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EDITORIAL NOTICE

Street railway news, and all information regarding changes of officers, new equipments, extensions, financial changes and new enterprises will be greatly appreciated for use in these columns.

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Street Railway Leadership

The growing importance of the street railway field is emphasized by the recent death of A. L. Johnson, and the publicity generally accorded that sad event. The capitalists and managers connected with steam railroad systems have long been personalities of national repute, but it is only thus of late that their counterparts in street railway work have loomed up as largely in the public eye and imagination. Two explanations may help account for the undoubted fact. Urban transportation has become the greatest problem of all in the domain of traction, and the attention of the public is continually fixed on everything that pertains to its solution. Another reason is that the irresistible tendency toward consolidation has made the street railway system in each large community a prominent physical and financial entity, and that strong, masterful men have been called to the front to assume the direction of these gigantic properties. In a certain sense, big interests demand "big" men, and the popular mind has already, and always, grasped this truth. General Sherman long ago managed a little horse railway down in St. Louis, and it is certain that had electricity been in vogue in those days, he would have been the ideal man for the larger system created since, for even in those humbler days of the art, its problems and difficulties appealed to the intellect that planned and executed the march to the sea. To what extent the political glamor that has played so long around the Johnson name may have contributed in the present instance to the remarkable outburst of public comment we can not, of course, undertake to say; but anyone who watches the public prints must have been impressed with the growing frequency with which such names as Vreeland, Everett, Parsons and others now occur. It is doubtful whether any name has been more often in the papers of late than that of Yerkes, while those of Widener and Elkins and Whitney are as freely used as ever.

The Metropolitan Express Service

The electric express service inaugurated by the Metropolitan Express Company on the lines of the Metropolitan Street Railway Company last week is now in regular service, although extensions will, of course, be made as the traffic increases, and it is with great pleasure that we are able to present in this issue a view of one of the cars used. We notice that the innovation is regarded by a certain portion of the daily press of New York with suspicion, due partly to ignorance of the merits of the plan and partly to a hostility which, unfortunately, exists in all large cities, to any step of this kind made by a railway company. We believe, however, that when the advantages are realized by the municipal journals and the public in general, of carrying merchandise on cars instead of by trucks, and these advantages were pointed out in our last issue, there will be a widespread demand in New York and other cities to substitute, so far as possible, electric cars for carts and drays, and so secure cleaner, clearer and more quiet streets.

Epizooty

There are still a good many horses in street railway work in New York City, but one dreads to think of the suffering of motive power and passengers alike had all the lines in the city been operated by horses last week. Doubtless the executive ability, and the devotion of the men, which carried the service through the ordeal so splendidly would still have been as fully displayed, but it is open to question whether many of the horses could have been saved. Not only did the heat slay its hundreds of animals, possibly its thousands, in Greater New York, but the prevalent epizooty disabled many more, so that express deliveries and livery stables were in an agony of inefficiency. There is a morale about the average human being that enables it to stand up to the punishment of such torrid weather, but it is well nigh a crime to expect such vitality and resistance in a horse. The conductors and drivers we saw last week utterly played out after a round trip knew they had done their duty bravely, and that it was noted and appreciated; but for a horse there can be no such consolations. It is cause for deep thankfulness that electricity was not

alone in the street car, but in the automobile, able to relieve the horse to the extent it did during the hottest spell of the last thirty years.

Hearings on Franchise Assessments in New York

The heritage of the ill-advised and hasty franchise bill passed during the last few days of the 1899 meeting of the New York Legislature and amended at a special session called by Governor Roosevelt in an attempt to make the act constitutional is still with us. After various hearings before different judicial officers the question is now before ex-Chief Judge of the Court of Appeals Robert Earl, who is the referee appointed to take testimony in the certiorari proceedings commenced by several large corporations of New York City to review the assessments placed on their franchises. It is impossible to tell yet when the hearings will be closed, and even then the legal remedies available will be by no means exhausted, as in case of an adverse decision by the State courts the case will undoubtedly be taken to the United States Supreme Court on the constitutional clause prohibiting excessive taxation. The whole matter, however, is most unfortunate and shows the trouble which can be precipitated by unconsidered legislative action, proposed and forced through under orders for political effect.

More Rumors of Consolidation in Cleveland

H. A. Everett, president of the Cleveland Electric Railway Company, is quoted in Cleveland as predicting that it is now a matter of only a very short time before the Cleveland Electric Railway and the Cleveland City Railway will be consolidated into one company, which will also have control of all the interurbans radiating from Cleveland, with the exception of the Cleveland, Elyria & Western Railway. For a number of years Senator Hanna has held the balance of power in the Cleveland City Railway, and has declined to consent to a consolidation. H. A. Everett, E. W. Moore, Barney Mahler, C. W. Wason, R. A. Harman and a number of others friendly to the Everett-Moore syndicate have held large holdings in the company, but have been unable to secure the control. Rumors of consolidation have been current before, but it is now claimed that C. F. Emery, for years vice-president of the company and a heavy stockholder, is about to retire from business, and will dispose of his stock; report has it that members of the Everett-Moore syndicate already have an option on it, and it is claimed that this, with recent purchases made by other members of the syndicate, will give them sufficient holdings to wrest the control from the hands of the stubborn Senator. The consolidation, if effected, will represent in stock and bonds \$27,450,000.

The New Orleans Troubles Over

We are glad to note the subsidence of the street railway difficulties in New Orleans, after a period of suspense and anxiety. The demands made by the men can only be characterized as startling, and one must infer that they hardly expected to get "the face value" of their claims. What the men wanted broadly was an increase from 10 cents up to 20 cents an hour. Now, wages that will permit of doubling up would be a unique phenomenon in the world of industry, and it would be hard to believe either that the men had been so grossly underpaid, or that such sudden prosperity had fallen upon the four local street car companies, as to warrant them in disregarding all the laws of supply and demand. As it is, the new scale, of which note is made in detail elsewhere, increases wages all the way up from 9.09 per cent to 21.21 per cent, and this scale the men have accepted without more ado. We trust the peace may long endure. Nothing is more distressful than the arbitrary use of violence, as seen quite lately in efforts to compel higher street railway wages, and we must congratulate companies and employees alike on the pacific solution of the matter. Yet the companies are increasing their

pay rolls from \$600,000 up to \$725,000 a year, all of which must come out of an income not readily susceptible of such a jump. Street railway systems must be just, as well as generous, and aside from obligations to bondholders and stockholders, whose savings are in the property, they have grave primal duties to the public, against the full performance of which every increase in expense militates seriously.

Democracy in Travel

Surely the modern trolley car illustrates the latest and fullest reach of the democratic idea of equality. In America at last 5 cents will carry a man further, in greater comfort, than he ever traveled before. As a matter of fact, some "elements" in society have been spoiled by the cheapness of this comfort and luxury, and hence we have the complaints about standing up and lack of seats in the rush hours. As President Vreeland, of the Metropolitan, in this city has said, with wonted shrewdness and incisiveness, "The kicks come from a class of men and women who ought to ride in their own carriages, or else hire automobiles and hansom cabs." This is not to be denied, although it would have more force if cabs were as cheap here as in London or Paris, where one can see the butcher's boy or the laundry woman traveling in solitary state in hansom or barouche. The vogue of the street car is indeed raising in an acute form the question on which Mr. Vreeland lays his finger. It is said that there is no chance for cheaper cabs in New York while trolleys are so good for the price, and it has been predicted that as trolleys and underground electric roads multiply in the capitals of the old world, the antique cab system is so likely to be affected by the new competition that many of the vehicles will be driven from the streets, and a "bob" or a franc will no longer suffice for the trip. The coming in of the automobile may correct this tendency, which operates against the welfare of those who are neither very rich nor very poor; but in the meantime there can be no gainsaying the fact that the cheap luxury of modern trolley travel has all been along purely democratic lines. The passion for equality has some odd twists, as for example, in the "pay chair" agitation in New York. It would seem rational that a person who found all the public benches decently occupied, or in possession of frowsy tramps, should be allowed to pay for a chair, if willing, but such special privileges are, apparently, against popular or populist sentiment, and the "middle-class" person with 5 cents to spare must, therefore, stand, no matter how ill or feeble. It is not quite clear why the steam railroads should be allowed to run "Pullmans," but may be that has nothing to do with the case.

The Effect of the Recent Hot Spell on Street Railways

The torrid weather which extended over practically the entire country last week brought with it varying conditions to the street railways of the country. Those which extended to parks or sea-shore resorts were crowded with passengers, and about the only stock on the New York Stock Exchange which manifested any very considerable degree of activity during the first week in July was that of the Brooklyn Rapid Transit Railway Company, whose sea-shore traffic must have been enormous. The cars were crowded night and day, but the same remark is equally applicable to other systems, even city lines attracting passengers who wanted to get a breath of fresh air. As a result night cars were run with more frequency in all of the large cities than is usual in summer. In New York City, according to President Vreeland, the traffic surpassed every record except that of Dewey day and similar big celebrations. The effect upon the men who handled the cars was severe, however, for while many industrial establishments were closed on account of the heat, the street railways had to work overtime. It is noticeable that in all the large cities the most trouble was experienced with their conductors. The motormen were all right, but at many car houses car after car would arrive with the man who takes the nickels worn out and pleading to be allowed to quit. The reason for this is logical. The motorman is in the coolest position on the car, and, moreover, usually finds during the

weather which has just past the streets unusually empty and pedestrians in no great hurry to cross the streets in front of a moving car, so that the tracks have been comparatively clear. The work of the conductor of an open car, on the other hand, is hard, even under the most favorable circumstances, as those who have had charge of one know. When, in addition, he has a car crowded with passengers, rendered more than usually irascible by the heat, and is obliged to force his way through the aisles or in and out the car to collect his fares, he must be more than human if he can work ten hours when the thermometer is at 100 degs. in the shade. The railway companies generally recognized this, and in all the large cities the supply of extras was largely utilized. While the returns from a traffic standpoint were in the most cases fairly satisfactory, the drain on the energies of the working force is so great in a heated spell like that which we have just experienced, that railway companies welcome a return to normal conditions as heartily as any other member of the community.

Steam vs. Electricity in Southern New England

Connecticut and Massachusetts now present the scene of as interesting a competition as has ever been held between steam and electric roads, a competition, however, so far not for through, but for local traffic, and thereby hangs a tale. For the last fifty years the steam lines which now constitute the New York, New Haven & Hartford Railroad have held the monopoly of the through business by land between New York and Boston. Various efforts, more or less futile, were made to build parallel lines, and there has hardly been a session of the Connecticut Legislature during the last four or five decades at which an effort has not been made to secure the right to build partly, or in its entirety, some sort of competing line between the two cities. Some of these went through and blossomed, only to be plucked before fruition, but nearly all perished before any actual construction work was done. A few like the New England Railroad and the Housatonic parallel, which ran through cars between Brooklyn and Boston, reached the point of carrying passengers, but failed to make it pay. All finally came under the control of the New Haven road, whose position, up to recently, has seemed impregnable.

While this absorption has been going on the electric railways in the cities have been gradually extending into the country, have been approaching each other, and connecting links have been built. So long as the roads were under different ownerships, the competition from this source did not seem serious; nevertheless the New Haven road took the precaution to secure control of the city systems at two points which seemed essential for a competing electric line, *i. e.*, at Stamford and at Meriden. This step, it was thought, would put a quietus on an electric railway "parallel." But recent history would seem to show otherwise. The Connecticut Lighting & Railway Company some time ago commenced to make its series of purchases which first united all the railways in the Naugatuck and lower Housatonic valleys, and recently the system has gradually grown until it now includes nearly all the roads in the State outside of New Haven, Hartford, the Thames Valley and those controlled by the New York, New Haven & Hartford Railroad Company itself. Interest has been awakened again in the plans of the company by the purchase by the Widener-Elkins syndicate, which controls the Connecticut Lighting & Power Company, of the newly chartered Cheshire Street Railway. As this road will connect at its northern end with the Waterbury roads, and at its southern end with the New Haven system, the purchase is regarded by many as foreshadowing the early absorption of the New Haven lines by the syndicate. In fact, rumors have already been current that this is under way and have been mentioned in this paper. If this deal is consummated it will add another link to the chain of roads extending across the State and will provide a means for reaching Hartford from New Haven without passing through Meriden. We are not believers in the early establishment of through electric trains between New York and Boston by the roads controlled by the Connecticut Lighting & Railway Company, and

the suggestion that sleeping cars could be run with profit on the electric roads between the two cities is absurd. The conditions are not such, and perhaps never will be such, as to make the route popular with those to whom time is a consideration. But it is undeniable that a vigorous competition for local traffic could be set up, in which the electric roads, with their lower fares and shorter headway, could secure a considerable amount of traffic which must now go to their steam rival.

The Union Traction Franchise in Chicago

We are glad to see that steps have at last been taken by the interests connected with the Union Traction Company, of Chicago, to settle definitely the question as to whether the company's franchises expire from 1957 to 1960, as claimed by the company, or whether most of them run out in 1903, which is the contention of the city. The municipal authorities have discussed to such an extent just what they would do with the property when it came into their possession, and so many statements have been made as to the status of the franchises, by which the company has suffered, that an authoritative decision from a court having jurisdiction would be welcome.

Two bills, which are practically the same, except as the history of the West and North Side companies differ, have been brought by William L. Elkins, of Philadelphia, a stockholder in both the West and North Side companies, now leased by the Union Traction Company. The Union Traction Company, the Chicago West Division Company, the West Chicago Street Railway Company, the North Chicago Railway Company, and the North Chicago Street Railway Company are all made defendants as well as the city of Chicago.

There is also an averment in the bills that Mr. Elkins had previously applied to the boards of directors of the two companies, and asked them to file the bills, but they had refused, and so he, as an individual stockholder, had been compelled to do so to protect his rights. The directors and officers of the Union Traction Company have stated that they had nothing to do with the suits, and discouraged them as being impolitic, but Mr. Elkins had insisted on bringing them.

One reason given for the institution of the suits by Mr. Elkins, instead of by the companies, is that, as the latter, being residents of Illinois, the suits must have been heard in the State courts. Mr. Elkins, however, being a resident of Philadelphia, could bring them in a United States Court.

