring simple negligence of the conductor of the street car on which plaintiff was riding, if error, was harmless.

8. In an action for injuries, an instruction that the jury were the sole judges of the damages to be awarded was proper; it being assumed that they would look to the evidence of the injury in making their assessments.

9. In an action for injuries to a passenger, the fact that some items which made up the total of his physician's bill were not recoverable in the action furnished no justification for a request to charge that the jury were not entitled to take into consideration the doctor's bill testified to in assessing plaintiff's damages.—(Birmingham Ry., Light & Power Co. vs. Rutledge, 39 S. Rep., 338.)

ALABAMA.—Corporations—Consolidation—Corporate Debts—Actions—Effect of Consolidation—Carriers—Injuries to Passenger—Evidence—Res Gestæ—Expressions of Pain—Expert Testimony—Cause of Disease—Trial—Affirmative Charge—Instructions—Applicability to Issues—Assumption of Facts.

1. Code 1896, Section 1204, relative to the consolidation of corporations, and providing that the consolidated corporation shall be entitled to the property and rights of the uniting corporations, and liable to the debts and obligations of each of them, applies to every successive consolidation, and makes the final consolidated corporation liable for the debts of the original constituent companies.

2. Code 1896, Sections 1202-1204, provide for the consolidation of corporations. The latter section authorizes the adoption of the name and charter of either corporation as the name and charter of the consolidated corporation, and declares the consolidated corporation entitled to all the property of the constituent corporations, and liable for the debts of each of them, and provides that suits pending for or against either of the original corporations as the time of the consolidation are not abated, but shall proceed in the name of the consolidated corporation. A street railway caused the death of a passenger, and subsequently consolidated with another

corporation under the name of the latter. Afterward, and, for aught appearing to the contrary, after suit brought on account of the death, the consolidated corporation again consolidated with a third corporation; the new consolidated company retaining the name of the original consolidation. Held, that the rights of the parties in the pending suit were in no wise affected by the last consolidation, but the suit would proceed as though it had not occurred.

3. In an action against a street railroad for negligently causing the death of a passenger, evidence that the place where the injury occurred was one which had, by the custom of the railroad, become a stopping place for receiving and discharging passengers, was competent.

4. In an action for wrongful death, evidence of complaint and expressions of pain and suffering, made by plaintiff's intestate during his lifetime, and after receiving the injuries which resulted in his death, was competent.

5. A medical expert may give his opinion as to whether, in a hypothetical case based on the facts and circumstances in evidence, resulting cerebral meningitis would have been caused by the injuries shown by the evidence.

6. The general affirmative charge should not be given whenever there is a material conflict in the evidence, or when the evidence reasonably affords inferences adverse to the right of recovery by the party asking the charge.

7. In an action for wrongful death, the complaint contained two counts; the first being predicted on simple negligence, and the second on intentional or wanton misconduct. Defendant pleaded the general issue, and filed two special pleas, separately setting up contributory negligence. No demurrer was interposed to the special pleas as constituting an insufficient defense to the second count, but issue was taken, but issue was taken thereon as pleaded. Held, that a charge authorizing a recovery, although plaintiff's intestate was guilty of negligence, if defendant's negligence amounted to wantonness or willfulness, was erroneous.

8. In an action against a street railroad for the death of a passenger, charges to find for plaintiff, "if the jury believe from the evidence" that the sole cause of the injury was a sudden jerk of the car, and plaintiff's intestate acted only as an ordinarily prudent person would have acted, and that, "if the jury believe from the evidence" that at the time of the injury the conductor was looking at plaintiff's intestate and knew that he was in the act of alighting, and nevertheless rang the bell for the motorman to proceed, then the conductor was guilty of wanton negligence, were not subject to the objection of assuming the facts stated therein.—(Birmingham Ry., Light & Power Co. vs. Enslin, 39 S. Rep., 74.)

CALIFORNIA.—Carriers—Street Car—Duty to Stop for Passenger—Contributory Negligence—Burden of Proof—Contributory Negligence.

1. Where a passenger on a street car arose from her seat and stepped onto the step while the car was standing still, and either the motorman or conductor observed such act, it was sufficient notice of her desire to alight.

2. Where, while a street car was standing, a passenger stepped onto the step of the car, and while there it moved suddenly forward, owing to the negligence of the conductor, whereby the passenger was injured, she was not guilty of contributory negligence, unless an ordinarily prudent person would not so have done.

3. Where a passenger on a street car, while it was standing, stepped down onto the step, with a view of leaving the car, and while in the act of alighting the operatives caused the car to start, so as to injure her, the facts showed a prima facie case of negligence.

4. A passenger on a street car cannot recover for injuries sustained in consequence of her voluntarily alighting from the car when it was in motion.—(Joyce vs. Los Angeles Ry. Co., 82 Pac. Rep., 204.)

CALIFORNIA.—Appeal—Decisions Reviewable—Discretionary Rulings—Relief from Default—Denial of New Trial—Preparation of Statement—Relief from Default—Orders—Finality—Reconsideration—Master and Servant—Superiors in Service—Scope of Authority—Injuries to Servant—Negligence of Master—Availability to Servant—Contributory Negligence—Non-Suit—When Granted.

1. Whether or not the circumstances of a particular case are such that a mistake or inadvertence of a party should be excused is a question for the court to which application for relief against a default is made, and the Supreme Court will not interfere with the exercise of the discretion of the lower court unless a clear abuse of discretion is apparent, especially where the discretion is exercised in favor of granting such relief.

2. Defendant's motion for a new trial was submitted May 23 and denied July 21. The order of denial appeared in a daily newspaper, which contained court news, and to which defendant's attor-

neys subscribed, but which the attorney having the matter in charge failed to read on the day the order appeared therein, as he was busily engaged in other matters. Neither of defendant's attorneys had actual notice that the order had been made until Aug. 1, and on the next day notice of motion for an order relieving defendant from its default in failing to prepare and serve its statement and for extension of time to so do was given, and on Aug. 4 the motion was heard and granted. Held, that the inadvertence or neglect of defendant's attorneys was excusable, and it was not an abuse of discretion to grant the motion.

3. Where defendant failed to prepare and serve a statement within ten days after the denial of its motion for new trial, it was competent for the court to relieve defendant from its default if excusable; and the granting of such relief was not premature, although no "order" had been made against defendant in the matter.

4. The court on Aug. 4 entered an order relieving defendant from its default in failing to file its statement within ten days after the denial of motion for new trial. On Dec. 13 the engrossed statement was presented, and the court refused to settle the same for the ostensible reason that it was not served within the time prescribed by law, but the theory of the court's action was that the former order might be held premature. Thereupon defendant gave notice of a motion for relief on the ground of inadvertence and excusable neglect, and on Dec. 15 the court granted the motion and settled the statement. Held that, conceding that the order of Dec. 15 was beyond the power of the court, as it had finally disposed of the matter on the 13th, yet the order of the 13th was objectionable for the same reason in that the matter was settled by the order of Aug. 4, and the latter order would be regarded as finally relieving defendant from its default.

5. An order of a railroad that a roadmaster should be in charge of all work in connection with handling gravel, and that trainmen on gravel trains should obey his orders, did not render a motorman on a gravel train subject to the orders of the roadmaster in moving and managing the train, where it was thoroughly understood by both the roadmaster and the motorman that the order gave the former authority over the train only in the matter of construction and repair, as to where it was to be taken, etc., and the motorman was the sole responsible party in operating the train and taking precautions against collisions with other trains.

6. Negligence on the part of a railroad in allowing two trains to make a trip without orders from some one knowing where all trains were, and leaving it to the motorman of one train to determine how the two trains should pass each other, the road having but a single track, was not available to support a recovery for injuries to the motorman, whose special duty it was to know the position of the other train, and to avoid collision with it.

7. A motorman of a work train, whose duty it was to look out for another train, was guilty of contributory negligence in case of a collision with the other train, if he failed to look at the bulletin board on which the movements of the other train were posted, or, having looked, failed to remember the location of such train.

8. The motorman of a work train, who knew, or should have known, of the proximity of another train approaching his train in an opposite direction, and who nevertheless ran his train into and through a fog so dense that he could not see more than 200 ft., without taking the precaution of ringing his gong or complying with the instructions of the railroad to send a flagman ahead of his train, in consequence of which the trains collided, was guilty of contributory negligence in law.

9. In an action for the death of a servant, where the evidence shows that the servant was guilty of contributory negligence in law, a non-suit should be granted.—(Vinson et al. vs. Los Angeles Pac. R. Co., 82 Pac. Rep., 53.)

DELAWARE.—Carriers—Street Railroads—Passengers—Duty in Taking On or Letting Off Passengers—Duty of Passengers—Personal Injury—Burden of Proof—Negligence—Evidence—Damages—Personal Injury—Amount of Verdict—Evidence—Preponderance.

1. A person who, in attempting to board a street car that had stopped at the usual place for cars to stop to take on passengers, took hold of the hand rail with one hand and had one foot on the platform step, was a passenger.

2. A street railway company, in taking on or letting off passengers, must stop its cars at its usual stopping places and wait a reasonable time for passengers to get on or off, and must exercise reasonable care to secure the safety of the passengers.

3. A passenger attempting to board or alight from a street car must see that the car has stopped so that he may safely get on or off, and must exercise reasonable care to avoid danger.

4. A passenger, suing for a personal injury negligently inflicted, must show by a preponderance of the evidence that the negligence which caused the injury is the negligence alleged.

5. A person attempted to board a street car that had stopped at

a usual place for stopping cars to take on passengers by taking hold of the hand rail and placing one foot on the platform step, when the car suddenly started up, throwing him on the ground. Held to authorize a finding that the company was guilty of actionable negligence.

6. A verdict for plaintiff in a personal injury action should be for such sum as will compensate him for the injuries sustained, including therein his pain, suffering and disability resulting therefrom.

7. It is the duty of the jury to reconcile conflicting evidence, if possible, and, when that cannot be done, to render a verdict for the side on which the evidence preponderates.—(Waller vs. Wilmington City Ry. Co., 61 Atl. Rep., 874.)

FLORIDA.—Imputed Negligence—Injury to Child—Trial—Instruction—Street Railroads—Injury to Child—Negligence—Trial—Instructions—Appeal—Review—New Trial.

