SENATE . . . No. 249.

Commonwealth of Massachusetts.

SENATE, May 7, 1888.

The Committee on Street Railways, to whom was referred the petitions of the Meigs Elevated Railway Company for an amendment of its charter relative to the amount of capital stock, and for other purposes, reporting thereon in part; of S. B. Hinckley and others for an act of incorporation as the Boston and Suburban Elevated Railway Company; of Frank A. Bartholomew and others for incorporation as the Boston Elevated Railway Company; of Thomas J. Mayall for authority to construct an elevated railroad in Boston; and of the South Boston Citizens' Association for a general law or charter to some responsible party to build and maintain a system of elevated railways for Boston and vicinity, make the following general report in relation thereto: —

Surface street railways have become a necessity of daily life in all the large cities of the Commonwealth. They are expected to carry large masses of people through the streets with the highest speed which the safety and convenience of the public will permit; and parties using them desire to be landed as near as possible to the points sought to be reached. In hearings before the Committee it was generally conceded that street cars were now doing as much as the public had a reason-

able right to expect, if horses only are to be used as a motive power. It was admitted, however, by all parties, that at certain hours of the day, notably in the morning and evening, when the travel is heaviest, the limit of the use of horses had nearly been reached, and that the time had come when some substitute should be adopted that would increase the capacity of the streets for carrying the people.

The petitioners claim that the needed relief can be afforded by elevated roads, giving their reason that, being raised above the street surface, they have a free track to themselves, and can make faster and more certain time than is possible on surface roads, and that by uniting several cars in one train their capacity for carrying people is greatly increased. Much of this is undoubtedly true.

The remonstrants claim that means of propelling street cars other than by horses can now be safely adopted, which will greatly increase the speed of the cars and their carrying capacity, and that thus the public will, on the whole, be better accommodated than by elevated roads. They claim that serious objections exist as to elevated roads, from the inconvenience of reaching them, the obstructions they place in the streets, the damages they cause to abutting property, their inability to receive and deliver passengers except at points far apart, while the actual speed obtained is but little more than that which can be obtained on surface cars propelled by cable or electricity, except through the very crowded sections of the city. Starting then with the admitted fact that improved facilities should be furnished, the Committee have sought, by careful attention to the evidence offered on both sides, in many extended hearings, and by affording to all parties desiring it an opportunity to be heard, aided by the arguments of counsel and by a personal examination of elevated and cable roads in other cities, to ascertain what form of road, under all the circumstances, at the present time, will best subserve the public interests and convenience in Boston and its immediate vicinity.

While in New York, the home of elevated roads, the travel upon them has been enormous, it must be borne in mind that the

situation in New York is very peculiar. Virtually a long, narrow island, the population growing with great rapidity, the metropolis of the whole country, and with the centre of business at one end and without any steam surface roads to assist, it has from the first presented great and peculiar difficulties which it has been found impossible to overcome, except by the use of special means of transportation. Nevertheless, upon the best inquiry and observation which the Committee have been able to make, it is very doubtful whether even elevated roads are long to continue the main dependence of the city of New York. The darkening of the streets, the permanent injury to some property, and the admitted inability of these roads to keep pace with the enormous growth of the city, has led the mayor of New York and the people at large to demand some increased and enlarged facilities by which not only local but express trains may be run. The hope of New York to-day is for an underground or viaduct road which shall give more rapid transit and accommodate the myriads of people who live in or visit New York; and the necessity for it is so great that at an early day there is little doubt that either underground or viaduct roads, or both, will be established, and elevated roads will be either discarded, or they will become an auxiliary aid with surface cars in the transfer of the people; but if any one is to be disused in the future it will undoubtedly be elevated roads. The Committee did not attempt to bring the city of New York east and substitute it with its remarkable conditions for Boston, and they are compelled to take Boston as it is and as it may grow to be for some years to come. Boston is situated very differently from New York. The business centre of Boston is within a very limited area, bounded, practically, by City Hall, the Post Office, State and Summer Streets; and travel and business gravitate to that centre. In the laying out of Boston, originally, no provision was made for so large a city. Crooked and narrow streets were early accepted, and, while they have been widened and straightened somewhat, the expense of continuing these changes is now so great that the Boston of the future, as to the central portion, will remain substantially as at

present. While Boston is thus deprived of some convenience in transportation which New York possesses, it yet has an individuality and a charm possessed by few other American cities, and the service to be furnished must be adapted to the streets of the city of Boston as they now are.