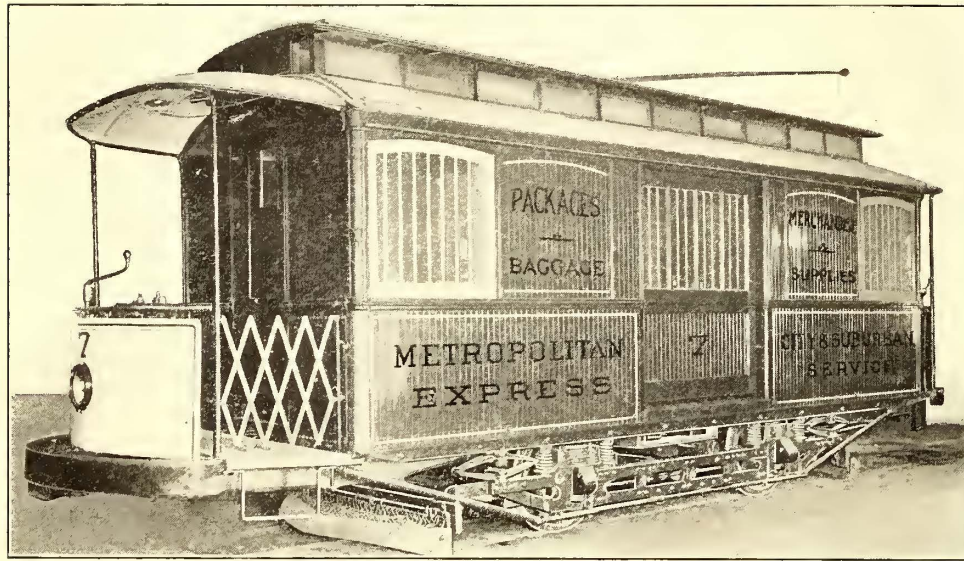
Mr. Elkins bases his claim on the act of the Legislature in 1865 extending the previously granted twenty-five-year charters to ninety-nine years. He contends that this grant of ninety-nine years not only applies to the lines then in existence, but to all which have been built since under franchises from the City Council. Although the original charter provided that only "animal power" should be used in hauling cars, he now thinks the permissions afterward given by the City Council to change this power to cable and electricity apply to the original ninety-nine-year charter.

Incidental to the suits, the plaintiff asks that the city be enjoined from attacking the company's right to operate under the old charter either by declaring its franchises void, by using physical force to prevent it from running cars, or by granting any other persons or corporations the right to lay tracks and run cars on the streets the company now occupies.

No temporary or preliminary injunctions are asked in the bills. They are in the nature of bills to determine rights or quiet titles, and are not in form petitions for writs of injunction, except that if the court should find the company entitled to the rights it claims, then injunctions to restrain the city from interfering with them would naturally follow. Also, if the suits are not determined before June 30, 1903, when the city claims the company's main franchises expire, then injunctions probably would be asked to restrain the city from interfering with the alleged rights of the company until the Supreme Court of the United States, to which they will ultimately go, has passed on them.

Reconstructed Mail Cars for Express Service in New York City

The old cars that were formerly used for carrying the mail between the postoffice and the Grand Central Station on the Third Avenue line, and which were discarded some time ago, have been reconstructed for service in the new express system which has been inaugurated on the street railway lines of New York. But little change has been made in the general appearance of the cars, with the exception that the side doors, which were formerly placed near the end, have been moved to the center, it being intended to keep the central portion of the interior space clear of packages whenever possible. The accompanying illustra-



CAR FOR METROPOLITAN EXPRESS COMPANY

tion shows the general appearance of the exterior of the car. The body is 20 ft. long x 7 ft. wide, inside measurement, so that its capacity is more than three times the capacity of an ordinary express wagon of the largest type. A few other cars have also been converted, making a total of ten.

The new company which is to operate the express service over the street railway lines of New York City, the opening of which was mentioned in these pages last week, will be known as the Metropolitan Express Company. It is owned and controlled by the New York Electric Vehicle Transportation Company. The Metropolitan Express Company bought out the Century Express Company, which did a very large business, especially in delivery work for large and small business houses. The general manager of the Century Express Company, George W. Slingerand, will retain the same position in the Metropolitan Express Company, and his close touch with this type of express business in the metropolitan district will enable him to lay out the location of the sub-stations from which deliveries will be made to the greatest possible advantage. At present but two or three of these delivering and receiving stations have been established, but others are expected to be put in service in rapid succession, and before long the residents of Manhattan and the Bronx will have at their disposal a most

efficient means of rapidly transporting individual baggage, as well as receiving deliveries from business houses with the greatest expedition. Deliveries are at present made by means of the wagons of the old Century Express Company, with one or two of the automobile emergency wagons of the New York Electric Vehicle Transportation Company, which have been put into service. Several new automobile delivery wagons will soon be running, painted in the same standard orange tint as the cars. The company is rapidly changing over its automobile batteries from the old chloride accumulator to the new Exide cell made by the Electric Storage Battery Company, of Philadelphia, and in consequence has a large number of the heavier cells in excellent condition. These old cells will probably be installed upon heavy automobile trucks, which will be able to transport such merchandise as does not need the greatest speed in delivery from the sub-stations to its destination. Trucks of this kind would be especially serviceable, for example, in the downtown districts, where it could take goods from the express cars to the ferry, go across the ferry on the boat, and then deliver its load at the railway stations on the Jersey shore. As nearly all the time would be occupied in crossing the ferry, the speed at which the vehicle could be propelled would count but little in the total time taken.

The Metropolitan Express Company is at present negotiating with many of the other companies of the city, and intends to run its system so as not to conflict with the existing conditions of express delivery. It is expected that the co-operation of these other companies will be secured, and that all terminal facilities, both at the railway stations and in the residential districts, will be easily obtained. The most important of these have, of course, already been obtained, and commodious quarters immediately across Forty-Second Street from the Grand Central Station will give ample means of handling this department of the business. The service will enable many small concerns to deliver their goods much more promptly, and at a reduced expense to themselves, while larger firms which still wish to retain their individual wagons can employ the express cars for their distant deliveries and have different sets of wagons in the various sections of the city. The handling of its patrons' property is entirely done by agents of the Metropolitan Express Company, both at the stations and in the cars, but the cars themselves are operated by employees of the road over which they run, the crews being changed when going from the line of one company to that of another.

Although fairly started, and at present operating four cars out

of the ten completed, there is very much to do, both in the business organization of the company and its mechanical details. The personnel of the company, which at present includes officers of the express and transportation companies entering into the combination, will probably remain the same as at present, but the final election of officers has as yet not been made; President Sanderson, of the New York Electric Vehicle Transportation Company, will, however, be elected president of the express company. The cars are expected to run on all the longitudinal lines of the Metropolitan system which are equipped with electricity, except Broadway, and as it is necessary that frequent cross-overs be made to furnish a completely satisfactory system, numerous curve connections must be made between the cross-town lines and the avenue lines. This work is being taken up by the Metropolitan engineers, and will be soon gotten under way. The cars will not be run during the rush hours, but will be operated only under such conditions of traffic as will enable the railway company to continue its regular service uninterruptedly. No crowding out of the passenger cars will, therefore, result from the inauguration of the express service.

Convention of the Master Car Builders' Association

The Master Car Builders' Association held its annual convention at Saratoga Springs during the last week in June, immediately following that of the Railway Master Mechanics' Association, reported in our issue for June 29. While most of the subjects discussed were of steam railroad interest entirely, certain points were brought out on the use of car wheels, axles and brake-shoes, which are of value in electric railway service, although the difference in conditions of speed and weight do not allow the conclusions to be applied without modification by street railway companies.

The report on brake-shoes follows :

LABORATORY TESTS OF BRAKE-SHOES

Your committee on laboratory tests of brake-shoes begs to submit the following report:

The last report of the committee which contained the results of tests made was presented in 1896; since that time the committee

number opposite each one being the laboratory number and the number by which each shoe is designated:

Shoe	Laboratory Number
Lappin	47
Sargent U (Broke).....	48
Streeter	49
Corning	50
Herron	51
Cardwell	52
Ideal	53
Cardwell	54
Sargent U	55
Composite	56
Diamond S.....	—
Diamond S.....	—

Note.—Tests of Diamond S shoes could not be completed in time for printing, but will be presented at the convention.

Following this report are the notes on the test prepared by Professor Smart.

The table on next page gives a resumé in statement form, and the diagram is appended showing the relation of each shoe separately on the steel and chilled wheels.

The committee presents the particles collected from each shoe in powder or in flakes; also specimens of each shoe tested showing the fracture through the center, the counterparts of which have been returned to Purdue University.

Reviewing the tests, attention is first called to the great variation in the coefficient of friction between one group of shoes and another, and in comparing the friction of the different shoes it is to be specially noted how the loss in weight compares. It is apparent that the shoes producing the greater friction also show the greater wear, and the committee feels safe in stating that this is the general rule, which may, however, have some exceptions, and may show differences in the amount of wear for any given friction. An examination of the particles worn from each shoe, and samples of the fractured shoes themselves, will give anyone an idea as to the causes that have produced the results in each specific case.

NOTES CONCERNING ACTION OF BRAKE-SHOES UNDER TEST.

NAME OF SHOE	Laboratory Number	Committee Number	Area Bearing at Start	Same in Percentage of Normal Area	Loss of Weight During Tests on Steel Wheel	Loss of Weight During Tests on Chilled Wheel	REMARKS
Lappin.....	47	4	41.44	*7.96	6 oz.	5 oz.	Considerable amount of fine scale
Sargent U.....	48	8	.....	.....	.....	.....	Shoe broke while wearing down
Streeter.....	49	11	47.18	95.8	4½ oz.	1½ oz.	Considerable amount of fine to flaky scale
Corning.....	50	14	43.50	99.1	5 oz.	1 oz.	Small amount of flaky scale
Herron.....	51	16	47.70	97.7	3 oz.	1 oz.	Small amount of fine scale
Cardwell.....	52	18	45.51	94.5	7 oz.	4 oz.	Considerable amount of fine scale
Ideal.....	53	19	49.20	100.0	13½ oz.	3 oz.	Small amount of fine to flaky scale
Cardwell.....	54	21	46.00	100.0	16 oz.	16 oz.	Large amount of very fine scale
Sargent U.....	55	.....	46.50	90.0	8 oz.	3 oz.	Very large amount of fine scale on the steel wheel; same on the chilled wheel, only coarser
Composite.....	56	20	48.40	98.0	8 oz.	8 oz.	Large amount of fine scale
Diamond S.....	57	26	52.92	100.0	10 oz.	6 oz.	
Diamond S.....	58	28	49.16	99.0	8 oz.	7 oz.	

* NOTE.—Side of shoe rounded. Net width during test, 3¼ inches.

has had no report to make, except that of last year on the installation of the testing apparatus at Purdue University, and the arrangement effected between the Master Car Builders' Association and the Purdue University concerning its care and use.

At the last convention the committee was instructed, first, to make tests of any brake-shoes that might be submitted to it by any railroad company belonging to the association; second, to present a specification for adoption as standard by the association which would cover the essential and most desirable features of a satisfactory brake-shoe for steam railroad purposes.

In compliance with the above, the committee, through the secretary of the association, gave due notice to all concerned that it would receive brake-shoes for test. Arrangements were also made with Professor Goss whereby, under the direction of Professor Smart, the work of testing would be conducted in a manner exactly similar to that followed in 1896, it having been demonstrated by the committee and the university authorities who have used the machine frequently that the original results obtained by the committee were both accurate and reliable, and as representative as possible of actual conditions.

The shoes submitted for test and tested were as follows, the

The committee has no knowledge as to the origin of the shoes tested, and desires to state distinctly that all brake-shoes furnished under similar names may not give the same results as those tested. The committee recommends that the results shown should be regarded more as an indication of what it is possible and practicable for brake-shoes made up under the various forms to produce, and that anyone desiring to be assured of getting brake-shoes with a specific value as to friction can only do so by selecting samples from time to time and having them tested, or by learning the physical qualities as developed by the character of the fracture, or by having satisfactory samples of fractured shoes with which to compare.

As to the matter of presenting a specification, it may be stated that a perfect specification should cover:

1. The mean coefficient of friction throughout the length of the stop.
 2. The final coefficient of friction which is taken at a point 15 ft. from the end of the stop.
 3. The initial coefficient of friction which is taken to be the highest value obtainable at a point near the beginning of the stop.
- Such a specification, however, would perhaps be unnecessarily

refined and complicated for practical purposes, and it seems probable that the several factors are so related that a specification covering one or two would insure protection against failure in respect to others.

TABLE SHOWING RELATIVE PERFORMANCE OF BRAKE SHOES

SHOE	Lab Number	Wheel	Coefficient of Friction in Per Cent	
			Mean—A	Final—B
Lappin.....	47	Steel.....	20.45	28.37
		Chilled.....	24.87	31.26
Streeter.....	49	Steel.....	21.99	26.55
		Chilled.....	16.51	21.76
Corning.....	50	Steel.....	14.22	20.88
		Chilled.....	13.69	22.00
Herron.....	51	Steel.....	18.98	26.03
		Chilled.....	17.80	25.66
Cardwell.....	52	Steel.....	22.91	29.29
		Chilled.....	24.42	30.64
Ideal.....	53	Steel.....	14.13	21.05
		Chilled.....	17.46	24.36
Cardwell.....	54	Steel.....	18.72	24.50
		Chilled.....	27.29	31.47
Sargent U.....	55	Steel.....	16.78	28.74
		Chilled.....	16.16	28.85
Composite.....	56	Steel.....	20.66	28.67
		Chilled.....	25.86	30.41
Diamond S.....	57	Steel.....	17.13	27.86
		Chilled.....	18.90	30.46
Diamond S.....	58	Steel.....	18.12	25.39
		Chilled.....	21.63	28.46

The committee is of the opinion that, to cover the frictional clause satisfactorily, it will only be necessary to use two of the factors, *i. e.*, the mean coefficient of friction for the whole stop and the final coefficient of friction.

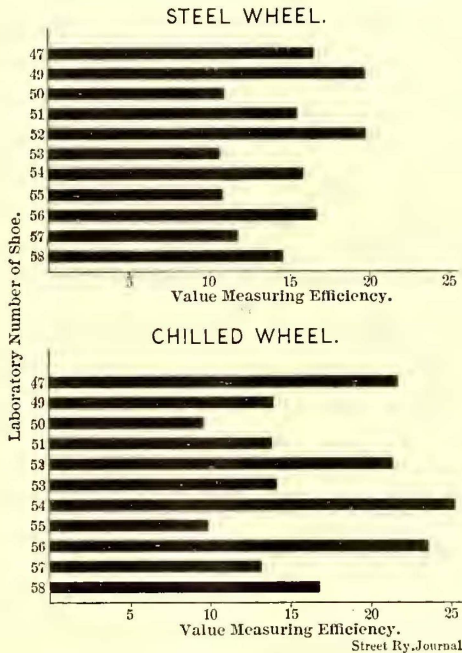


DIAGRAM OF BRAKE SHOE TESTS

The committee is also of the opinion, from a review of all the data obtained from the test on the machine, that these results are more satisfactory for purposes of comparison when stops are made from a speed of 40 miles per hour, and for this reason it is proposed to make this the standard speed in the proposed specification, and to follow the original practice of the committee in adopting three comparative pressures, *i. e.*, 2808 lbs., 4152 lbs. and 6840 lbs., respectively.