1. The contributory negligence of parents in permitting a child, a boy four years and one month old, to go without a caretaker upon the streets of a city upon which electric cars are operated, cannot be imputed to the child in an action by him against the corporation operating the electric cars for damages resulting to him from the negligent operation of an electric car.

2. An instruction calculated to mislead the jury is properly refused.

3. Where the motorman of an electric car, being operated upon the streets of a city, should and must have seen a child of tender years, unattended, in dangerous proximity to the track upon which the car was being operated, it was his duty to use means "strictly commensurate with the demands and exigencies of the occasion" to prevent injuring such child, the burden of proof being upon the electric car company to show that such means were used; and under such circumstances, if such proof is not satisfactorily made, the company is negligent and liable for damages.

4. If there are several important issues in a case, it is not proper to single out one of them in an instruction, in such a way as might impress the jury that such issue was the controlling one, and thus mislead the jury; and such an instruction is properly refused.

5. Where the bill of exceptions does not show any exception to the ruling of the trial judge denying a motion for a new trial, this court cannot consider the merits of such motion.—(Jacksonville Electric Co. vs. Adams, 39 S. Rep., 183.)

GEORGIA.—Carriers—Street Railroads—Instructions—Negligence.

1. A charge that it is the duty of a street car company to select a reasonably safe place for landing passengers, wherever it may stop a car for that purpose, states a sound legal proposition, and is not open to the criticism that it impliedly instructs the jury that a failure to perform such duty would be negligence per se.

2. On the trial of an action against a railway company for personal injuries, it is error for the trial judge to instruct the jury that a given state of facts would be sufficient to establish negligence on the part of the defendant; these facts not being such as would in law, per se, constitute negligence. The fact that the Supreme Court, in passing upon demurrers to the petition in the same case, when formerly under review, stated that certain acts or their omission would constitute negligence and render the defendant liable, does not make it proper for the trial judge to make such statement in charging the jury.

3. One of the charges accepted to was somewhat argumentative, and presented with too much stress plaintiff's contention of fact.—(Macon Ry. & Light Co. vs. Vining, 51 S. E. Rep., 719.)

GEORGIA.—Appeal—Prejudicial Error—Instructions—Evidence to Sustain—Punitive Damages—Assessment—Evidence—Absence of Witness—Excuse—Damages—Personal Injuries—Expert Witness—Competency—Damages—Instructions—Earning Capacity—Witness—Competency of Wife—Evidence—Opinions of Non-Experts—Bodily Condition.

1. In an action to recover damages for a personal injury it is error requiring a new trial for the court to instruct the jury as to the right of a plaintiff to recover punitive damages, where the tort complained of is accompanied by aggravating circumstances, when the evidence does not warrant a charge on this subject.

2. In order for the jury to assess punitive damages in such an action, it is not necessary that they should be claimed eo nomine, but it is enough that the facts alleged and proved be such as to warrant the assessment.

3. It is competent for a party to account for the absence of an eyewitness to the occurrence under investigation, that the jury may not draw any unfavorable inferences from the failure to produce and examine the witness.

4. Where the person injured is a dentist, testimony as to his capacity and efficiency in his chosen profession prior to his injury is relevant as bearing directly upon the measure of damages.

5. One who is the graduate of a college where anatomy and physiology are taught, and who is engaged in the practice of osteopathy, and has gained experience in the treatment of nervous disorders, may be examined as an expert witness, upon these facts being made to appear, notwithstanding he is not a licensed physician and does not administer drugs to his patients.

6. That the jury may clearly understand their duty with respect to reducing to its present cash value the gross amount which they may find to fairly represent the loss in earning capacity which the injured party has sustained, the court, in charging upon this subject, should make choice of language which is not calculated to confuse the jury because of inaccuracy of expression.

7. The wife of the injured party is not, because of the marital relation existing between them, and the policy of the law to preserve inviolate confidential communications between husband and wife, incompetent to testify as to the nature of the injury received by him, and its effect upon his physical condition, when there is nothing to indicate that her knowledge on the subject was gained because of any confidence which he reposed in her as his wife.

8. The wife may testify to symptoms which she observed indicating that her husband suffered from headache, but she should not be permitted to generalize or state any bare conclusion based upon her observation of others who had headache, she not professing to be an expert.—(Macon Railway & Light Co. vs. Mason, 51 S. E. Rep., 569.)

GEORGIA.—Pleading—Amendment—New Cause of Action—Carriers—Injury to Passenger—Pleading—Amendment—New Cause of Action—Appeal—Harmless Error—Amendment—Refusal of Non-Suit—Instructions—Presumption of Negligence—Appeal—Refusal of New Trial.

1. Where an action was based on the allegation that a passenger on a car of an electric railway, at the direction of the conductor, was required to change cars, and while passing from one car to another she was injured by the negligent conduct of the defendant's agents and servants in connection with such change, an amendment which alleged an additional act of negligence forming part of the same transaction did not set up a new and distinct cause of action.

2. Such an amendment, which alleged that "said jerk of said car was caused by the defendant's servants and agents in charge of said car," was not subject to objection on the ground that it did not connect the alleged negligence with the defendant.

3. If a car is at rest temporarily, and a passenger is lawfully leaving it, or passing from it to another car, under the direction of the conductor, and while this is in progress a sudden and violent jerk or movement of the car is caused by the company's agents, resulting in injury to the passenger, it is not necessary to allege in detail by what particular means they caused the jerk to occur.

4. While an independent act of negligence not connected with, contributing to, or causing the injury to a passenger is immaterial, and an amendment alleging such an act is demurrable, yet where the amendment, taken in connection with the declaration, sufficiently shows that the act alleged in it formed a part of the conduct of the defendant's agents from which the injury was alleged to have resulted, there was no error in overruling a demurrer thereto.

5. Where the evidence for the plaintiff in an action for damages tended to show that the injury occurred on the same line of railroad, but at a point some 350 or 450 yards distant from the place where it was alleged in the declaration to have happened, an amendment for the purpose of correcting the allegation so as to make it conform to the evidence, but still referring to the same transaction, and not to a different occurrence, did not add a new and distinct cause of action, and was not objectionable on that ground.

6. If any objection could properly have been made to the allowance of such an amendment, it furnishes no cause for a reversal, where, upon further evidence being introduced, which tended to show that the injury in fact occurred at the point originally alleged, the amendment was withdrawn.

7. If a motion for a non-suit should have been granted at the time when it was refused, yet, if the evidence afterwards introduced supplied the deficiency, no reversal will result from such refusal.

8. Where the presiding judge, at one part of the charge on the subject of the presumption arising from proof of injury from the running of the cars of a railroad company, or the acts of persons in its employment, did not limit such presumption to the specific acts of negligence alleged, but in his general charge did clearly and specifically confine the jury to the consideration of such specifications of negligence, this furnishes no ground for a new trial.

9. If a car containing passengers is stopped while in transit, and the passengers are directed by the conductor to change to another car, which is on a track parallel to the first, and if, while they are so doing, the employees of the company put out the lights of the

first ear, and cause it to jerk suddenly, resulting in injury to a passenger who is in the act of making the change, this would be an injury resulting from the running of the cars of the company, within the meaning of the statute, and would also be a damage done by a person in the employment and service of the company, so as to raise the statutory presumption of negligence against it.

10. None of the other grounds of the motion for a new trial in this case require a reversal.—(Georgia Ry. & Electric Co. vs. Reeves, 51 S. E. Rep., 611.)

ILLINOIS.—Limitation of Actions—Amendment—New Cause of Action—Negligence—Care Required—Street Railroads—Collision with Traveler—Contributory Negligence—Question for Jury—Instructions—Care Required of Traveler.

1. In an action for death, the original declaration alleged that the negligence was that defendant so carelessly operated a car that it ran against deceased and knocked him off his bicycle, and he was thereby so seriously injured that he died; and thereafter an additional count was presented, stating that defendant so negligently ran the car that, as a direct result, deceased was brought in collision with the car and knocked off his bicycle, and so seriously injured that he died. Held, that the negligence charged in the original count and that charged in the additional count were the same, and hence a plea of limitations to the additional count was properly overruled.

2. The law does not demand that one in a place of danger shall exercise the highest degree of self-possession, coolness and skill, but only such as an ordinarily prudent and careful person would exercise in like situation and under like circumstances.

3. In an action for death owing to a collision between defendant's car and the bicycle which deceased was riding, held that the question of contributory negligence was one for the jury.

4. Where a pleading charged that defendant's servants negligently placed deceased in a position of great peril, whereby, while exercising ordinary care, he received his injuries, it was for the jury to determine, whether under the influence of sudden fear, he so conducted himself as to incur the imputation of contributory negligence.

5. In an action for death owing to the negligence of defendant railroad company, the court instructed that the plaintiff could not recover unless deceased was in the exercise of ordinary care (meaning thereby that he was required to exercise such care for his own safety not only at the time of the injury, but during the time and circumstances preceding the injury), and that, if deceased failed to exercise care for his own safety in going into the position he was in when injured, the jury should find for defendant, the same as if plaintiff had failed to exercise care at the precise instant of the injury. Held that, in view of such instruction, another instruction—that ordinary care is that which an ordinarily prudent person, situated as the deceased was before and at the time of the accident, would exercise for his own safety—was not erroneous on the theory that it assumed that plaintiff was not guilty of contributory negligence in being in the position in which he found himself at the time of the injury.—(South Chicago City Ry. Co. vs. Kinmare, 75 N. W. Rep., 179.)

KENTUCKY.—Street Railroads—Collisions With Cars—Injuries to Traveler—Contributory Negligence—Instructions—Trial—Death by Wrongful Act—Instructions—Street Railroads—Injury to Traveler—Evidence—Instructions—Evidence—Experiments.

1. Where there was contributory negligence on the part of a traveler injured in a collision with a street car, there can be no recovery unless his peril was, or could by ordinary care have been, discovered by the servants in charge of the car, and the injury avoided by the exercise of ordinary care.

2. An instruction, in an action against a street railroad company for injuries to a traveler by collision with a street car, that if the injury, though occasioned by contributory negligence, could have been avoided by the motorman by the exercise of ordinary care, plaintiff is entitled to recover, is erroneous, because it eliminates the question whether the motorman knew, or might by exercise of ordinary care have known, of the traveler's peril.

3. An instruction, in an action for death by wrongful act, that in considering the damages the jury might consider the amount that decedent was earning prior to his death and all circumstances touching his capacity to earn, was erroneous, as giving prominence to certain evidence in the case.

