

MORGAN ELEVATED RY. CO. *v.* PULLMAN.

Circuit Court, N. D. Illinois. December 4, 1882.

PATENTS FOR INVENTIONS—ELEVATED
RAILWAYS.

A patent for a plan and design for the construction of an elevated street railway, to be composed of a series of arches, supported on each side of the street upon iron shoes imbedded in masonry, and connected together by arched trusses and tension-rods, to impart sufficient strength and rigidity to prevent any vertical or lateral displacement of the railway,—the essential element of the invention being the arcs or arches, supported and strengthened in the manner stated,—held, not infringed by any elevated railway, constructed without these essential features.

Hamilton Spencer, Henry A. Gardner, and A. T. Ewing, for complainant.

Judge Green, Robert Williams, and Wirt Dexter, for defendant.

DRUMMOND, C. J. On the twentieth of April, 1869, letters patent were granted to Richard P. Morgan, Jr., for an improved elevated railway. The bill alleges that the defendant, without the consent of the plaintiff, and since the letters patent were issued to Morgan, has constructed, in the city of New York, an elevated railway upon the plan and design secured to Morgan by the said letters patent, and 649 in violation of the rights of the plaintiff. The bill also alleges that the plaintiff has become, by proper deeds of assignment, the owner of all the rights of Morgan under the patent.

The defendant, in his answer, admits that he is a stockholder and director of the Metropolitan Elevated Railway Company of the city of New York; but he denies, among other things, that the Metropolitan Railway Company was built upon the plan or design

alleged to have been secured by the letters patent to Morgan.

Waiving all questions connected with the validity of the letters patent granted to Morgan, I propose to consider only this question, viz., whether the Metropolitan Elevated Railway in New York is an infringement of that described by Morgan in his letters patent, because if that question is decided against the plaintiff then we need not consider or decide other questions which have been made in the case; It becomes necessary, therefore, in this view of the case, to ascertain the nature and character of the elevated railway described by Morgan in his letters patent, as well as the nature and character of the construction of the Metropolitan Railway of New York. As preliminary to this, however, certain facts and principles should be stated which do not seem to admit of any serious controversy: (1) Morgan was not the first inventor of an elevated railway for the rapid transit of passengers in large cities. The proof shows that other persons preceded him in this field of discovery. (2) Morgan could not be the inventor and so entitled to a patent of an elevated railway in large cities as such, but only to the particular means or instrumentalities by which a railway was constructed.

Morgan, in his specifications, declares that his invention consists "in the construction of a street railway, composed of a series of arches, supported on each side of the street upon iron shoes imbedded in masonry. These arches are connected together by trusses of an ordinary or suitable construction, which will impart sufficient strength and rigidity to the whole superstructure to prevent any vertical or lateral displacement of the railway." He then proceeds to give a description in detail, accompanied by drawings, of the particular manner in which his elevated railway is constructed. Posts are imbedded in masonry on each side of the street. These, rising from the place where

they are imbedded, form an arch immediately over the center of the street. There is an interior arc or arch attached to the posts already named, extending across the street in an elliptical, semi-circular, or other curve below the principal arch. These two arcs are connected together by trusses and tension and stay-rods, in the manner 650 particularly described in the specifications and in the drawings, an indispensable part of which would seem to be a tension rod of great strength extending from the apex of the upper arch to the lower arch. In the opening between these two arches, left by the trusses and the tension rods, as described in the specifications, is a sufficient space for the cars to run without obstruction. The material of which these posts, arched trusses, and tension rods are constructed is assumed to be iron, wrought iron, or angle-iron. A series of arches being thus constructed at suitable distances from each other, and connected together by longitudinal stringers of sufficient solidity and strength, with proper trusses, constitute the elevated railway described by Morgan in his letters patent. He makes five claims, as follows:

“(1) The elevated railway constructed and arranged in the manner and for the purpose herein described. (2) The arches, a and b, so constructed as to act as a support to each other in sustaining the superstructure and trains in a street railway in the manner and, for the purpose herein described. (3) The combination of the arcs or arches, a and b, with the truss frames, c and d, in the manner and for the purpose herein described. (4) The connection of the arcs or arches, a and b, of an elevated street railway by means of truss frames, in the manner and for the purpose herein described. (5) The combination of the arcs or arches, a and b, with the tension rods herein described, so as to resist the vertical and lateral pressure upon the whole superstructure, and by a conflict and consequent resolution of forces, to direct the same in the line of

the greatest strength of the material employed, thus enabling a light and economical structure to be used, and interfering in the smallest possible degree with the space, light, and ventilation of the streets occupied and the buildings thereon.”

There can be no doubt that in the specifications and drawings, an essential element of the invention described by Morgan, and which is comprehended in all of the five claims made by him, is the arcs or arches supported and strengthened in the manner stated by him; and that any elevated railway, constructed without these essential features contained in the elevated railway of Morgan, does not infringe the patent. We have the testimony of several witnesses who describe the manner in which the Metropolitan Elevated Railway is constructed, and we have also in evidence several photographs which give a distinct view from different points of the railway itself, so that we are enabled to form a very clear idea of the manner in which it has been constructed. There are posts or shafts fastened, in the ground, near, the curbstone, rising to a proper elevation, across which are placed wrought-iron beams, which extend from one side of the street to the other, strengthened by a short circular flange at the end 651 of each beam, and attached to the post. These beams are formed by the union of wrought-iron plates stayed by angle-irons and by means of rivets, and have the appearance of being solid. They are three or four feet deep vertically. A series of these are constructed and are connected together by stringers of proper strength, and with trusses, and upon these the rails are laid upon which the cars run; there being, in fact, nothing above the rails. There really seems to be no similarity in the construction of these shafts and beams, as thus described, to the arches of the plaintiff's patent; unless, possibly, in the fact that there springs from the top of each post, or shaft, a sort of flange in a circular form, not essentially different

from an ordinary bracket, which is attached at a short distance from the shaft to the beam. Indeed, these beams would be described as girders, and not at all as arches; and from a mere inspection of the construction of the two elevated railways, that of the Morgan and the Metropolitan Elevated Railway of New York, the contrast is apparent.

It is not necessary to consider what might be the effect of the construction of such an elevated railway as that described by Morgan in the streets of New York, with the short curves at right angles there made; it is sufficient to say that the difference between the two railways, though both are of iron, is so clear and distinct that they cannot be said to be a pattern or an imitation one of the other.

There does not seem to be anything particularly novel in the construction of either railway, in connecting longitudinally the various parts together. They are not, in either case, essentially different from the manner in which bridge stringers had been stretched before, from pier to pier. In comparing two structures of this kind, we have to be guided very much, even after examining the details of both, by the manner in which they strike the eye; and thus judging of them I am clear, independent of what has already been said upon other grounds, that the structure called the Metropolitan Elevated Railway of New York is not an infringement of the elevated railway covered by the patent of Morgan, and so the bill will be dismissed.

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