Considering the question as to whether it would be desirable to have a separate specification for chilled and steel-tired wheels, the committee, after reviewing the results, does not feel that such would be warranted. The results indicate plainly that a satisfactory friction can be obtained on either, although, as a rule, the coefficient of friction obtained on steel-tired wheels is somewhat lower than on the chilled, but inasmuch as the steel-tired wheels are used principally in passenger service, the committee is of the opinion that an effort should be made to keep the coefficient of friction up with a view of keeping the efficiency of the brakes up to a proper point. The committee, therefore, proposes the following specification for a brake-shoe, having the standard M. C. B. dimensions:

SPECIFICATION

Shoes, when tested on the Master Car Builders' testing machine, in effecting stops from an initial speed of 40 miles an hour

shall develop upon a cast-iron chilled wheel, or upon a steel-tired wheel, a mean coefficient of friction of not less than 25 per cent when the brake-shoe pressure is 2808 lbs., 22½ per cent when the brake-shoe pressure is 4152 lbs., 20 per cent when the brake-shoe pressure is 6840 lbs.

The rise in the value of the coefficient of friction at the end of the stop shall be within such limits that the value of the coefficient of friction for a point 15 ft. from the end of the stop will not exceed the mean coefficient of friction by more than 7 per cent.

This specification is based upon the results obtained in the case of ordinary or reasonably hard cast iron, such as the "B" shoe of the original tests, and a good quality of composite shoe. It will be noticed that this specification does not place a maximum limit on the coefficient of friction. The committee has omitted this for the reason that it believes it is the desire of the association to encourage high frictional qualities as well as satisfactory wear. It is found that high and uniform frictional qualities are desirable in that it makes it possible to perform the operation of braking with an expenditure of less work and with lighter and less expensive brake gear. The committee believes that it is undesirable to use a brake-shoe that gives a high coefficient of friction at or near the end of the stop, as this results in sliding the wheels, and in recommending that the coefficient of friction for a point 15 ft. from the end of the stop should not exceed the mean coefficient of friction by more than 7 per cent, it was intended to exclude only the worst of those that have been presented for test.

Finally, it may be stated that as development in the matter of brake-shoes continues, it may be found desirable to make some modification in the specification proposed, but for the conditions existing to-day, the committee believes that it is fair and reasonable, and urges all members to pay some heed to the frictional qualities of brake-shoes that they may use.

The committee desires to acknowledge the exceedingly valuable assistance rendered by Professors Goss and Smart and the students working under their direction. It will be seen from Professor Smart's notes that the work has been most carefully done. The committee feels that the association is to be congratulated upon having its testing machine in the hands of such earnest and capable men.

S. P. BUSH,
R. P. C. SANDERSON,
GEORGE GIBBS,
Committee.

NOTES CONCERNING TESTS OF BRAKE-SHOES

The effect of the various shoes tested upon the wheel was fairly uniform. None of the shoes cut either wheel to a serious extent. In nearly every case the shoe would leave small particles of scale embedded at intervals over the surface of the wheel. Shoe No. 53 was an exception to this rule. As already noted on the data sheets, this shoe left a thick, gummy substance on the wheel after each test. On long runs, when the shoe became well heated, one or two drops of a thick, black substance would run off from the trailing end of the shoe. On short tests, and when the shoe was comparatively cold, this running of the filling was not noted. These facts account for the unusual variations in the results from this shoe.

In the tabular statement headed "Notes from the Tests" will be found a statement as to the percentage of the nominal area of the shoe which was in bearing when the tests began. This was found by taking a print of the face immediately before beginning the record tests of each shoe. It should be stated that in nearly every case the bearing surface was very nearly, if not quite, 100 per cent of the nominal area before the tests had progressed far. An exception to this is shoe No. 47, one side of which was rounded off to a radius of about one-half inch. With this shoe it would have taken about a quarter of an inch of wear to bring the shoe down to a full bearing.

In running the tests each shoe was cooled by an air blast to a temperature of 80 degs. or 90 degs. between every two or three applications. After each application the wheel was cleaned by applying an emery stone and wiping the wheel with burlap.

All calculations have been checked at least once.

The following gentlemen were interested in the running of the tests and in making calculations: M. R. Wells, assistant in the engineering laboratory, and G. F. Endicott, L. Endsley and L. R. Switzer, of the class of 1901, whose work in connection with the tests deserves special mention.

R. A. SMART.

In the discussion which followed the reading of this report, S. P. Bush, chairman of the committee, added certain words of explanation:

"Without reading the report I wish to make a few remarks on the general subject of brake-shoes. The committee was instructed to make a test of brake-shoes that might be presented by the railroad companies, and that was the only work presented

to it. We have taken most of the brake-shoes out of the stock of the railroad companies. The committee does not know where the brake-shoes came from; they know what railroads they came from but that is all. In the case of two of the shoes the committee presented them as coming from the committee. The shoes known as the Lappin and the Cardwell were presented direct to the chairman of the committee, and he presented them as coming from the St. Paul road. These two shoes, while presented to the committee as coming out of the regular stock, the Chicago, Milwaukee & St. Paul road is not using them. I will say further, that the manufacturers of the shoe designated as the Lappin shoe do not desire this shoe to be considered as their regular shoe, as it is a softer shoe and made according to a different plan. The shoe which was tested is at the Grand Union Hotel, where it can be seen, and it will be recognized as different from the regular

of the insert runs either directly across or diagonally across, or in the form of an irregular curve, it changes the action, and it has been thought possible that there was a slight cutting action. It is known that certain kinds of shoes are considered as tire-dressing shoes. The Ross-Meehan shoe has been considered as a tire-dressing shoe, and the cast-iron shoe, with the chilled insert, would unquestionably have the same effect. It will be observed that such a shoe operates differently on a chilled wheel, the coefficient of friction is not nearly so high on a chilled wheel, but on a steel wheel it seems to be able to perform a certain amount of work of cutting. Whether that cutting action would be objectionable, the committee is not prepared to say. It is a fact that such shoes are used on steel-tired wheels to a greater or less extent at the present time."

Mr. Sanderson.—I would say a few words to supplement what

DIMENSIONS FOR AXLES

AS DETERMINED BY THE METHOD GIVEN BY COMMITTEE OF M. C. B. ASSOCIATION AND REPORTING TO CONVENTION 1896. REVISED 1901

	Nominal Capacity of Car	Weight on each axle, lbs.	JOURNAL				WHEEL SEAT				CENTER						
			Theo. Diam.	Size New		Limit Diameter		Theo. Diam.	Diameter New		Limit Diameter		Theo. Diam.	Diameter New		Limit Diameter	
				Ideal	M. C. B.	Ideal	M. C. B.		Ideal	M. C. B. Proposed	Ideal	M. C. B. Proposed		Ideal	Proposed M. C. B.	Ideal	Proposed M. C. B.
Axle "B" ..	60,000	22,000	3.74	4 1/4 x 8	4 1/4 x 8	3 3/4	3 3/4	5.49	5 5/8	5 3/4	5 1/2	5 1/2	4.69	4 3/4	4 5/8	4 3/4	4 3/4
	50,000	18,000	3.49	4 x 8	-----	3 1/2	3 1/2	5.13	5 3/8	-----	5 1/4	4 3/4	4.38	4 1/4	-----	4 1/2	4 1/2
Axle "A" ..	40,000	15,000	3.13	3 3/4 x 7	3 3/4 x 7	3 1/4	3 1/4	4.81	5	4 7/8	4 3/4	4 3/4	4.10	4 1/4	4 1/4	4 1/4	3 7/8
	30,000	13,000	2.99	3 1/2 x 7	-----	3	3	4.50	4 3/4	-----	4 1/2	4 1/4	3.91	4 1/4	-----	4	3 1/2
	20,000	10,000	2.73	3 x 7	-----	2 3/4	2 3/4	4.21	4 3/8	-----	4 1/4	4 1/4	3.58	3 3/4	-----	3 5/8	3 1/2

Lappin shoe. The report shows the result of the tests on each shoe.

"In the matter of specifications, the committee recommends that some influence be used on the part of the association to counteract the tendency that has existed for some time past to use brake-shoes that give very low wear and very small friction, and in preparing the specifications the committee had this point in view. Since coming to the convention the committee has had a good deal of conversation on the subject, and it is inclined to believe that the specifications, as shown in the report, offer a little bit too much influence in the direction of high friction, in that it might eliminate, if everybody followed the specifications, some shoes that really must be used at the present time. For instance, it would eliminate the use of the hard cast-iron shoe under certain conditions. At the time the committee prepared these specifications it found that there was more than one shoe that would come under the specification in other respects; but, for instance, the hard cast-iron shoe would be barred at 48 miles an hour under a pressure of 6800 lbs., and as this shoe has been used for many years, and will be used for many years to come, the committee hardly felt justified in taking the position to bar that shoe under any circumstances, so it recommends a change in the specifications, as follows: At 40 miles an hour, 22 per cent at a pressure of 2808 lbs.; at 40 miles an hour, 20 per cent at a pressure of 4152 lbs.; at 40 miles an hour, 16 per cent at a pressure of 6850 lbs. The above are the specifications for chilled wheels. That specification will bar out all shoes that have an excessive amount of chill in them. It will bar out shoes that stay on the brake beams a very long time and do not do very much braking.

"In the case of a steel-tired wheel, the committee feels that it might be better to make a change and make the basis of the specification a speed of 65 miles an hour instead of 40 miles an hour, for the reason that most of the work with cars which have steel-tired wheels is done under conditions of higher speeds, and, in fact, it is a usual occurrence, with high-speed work in passenger service to-day, to commence the operation of the brake at a speed of 65 miles an hour. We therefore recommend that the specifications for steel-tired wheels be as follows: 40 miles an hour, 16 per cent, 2808 lbs. pressure; 40 miles an hour, 14 per cent, 4152 lbs. pressure; 40 miles an hour, 12 per cent, 6850 lbs. pressure.

"In regard to the action of the various shoes under the test there are some things the committee feels it can speak of with safety. One is that increasing the quantity of chilled iron decreases the coefficient of friction. That seems to be demonstrated all the way through. There is a difference, however, in the manner of applying the chilled iron in the shoe. In some cases it is done by simply chilling the face of the shoe itself. In other cases it is done by applying a chilled insert. If you will examine the diagrams you will find that there is a difference, particularly in the case of steel-tired wheels, in the coefficient of friction, although there may be approximately the same amount of chilled iron. In the case of the chilled iron inserts, where the edge of the chill

Mr. Bush has said. The work of stopping the train by the action of the brake-shoes on the wheels, the absorption of the work in the momentum of the train, can only be used up in one of three ways—by the wear of the wheel, by the wear of the shoe or by the production of heat. Mr. Bush has referred to the cutting action or dressing action of the shoes on steel tires. If the members will look at the diagram it will be seen that the shoes having the chilled inserts show a high friction. That indicates, to my mind, that there was a slight tire-dressing; it is not, properly speaking, friction, but an abrasion of the steel tire. While we might wait for years for the records of steel tires to get the life of these shoes to see if there was any cutting or not, it looks as if it would be a reasonable deduction to draw from the information given in the report that there is a tire-dressing effect. In the second method of absorbing the work, which is the production of heat, we have to guard against excessive heating and burning of the wheels, especially chilled wheels. The third is the wearing of the shoe, and the softest shoe will give the greatest friction, but it has the shortest life. The whole problem, as I understand it, is to find the happy medium between the three conditions, and it is a matter of skill and adjustment to get the shoe that will give the best results with the longest life, the least wear on the wheel, and the specifications as modified by Mr. Bush are advanced with that idea.

"The average friction is less on steel-tired wheels than on chilled wheels. Most people do not understand it that way. That is why the recommendation is to use a smaller coefficient of friction on steel-tired wheels than on chilled wheels. Properly speaking, we ought to have a more efficient shoe on steel-tired wheels than on cast-iron wheels, for the reason that steel-tired wheels are mostly used on high-speed passenger service. In that connection we have reasonable assurance that we know definitely what the effect of the different shoes on steel-tired wheels in regard to friction is, and we have to face the proposition that we are not, perhaps, generally using the most efficient shoe for stopping trains in the shortest distance. Can the Master Car Builders of the country stand for that? Will not they have to agree, now that they know it, to let up on the long life of a shoe to some extent and feel that they are in position to say that they are using a shoe which will give a proper amount of friction for the stopping of a train?"

Mr. Bush.—Mr. Sanderson stated that the coefficient of friction was less on steel-tired than on cast-iron wheels. That is generally true, but if you will look at the table you will find it gives two composite shoes, the coefficient of friction of which is higher on steel-tired wheels, so that should be taken into consideration. In the case of all the plain shoes, and some of the composite shoes, Mr. Sanderson's statement is correct. But this point should not be overlooked, that there are other composite shoes tested which show a higher friction on the steel-tired wheel than on the cast-iron wheel.

"Mr. Rhodes is correct in his conclusion that the committee

favors the hard cast-iron shoe. The question might be asked, 'why not use the soft cast-iron shoe?' The reason is, that the wear of a soft cast-iron shoe is so great that it is not practicable to use it under many conditions. You could not make continuous runs of several thousand miles with a soft cast-iron shoe; you have to change the shoe. In addition, it means a more frequent adjustment of the brakes, which can not be well done with trains in transit, so it is hardly a practicable shoe to use.

"As far as these particular shoes are concerned the impression should not go out among the members of the association that what the report gives here as the coefficient of friction of the Lappin, Streeter or any other shoe is necessarily what the friction must be of the shoes. Take the two tests of the Cardwell shoes. The two Cardwell shoes came from the same lot of shoes; they were selected at the same time, and yet there is a very considerable difference in the coefficient of friction. Take the two Corning, the two Streeter, and the two Sargent shoes; if the shoes were made at different times you might get different results. The fact of the matter is, that in many respects the manufacturer has it entirely within his control to produce what is wanted, and no injury should be done any manufacturer in presenting these names simply because some of them happened to be low on the list. It should not be understood that they can not produce what may be desired for service."