4. Where, in an action against a street railway company for the death of a traveler by collision with a street car, defendant's evidence showed that the car was close to the wagon in which decedent was riding while it was on the side of the car track, that the driver turned on the track, and that it was impossible for the motorman to prevent the collision, the refusal to charge that the motorman was under no obligation to stop his car as long as the

wagon was in a place of safety, and that he had a right to presume that the wagon would remain in a place of safety until some indication was given that it would get into a place of danger, and that if the motorman used ordinary care to prevent the collision as soon as he discovered, or could have discovered by ordinary care, that plaintiff was in peril, plaintiff could not recover, was erroneous.

5. In an action against a street railway company for the death of a traveler in a collision with a car, evidence of experiments made with another horse than that driven at the time of the accident, for the purpose of determining the time it took to turn and cross the tracks, was inadmissible.—(Louisville Ry. Co. vs. Hoskins' Adm'r., 88 S. W. Rep., 1087.)

MASSACHUSETTS.—Master and Servant—Inspection of Appliances—Cars Belonging to Third Person—Ways, Works and Machinery.

1. Where defendant maintained a coal shed into which a railroad company ran cars on a spur track to be unloaded by defendant's employees, defendant owed its employees no duty to inspect the cars.

2. The cars were not a part of the ways, works and machinery of the defendant, so as to make it liable for a defect therein, under Rev. Laws, chap. 106, sec. 71, cl. 1.—(Dunn vs. Boston & N. St. Ry., 75 N. E. Rep., 75.)

MASSACHUSETTS.—Electricity—Street Railroads—Trolley Wires—Electric Shock—Evidence—Negligence—Sufficiency—Contributory Negligence—Evidence—Electric Light Companies Rules—Violation by Linemen—Appliances to Prevent Injury—Evidence—Appeal—Exceptions—Waiver.

1. Evidence in an action for the death of plaintiff's intestate and for his conscious suffering examined, and held to support a finding that the death and suffering complained of were caused by an electric current which came from the company's trolley wire, authorizing a recovery, if the company was negligent and the intestate free from contributory negligence.

2. Evidence in an action against a street railway company for the death and conscious suffering of plaintiff's intestate, by reason of an electric shock while engaged in putting a cross-arm to a pole of a light company, examined, and held to support a finding of actionable negligence on the part of the street railway company for failing to prevent its trolley wire from coming in contact with a light wire and charging it with an electric current.

3. Evidence in an action against a street railway company for the death and conscious suffering of plaintiff's intestate, by reason of an electric shock from the company's trolley wire coming in contact with a light wire near which he was working, examined, and held to show freedom from contributory negligence.

4. A violation by a lineman of a rule of a light company employing him that linemen should treat every light wire as a live wire is not conclusive evidence of negligence, but only a circumstance to be considered with others.

5. In an action against a street railway company for the death of a lineman employed by a light company, by reason of receiving an electric shock coming from a trolley wire on coming in contact with a light wire, evidence of the existence of an appliance, known as a "guard wire," in common use for the purpose of preventing trolley wires from coming in contact with other wires, was admissible.

6. Exceptions not argued are deemed waived.—(Mahan vs. Newton & B. St. Ry. Co., 73 N. E. Rep., 59.)

NEW YORK.—Railroads—Injuries to Person on Track—Right of Person Intending to Board Train—Custom of Company—Person's Reliance Thereon—Evidence of Contributory Negligence—Contributory Negligence—Evidence—Question for Jury.

1. A person, crossing at grade the tracks of a street surface railroad company to reach a station to take a train, need not exercise the care of a traveler on a highway crossing or a trespasser; but he is warranted in concluding that he will not be put in jeopardy by an approaching train accustomed to stop at the station before reaching the crossing.

2. Where it was the uniform custom of all trains to stop before coming to a certain point, a person crossing the track at that point is justified in assuming that a train passing the point with unabated speed will give warning of such a course, and the omission to give any warning may be considered on the question of his negligence in attempting to cross.

3. Evidence, in an action against a street surface railroad company for injuries sustained by a pedestrian crossing its tracks to reach a station to take a train, held to warrant a finding that the trains in stopping at the station never reached the point of crossing, thereby warranting a finding of freedom from contributory negligence.—(Cranch vs. Brooklyn Heights R. Co., 95 N. Y. Sup., 169.)

FINANCIAL INTELLIGENCE

WALL STREET, Dec. 6, 1905.

The Money Market

A decidedly firmer tone developed in the money market during the past week, the chief influence being a larger demand for accommodation resulting by the increased activity in stock speculation, and a further substantial reduction in the surplus reserve of the clearing house banks. Early in the week the market was influenced to some extent by the calling of loans preparatory to the Dec. 1 interest and dividend disbursements, and later by the continued heavy losses sustained by the banks on sub-treasury operations. From 5 per cent, the ruling rate at the opening of the week, call money advanced to 25 per cent, equaling the previous high record for the year. The time money market, however, underwent no material change as a result of the sharp advance in demand money rates. On the contrary, lenders reported a very fair demand, while offerings both by local and foreign houses were liberal at 6 per cent for sixty days, $5\frac{1}{2}$ per cent for three and four months, and $5\frac{1}{4}$ per cent for six months. Commercial paper was extremely quiet. Dealers reported a scant supply of the choice names, merchants, as a rule, depending upon collections, which are reported good throughout the country, or obtaining all necessary requirements from their respective banks. The bulk of the buying was for out-of-town institutions. Sterling exchange has ruled considerably lower, the market being influenced by a more liberal supply of bills drawn against cotton shipments, and by the offerings of loan bills, the proceeds of which were employed in the local money market. Silver bullion continues in good demand and firm in price both at home and at London. The bank statement published on last Saturday showed an increase in loans of \$11,594,000, which was not surprising in view of the activity and strength in the local securities market. Cash decreased \$4,593,000, due largely to the shipments of gold to Mexico as a result of the sharp rise in silver, and to the transfer of currency through the sub-treasury to San Francisco. The reserve required was \$1,998,725 more than in the preceding week which, added to the loss in cash, resulted in a decrease in the surplus reserve of \$6,591,725. The surplus now amounts to \$2,565,375, as against \$8,539,075 in the corresponding week of 1904; \$6,305,300 in 1903, \$9,973,750 in 1902; \$6,607,675 in 1901, and \$5,701,125 in 1900. The European markets have ruled easier, despite the disorder throughout Russia, and rates for money and discounts at all the principal centers displayed increasing ease. The easier tendency abroad was due largely to the statement made by the French Premier that there was enough money belonging to Russia outside of that country to pay the interest on all the Russian obligations for the next two years. This statement was also largely accountable for the sharp recovery in Russian bonds at the end of the week. At the close there was nothing in the situation to warrant the belief in a materially lower money market until after the turn of the year. Thus far this week the banks have lost to the sub-treasury nearly \$1,900,000, exclusive of \$5,000,000 gold transferred to San Francisco. In addition, the return flow of currency to this city has been temporarily checked. Preparations must also be made for January interest and dividend disbursements, which promise to break all previous records.

The Stock Market

A great deal of irregularity marked the course of prices on the Stock Exchange during the past week, but for the most part the trend of values was upward, this having been particularly true of some of the industrial properties, a number of which made spectacular, if not sensational, advances. In this category Tennessee Coal & Iron, National Lead and the Republic Iron & Steel issues were very conspicuous, and while there was no actual announcements to account for the phenomenal gains made by these stocks, it was the general opinion that special reasons existed for the same apart from the continued great prosperity of all manufacturing industries throughout the country. This afforded a splendid opportunity for the stock manipulators, and they were not slow to take advantage of it. The street would have much preferred that the active demand for stocks which prevailed during the greater portion of the week had been for the standard railway shares and the higher grade industrials, rather than for

the class of stocks above referred to. The heavy buying and skyrocketing movements in these shares were not at all confidence inspiring, hence, to a considerable extent, the irregularity that pervaded the general list. However, there were other factors that served in greater or less measure to give an uncertain tone to the market as a whole as well as to check extensive operation for the bull account. Chief among these was the tremendous slump in Russian Government bonds abroad, with the consequent unsettlement of all the foreign securities markets, which, of course, was the direct outgrowth of the deplorable condition of affairs in Russia, threatening the very existence of that government. Next in importance as a deterrent to bullish operations was the continued firmness in the local money market, partly resulting from another considerable loss in surplus reserves by the New York banks, as disclosed in their statements of Saturday last. Added to these matters were the formal announcement of the St. Paul's intention to build to the Pacific Coast, serious depression in the shares of the Rock Island Company, with attendant unfavorable rumors concerning the next dividend on the preferred stock; unpleasant reports with reference to the Cincinnati, Hamilton & Dayton, which eventuated in the appointment of a receiver for that property and the Pere Marquette, and finally, doubts as to the exact nature of the President's Message to Congress. Fears on this score, however, proved to be entirely unfounded, as the document in question was far more conservative than the street had any reason to expect, and this was reflected in a much firmer tone to the market all around in the final dealings. Other matters which tended to create a more bullish sentiment toward the close of the week were the heavy over-subscription to the new Japanese loan, the declaration of an extra dividend of 10 per cent by the Delaware, Lackawanna & Western, the further evidence of the remarkable activity in the copper mining industry as shown by the fact that all the large companies have disposed of their product for several months ahead, and estimates that the earnings of the United States Steel Corporation for the current quarter will be in the neighborhood of \$35,000,000, thereby making a new record for that particular period.

Generally speaking, the local traction shares were inclined to heaviness during the week, and in one instance, that of Brooklyn Rapid Transit, quite an active selling movement developed. There was, however, nothing of a tangible character to account for the comparative weakness of these shares, and the entire movement was set down to realization of profits by members of the pool existing in that stock.