The daily coming and going is in all directions, and many lines of steam railroads, including branches, run great numbers of cars to accommodate the public. There is thus no community of any importance within a radius of ten miles from City Hall in Boston that cannot, within a reasonable time, reach some line of conveyance running into the city.

With the growth of these suburban communities, trains have been multiplied and their carrying capacity greatly increased, so that to-day there is no city in the country that has such complete, frequent and convenient transportation for suburban residents as the city of Boston. And this to a large degree has, and will in the future, help solve the problem of local transportation. The number of passengers carried by these lines of steam railroads the past year was not stated to the Committee, but it is a matter of common knowledge that the number is very large, and is rapidly increasing. Still the fact remains that in the year prior to October 1st, 1887, more than 100,000,000 persons, as appears by the last Railroad Commissioners' report, availed themselves of the surface street car lines of Boston; and it is for the accommodation of this part of the travelling public that the application for elevated roads is made.

In the construction of elevated roads, it is to be considered, where does the travel go that elevated roads are to accommodate? what streets would it be necessary for them to occupy for this purpose? and what is the reasonable probability of their being built, maintained and operated in a safe, profitable and convenient manner? for it is not in accordance with sound public policy that mere paper charters should be encouraged. No charter should be granted without well-grounded assurance that it will be promptly followed by the construction of a plant of substantial character, possessing the fullest elements of

safety, and giving to all parties ample security for damages occasioned by its construction and operation. A charter granted to parties who at heart merely desire it for speculative purposes, if it were limited to certain streets, would act as a check upon improvements and a cloud upon titles and property thereon; and if it were granted under those circumstances, where the streets are not defined, it would tend generally to unsettle values and retard public improvements.

The cost of construction of elevated roads must at all times be very heavy, when the public safety is properly considered, and while the Committee are not able to state definitely what the exact cost would be, still the cost of stations, rolling-stock and all the necessary appliances must be in the vicinity of four or five hundred thousand dollars per mile where two tracks are put into the same street, or two hundred and fifty thousand dollars per mile if a single track is constructed. No reasonable accommodation for the public of Boston and its environs could be furnished that did not provide for at least fifty miles of single track. This would involve an outlay in construction of from ten to fifteen millions dollars, without any allowance whatever for damages to the abutting property.

There was some evidence before the Committee that no damage would result to the owners of lands abutting on streets where elevated roads could be built, but we attach slight importance to it, for although it is undoubtedly true that some estates would be undoubtedly benefitted, especially in the outlying districts, it is equally a fact that damages would exist in many cases. On this latter matter there can be no doubt. The extent of these damages would very largely depend upon the location of the track and the form of construction, so that it is very difficult to make an exact estimate of the same; the range in well-occupied streets in some cases being perhaps from ten to thirty-five per cent. of the value of the abutting property. If the roads should be restricted in their entrance to the city so as not to come into the most crowded business portions, they would leave their passengers substantially where the steam roads do now. In such

case there seems to be no probability that any single suburban district thus reached by an elevated road would afford sufficient business to pay operating expenses when such road would have to compete with surface and steam railways.