CAST-IRON WHEELS

The report on cast-iron wheels was principally on the proportions and minimum weights of wheels for use under 60,000-lb., 80,000-lb. and 100,000-lb. capacity cars. These weights, of course, greatly exceed those met with in electric railway service. The recommendations made by the committee were, briefly, as follows:

	Repair	New
For cars of 60,000-lb. capacity.....	550 lbs.	575 lbs.
For cars of 80,000-lb. capacity.....	590 "	600 "
For cars of 100,000-lb. capacity.....	620 "	625 "

In the discussion the question of material was briefly discussed. Mr. Barr, chairman of the committee, referred to the danger of continually remelting old wheels, and stated that there are wheels running composed of material which, to a large extent, has been remelted a dozen times. Other speakers contended that the quality of the material is now usually much better than formerly. All agreed that quality was an important factor, which should be carefully considered.

CHEMICAL COMPOSITION OF ALL-STEEL CAR AXLES

The final report of interest to street railway companies was on the composition and dimensions of all steel axles, and the accompanying table was presented of dimensions recommended, the sizes of axles for some of the heavier cars.

The Expense of Crossing Safeguards in Michigan

An important decision has been handed down by the Supreme Court of the State of Michigan in the case of the Detroit, Fort Wayne & Belle Isle Railway Company vs. the Commissioner of Railroads.

In this case an order was issued by the Commissioner for the construction of safety gates at the Clark Avenue crossing of the tracks of the Union Terminal Association in the city of Detroit, and for derailleurs in the tracks of the street railway company, such gates and derailleurs to be operated by a watchman from a tower, and the expense of the construction, maintenance and operation of the appliance to be divided between the companies.

The street railway company claimed that inasmuch as its line was built before the building of a railroad at this point, it had secured a vested right that was not subject to legislative regulation, and that it could not be required to pay any part of the expense made necessary by conditions created after its line was built and in operation, and for which it was in no way responsible.

The court held that the statute under which the order was made, and which makes it the duty of the Commissioner of Railroads to examine the crossings of steam and electric roads now existing, and to order such changes made in the manner of such crossings, or such safeguards for the protection of the public thereat as in his judgment shall appear to be necessary, and to apportion the expense incident thereto between the companies affected as he may deem just and reasonable, was a valid enactment and that such discretionary powers might be properly vested in the Commissioner by the Legislature.

A dissenting opinion was filed by Judge Grant, in which he took the position that the use of a street by a street railway company was a strictly legitimate use, and that they should no more be required to pay any part of the necessary expense for the protection of railroad crossings than any other travelers using vehicles on the street.

Complimentary Dinner to M. G. Starrett

M. G. Starrett, chief engineer of the Metropolitan Street Railway Company, of New York, who recently sailed for Europe, where he will be about six weeks, was tendered a dinner on the evening of Monday, July 1, by the other members of the engineering department of the Metropolitan Street Railway Company, and a few of his other friends. The banquet was held at the Manhattan Hotel, and about sixty-three persons were present. An important feature of the evening was the presentation to Mr. Starrett of a very handsome silver loving cup, a view of which is presented herewith. This cup bears the inscription: "Presented to Milton G. Starrett, chief engineer of the Metropolitan Street Railway Company, by the members of the engineering department and friends, July 1, 1901."

Mr. Starrett, as is well known, has had charge of all the important engineering work carried on by the Metropolitan Street Railway Company, in changing its extensive system from cable to electricity, including the construction of the new power house at Ninety-Sixth



LOVING CUP PRESENTED TO MR. STARRETT

Street. This work, which is greater in magnitude and importance than any other which has ever been attempted by a street railway company, has been accomplished with the greatest success. One of the most difficult portions of the work was that of changing the power on the Broadway line from cable to electricity, which was carried on without interruption of traffic, and in so short a time and with such a minimum amount of delay and inconvenience, that of itself it constitutes a most remarkable piece of engineering. That Mr. Starrett's achievements are appreciated by his friends and associates was amply proved by the speeches of the evening.

Jacob Wendell, Jr., acted as toastmaster, and it is needless to say, carried out the part in his own inimitable way. In referring to Mr. Starrett, he said in part: "We all know the gentleman in whose honor we are gathered together this evening. His name and his work need no comment from me, for they speak for themselves. The recent marvelous change of motive power on Broadway from cable to electricity, and its accomplishment in such an incredibly short space of time, was planned to its smallest detail, and carried out by the master hand on my right. In this connection I would add, and I am sure that Mr. Starrett will agree with me, that he was assisted by as able, as skilful and as efficient a corps of assistants as could be gotten together anywhere. It has usually been the custom for the Metropolitan boys, if I may so call them, to give a dinner of this nature only when a superior officer is leaving the employ of the company. But they considered that this was an occasion when that unwritten rule might be transgressed, and they decided that, if only for his remarkable achievement which I just mentioned—but, really, I may add, for the love and respect which they bore

him—Mr. Starrett deserved a dinner, and a hearty 'God speed' on the journey he is about to undertake."

The presentation speech of the loving cup was made by F. F. Ogston, of the Metropolitan Street Railway Company, and was accepted by Mr. Starrett in a brief, but well-chosen, speech, in which he expressed his appreciation of the gift, and the complimentary remarks which had been made to him, as well as the pleasure he experienced in meeting again his friends in such a pleasant way on the eve of his departure for Europe. Among others who responded to toasts were: Edwin A. Moore, of the Pennsylvania Iron Works Company; H. F. DePuy, of the Babcock & Wilcox Company; Colonel L. R. Greene, of the Walworth Manufacturing Company; A. Carr, assistant engineer of the Rapid Transit Commission; A. E. Bebey, of the Pennsylvania Steel Company; Colonel J. J. Quinlan, and James H. McGraw.

Telegrams and letters of regret were also received from Senator F. E. Huntress, of Boston; D. F. Lewis, formerly president of the Brooklyn City Railway Company; Major H. C. Evans, of the Lorain Steel Company; F. S. Pearson, engineer of the Metropolitan Street Railway Company, and R. H. Beach, of the General Electric Company.

The arrangements for the dinner were in charge of a committee of the engineering department, headed by W. P. Plummer, and were very ably handled. The menus were designed expressly for the dinner, and were decorated with drawings of a power station and other parts of an electric railway equipment. Punch was served in miniature cars, and the different guests took away souvenirs in the form of clocks in leather cases. Music was discoursed during the banquet by the Neapolitan Orchestra and Gypsy Band, and when the party broke up, it was with the feeling that a very pleasant evening had been passed, and pleasure that an opportunity had been given to all to contribute their testimony of esteem to the honored guest of the evening.

All Labor Troubles Settled in New Orleans

The labor agitation which has been in progress during the last few weeks on New Orleans street railway systems has finally been settled in the form of a compromise. The four principal companies in New Orleans, the New Orleans City, the New Orleans & Carrollton, the Orleans and the St. Charles were affected. In the negotiations the first three companies acted in general together, while the last mentioned carried on its dealings directly with its own employees. The basis of settlement was practically the same, however, in each case.

The men originally demanded 20 cents an hour, and the companies' final answer was an offer of 18 cents an hour. This was the principal point of difference, and, as stated, the companies' offer was finally accepted unanimously by the men, largely through the advice of Mayor Capdeville, who, throughout, manifested the most earnest desire to secure an amicable settlement. The other main points of difference were that the men insisted that ten hours should constitute a day's work and that the schedule be so arranged that a day's work might be accomplished within eleven consecutive hours. The companies conceded the ten-hour day, but placed a maximum limit of fourteen hours in which it should be performed. This also was finally accepted by the men. Both parties to the controversy are to be complimented on the commendable spirit of fairness which actuated them in all their dealings.

American Street Railway Managers Abroad

According to the European correspondent of the *New York World*, Americans are invading the city transportation field with the same success as other branches of industry. He cites as an example a street railway company in Paris, which about six months ago imported as manager, at a big salary, an American named McDonald, a native of Buffalo, but for several years manager of Montreal lines. McDonald at once discharged a lot of antiquated functionaries, introduced Yankee speed and simplicity and imported three other Americans, to whom, respectively, he gave charge of the power house, the car house and the traffic. Since then, instead of a car every ten minutes, there has been one every two minutes—something unheard of previously in Paris. He doubled the speed and reduced the number of employees 15 per cent. The line is now always ready to move the biggest crowds. The patronage has tripled in six months and the line is on a paying basis and the shares have gone up one-third.

McDonald's ways were at first regarded as crazy and ruinous, but at a recent stockholders' meeting three more lines decided to engage American expert managers.

Consolidation in New Orleans

The deal by which the New Orleans & Carrollton Railroad Company's directors and stockholders are to be placed in possession of the property of the Edison Electric Company, of New Orleans, as well as that of the Merchants' Electric Light Company, of the same city, has been practically completed, is all but an accomplished fact.

Following are the conditions of agreement as submitted to the stockholders:

COPY OF RESOLUTIONS PASSED BY BOARD OF DIRECTORS OF THE NEW ORLEANS & CARROLLTON RAILROAD COMPANY, JULY 1, 1901.

Whereas, it has been proposed to the Board of Directors of the New Orleans & Carrollton Railroad Company that a sale of the property, franchises and assets of the said company shall be made in connection with a sale of the property, franchises and assets of the Edison Electric Company and the Merchants' Electric Light Company, in order that the business heretofore done by said three corporations may be hereafter conducted by one corporation, the sale of the property, franchises and assets of the New Orleans & Carrollton Railroad Company to be made for cash on the basis of \$120 per share for the old stock, and on the basis of \$208 per share for the new stock, but the stockholders to have the right to receive the securities of the new company in lieu of their proportion of the said cash price, on the basis of the following plan:

All of the bonds of the respective companies shall be assumed and guaranteed by the new company. The basis of capitalization of the new company shall be as follows:

Authorized issue 5 per cent cumulative preferred stock of \$100 each (first lien on net assets), \$5,000,000.

Authorized issue common stock of \$100 each, \$2,500,000.

Of the authorized issue of \$5,000,000 preferred stock, and \$2,500,000 common stock, and also the cash on hand of the respective companies, the following distributions shall be made:

Each share of "old" Carrollton railroad stock shall receive \$10 in cash, \$200 in new preferred stock and \$50 in common stock.

Each share of "new" Carrollton railroad stock shall receive \$8 in cash, \$200 in new preferred stock and \$50 in common stock.

Each share of Edison Electric Company preferred stock shall receive \$90 in new preferred stock and \$22.50 in common stock.

Each share of Edison Electric Company common stock shall receive \$60 in new common stock.

The stock of the Merchants' Electric Company does not participate in any of the securities of the new company.

Upon this basis, there will remain in the treasury \$400,000 preferred stock of the new company. This, together with \$100,000 cash assets of the respective companies, will give the new company \$500,000 available for improvements if required.

Whereas, the Board of Directors has carefully considered said plans and believe that such a sale would bring to each stockholder of this company a fair and full price in cash for his stock, and, in lieu of cash, the opportunity to invest upon a favorable basis in the securities of the new company. Be it

Resolved, That a sale of all the assets, property, rights and franchises of the New Orleans & Carrollton Railroad Company is hereby agreed to upon the terms and conditions, and for the objects and purposes hereinabove set forth; and be it further

Resolved, That a meeting of the stockholders of this company be called, to be held at the office of the company, on Wednesday, July 10, 1901, at 1 o'clock p. m., for the purpose of ratifying and confirming this action of the Board of Directors.

The following circular letter has been addressed to all stockholders of the Carrollton company:

NEW ORLEANS, July 1, 1901.

Dear Sir—In accordance with resolution of the Board of Directors of the New Orleans & Carrollton Railroad Company, you are requested to attend a meeting of the stockholders of said company, to be held at its office in the city of New Orleans, on Wednesday, July 10, 1901, at 1 o'clock p. m., for the purpose of voting upon the proposition to ratify and confirm the action of the Board of Directors in agreeing to the sale of the property, assets, rights and franchises of said company. A copy of said resolution is transmitted herewith for your consideration.

If the action of the board meets with your approval, and you elect to take the new securities as offered in the plan, please sign the enclosed agreement to that effect, in order that due provision may be made for you in the distribution of the stock of the new company. If you prefer to receive cash, in lieu of said securities, the same will be paid to you in the regular course of liquidation.

Kindly sign and return the enclosed proxy to Isadore Newman, Sr., in order that a full vote may be assured. If, however, you can make it convenient to be present, we would be glad to have you participate in the meeting. Yours respectfully,

WALTER V. CROUCH, Secretary.

As a reason for the consolidation, it is given out that the General Electric Company, large holders in the Edison company, grew tired of the work necessary to manage the Edison Electric Company, and used this means of putting the corporation under the management of Isadore Newman, the controlling spirit of the Carrollton road and a large holder of Edison company stock. It is considered noteworthy that the General Electric Company in making the deal accepted Mr. Newman's statement of the street railway's condition and value without sending an auditor to verify

the balances. The transaction, it is declared, is the largest ever consummated on the simple say so of a financier. The Edison company, now part of the new corporation, has from the beginning furnished the power for one of the other traction companies in New Orleans, and it is considered that the present consolidation paves the way for a general street railway combination in New Orleans.

Death of A. L. Johnson

Albert L. Johnson, who has occupied a prominent position in electric railway construction, died at his home in Brooklyn, July 2, from heart disease. Mr. Johnson had been ill at home only three weeks. Previous to this time he was under the care of a physician for heart trouble, but the symptoms were not alarming, and did not cause his family any worry. Mrs. Albert L. Johnson, her four children, and Mayor Tom L. Johnson were present.

The death of Mr. Johnson will come as a surprise to his friends, as he was a man of powerful physique, who always led an outdoor

life in his railway work, and had never had any severe illness.

The first experience of Albert L. Johnson in street railway operation was in Cleveland, when, with his brother, he purchased in that city a short mule line, with what were considered to be valueless old franchises. Tom Johnson led in the development of the street railway ventures and Albert Johnson was active in the operating department.

When the Johnsons disposed of their Cleveland street car interests and took to other fields success seemed to come a little slow to Albert Johnson.

A system from East Liverpool to Wellsville, Ohio, was built by him, Sidney Short, C. E. Grover and Henry Davies. Eight miles of track were laid, but the venture was not a successful one.

Mr. Johnson's attention was next devoted to the street railway systems near Allentown. With Allentown as the center he began the development of lines of urban and interurban trolleys, which now connect over sixty villages and towns.