Philadelphia

Trading in the local traction issues was upon a much smaller scale to-day, but values generally showed firmness, despite the irregularity in prices in other quarters of the securities market. Philadelphia Rapid Transit was the active feature, and was the only stock to show any substantial change in price. In the early dealings it showed firmness with sales at $33\frac{3}{8}$, but toward the close there was fairly heavy selling, said to be for New York interests, which carried the price off to $31\frac{1}{4}$, which was the closing figure. Upwards of 9000 shares were dealt in. Although the statement of earnings for the month of November has not been made public, it is understood that the increase will be in excess of \$100,000. Philadelphia Company was comparatively quiet but steady, about 2500 shares selling at $51\frac{7}{8}$ and $51\frac{5}{8}$, while odd lots of the preferred brought $49\frac{3}{4}$ and $49\frac{1}{2}$. Union Traction was in fairly good demand, 3500 shares changing hands at $62\frac{1}{2}$ to $62\frac{5}{8}$. Philadelphia Traction was decidedly firm, several hundred shares being traded in at from $100\frac{1}{4}$ to 101. Consolidated Traction moved up a point, upwards of 150 shares selling at from 82 to 83. American Railway opened at $53\frac{1}{4}$ and later sold at $52\frac{1}{4}$ ex the quarterly dividend. Other transactions included Indianapolis Street Railway at 121; Railways General at 6 to $6\frac{1}{8}$; United Traction of Pittsburg at $50\frac{5}{8}$; 50 United Companies of New Jersey at $271\frac{1}{4}$, and Rochester Railway & Light at 120.

Baltimore

Very little activity developed in the traction issues during the past week. The demand for these issues was extremely quiet, but at the same time there was no pressure to sell. The United Railway issues displayed decided firmness, despite the default in the interest due Dec. 1 on the income bonds. Upwards of \$75,000

of the 4 per cents changed hands at 92 and 92½, while \$35,000 of the incomes brought 65⅞ and 65½. The stock was practically neglected, a small lot of the free stock bringing 15, while a few odd lots of the deposited stock brought 15 and 15¼. Macon Railway & Light 5s brought 100 and 100¼ for \$5,000. Other sales included \$2,000 Norfolk Railway & Light 5s at 95, and \$2,000 United Railway of St. Louis 4s at 81.

Other Traction Securities

The Chicago market was dull, with trading confined almost entirely to the elevated issues. Northwestern Elevated common advanced from 23⅞ to 24⅞ on purchases of about 500 shares, while the preferred, after declining from 64¼ to 63, recovered to 64. Chicago & Oak Park common brought 6⅞ to 6¾. Metropolitan sold at 28½ and the preferred changed hands at 70⅞ to 71. South Side Elevated brought 96⅞. Twenty-five shares of West Chicago sold at 55. The Boston market was moderately active and generally firm. Boston Elevated advanced a point to 153 on transactions amounting to 74 shares. Massachusetts Electric early in the week sold at 13½, and on rather active buying the price rose to 15½. The preferred sold at 57 to 59¾. About 850 shares of the common and about 600 of the preferred stock were traded in. West End common sold at 98¼ and 98. Other sales were Boston & Suburban preferred at 63, Boston & Worcester common at 27 to 26½, 1000 preferred stock at from 72½ to 74½. In the New York curb market, dealings in Interborough were quite active, but were attended with considerable irregularity. From 211½ at the opening, the price ran off to 210, but later it advanced sharply to 213. In the final dealings there was a reaction of 2 points to 211 in sympathy with the recession in the other traction issues. New Orleans Railway common sold at 37¾ for 200 shares, while the preferred was bid up sharply at the close, 500 shares changing hands at 82⅞ to 84½. Other sales included 17 shares of American Light & Traction preferred at 117.

Cincinnati, Newport & Covington common continues the most active issue at Cincinnati. Over 3000 shares sold with an advance from 49 to 50. The preferred advanced to 97¼; both gains being due to indications of increased dividends. The first 5 per cent bonds sold at 110¼, a fractional advance. Cincinnati Street Railway dropped a fraction to 145½. Cincinnati, Dayton & Toledo sold at 25¾, a fractional decline. Its 5 per cent bonds were stationary, at 98¼.

Northern Ohio Traction & Light continues to gain in Cleveland on prospects of a dividend, several hundred shares selling with an advance from 28½ to 29½. Lake Shore Electric common made an advance of two points, from 13½ to 15½, and early this week sold at 16. The old preferred sold at 68 and the new preferred at 58. Aurora, Elgin & Chicago common sold at 30½ and 31, and the preferred at 89¾ and 90. Toledo Railways & Light sold at 32¾. Cleveland Electric at 81¼ to 82. Much interest is being displayed in the underwriting of the Washington, Baltimore & Annapolis proposition, and there were several transactions last week on the curb at 7 points premium.

Security Quotations

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

	Nov. 29	Dec. 6
American Railways	52¼	*52¼
Boston Elevated	152	152½
Brooklyn Rapid Transit	87⅞	85
Chicago City	200	200
Chicago Union Traction (common).....	10½	10¾
Chicago Union Traction (preferred).....	—	—
Cleveland Electric	—	83
Consolidated Traction of New Jersey.....	—	81
Consolidated Traction of New Jersey 5s.....	—	108
Detroit United	92¾	92¾
Interborough Rapid Transit	210	211
International Traction (common).....	36	35½
International Traction (preferred) 4s.....	75½	75½
Manhattan Railway	163	163
Massachusetts Electric Cos. (common).....	14½	15
Massachusetts Electric Cos. (preferred).....	58½	59
Metropolitan Elevated, Chicago (common).....	28	28
Metropolitan Elevated, Chicago (preferred).....	70	70
Metropolitan Street	118½	117¾
Metropolitan Securities	71¾	72¼
New Orleans Railways (common), W. I.....	37	37
New Orleans Railways (preferred), W. I.....	84½	84
New Orleans Railways, 4½s.....	90½	90¾
North American	100	100
North Jersey Street Railway	26	25½

	Nov. 29	Dec. 6
Philadelphia Company (common).....	51⅞	52¼
Philadelphia Rapid Transit	31½	31¼
Philadelphia Traction	100	100½
Public Service Corporation 5 per cent notes.....	95	95
Public Service Corporation certificates.....	65	65
South Side Elevated (Chicago).....	96	96
Third Avenue	121	122
Twin City, Minneapolis (common).....	114	114
Union Traction (Philadelphia).....	62½	62½
West End (common)	97½	97½
West End (preferred)	114	113½

* Ex-dividend W. I., when issued.

Iron and Steel

The "Iron Age" says that while there is less excitement in the iron and steel trades, the volume of work coming out continues extremely heavy. No better indication of this could be furnished than by the fact that the bookings of the United States Steel Corporation during November were slightly above 51,000 tons a day, as compared with a little more than 50,000 tons in October. When it is considered that an even much larger tonnage was booked in September, the record month, and that the daily capacity of the works of the corporation is 34,000 tons, the volume of current consumption will be appreciated. Rail makers again report heavy orders, and prices for light rails have been again advanced \$1 per ton, and are thus getting more in line with the standard section. Some heavy work is coming to the structural mills. It is estimated that there has been contracts for thus far about 50,000 tons of foreign structural material, which includes some sales of Belgium mills. There have been some further large contracts for rolling stock, and reports are current that one of the large systems has been forced to turn to foreign makers for equipment in order to get reasonable delivery.

RUMOR OF OTHER PURCHASES IN NEW YORK BY THE DELAWARE & HUDSON RAILROAD

The purchase of the property of the United Traction Company, of Albany, by the Delaware & Hudson Railroad interests has caused the rumor to be revived that the Albany & Hudson Railway is soon to be taken over. This is a third-rail line between Albany and Hudson, and crosses the Boston & Albany near Niverville. Besides the third-rail system the investments of the road include the street railway system of Hudson and the gas and electric plants in Rensselaer and Hudson. One of those interested in the company is Horace E. Andrews, of Cleveland, a member of the Andrews-Vanderbilt syndicate, operating the Vanderbilt electric railway interests in Central New York. Just what his holdings are in the company is not generally known. The fact remains, however, that with this property formally in control of the Vanderbilt or Delaware & Hudson interests, the chain of electric railway lines in New York would be complete from Hudson almost to Rochester.

CHANGE IN CONTROL OF SAN FRANCISCO PROPERTY

At a meeting of the directors of the United Railroads of San Francisco, held on Thursday, Nov. 23, President Holland announced that the control of the United Railways Investment Company, which owns the stock of the United Railroads of San Francisco, having been acquired by other interests, he and Brown Brothers & Company will retire from participation in the management of the company Jan. 1. In retiring they leave the property in excellent condition, both physically and financially, and its prospects of the best, and wish to congratulate the board on its efficient and successful conduct of the company's affairs. Upon receipt of this advice the board unanimously adopted the following resolution:

Whereas, Mr. Arthur Holland has notified this board that he intends to resign the presidency of the company by the close of the year, against the earnest wish of the directors and of the stockholders; and,

Whereas, His administrative ability has during the four years of his management placed the United Railroads of San Francisco among the best properties of the country; and,

Whereas, His personal qualities have endeared him to the company's directors and officers;

Now, Therefore, Resolved, That the directors of the United Railroads of San Francisco appreciate the faithful and efficient service rendered to the company by Mr. Holland and by Brown Brothers & Company, and accept the president's resignation with great regret that he will not reconsider and withdraw it.

THE CHICAGO FRANCHISE QUESTION

The long debated subject of the extension of the franchises of the Chicago street railway companies bids fair to be settled very soon. To rehearse briefly the recent history on Sept. 27, the Chicago City Railway Company submitted to the transportation committee of the City Council a proposition upon which it was willing to accept a 20-year franchise and abandon its claims under the so-called 99-year act. This proposition, the salient features of which were published in the STREET RAILWAY JOURNAL for Oct. 7, was submitted by the transportation committee to its expert, Bion J. Arnold, and was made the subject of a report by him, which was printed in full in the STREET RAILWAY JOURNAL for Nov. 25. The Chicago Union Traction Company was not mentioned in the original proposition or report, but it was understood that that company would accept the same conditions which proved satisfactory to the City Company.

The transportation committee formally considered the proposition and Arnold report on Nov. 27, and suggested certain changes in the proposition, which were accepted by the company. The most important of these changes was the increase of the percentages of the gross earnings to be paid by the company to the city. In the original proposition these percentages were 3 per cent for three years; 5 per cent for the next two years; 7 per cent for the next ten years and 10 per cent for the last five years. In the compromise each percentage was increased 1.08 points. Upon the basis of the estimates of gross receipts made by Mr. Arnold this will increase the payments made by the City Company to the city \$5,284,245.

An abstract of the ordinance as applicable to the Union Traction Company and its allied companies follows, although it will be understood that the Chicago City Railway ordinance is the same, except so far as the routes covered.