If they should be allowed to enter the central parts of the city where people desire to be left, the damages caused by any general building of elevated roads would be something enormous. It is not believed by the Committee, if a charter were granted with proper guarantees for payment of damages for a community of the size of Boston and vicinity, that such roads could possibly be built for years to come, if ever. It would be a great impairment of the attractiveness and enjoyment of the city if elevated roads should be built in its streets, and nothing but an absolute necessity, which does not seem to exist at the present time, should authorize their construction. The injury to taxable property along the lines of their location would be very great in some cases. The beauty of many of our public buildings would be greatly impaired, the sunlight would be shut out from our narrow streets to some extent, and elevated trains of cars running through our narrow streets would be a constant source of annoyance. There is a great deal of misconception in regard to the advisability of having elevated roads in Boston. People forget that, in order to attain rapid transit on elevated roads, that stations must be from a third to a quarter of a mile apart, and that in order to have a fairly uniform grade of track over which the trains shall run it is necessary to have long or short posts as the change in the street grade may require. At one station the people may climb up fifteen feet, and at another station they may be required to climb thirty feet or more. Consequently, even on the street where the road is located, it may be a long walk from the place where the passenger starts to his seat in the car. Again, all of the enormous travel, to the extent of 200,000,000 people per year upon elevated roads in New York, is upon four lines running lengthwise of the city. New York is from a mile to a mile and a half in width, and although two or three Bostons travel widthwise across New York every

day, yet no one has yet suggested the building of an elevated road running in that direction in that city. On account of its peculiar shape it would require many elevated railroads to accommodate Boston and its environs. Where would they run? A good lesson upon this part of the subject can be had by taking a map of Boston and attempting to mark the streets along which elevated roads can run to accommodate the people of Boston and its surroundings. Elevated roads are for the accommodation of long-distance passengers. What would be considered a short ride on elevated roads in the city of New York would take a passenger outside of the limits of Boston proper. The question arises, also, should the streets of Boston be given up for the accommodation of the suburbs of Boston? These and many other suggestions have to be taken into account in considering the advantages which might accrue by the erection and operation of elevated roads. Of course those gentlemen who believe they ought to have a right to build elevated railroads, because they earnestly believe there is "millions in it," are disposed to put aside many of these suggestions.

Under an act of the last Legislature authorizing the consolidation of the various street railway lines of Boston, all have now been brought under one management, except the Lynn and Boston. This, it was believed, would enhance the convenience of the public, and do away, at least to some extent, with the blockades which are so frequent in its streets. From the evidence presented to the Committee much seems to have been accomplished in that direction; but the growth of a large city and the future remains to be provided for, and the public have a right to expect of a corporation having such large rights that it will be alive to the improvements that are constantly going on in street transportation and to the growth and increasing requirements of the community.

Previous Legislatures have already authorized street railway companies, with the consent of the municipalities in which its cars are run, to use electricity and the cable as motive-powers. While electricity has not come into such rapid use as a motive-

power as was expected of it a year ago, and while it cannot perhaps be said that it is to-day advisable to introduce its use into the streets of a large city, it is still confidently hoped that at an early day it may be used to help solve this difficult problem of suburban travel. Acting upon authority granted by the last Legislature, a street railway company has already applied to the cities of Boston and Cambridge for leave to establish and maintain the cable system; and both cities since these hearings began have given their consent to its introduction, and it is now understood that that corporation during the present season will enter upon the construction of cable roads.

The claim of the respondent horse railroad company before the Committee was that, with cable roads constructed and in operation, a great advance would be made in street transportation, one quite sufficient for the present and immediate future, beyond which time, with the spirit of invention abroad in the land, it was not wise for any one to plan. The Committee, therefore, have carefully examined the evidence and capacity of the cable systems and the objections which may be fairly brought against them. It is claimed that a single system has a capacity for the transportation of passengers three times as great as one operated by horses. Whether this is certain or not, there can be no doubt that by the cable system much quicker transit can be obtained than with horses, and that the carrying capacity can be greatly increased, as trains may be operated instead of single cars as now by horses. While it may not be true that as high rate of speed can be obtained by cable as by elevated roads, the difference in speed, as observed by us, is quite insignificant when the fact is borne in mind that the cable furnishes the additional advantage of being able to receive and deposit its passengers at any point on its lines, while elevated roads, as has already been stated, if they are to maintain any high rate of speed, would be obliged to locate their stations some distance apart, so that, taking the time occupied in going to and from stations and climbing up to the level of the road and descending again at the end of the