One of the most successful ventures of Albert Johnson was with his brother, Tom Johnson, in the Nassau Railroad Company, of Brooklyn. The first surprise came when Tom and Albert Johnson started trolley roads to Coney Island and placarded them with signs, "East River to the Ocean." A single fare of 5 cents was charged, and the Nassau system became a dangerous competitor to the Brooklyn Company. When the plans of Roswell P. Flower were formulated for the consolidation of all the transit lines of Brooklyn into one system the Johnsons held out for a very large price for their road, which they eventually got. The price paid to the Johnsons for their personal holdings is said to have been over \$4,000,000.

Mr. Johnson then went to London and took an active part in the building of an underground road in that city. The last project to which he devoted his attention and energies was the plan to connect Philadelphia and New York by a trolley system. This plan has been described in recent issues of this paper.

Mr. Johnson offered to build a tunnel under the East River to Brooklyn to Flatbush Avenue, thence to South Brooklyn and under the Narrows to Staten Island, thence to New Jersey, and direct across that State to Pennsylvania. He offered to make the fare 3 cents for passengers in any part of Greater New York, and if the tunnel cost more than the \$8,000,000, which it was decided could be spent on the Brooklyn extension of the rapid transit tunnel, Mr. Johnson offered to raise the capital himself.

After a controversy with the Rapid Transit Commissioners, during which Mr. Johnson charged that a present of many millions of dollars had been made to Contractor John B. McDonald when the rapid transit tunnel contract was signed, it was decided not to accept Mr. Johnson's offer. The statement was also made that if Mr. Johnson wanted to bid on the tunnel as planned under the East River to Flatbush and Atlantic Avenues, Brooklyn, his bid would receive consideration.

For several months Mr. Johnson had been busy buying and consolidating trolley lines between New York and Philadelphia to make a trunk trolley system, and he promised a 40-cent fare

from the extremes of the line. Mr. Johnson also had his engineers at work preparing estimates of the cost of building the Brooklyn tunnel.

The home of Mr. Johnson was one of the handsomest on the Shore Road in Brooklyn. The house overlooks New York Bay and the Narrows, and is of unique architecture. Mr. Johnson's wife was a Miss Mitchell, of Louisville, Ky.

It is stated that Mr. Johnson's railway projects will be taken over and followed up by his brother and C. M. Bates, of 71 Broadway, New York.

Eleven Months' Operating Statement of the International Traction Company

The following is a combined comparative operating statement of allied companies in Buffalo, Niagara Falls and adjoining territory controlled by the International Traction Company, for the eleven months ending May 31, 1899, 1900 and 1901:

	1899	1900	1901
Gross receipts.....	\$2,133,139.18	\$2,331,632.02	\$2,698,331.65
Operating expenses	1,244,544.76	1,245,883.65	1,395,115.72
Net earnings from oper't'n	888,594.42	1,085,748.37	1,303,215.93
Miscellaneous earnings...	77,626.09	72,983.97	94,664.78
Total earnings.....	966,220.51	1,158,732.34	1,397,880.71
Fixed charges.....	791,390.62	832,212.09	936,336.17
Surplus.....	\$174,829.89	\$326,520.25	\$461,544.54

As will be seen, there have been noteworthy gains in gross, net and surplus. The figures given herewith, as will be seen, cover practically none of the Pan-American business which the company will enjoy during 1901, as while the Exposition was formally opened on May 20, the attendance of visitors did not commence in any considerable number until during June, and even during that month did not reach the proportions which it undoubtedly will during the later months of the year. The figures, therefore, can be considered in no other light than that of normal growth, and with the increase in population and resources which Buffalo is enjoying, everything points to a continuous or greater increase during the future.

The figures as presented herewith of gross earnings for eleven months of \$2,698,332 would on a pro rata basis amount to \$2,943,636 for the full year, which would make the company rank among the ten largest street railway companies in the country on a comparison of gross receipts.

The General Electric Control of the British Thomson-Houston Company

The control recently secured by the General Electric Company, of the British Thomson-Houston Company, mentioned in our last issue, continues to attract much attention in England. The London *Daily Express*, which is just at hand, gives some further particulars of the deal, from which the following additional particulars are taken:

"While the British Thomson-Houston Company has held exclusive rights in Great Britain for the Edison, Thomson-Houston and other patents and inventions of the General Electric Company, and has hitherto co-operated with that company, the financial control has been held on the Continent. The purchase of this foreign controlling interest is considered, therefore, most satisfactory to the British shareholders, in bringing the two companies into closer relations, especially as no purchases have been made from British shareholders.

"Few changes, it is said, will be made in the personnel of the British Thomson-Houston Company's staff or of its board, which, however, will now receive the direct assistance and advice of C. A. Coffin, the president, and General Eugene Griffin, the first vice-president, of the General Electric Company. W. J. Clark, the manager of the foreign department of the company, who was largely instrumental in negotiating the deal just consummated, is already a member of the board, and will remain in England permanently. This arrangement will give the Americans three directors out of a total of thirteen.

"The works of the British Thomson-Houston Company, which are now in process of construction at Rugby, will be rapidly pushed to completion, and it is probable that a portion of the large amount of material which the American company is now furnishing from its works in the United States for the Colonial trade will hereafter be produced at Rugby. It is understood, also, that such additional capital as is required for the extension of the business will be furnished by the American company.

Convention of Railroad Commissioners

At the recent convention of Railroad Commissioners of the United States, held in San Francisco, June 5, 1901, the Street Railway Accountants' Association of America was officially invited to be present, and was represented by a committee of three. The committee consisted of C. N. Duffy, auditor Chicago City Railway Company, of Chicago; F. E. Smith, auditor Chicago Union Traction Company, of Chicago, and H. C. Mackay, comptroller the Milwaukee Electric Railway & Light Company, of Milwaukee, Wis.

The business transacted of importance to the Street Railway Accountants' Association of America was:

First. The committee on classification of construction and operating expenses of electric railways submitted a report recommending that the president of the Association of Railroad Commissioners appoint a committee to formulate a standard form of report that electric railways are to use in making reports in their respective States to the boards of Railroad Commissioners; this committee to co-operate and confer with a committee from the Street Railway Accountants' Association of America. The report was unanimously adopted by the convention.

Second. A constitution and by-laws was adopted, the Association of Railroad Commissioners never having had one before. This constitution prescribes that the Street Railway Accountants' Association of America and the American Railway Accounting Officers' Association shall constitute a part of the body of the association, to be represented on the floor of the conventions by three members from each association.

Third. The next annual convention of the Association of Railroad Commissioners will be held at Charleston, S. C., Feb. 11, 1902. The Street Railway Accountants' Association of America is expected to send three delegates to represent their association.

The committee representing the Street Railway Accountants' Association of America at the San Francisco convention deserve the thanks of their association as well as of the street railway industry in general for their attendance at this convention, which occupied several weeks of their time, and involved a trip of several thousand miles. The association is to be congratulated upon possessing members who will give so much of their time to its interests, and who make such an excellent representation. The Accountants' Association, also, as well as the members of the committee themselves, are also under many obligations, officially and personally, for the many kindnesses and courtesies extended to them. The journey from Chicago to San Francisco and return was made by special train, the party, including the ladies and guests in attendance, numbering about one hundred and fifty.

Every comfort and luxury was provided, and the trip of over eight thousand miles, occupying twenty-five days in all, was one of continuous pleasure. The party was royally received and entertained everywhere.

Unquestionably, these conventions are of great benefit in promoting an acquaintance and a better feeling between the railroads and those who exercise supervision over them. This is true of the street railways, and especially of those who make reports to their respective boards of Railroad Commissioners.

The Street Railway Accountants' Association of America and the convention of Railroad Commissioners have certainly been brought much closer together than they ever were before. The accountants' classification of accounts having been officially adopted by the Railroad Commissioners at a prior convention, the next logical step is to formulate a standard form of report that will be uniform and go hand in hand with the classification of accounts.

By the action of the San Francisco convention, this is the work that will now be undertaken by representatives of the two associations, which should be productive of great good to all interests involved.

The Association of Railroad Commissioners will be invited to attend the convention to be held in New York in October.

Rochester and Buffalo Companies to Pay Franchise Taxes

All of the Rochester corporations subject to taxation under the Special Franchise Tax law, which passed two years ago, have accepted a reduction in the valuation of their franchises as fixed by the State Tax Commission, and have agreed to pay at once the taxes for the years 1900 and 1901, which aggregate upward of \$115,000. The Buffalo street surface railway companies have also entered into such a stipulation, and it is expected that several big transportation corporations of New York City will do likewise

within a few days. It is understood that this action does not bar the companies from recovering taxes paid in the event that the Franchise Tax law is declared unconstitutional by the Court of Appeals, as a result of the litigation now being pressed before Judge Earl as referee, by the New York City traction and lighting companies. This action permits the corporations to pay each year's taxes out of each year's earnings, rather than the accumulated taxes of two or three years after the Court of Appeals has decided whether the law is constitutional, if this decision is reached, provided the question is not carried to the United States Supreme Court.

By a final order of the State Supreme Court justice in certiorari proceedings to review the assessments made by the State Tax Commission, reductions have been made in the different assessments, as follows:

Rochester Railway Company, assessment for 1900 reduced from \$2,057,000 to \$1,234,200, and for 1901 from \$1,950,431 to \$1,560,344, tax to be paid for both years, \$60,000.

Buffalo Traction Company, assessments reduced for 1901 from \$463,580 to \$324,506.

Buffalo Railway Company, assessment reduced for 1901 from \$3,378,290 to \$2,364,803.

Crosstown Railway Company, of Buffalo, assessment reduced for 1901 from \$1,824,675 to \$1,277,272.

In the proceedings before Judge Earl the New York City corporations claimed that, as special franchises are to be assessed as real estate, the State Tax Commissioners should not, as they had done, assess them at full value, but should adopt the percentage of assessment in vogue in the different localities. The State authorities have followed this plan in making the settlements referred to, admitting the justice of the contention thus made by the corporations.

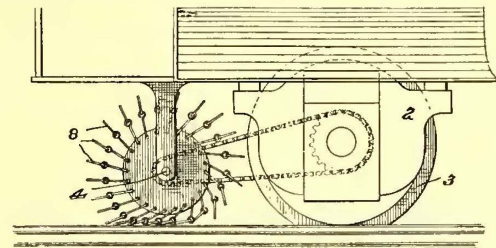
Therefore, the reductions in the valuations noted above are mainly due to the special franchises being assessed according to the percentages of full value in vogue in assessing other real estate in the respective localities.

Street Railway Patents

[This department is conducted by W. A. Rosenbaum, patent attorney, 177 Times Building, New York.]

UNITED STATES PATENTS ISSUED JUNE 25, 1901

677,016. Railway Car Truck; G. J. Capewell, Hartford, Conn. App. filed Feb. 20, 1900. A car truck having pairs of flanged traction wheels of common gage, boxes mounted on the axles of the traction wheels, a frame supported by the boxes, and an outwardly facing horizontally arranged guiding wheel yieldingly supported on each side near each end of the frame.



PATENT NO. 667,168

677,026. Electric Brake; F. W. Garrett, Johnstown, Pa. App. filed Oct. 24, 1900. The braking members are applied directly to the shaft of the motors, the brake magnets being provided with coils for destroying the residual magnetism.

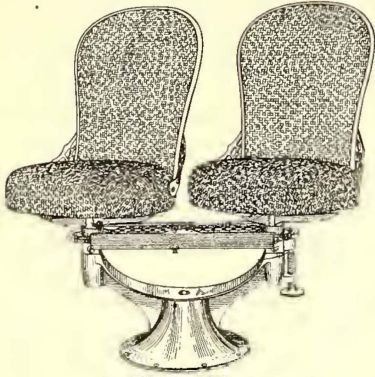
677,042. Car Truck; W. E. Prindle, Johnstown, Pa. App. filed Oct. 24, 1900. The side bars of the truck extend some distance beyond the wheel base at each end, and support springs by which a long spring base is obtained without lengthening the wheel base.

677,069. Car Fender; F. E. Dow, Fredrickton, Canada. App. filed Feb. 4, 1901. Structural details of a fender having a pilot frame and latch operating devices to move the parts of the fender from a normal to a working position when desired by the motor-man.

677,120. Wheel; G. W. Cross, Carbondale, Pa. App. filed April 25, 1899. The web of the wheel is provided with a central flange and a rim flange, about which the hub and rim are respectively cast.

677,168. Cleaning Device; J. Berley, Gloversville, N. Y. App.

filed Feb. 25, 1901. A cleaning wheel having short chain sections attached to its periphery, which break up the ice on the rail.



PATENT NO. 177,195

677,195. Car Seat; C. W. H. Frederick, Melrose, Mass. App. filed Jan. 12, 1901. Doubled-seated revolving chairs, having a sprocket chain connecting the seats to cause them to revolve in unison.

677,293. Convertible Open and Closed Car; H. Frost, Cohoes, N. Y. App. filed March 23, 1899. When it is to be used as an open car the seats, as well as the backs of the seats, may be extended to make continuous seats and backs from side to side of the car, and

when the car is to be used as a closed car these extensions may be slid out of view so as to leave an aisle from end to end of the car through the center.

UNITED STATES PATENTS ISSUED JULY 2, 1901

677,456. Railway; G. Larson, Bothell, Washington. App. filed Jan. 5, 1901. A slot cover is lifted by a plow immediately preceding the contact shoe.

677,463. Frog for Use in Connection with Overhead Conductors of Electrical Tramways or Railways; H. G. Nicolson, Bellevue, Ireland. App. filed April 12, 1901. The trolley pole or an attachment thereon strikes the frog and moves it just before the wheel reaches the switch.

677,523. Car Fender; S. Lind, Davenport, Ia. App. filed Jan. 18, 1901. The fender is a horizontal wheel intended to throw the obstruction to one side.

677,532. Yielding Automatic Adjustable Car Fender; S. W. Alexander, Los Angeles, Cal. App. filed Sept. 6, 1899. Details.

677,554. Sand Box for Cars; A. L. Bacon, Franklin, Mass. App. filed Oct. 27, 1900. The valves of the sand duct are controlled by electromagnets.

677,618. Switch-Throwing Device; A. A. Baker and F. E. Hefernan, Pittsburgh, Pa. App. filed April 16, 1901. A rod is to be projected from the car through a slot to engage a lever for throwing the switch point.

677,696. Railway Track Cleaner; M. Power, Toronto, Canada. App. filed Nov. 19, 1900. Detail improvements on the construction shown in patent No. 556,612.

677,741. Means for Supporting and Manipulating Contact Shoes or Electrically Propelled Railway Cars; H. C. Hastings and L. E. Walkins, Springfield, Mass. App. filed Feb. 21, 1901. The shoe, which makes contact with the under side of a third rail, is fitted with devices whereby it can be first withdrawn horizontally from the rail and then folded vertically.