SEC. 1. Authorizes the West Chicago Street Railroad Company, the Chicago West Division Railway Company, the Chicago Passenger Railway Company, the West Chicago Street Railroad Tunnel Company, the Chicago Union Traction Company, the receivers of the Chicago Union Traction Company and the receivers of the West Chicago Street Railroad Company to maintain and operate for twenty years a system of street railways in streets designated.

SEC. 2. The company shall proceed at once to put in first-class condition, by reconstruction, its entire plant and equipment, and to complete the work within five years from the date of the ordinance. All the new cars specified (new equipment everywhere except the electric cars recently bought) must be placed in service within three years from the passage of the ordinance.

SEC. 3. The company shall operate all its street railways by electricity. The overhead trolley may be used everywhere unless the test of the underground trolley to be made by the Chicago City Railway Company for two years in the downtown district shall prove to be practicable and satisfactory, in which event all lines in the south side of the city north of Polk Street must be equipped with the underground system.

SEC. 5. Poles of the company may be used by the city to carry signal, telephone, telegraph and electric light wires and lamps. The transmission wires of the city for such purposes shall be placed on the poles under the direction of the company's engineer, without expense to the company, but the maintenance of the poles is to be by the company.

SEC. 7. All transmission and feeder wires carrying a current of more than 1000 volts shall be laid underground, and all transmission and feeder wires east of the west line of Halsted Street shall be laid underground.

SEC. 8. All electric work shall comply strictly with the city ordinances for such work, and shall be done under the supervision and subject to the approval of the city electrician. All other construction work shall be under the supervision and subject to the approval of the Commissioner of Public Works. Before excavating in any street the company must obtain a permit for the work, and after the restoration of the street to its former condition the company shall maintain it for one year.

SEC. 9. All tracks must conform to the grade of the streets in which they are laid and must be laid on wooden, steel or concrete ties. New tracks in streets paved or about to be paved with asphalt, granite, brick, creosoted block or other similar material shall be laid with "trilby" rails weighing not less than 85 lbs. to the yard, with a difference of height between lip and tread of not more than 6-32 in.

SEC. 10. Snow and ice must be removed from the portion of the street occupied by the company's rails by the company. In removing snow and ice the company may pile the same temporarily on the street outside its tracks, but must remove it within a reasonable time, to be fixed by the Mayor and the Commissioner of Public Works. Paving, repaving and repairing by the company, in accordance with the ordinance, are to be done by the company upon the order of the Commissioner of Public Works.

SEC. 11. All cars for the passengers "hereafter built or purchased" are to be "of the best and most approved finish, style and design, to have center aisles, to be without running footboards along the sides, to have cross seats facing forward (except that longitudinal seats each for not more than four passengers may be used at the ends of the car). All closed cars shall be vestibuled and supplied with electric button devices so that passengers may, without inconvenience, signify their desire to leave the car. The cars must conform to detailed specifications and "at all times be kept clean and in good repair," and they shall be well ventilated and lighted. They must be kept heated to 50 degs. F., "as nearly as possible," and bear "appropriate and conspicuous" signs upon the sides and ends. Every electric car shall be

"in charge and under the control of two competent men, a motorman and a conductor, and shall be operated singly, except when otherwise expressly authorized by the City Council."

SEC. 12. The company is permitted to operate funeral cars and separate cars for the mails, and for the carriage of parcels and packages. Cars for parcels and packages may be operated only between 8 P. M. and 5 A. M., unless otherwise authorized by the City Council. The Council reserves the right to regulate the rates to be charged by the company for the carriage of parcels and packages.

SEC. 13. On the order of the Mayor and Commissioner of Public Works, street sweepings, garbage and other refuse shall be removed by the company, for reasonable compensation. Arbitrators are to fix the compensation in case the company and the city's officers do not agree. Suitable and convenient dumping grounds are to be provided by the city for the street sweepings and garbage, and the company is to be permitted to connect its tracks with such grounds.

SEC. 16. The company must remove all unused tracks that exist now or may hereafter exist. Failure to operate cars for passengers at least once each way within every hour of the day, between 6 a. m. and 8 p. m., shall be considered a cessation of the use of the tracks, unless the operation of cars is interfered with by "unavoidable accidents, labor strikes, or litigation brought without connivance of the company."

SEC. 17. Provides for a 5-cent fare for each passenger over 12 years of age, and a 3-cent fare for each passenger over 7 and under 12 years of age. Children under 7 years of age, accompanied by parent or guardian, shall be carried free. Transfers are to be given and accepted so that a passenger may ride, in one general direction, from any one point in the city to any other point in the city, reached by the company's lines, for a single fare. The company need not give a transfer when the passenger can reach his destination by means of a through car. Transfers are to be good for thirty minutes.

SEC. 18.—Transfers are to be given between the lines of the Chicago Union Traction Company and the Chicago City Railway Company as though both lines were owned by the same company, except that this privilege shall not apply east of Clinton Street and north of Twelfth Street.

SEC. 19. Through lines of street cars are to be operated as shown in "exhibit C" accompanying the ordinance, and are specified in the section to be established in Halsted Street, Western Avenue, Kedzie Avenue and Ashland Avenue. The through lines are to be operated "if and so long as the traffic warrants as to each of them," and any of them may be discontinued if the city shall so order.

SEC. 20. The company is to pay into the treasury of the city on the fifteenth day of each January the following percentages of its gross receipts: For each of the first three years, 4.08 per cent; for each of the next two years, 6.08 per cent; for each of the next ten years, 8.08 per cent, and for each of the next five remaining years, 11.08 per cent. All franchise taxes, including so-called taxes on capital stock, paid to taxing bodies in the State of Illinois, are to be deducted from the amount so paid, each year, as are all license fees and franchise taxes and all other taxes, except those upon the tangible property of the company. At any time the city may compute the percentages of gross receipts into a reduction of fares.

SEC. 21. The company is to indemnify and save harmless forever the city from and against all damages, decrees, costs and expenses growing out of the exercise by the company of the privileges in the ordinance. A penal bond of \$250,000 is to be given by the company to the city to this end.

SEC. 22. A report on the gross receipts of the year ending on the previous 31st day of December is to be filed by the company with the City Comptroller by Feb. 28 of each year. The Comptroller may at all times verify the reports by examination of the books of the company, and may also examine the books at any time during the year in which an appraisal is to be made of the value of the company's property.

SEC. 23. By the acceptance of the ordinance the company obligates itself and expressly agrees to comply with all its terms and conditions. It further agrees that if it shall make default "in the due observance or performance of any of the agreements or conditions" of the ordinance throughout a period of six months, exclusive of delays due to unavoidable accidents, labor strikes or the orders or judgments of any court of competent jurisdiction entered in any suit brought without its connivance, after written notice thereof to it from the city, the city may declare the grant and all the rights and privileges of the company forfeited.

SEC. 25. New construction of street railways may be ordered by the City Council, not to exceed 3 miles of double track or 6 miles of single track per year, during the life of the grant. There must be no existing parallel track nearer than one-half mile, and at least an average of 150 families must reside in each mile, within one-fourth of a mile of the street or public way in which the new track is to be laid. No such extensions shall be required during the period of reconstruction, within the last year of the term of the grant, or after the city has given notice of its intention to purchase the lines.

SEC. 26. Municipal ownership. At the end of the first ten years the city may elect to purchase the property of the company; it may so elect at the end of the first thirteen years, or again at the end of the first sixteen years from the date of the grant. Such purchase may be for municipal operation only. The city is to pay the then cash value of all the real and personal property of the company, and also the then fair cash value of all the then unexpired rights of the company in the street, under franchises existing at and prior to the passage. If the city elects to purchase, it must give the company a written notice to that effect at least one year, and not more than two years, prior to the time the purchase is to be made. The purchase price is to be determined by appraisal, one appraiser to be appointed by the city, another by the company and the third by the two thus selected. The third appraiser is not to be a resident of Illinois. Should either the city or the company fail to appoint an appraiser and give notice thereof, as provided, or should the two appraisers first appointed fail to agree upon the third appraiser within thirty days, either party, by giving a written notice of ten days to the other party, may apply to the chief justice of the Supreme Court

of Illinois and two judges, not residents of Illinois, of the Circuit Court of the United States for the circuit of which the Northern District of Illinois shall be a part, and any appraiser appointed by them, or any two of them, shall have the same powers and duties as an appraiser appointed by either the city or the company. The appraisers shall determine the fair cash value of the tangible property and unexpired franchises of the company (exclusive of this franchise), and the city may acquire title to the property on payment of this price to the company. If the city shall fail to pay or deposit the appraised price within one year after the announcement of the appraised value the appraisement shall become null and void. Should the city fail to take the property it must pay all the expenses of the appraisement; otherwise the expenses are to be divided equally between the city and the company. The right of the city to acquire the property is expressly limited to purposes of municipal ownership, and the lines may not be leased to another company or operated otherwise than by the city, if taken over, during the twenty years of the grant.

Sec. 27. During the term of the grant the company shall not remove its principal office beyond the limits of the city. The street railway property or any of the rights secured under this ordinance shall not be pledged as security for the payment of notes, bonds or other evidences of indebtedness maturing later than twenty years from the passage of this ordinance, the intention being that at the end of the term of the grant the company will be able to give a clear title to all its property, tangible or intangible, to the city.

Sec. 28. At the end of the grant the city or its licensee shall have the right to purchase all the property of the company at its then fair cash value. A written notice of its intention so to purchase must be given by the city or its licensee at least one year and not more than two years before the expiration of the grant. The purchase price shall be determined by appraisers selected as provided in Sec. 26. No franchise value to be considered in this appraisal. The city, in paying for the property, may deduct the then face amount of all indebtedness then secured by mortgage against the company and take the property subject to the mortgage indebtedness. If the city shall give notice of its intention to purchase, or to cause to be purchased, the property of the companies at the end of the twenty years' period, such notice shall constitute a contract obligating the city either to buy at the appraised price or to require the licensee to buy at the appraised price.

Sec. 29. The city intends by this ordinance to create conditions that at the end of the twenty years of the grant will result in either purchase by itself of the company's street railway system or purchase of the system by the city's licensee. If the city shall neither exercise its reserved right to buy the company's system nor cause its licensee to make such a purchase, but shall make a new grant to the company, the then fair cash value of the company's tangible property shall be taken as the value of the then investment of the company, regardless of franchise values or the market values of the company's stocks and bonds.