journey, it is doubtful if much quicker transportation is actually furnished, especially in view of the further fact that outside of the crowded parts of the city, and especially in the suburbs, a cable road makes nearly as good time as an elevated road. By actual timing by the Committee in New York, the elevated road ran about ten miles in about one hour. Horse cars in Boston run about five miles an hour, one-half as fast as elevated; cable roads could run through the city of Boston and out into the suburbs, deducting for the lessened speed through crowded streets, at the rate of about eight miles an hour, from the point of beginning to the end of the route.

A good deal of apprehension has been expressed that cable roads are not as well adapted to Boston as to many other cities; and there can be no doubt that Boston would be at a disadvantage in this respect as compared with Chicago; but in Kansas City the Committee saw difficulties as great, if not greater than those in Boston, successfully overcome in the operation of the cable road.

Many persons have expressed anxiety in regard to the danger and liability to accidents from cable roads, but the evidence furnished to the Committee tended to show a diminution rather than an increase of accidents over those on cars operated by horses, especially after the employees of the road had become accustomed to using the cable. It has therefore seemed to the Committee, in view of the present action of the cities of Boston and Cambridge and the railroad company, that the cable system and its convenience and capacity should be first tried before any new authority is given for the construction of an elevated road. The Committee desires to go still further in this direction, and to say that, in its opinion, some competent tribunal, the Board of Railroad Commissioners, for example, should have the power to compel horse railroads having large travel to accommodate, to put in and operate cables as a motive-power.

The petitioners are five in number, four of whom ask for a different grant; one, that a corporation may be chartered to adopt and use the Mayall system; another, to adopt and use the

Riley system; another, to adopt any system that upon examination shall seem the best; the application of the Meigs Company for an amendment to its charter, and the South Boston Association for a general law or charter to some responsible party to build and maintain elevated roads in Boston and vicinity.

As to what system of elevated roads is best, the Committee, in view of what has already been said, does not feel called upon to state. Indeed, the Committee were much impressed with the merits of a system not before the Legislature by petition, which in the course of its inquiries it took the liberty to inspect. Perhaps the better way of deciding the comparative merits of the numerous systems and appliances, each claiming to be the best, could only be properly settled by competent engineers.

In regard to the application to amend the Meigs charter, the Committee have carefully considered all the suggestions made. A former Legislature, that of 1884, granted a charter authorizing the construction of an elevated road within certain limits on the Meigs plan. It is claimed that numerous unavoidable obstacles have prevented a fair opportunity to test this system up to the present time. There is some force in these suggestions, and the Committee have therefore recommended certain amendments asked for or agreed to, which are embodied in a bill reported upon that petition. As to the other amendments desired by the Meigs company, they seem to be in the direction of relieving the corporation from the several provisions contained in its original charter, which were very carefully considered and guarded as to the rights of the public and the damages to abutting owners; and no good reason has been presented why what the Legislature has already enacted as a method of ascertaining and paying damages should be changed. It is claimed that the changes asked for would not relieve the company from the payment of damages. Whether it would or not, it creates a doubt where the existing legislation is certain, and if by any possibility it should relieve the company from the payment of the actual damages to abutting owners, the changes, in the opinion of the Committee, ought not to be made.

The Committee being of the opinion, as above expressed, in regard to elevated railroads in the city of Boston and vicinity, have reported that the four petitioners for new charters be granted leave to withdraw.

D. FRANK KIMBALL,
E. H. TUCKER,
Of the Senate.

THEODORE P. DRESSER,
CHAS. F. WOODWARD,
JERE'H DESMOND,
J. Q. A. LOTHROP,
EDWARD J. DONOVAN,
EDWARD P. SHAW,
JOSEPH H. CANNELL,
Of the House.

Present and dissenting:

FRANK W. HOWE,
Of the Senate.

DANIEL GUNN,
Of the House.