677,778. Electric Switch Railway; A. J. Hatfield, Newark, N. J. App. filed June 20, 1900. In addition to the main magnet for throwing the switch, a second magnet is used for locking the switch in either position.

677,827. Switch-Operating Device; D. N. Weathers and W. S. Stevenson, Marengo, Ind. App. filed Aug. 18, 1900. A vertical staff on the car has a crank at its lower end adapted to engage with cams for throwing the switch in one direction or the other, depending upon the position of the crank.

677,833. Device for Applying Sand to Railway Rails; E. F. De Witt, Lansingburg, N. Y. App. filed Dec. 30, 1899. An agitating device is operated simultaneously with the valve.

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PERSONAL MENTION

MR. JOHN K. FRYE, purchasing agent for the Lorain Steel Company, of Lorain, and a prominent figure in the steel and steel rail industry, has resigned to enter the firm of Banning, Cooper & Company, of Pittsburgh, brokers and dealers in iron and steel.

MR. W. H. ABBOTT, late of the Stanley Electric Company, of Pittsburgh, has been engaged by the Pomeroy-Mandelbaum syndicate as consulting engineer for all its properties. Mr. Abbott will devote his entire time to the elucidation of questions of power, construction and operation.

MR. JAMES ELLIS, of Lowell, has been appointed assistant superintendent of the Nashua division of the Lowell, Lawrence & Haverhill Street Railway, of Lowell, Mass. Mr. Thomas C. Lees,

who was formerly superintendent of the Nashua division, is now superintendent of the Lowell division of the company.

MR. W. B. TARKINGTON, who was recently appointed general superintendent of the Omaha & Council Bluffs Railway & Bridge Company, began his railroad career in the mechanical department of the Chicago & Northwestern Railway. He served a machinist's apprenticeship, and was later promoted to division master mechanic on the Iowa division; at that time he was the youngest official in the mechanical department of the road. In 1888, the Omaha & Council Bluffs Railway & Bridge Company was formed to construct an electric line between Omaha and Council Bluffs and a high steel bridge over the Missouri River; it was the first large electric railway built by the Thomson-Houston Company and attracted much attention. Shortly after the organization of this company Mr. Tarkington began his service with it as chief engineer, and in a short time he was promoted to master mechanic, having entire charge of power plants and shops. While serving in this capacity a modern power station was erected under his supervision, and the rolling stock was



W. B. TARKINGTON

entirely rebuilt and equipped with improved machinery. Through all the changes and development of the property to its present proportions, Mr. Tarkington has acquired an extended shop and railway experience. His work has frequently been referred to in these columns, and has been marked by great originality and a broad knowledge of mechanical principles. His advancement has been continuous and has been due, more than anything else, to his indefatigable energy and loyalty to the interests of his employers, and he has established a reputation as a most assiduous worker.

THE ANNOUNCEMENT was made June 20 of the appointment on July 1 of Mr. D. W. Cooke as general passenger agent of the Erie Railroad Company, vice Mr. D. I. Roberts, resigned. Although a comparatively young man, Mr. Cooke has had a wide railroad experience, and is recognized as being among the ablest general passenger agents in the country, and the Erie Railroad Company is to be congratulated upon securing his services. He was born at Lewiston, Niagara County, N. Y., Dec. 31, 1863, but his parents moved West when he was four years old, and resided in Iowa until he went to work for the Chicago & North Western Railway in the local freight office at Council Bluffs on May 25, 1881. He was for three years a clerk in the local freight office at Council Bluffs in various positions, among them that of assisting the cashier and ticket agent. He was then made



D. W. COOKE

chief clerk of the passenger department of the Sioux City & Pacific and Fremont, Elkhorn & Missouri Valley Railroads in Iowa before these lines were taken in by the Chicago & Northwestern system. Following this engagement he was for a short time with the Chicago, St. Paul, Minneapolis & Omaha Railway in St. Paul, and then went to Dallas, Tex., as rate clerk in the office of Mr. B. W. McCullough, who was at that time general passenger agent of all of the Gould lines in Texas, and which at that time comprised the Texas & Pacific, M. K. & T. and I. & G. N. lines. After three years' service with Mr. McCullough his record was so successful that he was offered an attractive position with the Wisconsin Central in Milwaukee, and later in Chicago, upon the occasion of the Northern Pacific lease. His promotions now became rapid, being first with the Chicago Great Western in Chicago, where he became assistant general passenger agent, and in 1896 to the New York office of the Erie Railroad. His recent promotion to that of general passenger agent of the important Erie system is a deserved tribute to his ability, and is in line with the continuous advancements which he has made since he entered the railroad industry.

FINANCIAL INTELLIGENCE

THE MARKETS

The Money Market

WALL STREET, July 10, 1901.

The money market has become a problem of increasing concern during the last fortnight. To some extent the stringency which has existed, and which was reflected in an extreme advance of the call loan rate to 30 per cent, was due to the tie-up of capital over the first of July corporation settlements. The banks are always impelled to keep a larger amount of funds on hand over this period than they usually do, in order to meet the demands of their depositors. But this is obviously only one phase of the situation which, for other reasons, has been rendered embarrassing for the present, and uncertain for the future. Loans are now extended to about the largest volume they have ever been in the history of the New York banks. They are \$87,000,000 greater than at the corresponding date a year ago, and \$96,000,000 greater than two years ago, when, it will be remembered, an acute stringency developed in the money market during the autumn months. The question which financial authorities are now pondering is whether this enormous loan expansion has occurred in the speculative channels of the stock market, or in other quarters, whence it may be withdrawn without causing serious disturbance. Probably the best opinion inclines to the view that the increase has represented principally advances to syndicates which have been carrying on the combination "deals" among the railroad and industrial properties during the last six months. The borrowing for this purpose is largely temporary, but the return of the capital is slow and intermittent. It should, however, provide a pretty steady source of gain to the local bank resources. In addition, the banks will shortly begin to receive large sums of gold arriving from the Klondike, which are transferred immediately here. Sterling exchange is falling, and it may go low enough to bring gold from Europe. Then, again, the interior exchanges should yield a favorable balance during the next few weeks before the crop-moving demands for currency begin. But the serious uncertainty is whether these various factors will build up the surplus reserve—now unusually low—effectively enough to allow it to withstand the heavy drain which is certain to come in the autumn.

Money on call averages about 6 per cent. Time money is quoted at 4 and 4½, according to length of maturity.

The Stock Market

The doubt as to what may develop in the money market, the severe drought in a portion of the corn crop, threatened rate cutting by the Western railroads, and the strike of sheet steel and steel hoop workers, have combined to give the stock market a different tendency from what was expected two weeks ago. Of these disturbing factors the first two are the most important. It looks now, at the time of writing, as if pressure enough had been brought to bear upon the traffic managers of the Atchison and the other lines in the Missouri Valley to force them to abandon the tariff reduction which, if it had not involved a rate war, would have meant at least a considerable falling off in profits for all concerned. It also appears that an amicable settlement will be reached between the steel magnates and their men at the conference called for to-morrow. The remaining points of uncertainty in the financial situation are those of money—already discussed in the paragraph above—and of the corn crop. The excessive heat and dry weather have no doubt done a great deal of harm to this grain, particularly over the great productive area of Kansas. In Nebraska and other sections the condition is much more favorable, and as yet there is no probability of what could be termed a failure of the corn harvest. But the fact that the greater portion of the growing territory has had virtually no rain for several weeks makes the situation, in the event of the drought continuing, quite serious. This and the possibility of tight money are what exclude at the moment the idea of any pronounced improvement on the Stock Exchange. Liquidation among the smaller speculators has been pretty heavy during the fortnight, and prices at times have broken sharply. But with the principal elements in the financial situation—the state of trade, of railroad earnings and of the wheat crop—extremely favorable, it is hard to see how the forces of depression can act any more than temporarily.

The local traction stocks have followed pretty closely the course of the general market, and their decline may be attributed to general, rather than to special, causes. But it may be remarked that they have resisted the downward tendency rather better than other groups of stocks have done. Brooklyn Rapid Transit has something ahead in the annual stockholders' meeting, and the report

for the year, the anticipation of which is often utilized effectively on the Stock Exchange. The Manhattan statement for the June quarter, which will also be out before long, is expected to make an unusually favorable comparison with the earnings for the period of a year ago. Nothing of importance has developed in connection with Metropolitan, but the stock, in common with the other two tractions, gives evidence of receiving fair speculative support.

The Curb Market

The only noteworthy dealings in traction stocks on the curb during the last fortnight have been those in the securities of the St. Louis company. Both common and preferred reached a week ago the highest prices recorded for them in nearly a year, the common selling up to 27½ and the preferred up to 82. Dealings were light, averaging only a few hundred shares a day. Since the beginning of the current week, when the whole curb speculation has been depressed in sympathy with the fall on the Stock Exchange, the St. Louis specialties have reacted sharply, the common being quoted at 26 and the preferred at 80½ when business ceased yesterday. The bonds have not shared the upward tendency of the stocks, remaining stationary between 89½ and 90 on unimportant transactions. No sales of the other curb tractions are reported. Specialists have merely shifted the bid and asked quotations to conform to the changes reported in the various local markets. New Orleans Traction, for instance, has been changed about in the bid price from 24½ to 27, but enough margin has been kept between bid and asked to prevent any transactions. In this and in other instances the changes are purely nominal.

Chicago

There have been no conspicuous changes in the quotations of the Chicago traction securities during the past two weeks. Union Traction has been the strongest feature of the group, with a gain of over a point. This move is associated with the talk of a resumption of dividends in the early future. In conservative quarters, however, it is not thought probable that such a step will be taken before the question of the company's franchise, which has entangled the road in a conflict with the notorious Chicago City Council, has been settled. The elevated stocks are mostly off from a fortnight ago. There are nothing but speculative reasons, however, to account for the reaction. The earnings reports continue excellent; it is estimated that in May the four roads using the Union Loop carried over 8,000,000 passengers around that structure, an average of 230,000 daily. New construction and suburban extensions are going on rapidly. The South Side is about to start laying a third track, and will probably soon extend its line to Englewood. Northwestern will before long have an extension to Evanston. There is some talk of the Metropolitan building a terminal east of the river, but it is hardly probable that such a move will be attempted right away.

Philadelphia

The adjournment of the Pennsylvania Legislature has provided a stimulus to the speculation in all the local traction stocks. On the principle of the cat being away, the mice will play, important interests in the properties who are able to influence speculative conditions have apparently selected the present as the best opportunity they have had for some time to create a more favorable market sentiment toward their stocks. As a result, Union Traction has risen two points during the last fortnight on fairly large transactions, Consolidated of Pittsburgh, after selling at 21¾, was bid up sharply to 23¾, while Philadelphia Traction and the active bond issues, like Electric People's Traction 4s, have been notably strong. There seems to be little doubt that Union Traction in its forthcoming annual report will show a surplus of \$1,000,000 on the stock. The earnings for June are known to have increased very largely over those of last year. It is in anticipation of the publication of the earnings results that the recent buying of the stock has chiefly occurred. Indianapolis Street Railway did not hold its extreme advance of two weeks ago, but it is firm around 38—a reaction of three points from the top. The 4 per cent bonds of the company are also off two points. Sales of about a thousand shares of Rochester Passenger were recorded recently, all at the one price, 27.

Iron and Steel

The iron market shows no sign of any fresh forward movement, but the undertone is distinctly strong, with every evidence of a very heavy consumption. Nearly all of the finished branches, such as steel rails, railway equipment and structural material, have booked all the business they can do well into the fall. The de-

mand for pig iron is fairly active for immediate delivery, but it is evident that the consuming interest is not yet prepared to stock up for the remainder of the year. Good judges, however, are of the opinion that the demand for both the unfinished and the finished product will continue at its present maximum throughout the rest of the year. Prices are unchanged on a basis of \$16 for Bessemer pig, \$24 for steel billets and \$28 for steel rails.

Stock Quotations

The following table shows present bid quotations for the leading traction stocks, and the active bonds, as compared with a week ago; also the high and low since Jan. 1, 1900:

	Jan. 1, 1900		1901	
	To Date		Closing Bid	
	High	Low	June 25	July 9
American Railways Co.....	48¾	27	43	41½
Boston Elevated	192	b95	181	185½
Brooklyn R. T.	88¾	47½	81½	80½
Chicago City	285	206	255	206
Chicago Union Tr. (common).....	..	..	19½	18
Chicago Union Tr. (preferred).....	..	..	58	59
Columbus (common)	42	20	42	40
Columbus (preferred)	100	80	97½	99
Consolidated Traction of N. J.....	69½	57	68½	68
Consolidated Traction of N. J. 5s.....	110	..	109½	109½
Consolidated Trac. of Pittsburgh (common).....	30¼	20¼	22½	22½
Indianapolis Street Railway.....	41	15	39	38
Lake Street Elevated.....	16¼	6½	13¾	13
Manhattan Ry.	131¾	84	125	119½
Massachusetts Elec. Cos. (common).....	42¼	15	40¾	40½
Massachusetts Elec. Cos. (preferred).....	96	70	95	93
Metropolitan Elevated, Chicago (common).....	37½	24½	35½	34½
Metropolitan Elevated, Chicago (preferred).....	93¼	76	92	91
Metropolitan Street	182	143¾	174½	170
Nassau Electric 4s.....	97½	..	97½	97½
New Orleans (common).....	33½	18¼	27	24½
New Orleans (preferred).....	168	90	93	100
North American	*106	*74	103	101
North Jersey	36	21	23	23
Northwestern Elevated, Chicago (common).....	52	..	47	45
Northwestern Elevated, Chicago (preferred).....	97	..	92	91
Rochester	31½	12	28	27
St. Louis Transit Co. (common).....	35	16½	24½	26
South Side Elevated (Chicago).....	119	93	112	111
Syracuse (common)	20	10½	20	20
Syracuse (preferred)	a80	25	60	60
Third Ave.	135¾	45¼	121	122
Twin City, Minneapolis (common).....	94¾	58½	93¼	92
United Railways, St. Louis (preferred).....	82	..	78¾	80½
United Railways, St. Louis, 4s.....	91½	..	89	89
Union Traction (Philadelphia).....	40¾	24¼	25¾	27½
United Traction (Providence).....	110	107	109	109
Worcester Traction (common).....	34½	25	34½	34½
Worcester Traction (preferred).....	106	89	105	105

a Asked. b Bid. * Quotation of new stock.

Metals

Copper is dull and unchanged at 17 cents, tin is quoted at 28½ cents, lead at 4¾ cents, and spelter at 3.95 cents.