Sec. 30. Contains a general waiver of the ninety-nine-year rights by the companies, to apply at the end of the twenty years' period. Should the city prior to the end of the twenty years acquire the property of the companies by condemnation proceedings or appraisement, just compensation for the then value of the ninety-nine-year rights shall be allowed "precisely as if this waiver and surrender had not been made."

Sec. 31. The company shall lower the tunnels under the Chicago River at Washington Street and near Van Buren Street so that the summits of their crowns shall be 26 ft. below Chicago datum. This work is to begin immediately on the passage of the ordinance, and to be finished on compliance with the act of Congress relating thereto (tunnels not to obstruct navigation after April 15, 1906). All work on the tunnels is to be done with the approval of the Commissioner of Public Works. In appraising the company's property under the terms of Secs. 26, 27 and 28 of the ordinance, the Van Buren Street tunnel and the reconstruction work on the Washington Street tunnel shall be considered part of the railway system. During reconstruction and repair of the tunnels the company shall have permission to operate the cars and trains now using the tunnels over the bridges and on the South Side terminals, by electricity instead of cable.

The local transportation committee on Dec. 4 reported this franchise extension ordinance to the Council, with the recommendation that it be passed by the Council, and thereafter lie on the table until the qualified voters of the city have opportunity to express their wishes in respect to it at next spring's election. The committee also reported out Mayor Dunne's plan providing for an issue of Mueller law certificates to pay for a municipal street railway system. This latter was reported with the recommendation that it be placed on the ballot at next spring's election in accordance with the public policy act, which will require the filing of a petition signed by 25 per cent of the voters. This will give the people a chance to say which they prefer. The ordinance was deferred one week by the Council and ordered published. Judging from the general tone of the Council it is likely to pass next week.

In their report to the Council the local transportation committee said:

The one immediate need of the people of Chicago is a first-class unified street railway service covering the entire city. To some it has seemed impossible to secure such a service without resorting, at whatever cost of time and money, to public ownership and operation. We have had presented to us one plan after another guaranteed to bring about municipal ownership, fragmentary at first, to become complete in some remote and wholly indefinite future. Each of these plans was framed without regard to legal limitations. Each promises additional confusion and further disruption of the present wholly inadequate street railway service. No one of them offers even the hope of a complete and unified service within a period which its sponsor dares to predict. It is a vice of each of them that its adoption would not set-

tle the problem of local transportation or give promise of any early improvement of the service. No one of them has ever been presented to the voters or even received their indirect approval.

We are not impressed by the contention that the election of the present Mayor, upon a platform expressly promising immediate purchase or condemnation of the tangible properties and existing franchises of the present companies and nothing more, meant the indorsement by the people of the various schemes which he has sought to substitute for that programme.

Your committee, after a prolonged study of the situation, has been unable to find any means for the immediate and complete solution of the street railway problem except through negotiations with the existing companies. They have extensive rights in the streets which all concede, and greater claims which have led to protracted litigation still undetermined. We deem it sound business policy once for all to terminate all existing grants expiring at different times, and disputed claims of real importance, by the substitution of comprehensive contracts securing reconstruction of the roads and unified service with a single fare throughout the city, and giving the city as soon as possible entire freedom of action in respect to local transportation.

The accompanying ordinances secure to the city all for which the people have so long contended. We believe that they reach the limit of concession by the companies; and that the choice lies between their acceptance and prolonged litigation with the continuance of intolerable service. Every public interest will be advanced by their passage.

The negotiations for the railway companies have been mainly in the personal charge of President Mitten, of the Chicago City Railway Company. He has been assisted in this work by Ford, Bacon & Davis, who have been acting as special experts on this problem.

A PECULIAR SUIT AT LAW

A peculiar case at law is the one in which A. R. Knowles received a verdict in the District Court of Tarrant County, Texas, for \$10,000 against the St. Louis, San Francisco & Texas Railway Company, and in which the Northern Texas Traction Company received a verdict in its favor.

On the morning of Feb. 1, 1905, a collision occurred at 6:30 o'clock between a car of the Northern Texas Traction Company and a freight train of the St. Louis, San Francisco & Texas Railway Company, at a point about a mile north of the court house in Fort Worth, this point being within the corporate limits of the city of North Fort Worth, which joins the city of Fort Worth on the north. The street car was coming south, towards and into the city of Fort Worth, from a point near the packing houses in North Fort Worth, leaving this point near the packing house at 6:18 a. m., and arriving at the point of collision about 6:30 a. m. The train consisted of two cattle cars and one box car in front of the engine of the regularly made-up freight train, and had started on its way from Fort Worth to Sherman, pushing the three cars in front of the engine for the purpose of making delivery of the two cattle cars to the Fort Worth Belt Railway Company, and of the box car to the Cotton Belt Railway Company, at points near and just beyond the point of collision.

The main question in the case was, whether the railroad company or the traction company was liable to the plaintiff for the injuries which were inflicted upon him. The street car company contended that it exercised all proper precaution in the operation of its car at the time of the collision, and before the collision; that is, that the car was stopped, and that those in charge of the car looked and listened for the approach of the train, before crossing or attempting to cross the track of the railroad company; that they did not hear any train, and saw no light or signal of any kind, to warn them of the approach of the train, and that having exercised these precautions, they had a right to presume and did presume that the railway company would give the necessary and statutory signals, and that indulging in these presumptions they proceeded and went upon the track of the railroad company, and that, therefore, the collision was without fault upon the part of the street car company. The Northern Texas Company further contended that the pushing of three cars in front of a regularly made-up freight train, starting on its journey from one city to another, and delaying to act in a switching capacity, was improper and constituted negligence upon the part of the railroad company, and that no whistle was blown, no bell rung, and no lights displayed by the railroad employees, although it was very early in the morning, and cloudy and foggy.

The railroad company admitted that the bell was not rung nor the whistles blown as required by law. Its contention was that it had the head brakeman on the forward end of the forward car which was being pushed, and that he did display his light to give warning of the approach of the train. The railroad company also contended that the street car did not stop, and that the street car employees did not look and listen for the approach of the train.

The plaintiff, A. R. Knowles, was a passenger on the street car

at the time of the collision. He received a verdict as before stated against the railroad company for \$10,000, and a verdict was rendered in favor of the street car company by the jury. The railroad company has filed a motion for a new trial, and will appeal the case to the Court of Civil Appeals.

W. C. Forbess, claim agent for the Northern Texas Traction Company, did very effective work in the way of digging up evidence for the case and was complimented by the company's attorneys, Messrs. Capps & Carty, of Fort Worth.

CHICAGO AND MILWAUKEE CONNECTED

The last link in the chain of interurban roads connecting Chicago and Milwaukee was completed Dec. 2 by the opening of the Chicago & Milwaukee Electric Railroad Company's line between Zion City, Ill., and Kenosha, Wis. The company has operated for a number of years from Evanston to Waukegan, and last summer opened that part of the line between Waukegan and Zion City. Notice was recently given in these columns of the purchase of the Kenosha Electric Railway from Bion J. Arnold, its owner, by A. C. Frost, president of the Chicago & Milwaukee Electric Railroad Company. The latter company by this purchase secures a right of way clear through Kenosha to its northern city limits, where it connects with the cars of the Milwaukee Light, Heat & Traction Company, running to Milwaukee. The trip from Chicago to Milwaukee can now be made over the electric lines for \$1.25, and the round-trip for \$2.15, or less than half the steam railroad fare. The time required from the center of one city to the center of the other is about 5 hours. The time from Evanston to Kenosha over the Chicago & Milwaukee Electric Railroad Company's lines is 1 hour and 45 minutes. This company now has 60 miles of road, almost all of which is double track, and part of which has four tracks. A sub-station has been built at Kenosha, to supply power at the north end of the line. A new power house, designed to contain 25,000 hp in steam turbines, is to be built on the beach at Waukegan, replacing the present power house at Highwood. At the southern end of the line, from Evanston to Fort Sheridan, a service at 10 minutes headway is now given. Between Fort Sheridan and Waukegan the headway is 20 minutes, and between Waukegan and Kenosha the headway is 1 hour, which will be reduced to 40 minutes after Jan. 1.

The opening of the line was celebrated by a banquet at Kenosha Dec. 2, at which the company entertained the mayors and aldermen of the villages through which the road passes and county officials. The guests were taken to Kenosha by three special trains. The banquet was served under the direction of the company's steward, who has regular charge of the café service at Ravinia Park and Fort Sheridan Park.

NEW YORK, NEW HAVEN & HARTFORD GETS OTHER PROPERTIES

The New York, New Haven & Hartford Railroad has added to its already extensive street railway interests in Western Massachusetts by acquiring control of the Woronoco Street Railway, of Westfield, and the Western Massachusetts Street Railway, which has franchises for a line from Westfield to Lee. A part of its line is built. When completed the road, with the Woronoco line, will form a connecting link between the Springfield Street Railway on the east and the Berkshire Street Railway on the west, both consolidated properties. Stockholders of the Woronoco Street Railway will receive \$175 a share for their stock, or they may take in exchange Consolidated 4 per cent bonds at \$180. The company is capitalized at \$250,000, and has 17 miles of track, running to Springfield and Holyoke. The Western Massachusetts Railway is practically a branch of the Woronoco, and has 12 miles of track, extending from Westfield to Huntington. It holds unexpired franchises in Chester, Becket and Lee, where connections will be made with the Berkshire line. If, as is stated, the Consolidated intends to put on through trolleys between Springfield and Pittsfield, as soon as the necessary road is built, the line will be in direct competition for passenger traffic with the Boston & Albany division of the New York Central.

The first electrical section of the West Shore Railroad will be opened to trolley traffic on Dec. 15, when cars of the Utica & Mohawk Valley Railway will be run between Frankfort and Herkimer, a distance of 2 miles. This makes possible the reduction of running time between Utica and Little Falls from 1 hour and 20 minutes to 1 hour or less. Iliion and Mohawk villages refused to permit the double-tracking of existing trolley lines, and in consequence the through cars practically go around each.

MR. CONNETTE ON THE QUESTION OF EXPRESS

E. G. Connette, general manager of the Worcester Consolidated Street Railway Company, was the speaker at the first of the winter smoke talks of the Worcester Board of Trade, given a few evenings ago. Mr. Connette's subject was "Evolution of Transportation Methods." It was the first opportunity that the business interests of the city have had publicly to meet Mr. Connette, and there was a large attendance present of those who realize the bearing that the careful management of the street railway lines has upon the fortunes of a city.

In presenting Mr. Connette the presiding officer called attention briefly to his achievements in the street railway field, referring more particularly to the excellent record made by him in the rehabilitation and management of the Syracuse Rapid Transit Street Railway Company. He then formally introduced the speaker. Mr. Connette, in his speech, reviewed very briefly the industry from its beginning, hastening on to the subject of handling express, which had to do with local interests. On this subject he said so much that is of general interest that it seems advisable to quote from his own remarks. He said in part:

"The subject of freight should interest the Board of Trade of the city of Worcester, because this city is in the midst of a large number of hamlets, villages and small cities, all of which are connected with electric lines diverging from the city of Worcester, and a convenient, quick express electric service, operated over all interurban lines leading out of Worcester to these clusters of population, will stimulate and enlarge the business of the city of Worcester.

"The Board of Trade is doubtless familiar with the fact that wagon trains are still being operated between Worcester and the suburban towns and villages, the antique methods of years ago.

"Some may question the development of express service because they confound the word 'express' with the word 'freight.' I desire to draw a distinction between the question of handling freight and handling express matter.

"I would not for a moment advocate, as a representative of the street railway company or as a citizen, the hauling of freight cars through the streets of Worcester, but the handling of express cars, which are built on the same plans and along the same lines as passenger cars, operated under the same conditions, with no additional burden on the streets whatsoever, is a different proposition.

"The operation of an electric express radiating from the city of Worcester to the contiguous clusters of population which surround the city within a radius of 30 miles, would stimulate and increase the volume of business which is now done by the members of the Board of Trade.

"At the present time Worcester is still enjoying the antique methods of handling a large portion of its business by wagon trains between the city and the contiguous villages and towns, and the shipment of stuff by steam railroad trains. With an electric express service, where two or three trips are made daily on the interurban electric lines, it would bring the business in close connection with this city, and the same results will be obtained as have been obtained in other States; that is, a large increase in the volume of business, and the express service would in time be as indispensable as the telephone.

"You may say that I am merely talking for the interests of the street railway; from one point of view I am, because if an electric express service was started by the street railway company, it would, of course, expect to handle the business with some profit, but the subject is certainly of mutual interest, so far as that is concerned to the farmer, merchant and manufacturer, and the man who has anything to buy or sell is as much interested in increasing his volume of business as the street railway company.

"There are several obstacles to be overcome before the service could be put into operation by the street railway company, and it occurs to me that the subject is one which should receive the co-operation and support of the Board of Trade of this city."

STREET RAILWAY PATENTS

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

UNITED STATES PATENTS ISSUED NOV. 21, 1905

804,914. Car Fender. George Allen, Franklin, Pa. App. filed July 8, 1905. A rectangular frame having a tightly stretched net is swiveled vertically in front of the car, and may be swung into an angular position so as to deflect an object upon the track to one side or the other of the car.

804,933. Beam Strut. Nathan H. Davis, Philadelphia, Pa. App. filed April 14, 1905. The strut is made with an eye at one end to

engage the usual tension rod, and has a two-part hook at the other end, one-half of which is removable, and which may be bolted to the integral half so as to grasp the web of the T-beam forming the compression member. The structure is designed brake beams.

805,059. Automatic Switching Device. Joseph A. De Ford, Logansport, Ind. App. filed May 1, 1905. A pivotal shoe between the track rails is engaged by a depressible roller upon the car to throw the switch point to its alternate position in case its setting is not right.

805,062. Guard for Third Rails. Augustus A. Hickerson, Reynoldsburg, and William H. Phalor, Shepard, Ohio. App. filed Feb. 6, 1905. A wooden housing for the third rail having a pitch roof or cover, and having means for securing the usual feed wires to its rear wall. Has a front guard plate, which is removable.

805,124. Sleet Cutter for Third Rails. Ervin A. Dunbar, Wheaton, and Walter H. Rogers, Warrenville, Ill. App. filed March 18, 1905. A double series of toothed discs or cutters are revolvably supported in bearings upon a hanger generally similar to that of the ordinary third-rail contact-shoe.

805,166. Electric Rail. Louis Steinberger, New York, N. Y. App. filed Jan. 3, 1905. The current carrying part of the third rail is m-shaped in cross-section, and is dove-tailed into the upper surface of a supporting rail, a sheet of insulating material being included between the two. Heat coils are provided for melting the sleet in cold weather.

805,193. Body Bolster. Thomas M. Gallagher, Old Orchard, Mo. App. filed April 4, 1905. Relates to the detail construction of the compression plate for the bolster of a bogie truck. The compression plate is made with round ends, which engage a correspondingly curved recess in the bolster so as to constitute an interlocking engagement.

805,223. Bolster. Peter H. Murphy, St. Louis, Mo. App. filed May 27, 1905. An I-beam is provided with transverse pins through opposite ends of its web, which engage eyes upon the tension rods. The usual struts are cast in such a form as to interlock with the flanges of the I-beams.

805,311. Fender. John L. Matthews, Hyde Park, Mass. App. filed Aug. 1, 1905. A fender comprising a rear section and a front section pivotally connected therewith, said rear section including a spring frame and the front section having a front buffer element composed of soft rubber.

805,326. Car Vestibule. John P. Sjoberg and Ernst L. Forsgren, New York, N. Y. App. filed July 31, 1905. The vestibule is made with a polyganol front having plane glass windows, which are designed to slide transversely. In order to permit the windows to move around the angles of the polyganol front, the windows are swiveled to their supporting rollers.

805,329. Brake Mechanism. Cassius D. Thomas, Moberly, Mo. App. filed Nov. 1, 1904. Has a pair of direct-brake levers and a pair of indirect-brake levers operated by a lever which fulcrums upon the direct levers.

805,364. Brake Rigging. William F. Kiessel, Altoona, Pa. App. filed August 23, 1905. Has a pair of horizontally disposed rocking levers, and the two pairs of brake-shoes are respectively cross-connected to the ends of these levers so as to be simultaneously tightened.

805,400. Ice Remover for Trolley Wires. Montraville A. Wood, Chicago, Ill. App. filed March 23, 1905. An endless elastic band having a plurality of cutters thereon, is engaged around the usual trolley wheel when there is any ice or sleet upon the wire.

805,427. Wheel. Henry H. Porter, Chicago, Ill. App. filed Nov. 21, 1905. The wheel flange is independent of the body part of the wheel, and may be held concentric therewith when the vehicle is running upon a car track, or may be moved to rotate on a slightly higher axis when the vehicle is running on a flat surface, such as a roadway.

UNITED STATES PATENTS ISSUED NOV. 28, 1905

805,568. Trolley Base. Henry R. Lockhart, Westmount, Can. App. filed July 23, 1904. Provides a trolley base having universal movement and arranged to permit the trolley pole to swing on a bearing parallel to the roof of the car lengthwise.

805,572. Trolley Wheel. Alexander H. Mathesius, Brooklyn, N. Y. App. filed May 24, 1900. To prevent slipping of the trolley wheel and abrasion of the trolley wire the wheel and wire are provided with corresponding straight transverse contact lines. The flanges of the wheel are revolvable independently of the tread portion, so as to compensate for the different surface speed.

805,627. Guard-Rail Clamp. Jasper Butcher and James L. Thomas, Gainesville, Tex. App. filed July 21, 1905. The guard rail is held in properly spaced relation to the track rail by a pair of clamping hooks, the rails being pressed thereagainst by wedges attached to threaded tie hooks.

805,638. Rail Joint. Henry Driehous, Hendricks, Pa. App.

filed March 30, 1905. A clamping plate is bent so as to embrace the base of the rail and the web portion thereof, the surfaces engaging the base being inclined or wedge shaped, so as to be tightened on the rail when the plate is pressed into position.

805,644. Rail Brake. Benjamin V. Gilmore, Redhouse Sholes, W. Va. App. filed May 15, 1905. A frame having depending flanged edges is adapted to be placed over the usual track rail, and has a clamping shoe for engaging the rail under the influence of a circular wedge operated by a lever arm.

805,684. Machine for Moving Snow. Owen Sullivan, Belmont, Ia. App. filed March 22, 1905. A funnel-shaped casing or scoop is attached to the front of a car, and has a revolving wheel with radial arms for impelling the snow toward its upper or narrow end. A centrifugal blower is effective to finally dispose of the snow.

805,690. Spike Lock. Harry S. Waterman, East Tawas, Mich. App. filed May 15, 1905. A plate with an opening for the usual spike, having an inclined prong which prevents the withdrawal of the spike when it is engaged.

805,773. Railway Switch. Lewis L. Biglow, Sultan, Wash. App. filed Nov. 9, 1904. The car has a pair of depending oppositely flanged rollers which can be moved down to engage a wedge-shaped cam rail, so as to move the same and throw the switch point.

805,802. Car Seat. Frederick Kohout, St. Louis, Mo. App. filed Dec. 5, 1903. The usual parallel rods which support the back of a reversible car seat, have bails rigidly secured thereto, which swing into position to form foot rests appropriate to the position of the seats.

805,831. Rail Joint. John E. Alexander, Covington, Va. App. filed June 22, 1905. The rail ends set within a suitably recessed base plate with inclined corrugated surfaces opposite the webs of the rails. Correspondingly corrugated wedges engage these surfaces for holding the rails in position.

805,849. Car Replacer. Henry K. Gilbert, Chicago, Ill. App. filed Nov. 1, 1904. A pair of steel castings with sharp prongs or teeth on their lower surfaces are adapted to engage the ties, and have specially formed curved upper surfaces adapted to replace the car wheels.

805,902. Track Rail and Rail-Joint connection. Charles W. Clark, Chama, New Mexico. App. filed May 23, 1905. The rail ends are made hollow and dove-tail onto a specially formed splicing member.

805,905. Railway Rail-Joint. John T. Evans, New York, N. Y. App. filed July 14, 1904. The base of the rail is made with longitudinal grooves which engage corresponding ribs or flanges upon the fish-plates, so as to produce interlocking engagement.