BALTIMORE, MD.—The directors of the Baltimore, Westminster & Gettysburg, Center & Clearfield, Montgomery, Doylestown & New Hope and Ambler & Jenkintown Street Railway Companies, which were recently incorporated under the new railroad act, have appointed executive, finance and other committees. The executive committee of the Baltimore, Westminster & Gettysburg Company is composed of President I. A. Sweigard, ex-officio; Thomas F. Durham, William H. Bartlett and S. L. Johns. The committee was empowered to proceed with the immediate construction of the road, the necessary funds being provided. The line will have a single track with necessary turnouts. It will extend from Reisterstown, Md., to Westminster, a distance of 12 miles; to Littlestown, Pa., 26 miles; to Gettysburg, 37 miles; to Chambersburg, 61 miles; to Shippensburg, 74 miles; to Carlisle, 96 miles; to Harrisburg, 116 miles; to Mount Holly, 122 miles; to York Springs, 132 miles, and to New Oxford, 144 miles. Branch roads will be run from Gettysburg to Bertwick, through New Oxford and Abbotstown, a distance of 23 miles; from Littlestown to York via Hanover, 25 miles, and from Hanover to McSherrytown, 2½ miles, making the total length of tracks 201½ miles. The line will later be extended from Westminster to Washington, D. C., 49 miles, making a direct route from Gettysburg to Washington. The executive committee of the Montgomery, Doylestown & New Hope Company consists of President I. A. Sweigard, ex-officio; S. L. Johns, John J. McCloskey and T. A. Snyder. The committee was empowered to proceed with the construction of the road. It will extend from Willow Grove to New Hope, with a branch line to Plumsteadville via Doylestown, a distance of 26 miles. The Center & Clearfield Street Company appointed the following executive committee: President, I. A. Sweigard, ex-officio; H. Rule, John J. McCloskey and S. L. Johns. The right of way has been secured for the entire distance and work will be begun on the road in thirty days. It will extend from Grass Platville, Clearfield County, to Janesville, Centre County, a distance of 25 miles. The executive committee of the Ambler & Jenkintown Company consists of President I. A. Sweigard, ex-officio; G. A. Snyder, S. L. Johns and John J. McCloskey. The road will extend from Centre Square, Montgomery County, via Jenkintown to Fox Chase, a distance of 31 miles.

CHICAGO, ILL.—Stockholders of the Northwestern Elevated Railroad have authorized the issue of \$15,000,000 4 per cent convertible bonds and an issue of \$15,000,000 preferred stock. The stockholders have also guaranteed \$6,000,000 of Lake Street Elevated 5 per cent debenture bonds. The Northwestern bonds run for ten years and are redeemable after Sept. 1, 1906. The purchase of the Union Loop at 125 for the stock has also been authorized. The present outstanding issue of \$5,000,000 5 per cent Northwestern Elevated bonds is to be refunded into 4 per cent.

LEXINGTON, MASS.—The Railroad Commissioners have approved an issue of \$100,000 new stock by the Lexington & Boston Street Railway Company, for reduction of floating debt and extensions. It has also approved an issue of \$100,000 twenty-year 5 per cent bonds by the same road for funding floating indebtedness.

MILFORD, MASS.—The Railroad Commissioners have approved an issue of \$50,000 5 per cent twenty-year bonds by the Milford, Attleboro & Woonsocket Street Railway Company, for funding floating indebtedness.

ST. LOUIS, MO.—A call has been issued for the outstanding \$791,600 consolidated mortgage bonds of the Union Depot Railway Company, one of the constituent companies of the United Railways Company, which is now operated by the St. Louis Transit Company. These bonds are 6 per cent ten and twenty-year bonds and were issued in 1890. They have been quoted at from 100½ to 101½. The books of the United Railways Company closed on July 1 and will open July 10, as the regular quarterly dividend of 1¼ per cent will be paid then on the preferred stock.

CONCORD, N. H.—The Concord Street Railway has passed into the control of the directors of the Boston & Maine and Concord & Montreal Railroads. The main line of the road, which will connect with the new branch of the Concord & Montreal Road, extends from the south end of Concord City to Penacook, a distance of 8 miles.

JERSEY CITY, N. J.—The directors of the Consolidated Traction Company have announced a regular semi-annual dividend of 1 per cent, payable July 15. The dividend will be paid with the money received from the North Jersey Street Railway Company as rental payment under the terms by which the North Jersey leased the Consolidated Traction Company.

BALLSTON SPA, N. Y.—The State Board of Railroad Commissioners have granted authority to the Ballston Terminal Railroad Company to increase its capital from \$300,000 to \$1,500,000 and to issue a mortgage for \$1,200,000. The company contemplates the construction of 20 miles of new road.

ONEONTA, N. Y.—The Oneonta, Cooperstown & Richfield Springs Electric Railway Company has been granted permission to increase its capital stock from \$750,000 to \$1,000,000.

KINGSTON, N. Y.—The Kingston City Railroad Company and the Colonial City Traction Company have been consolidated as the Kingston Consolidated Railroad Company. The officers of the new company are: C. M. Preston, president; A. J. Phillips, secretary; W. B. Taylor, general manager and purchasing agent; G. B. TeBow, auditor. The office is at 320 Broadway, Kingston.

NEWBURGH, N. Y.—F. H. Pouch, A. B. Pouch and J. B. Kilsheimer have been appointed as a reorganization committee for buying the property and franchises of the Newburgh Electric Railway Company, subject to the first mortgage bonds, when same are sold at auction under the second mortgage. The above committee agrees to organize the new company with capital as follows:

First mortgage bonds.....	\$425,000
Preferred stock (non-accumulative).....	175,000
Common stock	150,000

In consideration of the first mortgage bondholders allowing their bonds to be stamped 5 per cent, instead of 6 per cent bonds, the reorganization committee will issue to holders of \$1,000 bonds \$200 of preferred stock; second mortgage bondholders will receive preferred stock at par; debenture bondholders will receive common stock at par; certificate of indebtedness holders will receive common stock at par, and holders of common stock will receive common stock at 50. The committee also agrees that no dividends shall be paid on either class of stock for three years, but that all earnings over and above operating expenses and fixed charges shall be used on additions and betterments to the road. For the faithful performance of their agreement, the committee has executed a bond of \$50,000 with W. H. Pouch and E. D. Pouch as securities, with the Hamilton Trust Company, of Brooklyn, where bondholders agreeing to plan of reorganization are to deposit their bonds and receive stock. The above plan is not operative unless 80 per cent of the first mortgage bondholders deposit their bonds with the Hamilton Trust Company before Aug. 15, 1901.

WILMINGTON, N. C.—A. B. Skelding, general manager and purchasing agent of the Wilmington Street Railway Company, has been appointed receiver of that company, on application made by the Morton Trust Company, of New York. The petition was made to foreclose the \$150,000 mortgage on the property, and a decree of sale has been granted.

MIDDLETOWN, OHIO.—The reported sale of the Cincinnati, Hamilton & Dayton Traction Company's line to the Dayton, Germantown & Hamilton Traction Company is confirmed by the officials of the former company. It is denied, however, that the Woodsdale line is to be included in the deal.

CINCINNATI, OHIO.—The directors of the Cincinnati, Newport & Covington Railway Company have voted to accept the report of the executive committee of the company rejecting the proposition of the Cincinnati Traction Company to lease the property. It has developed that Senator Foraker, who held a large block of Cincinnati, Newport & Covington stock, has disposed of this to interests already identified with the Cincinnati, Newport & Covington.

CLEVELAND, OHIO.—It is anticipated that within another year the street railroad interests controlled by the Everett-Moore syndicate will have an earning capacity of \$1,000,000 per month. At the present time the earnings of the lines controlled by the syndicate are in the neighborhood of \$750,000 every thirty days. As compared with its earnings of a year ago, the syndicate shows an increase of \$62,803.31. The total earnings of the Detroit United Railway Company, Toledo Traction Company, Cleveland Electric Railway Company, Northern Ohio Traction Company, Cleveland, Painesville & Eastern Company, Cleveland & Chagrin Falls Company and Sandusky & Interurban Company were \$501,672.90. Of the half million dollars, the Detroit United contributed \$246,143; the Toledo Traction Company \$85,158.25; the Toledo Lighting Company \$25,000, and the Cleveland Electric Railway Company \$198,000.

LANCASTER, PA.—The Conestoga Traction Company, Lancaster Gas Light & Fuel Company and Edison Electric Illuminating Company have passed into the possession of the Lancaster County Railway & Light Company. The power plants of the absorbed companies will be centralized, and \$250,000, it is said, will be spent in improvements. A \$1,000,000 mortgage has been filed by the new company for the issuance of collateral trust bonds, \$500,000 to be issued at once.

PHILADELPHIA, PA.—The receipts of the Union Traction Company for June, 1901, are said to have increased \$50,000 over June, 1900.

WILKESBARRE, PA.—Pemberton & McAdoo, of New York, are offering \$1,400,000 of the Wilkesbarre & Hazleton (Electric) Railway Company's \$2,500,000 first collateral trust mortgage fifty-year 5 per cent gold bonds, dated May 15, 1901; due May 15, 1951; interest May and Nov. 15. Coupon bonds, \$1,000 each, with provision for registration. Guaranty Trust Company, of New York, trustee. This electric company is a New Jersey corporation, with \$2,700,000 of authorized capital stock, of which \$200,000 is 6 per cent non-cumulative preferred, this last having been issued in exchange for \$700,000 of the \$1,000,000 capital stock of the Lehigh Traction Company, of Hazleton, Pa. Of the new company's authorized issue of \$2,500,000 first collateral trust mortgage gold 5s, there are reserved for purchase of Lehigh Traction 5s \$600,000; reserved and in hands of trustee for acquisition of additional property and for other corporate purposes, \$500,000; present issue, \$1,400,000. The proceeds of the \$1,400,000 of bonds now offered will be used to complete the extension from Hazleton to Wilkesbarre (28 miles) and to equip the same and to construct a modern power house and for the purchase of the \$140,000 debt certificates of the Lehigh Traction Company. Further information is furnished as follows: The \$1,400,000 bonds offered are secured by the deposit with the trustee (the Guaranty Trust Company, of New York) of \$1,500,000 of the first mortgage bonds and \$1,500,000 (the total issue) of the stock of the Wilkesbarre & Hazleton Railway Company, of Pennsylvania, thus making, to all intents and purposes, these bonds an absolutely first mortgage, with additional security, consisting of the following: \$140,000 (being the entire issue) of the 5 per cent certificates of indebtedness and \$700,000 (being 70 per cent) of the outstanding capital stock of the Lehigh Traction Company, of Hazleton, Pa. The net earnings of the Lehigh Traction Company for the past year are stated by the officers to have exceeded \$27,000, or more than 33 per cent of the total fixed charges on the bonds here offered. The lines of the Lehigh Company aggregate 22 miles of well-built, electrically equipped road, and cover the city of Hazleton and the numerous surrounding mining towns, with a combined population of 95,000. The Wilkesbarre & Hazleton Railway Company, whose entire capital stock and bond issue are deposited as security for the bonds above described, owns the franchises and private right of way for an extension of 28 miles from Hazleton to Wilkesbarre, and has acquired by lease, on advantageous terms, the right to operate its cars over the tracks and to use the terminals of the Wilkesbarre & Wyoming Valley Traction Company, thus giving it terminal facilities in the city of Wilkesbarre and connection with the electric lines between Wilkesbarre and Scranton and intermediate towns. The population of Wilkesbarre and the towns served by the Wilkesbarre & Wyoming Valley Traction Company is about 200,000; that of Hazleton and its suburbs is 95,000; combined population reached by the lines of the Wilkesbarre & Hazleton and its immediate connections, 295,000.

FORT WORTH, TEX.—The Northern Texas Traction Company has filed an amendment to its charter, increasing its capital stock from \$250,000 to \$500,000.

SALT LAKE CITY, UTAH.—A. W. McCime, president of the Salt Lake Railroad Company and one of the largest stockholders of the company, has purchased the Salt Lake Rapid Transit Company and the Utah Power Company. Mr. McCime and his associates, so it is said, contemplate consolidating the three properties and improving them.

TOLEDO, OHIO.—The Toledo & Indiana Railway, which is promoted by A. K. Detwiler, C. P. Griffin and others, and the Toledo & Bryan Air Line, which is promoted by J. L. Yost and a number of Toledo capitalists, have commenced construction work on parallel roads from Toledo to Bryan. One crowd is working west from Swanton with a large force and the other east from that place. Both claim to have placed contracts for work and material. The fight promises to be an interesting one, as two roads will hardly pay.

TACOMA, WASH.—The Tacoma Railway & Power Company has completed and placed in operation a line from Tacoma to Spanaway Lake, a distance of 12 miles. Two miles of this distance an entirely new road was constructed from Fernhill to Sparkland. From Sparkland to Spanaway the old Tacoma & Columbia River Railroad, purchased some time ago, has been utilized and converted from a steam road into an electric line. The company is making a summer resort and pleasure park at Spanaway Lake, where it has purchased 45 acres of land. Work is in progress now building boat and bath houses, pavilions, etc., in which \$15,000 will be expended—\$6,000 of which will be put in this year. In the construction of the new part of road, purchase of the old line and land with improvements, the total expenditure by the company is estimated at \$70,000.

TOLEDO, OHIO.—William Hattersley and C. E. Sutton have sold out their interests in the Toledo, Napoleon & Defiance Railway Company to Cleveland and Detroit people. It is claimed that the real purchasers are not known, but as is the case with all electric railway reports in this section, it is supposed that the Everett-Moore syndicate proposes to build a line west from Toledo. The company mentioned holds a number of franchises for a line between Toledo and Defiance.

Tables of Recent Traction Earnings

NAME	LATEST GROSS EARNINGS		LATEST NET EARNINGS		
	Week or Month	1901	1900	1901	1900
American Rys. Co.....	May	\$73,265	\$68,620	\$.....	\$.....
Binghamton Ry. Co.....	May	15,678	14,184	6,337	5,494
Brooklyn R. T. Co.....	May	1,075,576	1,086,840	360,415	428,742
Chicago & Mil.El.Ry.Co.	Apr.	10,443	8,103	4,859	3,800
Cincinnati, Newport & Covington Ry. Co.....	May	69,841	64,424	49,964	37,476
Cleveland El. Ry. Co....	May	187,049	170,839	85,249	76,998
Cleveland, Painesville & Eastern.....	Apr.	10,184	8,966	4,249	3,163
Consolidated Tr. (Pittsburgh).....	Apr.	238,706	234,247	111,954	119,566
Denver City Tramway...	May	125,244	108,376	55,723	52,189
Detroit United Ry.....	May	224,447	201,021	96,639	82,529
Duluth Superior Tr.....	May	37,205	.....	.....	.....
Herkimer, Mohawk, Ilion & Frankfort Ry. Co..	May	4,508	4,146	1,935	908
International Tr.....	May	283,403	203,389	120,993	87,903
London St. Ry.....	May	10,003	7,345	3,185	674
Montreal Street Ry.....	May	160,612	151,540	.....	.....
Northern Ohio Traction..	May	48,505	42,450	20,204	17,026
Olean St. Ry. Co.....	Apr.	3,749	3,505	1,741	1,700
Richmond Traction Co..	Mar.	16,352	13,181	6,713	4,863
Rochester Ry. Co.....	May	80,401	75,749	32,930	26,011
Scranton Ry. Co.....	May	55,110	51,891	25,609	19,896
Southern Ohio Trac. Co.	June	29,905	25,818	14,741	11,747
Syracuse R. T. Ry. Co...	May	51,958	46,645	22,976	21,144
Twin City Rapid Transit.	May	251,946	224,927	137,605	119,694
United Tr. Co. (Albany).	May	73,152	116,605	.....	.....
United Tr.Co.(Pittsburgh)	Mar.	157,792	148,009	70,741	65,511

NAME	Period Ending	GROSS FROM JULY 1 TO LATEST DATE		NET FROM JULY 1 TO LATEST DATE	
		1901	1900	1901	1900
American Rys. Co..	May 31	\$764,569	\$.....	\$.....	\$.....
Binghamton St. Ry.	May 31	169,756	159,010	75,401	69,191
Brooklyn R. T. Co.	May 31	1,092,017	1,064,658	3,682,280	3,311,243
Chicago & Milwaukee El. Ry. Co...	Apr. 30	121,539	91,702	65,001	49,053
Cincinnati, Newport & Covington Ry. Co.....	May 31	312,437	295,991	181,094	177,445
Cleveland El.Ry.Co	May 31	1,950,303	1,475,485	889,592	556,357
Cleveland, Painesville & Eastern ..	Apr. 30	119,666	102,359	61,454	50,781
Denver City Tramway.....	May 31	1,260,441	1,148,047	588,121	447,292
Detroit United Ry..	May 31	1,012,877	930,143	452,270	395,139
Herkimer, Mohawk, Ilion & Frankfort Ry. Co.....	May 31	48,895	47,026	20,247	21,063
International Tr...	May 31	2,698,332	2,331,632	1,303,216	1,085,748
London St. Ry. ...	May 31	115,834	60,194	45,192	46,673
Montreal Street Ry.	May 31	*1168,843	1,087,871	.....	.....
Northern Ohio Tr..	Apr. 30	162,251	.....	58,217	.....
Olean St. Ry. Co....	Apr. 30	43,019	39,322	21,735	18,475
Richmond Trac.Co.	Mar. 31	151,620	134,104	64,441	57,869
Rochester Ry.....	May 31	898,156	835,543	337,248	328,021
Scranton Ry. Co...	May 31	554,095	548,044	233,677	249,802
Southern Ohio Tr.	June 30	142,956	126,640	55,937	56,018
Syracuse R.T.Ry.Co	May 31	564,347	504,191	254,458	211,962
Twin City R. T. Co.	May 31	1,178,258	1,086,395	614,594	548,433
United Tr. Co. (Albany).....	May 31	483,195	497,727	.....	.....
United Tr.Co.(Pittsburgh).....	Mar. 31	1,434,145	1,321,158	634,423	604,154

* Eight months. † Caused by strike of employees. α From Jan. 1.

δ Cars operated only 19 days in May on account of strike.

NEWS OF THE WEEK

CONSTRUCTION NOTES

LOS ANGELES, CAL.—W. H. Holabird, representing the Los Angeles & Pacific Traction Company, has succeeded in purchasing the franchise for the construction of an electric railway from Monrovia to Los Angeles. There were several bidders for the franchise. According to the terms of the franchise, work must be commenced on the line within four months and completed within two years, and the fare between Monrovia and Los Angeles shall not be higher than 25 cents and ten-ride books at \$1.75.

NORWICH, CONN.—The Danielson & Norwich Street Railway Company and the Thompson Tramway Company have been organized; the directors of the Danielson & Norwich Street Railway are the following: E. N. Sanderson, New York; F. A. Jacobs, Danielson; J. S. Thornton, Putnam; Harry S. Black, Danielson; H. Hobart Porter, New York. The officers are: F. A. Jacobs, Danielson, president; J. S. Thornton, vice-president; Harry S. Black, secretary; H. Hobart Porter, treasurer. The directors of the Thompson Tramway Company are: John Flint and Lyman R. Eddy, of Webster; E. N. Sanderson, New York; F. A. Jacobs, Danielson; J. S. Thornton, Putnam; Harry S. Black, Danielson; H. Hobart Porter, New York. The officers are: F. A. Jacobs, Danielson, president; J. S. Thornton, vice-president; Harry S. Black, secretary; H. Hobart Porter, treasurer.

SOUTHINGTON, CONN.—The Meriden, Southington & Compounce Tramway Company have been granted the right to build to Marion and West Peak.

HARTFORD, CONN.—The directors of the Connecticut Railway & Lighting Company have voted to extend the lines from Ansonia northward to Seymour. When the extension is completed the only break in the company's lines between Waterbury and Stamford will be a stretch of 7 miles from Seymour to Naugatuck. The directors have also decided to extend to Watertown the line which already runs from Waterbury to Oakville. Work upon both extensions will begin as soon as the preliminary formalities are adjusted.

NEW HAVEN, CONN.—The Fair Haven & Westville Railroad Company has assumed entire control of the lines of the Winchester Avenue Railroad Company, thus unifying the ownership of the electric railways of New Haven's system. A meeting of the stockholders of the Fair Haven & Westville Company has been called for July 9 to vote on a proposition to increase the capital stock \$500,000, in order to pay the indebtedness caused by recent improvements. The question of extending the line under the franchise secured at the last session of the Legislature will also be considered.

HARTFORD, CONN.—The Connecticut Railway & Lighting Company has just purchased the charter granted to the Cheshire Street Railway Company at the recent session of the General Assembly, embracing the franchise right to construct a street railway from Waterbury through Cheshire to Mount Carmel, where connection is made with the lines of the Fair Haven & Westville Railroad. The distance between Waterbury and New Haven by this route is only 17 miles, which is the most direct line available. A. W. Paige, general counsel for the Railway & Lighting Company, is quoted as stating that the construction of the proposed line may not be undertaken until next spring.

CARROLLTON, GA.—There is talk of building an electric railway from Carrollton to Villa Rica, a distance of 16 miles.

STEWART, ILL.—Surveys are now being made for the proposed electric railway to connect Stewart, Lee Centre, Amboy and Dixon, a distance of 35 miles, and a company has been organized to build the road. The details have not been worked out. I. R. Titus and E. L. Titus, of Stewart, are interested in the project.

EAST ST. LOUIS, ILL.—Articles of incorporation have been issued to the St. Louis, O'Fallon & Lebanon Electric Railroad Company, with its principal offices located at Seuz Station. The purpose of the company is to construct an electric railway from East St. Louis to O'Fallon and from O'Fallon to Lebanon, all in St. Clair County, Ill. The capital stock of the company is \$25,000, and the incorporators and first board of directors are: George J. Kobusch, of St. Louis; John A. Day, John M. Bramlette, Edward Abend, Jr., and Fred. Smith, of Belleville, Ill.

CHICAGO, ILL.—The Metropolitan Elevated Railroad has made provision for the construction some time in the future of a down-town terminal for the exclusive use of some of its trains. This will be in addition to the Union loop, over which the Metropolitan's trains are run. The extension mortgage filed a few days ago authorizes the issuance of bonds to cover the cost of right of way, construction and equipment of a terminal east of the South Branch of the river. As the arrangement with the loop is carried out now, nothing would be gained by using such a terminal, as the lease with the loop provides that the outlying roads are to pay a rental of one-half cent for each passenger carried, whether on the loop or not.

EAST ST. LOUIS, ILL.—The Union Traction Company has been incorporated with a capital stock of \$50,000, to construct suburban railways. The incorporators of the company are: W. K. Murphy, W. S. Wilson, W. L. McCandless.

SPRINGFIELD, ILL.—The Springfield & St. Louis Electric Railway Company was incorporated July 1, with a capital stock of \$25,000. The purpose of the company is to construct an electric railway from Springfield, through the towns of Chatham, Auburn, Virden, Girard, Nilwood and Carlinville, and thence through Macoupin, Madison and St. Clair Counties to East St. Louis. The incorporators and first board of directors are: J. W. Gaulbert, St. John Boyle, William Jarvis, of Louisville, Ky.; H. S. Reardon, D. T. Littler, F. W. Tracey, Edward Payne and Bluford Wilson, of Springfield; J. P. Matthews, A. H. Bell and George Baker, of Carlinville; H. R. Hamilton, G. L. Tipton, F. W. Lukins, J. P. Henderson and G. W. Hutton, of Virden.

MOUNT CARMEL, ILL.—Articles of incorporation were issued June 23 to the Olney, Lancaster & Mount Carmel Electric Railroad Company, with capital stock of \$50,000. The object is to construct an electric railway from Olney, Richland County, to Mount Carmel, Wabash County, via Lancaster. The incorporators and first board of directors include: Robert Parkmon and M. H. Murray, of Mount Carmel; J. C. Couch, of Mendenville; Charles J. Siebert, of Lancaster; J. J. Bunting, of Berryville; Aden Kuoph and William Bower, of Olney.

WABASH, IND.—The Wabash & Rochester Railway Company has been organized with a capital of \$35,000, subject to increase to any amount needed. The stockholders are business men of this city, and the purpose is to build an electric railway from Wabash to Rochester by way of Roann and Gilead. Petitions have been prepared asking for special elections in several townships to vote subsidies. The directors are: Alvah Taylor, Aaron Simon, James Lynn, Jr., R. P. Macy, L. L. Daugherty, Wilbur McNamee, John B. Latchem, Warren G. Sayre and M. S. Howe. James Lynn, Jr., is slated for president.

LAFAYETTE, IND.—Capitalists of Lafayette and Indianapolis have organized a company to build an electric railway to Frankfort by way of Colfax. This line will form a junction with the line being built from Indianapolis to Frankfort, and the two lines connected about 12 miles southwest of Frankfort.

HARTFORD CITY, IND.—The City Council has granted to the Fort Wayne, Hartford City & Muncie Electric Railway Company a new franchise, differing from the former one only in that the company is restricted to the use of Jefferson Street, whereas in the former instrument several streets were included. Under the company's new plans it wishes to use but the one thoroughfare. Nearly all the right of way has been secured, and as soon as the rest is in hand the work of construction will begin.

ATTICA, IND.—The Fountain-Warren Traction Company has been incorporated to construct an electric railway in Attica, Covington, Veedersburg and Williamsport. The road will be extended to Lafayette, and if the directors see fit they will build electric lines to connect other towns and cities in the counties of Fountain, Warren and Tippecanoe. The company is capitalized at \$300,000, divided into 3000 shares, of which 2000 are common and 1000 preferred stock. The company is also empowered to generate and sell electricity for lighting and power purposes. The directors of the company are: Charles M. McCabe, Harry C. Martin, Albert E. Harris, Morris Herzog and William W. Luke.

MUNCIE, IND.—The Muncie, Middletown-Greenfield Electric Railroad Company, which is to build an electric railway from Muncie to Greenfield, has perfected its organization. The directors of the company are: W. H. Wood, Charles B. Fudge and B. W. Bennett, of Muncie; E. L. Elliott and Frank Litzenger, of Middletown; W. H. Keesling, of Mechanicsburg; W. J. Garret, of Warrington, and Montgomery Marsh and George Duncan, of Greenfield.

DES MOINES, IA.—The Des Moines & Eldora Electric Railway Company has awarded E. E. Shugart, of Nevada, the contract for the grading of its proposed road. The plan of the promoters is to begin construction work at once and complete the line to Nevada this year. The line will eventually be extended to Eldora and Waterloo. The line will enter Des Moines over the lines of the Des Moines Interurban and the Des Moines Street Railway. H. H. Polk is president of the company.

LE MARS, IA.—Prominent farmers in this vicinity are making plans for the construction of an electric railway between Le Mars and Sioux City, a distance of 20 miles. They have interested the business men of both cities in the project, and the next step will be the formation of a stock company to construct and operate the road. It is the intention to secure the aid of the farmers who would be benefited by the road, and thus avoid the trouble of waiting to secure Eastern capital to construct the line.

DUBUQUE, IA.—Articles of incorporation of the Dubuque, Vinton & Southwestern Railway Company were filed with the Secretary of State July 6, 1901. The company organizes with a capital stock of \$100,000, and its purpose is to construct and operate a railway from Dubuque, in a southerly and southwesterly direction, via Vinton, Ia., to such point as may hereafter be determined. The motive power of the new line is not specified. There are seventy-four incorporators, all residents of Dubuque. The first board of directors consists of twenty-one members, as follows: W. H. Day, F. D. Stout, D. D. Myers, G. A. Burden, A. F. Heeb, F. J. Piekenbrook, H. B. Glover, John Ellwanger, H. E. Tredway, J. M. McDonald, J. W. Conchar, J. H. Shields, P. Klauer, William Lawther, G. W. Kiesel, J. M. McFadden, Frank Bell, B. W. Lacy, E. M. Ermsdorff, C. McLean and James M. Burch, all residents of Dubuque.

DES MOINES, IA.—The Des Moines Street Railway Company has decided to double track the line to the State Fair Grounds. This line branches off from the Capitol and East Grand Avenue line at the corner of Eighteenth Street and Walnut Street, and is about 1½ miles in length. The company has never been able to properly handle the large crowds which attend the State Fair, owing to the fact that the single line, with its few side tracks, was not equal to the service demanded of it. The company claims that with a double track it will more than be able to take care of the large crowds. The work of putting in the second track will be started this week, and will be completed by Aug. 23, the opening day of the State Fair.

MILLBURY, MASS.—At a recent meeting of the Worcester & Blackstone Valley Railway Company the following directors were elected: M. J. Whittall, Alfred Thomas, W. F. Ballou, of Worcester; Fred W. Moore, of Millbury; L. F. Chase, of Wilkinoville, and Thomas Wilmarth, of Fisherville. The following officers were elected: M. J. Whittall, president; Alfred Thomas, vice-president and treasurer; W. F. Ballou, clerk.