805,921. Steel Car Side Structure. Charles A. Lindstrom, Alleghany, Pa. App. filed Dec. 19, 1904. Steel structure for hopper gondola cars, having side plates with exterior stiffening beams riveted thereto, and extending vertically from points beneath a horizontal top rail.

805,928. Guard Rail. William H. Moore, Waveland, Ind. App. filed Aug. 29, 1905. The guard rail comprises a specially made casting with lateral lugs, which serve to space it properly from the track rail. Ordinary bolts are used to clamp the two together.

805,940. Car Truck Frame and Pedestal. Ransom C. Wright, Philadelphia, Pa. App. filed Aug. 31, 1904. Ordinary I-beams are used for the side frames of the truck, and have castings riveted thereto which form the guides for the usual journal boxes.

805,999. Locomotive. Hugh Reid, Springburn, and David M. Ramsey, Mount Florida, Scotland. App. filed July 1, 1904. An electric locomotive of the type having a boiler, engine and generator set within the car body. The sides of the car are fitted with radiating tubes, which serve as a condenser so as to permit the use of condensing engines.

806,022. Car Truck. John Taylor, Troy, N. Y. App. filed Aug. 31, 1905. The guide plates for the journal boxes have wedge surfaces on their supporting faces so that they may be adjusted for wear of the journal boxes by a longitudinal movement. The plates are held in position by ordinary bolts.

806,023. Rail-Joint. George W. Thurman, Cache, Oklahoma Territory. App. filed Dec. 27, 1904. The webs of the rails are cut away at the rail-joints and the fish-plates have ribs which enter the cut-away portions, so as to permit a slight longitudinal movement to allow for expansion and contraction. The fish-plates are held together by bolts in the usual way.

806,035. Electric Signaling and Electropneumatic Train Control System. John A. Whyte, Toronto, Can. App. filed Sept. 2, 1904. A pair of trolley conductors are specially laid, adjacent to the usual track rails, and a signal circuit completed when two trains occupy the same block, is effective to notify the engineers by means of electropneumatic apparatus within the engine cab.

LARGE BRAKE ORDER FOR BROOKLYN

The Brooklyn Rapid Transit Company has just placed an order for 300 Peacock brakes to equip the 150 cars which have been built by the J. G. Brill Company and the Laconia Car Company, and which were described in the *STREET RAILWAY JOURNAL* of Nov. 18. This order makes over 700 Peacock brakes purchased by the Brooklyn Rapid Transit Company within the last six months.

PERSONAL MENTION

MR. JAMES CAHILL, a former division superintendent of the old Brooklyn City Railroad Company and an employee for forty years, is dead.

MR. CHARLES D. NOYES has been elected secretary of the Groton & Stonington Street Railway Company, of Stonington, Conn., to succeed Congressman-Elect Edwin W. Higgins, resigned.

MR. J. B. WHITEHEAD, assistant purchasing agent of the Public Service Corporation of New Jersey, with offices in Newark, has been appointed purchasing agent of the Lehigh Coal & Navigation Company, with headquarters in Philadelphia.

MR. ROBERT P. PORTER, of New York, former head of the United States Census Office, has been awarded a silver medal by the Society of Arts, of London, for his paper, "London Electric Railways," read at the sessions of the society held in 1904 and 1905.

MR. FRANK S. TODD, who has been connected with the J. G. Brill works as car finisher, has accepted a position as foreman car builder with the International Railway Company, of Buffalo. Mr. Todd has also had considerable experience in car building with the American Car & Foundry Company at Berwick, Pa., with the Philadelphia Rapid Transit Company, and with other companies.

MR. R. G. OLIVER, who has been master mechanic of the Dauphin Street shop of the Philadelphia Rapid Transit Company, has been appointed master mechanic of both the Dauphin Street and the Kensington shops of the company. Mr. Frank Wampler, who has been master mechanic of the Kensington shops, has resigned to take an important position with the Public Service Corporation of New Jersey.

MR. W. B. GRAHAM has resigned as superintendent of surface lines of the Brooklyn Rapid Transit Company, and that position has been abolished. Mr. W. O. Wood, who has heretofore been superintendent of elevated lines of the company, has been appointed assistant general superintendent of the company, and Mr. L. V. Smith, who has been Mr. Wood's assistant, has been appointed superintendent of elevated lines.

MR. JAMES E. McVEY, a prominent attorney of Youngstown and secretary and general counsel of the Pennsylvania & Mahoning Valley Railway, died at his home in that city last week. Mr. McVey was associated with the Youngstown railways for a number of years, and was largely instrumental in effecting the recent consolidation of the Mahoning Valley and Youngstown & Sharon properties. His funeral was attended by a large number of traction men from Eastern Ohio and Northwestern Pennsylvania.

MR. WILLIAM DARBEE, who for the past four years has been general superintendent of the Connecticut Railway & Lighting Company, with headquarters at Bridgeport, has resigned from the company, and has assumed the position of engineer of the newly-created Commission of Gas and Electricity of New York State. Mr. Darbee was educated at the Brooklyn Polytechnic Institute and Stevens Institute, and was with the Brooklyn Rapid Transit before coming to the Connecticut Railway & Lighting Company.

MR. HENRY N. ROCKWELL, of Yonkers, has been appointed by Gov. Higgins, of New York, as the fifth member of the State Board of Railroad Commissioners. Mr. Rockwell is conductor of the second Empire State Express on the New York Central & Hudson River Railroad, and has been in active railroad service for more than forty years. His appointment completes the membership of the commission, which was increased from three to five by the Tully law, passed at the last session of the Legislature. The term of office is five years.

MR. HORACE ANDREWS, president of the Cleveland Electric Railway and active head of the Vanderbilt-Andrews-New York Central syndicate, it is reported on good authority, has been invited by Mr. Charles T. Yerkes, who is now in this country, to accept the presidency and management of the London Underground Railway. Daily newspapers quoted Mr. Andrews as stating that he had received such a proposition, and that he was still considering it. Mr. Andrews informs the *STREET RAILWAY JOURNAL* that he did not authorize such a statement, and that he must decline to be quoted about the matter. Close friends of Mr. Andrews intimate that he will hardly accept the position, as his New York Central

plans offer greater possibilities for development than could anything offered abroad.

MR. D. H. LAVENBERG has resigned as general manager of the Toledo & Indiana Railway, with headquarters at Delta, Ohio, and has been succeeded by Mr. E. E. Darrow, until recently chief engineer of the Toledo, Bowling Green & Southern Traction Company. Mr. Darrow has been succeeded by Mr. Charles Kilgore, of Cincinnati. Mr. Lavenberg was formerly general manager of the Northern Texas Traction Company and before that was division superintendent of the Lake Shore Electric Railway. He has been in the railroad business for many years, and has been particularly successful in the development of freight business.

MR. JOSEPH SACHS, whose name has been intimately associated with the enclosed fuse development, has resigned from Johns-Pratt Company, of Hartford, Conn., and the Arknot Company, of Hartford, Conn., has been organized, with Mr. Sachs as president, to do a general business in small electrical appliances and accessories, including devices such as those with which Mr. Sachs' name has been connected for several years. The company expects to have a complete line of National Electric Code standard enclosed fuse appliances ready for the market in the near future, as well as a number of allied specialties.

MR. I. A. McCORMACK, manager of Harlem line of the New York Central Railroad out of New York, has had his jurisdiction extended from Mott Haven to High Bridge on the Hudson division, and to Wakefield (Woodlawn) on the Harlem division, with title of general superintendent of electric division; having charge of the passenger train operation heretofore under the direction of the division superintendent. The direction of freight train and station operation, freight car distribution, and the despatching and recording of train movement between the points specified remain under the direction of the respective division superintendents.

MR. RANDALL MORGAN, of Philadelphia, with Mr. W. Kelsey Schoepf, of Cincinnati; Mr. H. J. McGowan and Mr. James Murdock, of Indianapolis, and others of the co-called Widener-Elkins syndicate, last week made a trip of inspection over a number of Ohio and Indiana properties in which they are interested. A considerable portion of the trip was made in the private car "Martha" of the Indiana Union Traction Company. They visited Cleveland and held a conference with Mayor Tom L. Johnson. This gives rise to the report that they are negotiating for the Cleveland city properties, and that they desired to sound Mayor Johnson as to the future of his 3-cent fare campaign before going into the proposition more fully.

MR. W. J. SHERWOOD, who has served as chief clerk of the general superintendent's office of the Brooklyn Rapid Transit Company under three general superintendents, has resigned from the company to become assistant to President and General Manager W. W. Wheatly, of the Mexican Electric Tramways, Ltd., which operate the street railway lines in the City of Mexico and its suburbs. Beginning his railroad work in the office of the train despatcher of the New York Central Railroad some twelve years ago, Mr. Sherwood became connected with the Brooklyn Rapid Transit Company in 1895, and has been with that corporation continuously, with the exception of a short period with the Public Service Corporation of New Jersey. Mr. Sherwood will sail Dec. 14 for Mexico with Mr. Wheatly and Mr. Paul H. Evans, engineer and purchasing agent of the company, who are now in New York.

MR. BLAKE A. MAPLEDORAM has resigned as vice-president and general manager of the Northern Texas Traction Company to become connected with the Washington, Baltimore & Annapolis Railway, now under construction between Baltimore and Washington. At the time of the sale of the Northern Texas property to the Stone & Webster syndicate, Mr. Bishop, the former president, asked for Mr. Mapledoram's release, as he wanted Mr. Mapledoram to be associated with him in the construction of the Baltimore-Washington-Annapolis railway. With that understanding, arrangements were satisfactorily made with Messrs. Stone & Webster, and Mr. Mapledoram left the Northern Texas Traction Company after straightening up some personal matters in Fort Worth. The retirement of Mr. Mapledoram from the management of the traction company was sincerely regretted by the employees of that line. As a slight token of appreciation of the respect they have for him, practically all the employees of the Fort Worth, the Interurban and the Oak Cliff lines congregated at Lake Erie a few evenings ago, and Mr. Mapledoram was with them. A smoker was spread, and during the evening, on behalf of the employees of the company, W. M. Short presented to Mr. Mapledoram a handsome silver loving cup and a most elaborate solid silver electric light desk stand, which came as a complete surprise. Mention has already been made in the *STREET RAILWAY JOURNAL* of the appointment of Mr. H. T. Edgar, of El Paso, Tex., as the successor of Mr. Mapledoram.