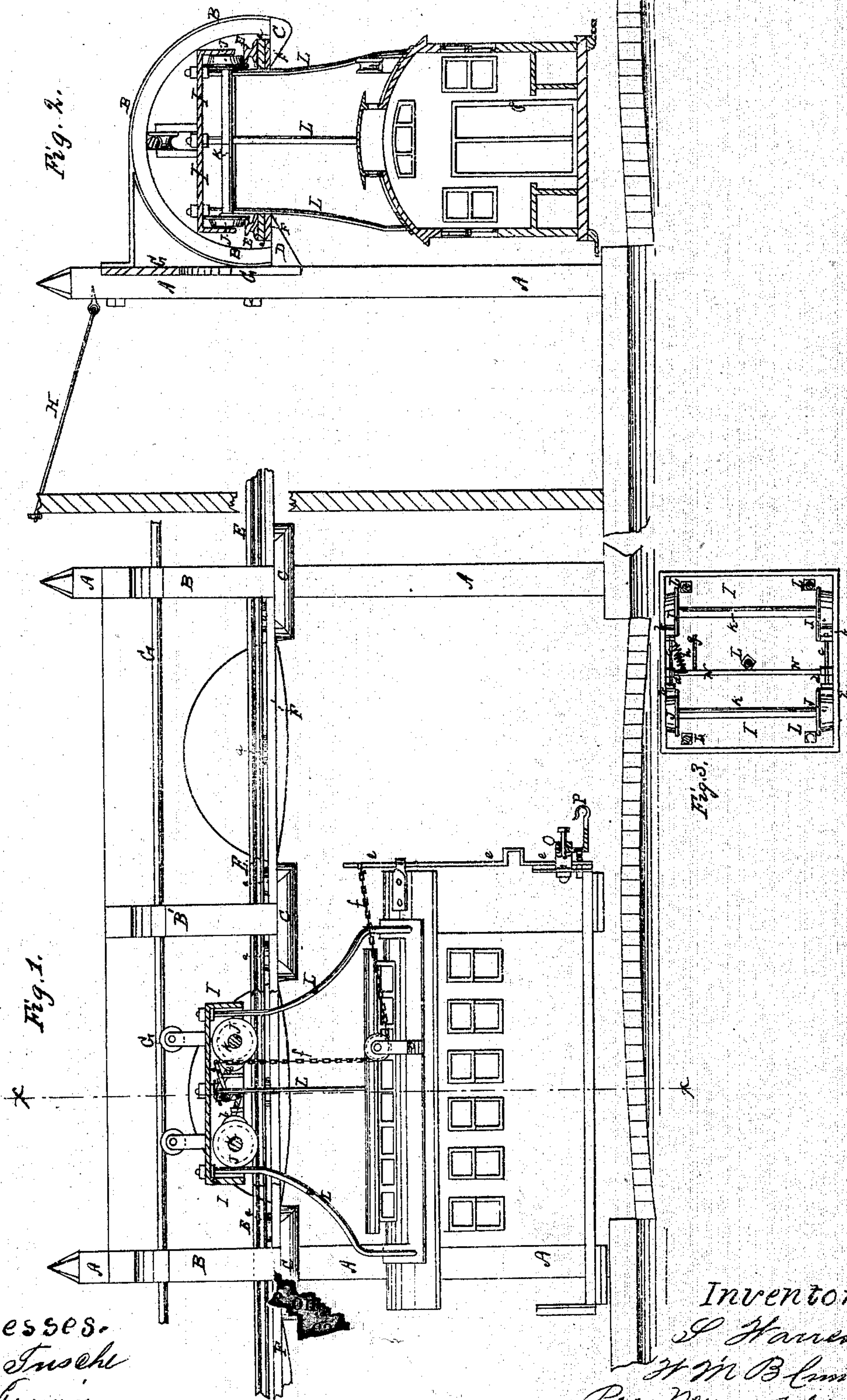


Elevated Railway.

Nº 71432

Patented Nov. 26, 1867.



Witnesses.
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SYLVANUS WARREN AND WILLIAM M. BLUME, OF NEW YORK, N. Y.,
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IMPROVED ELEVATED RAILWAY.

Specification forming part of Letters Patent No. 71,432, dated November 26, 1867.

To all whom it may concern:

Be it known that we, SYLVANUS WARREN and WILLIAM M. BLUME, of the city, county, and State of New York, have invented a new and Improved Elevated Railroad; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation, partly in section, of our improved elevated railroad. Fig. 2 is a vertical cross-section of the same, the plane of section being indicated by the line *xx*, Fig. 1. Fig. 3 is an inverted plan view of the truck from which the car is suspended.

Similar letters of reference indicate corresponding parts.

This invention relates to a new manner of constructing and arranging the rails as well as the cars of street or horse railroads; and consists, first, in arranging an elevated track upon one single row of posts, said posts being so formed that they will support both rails of one track.

The invention further consists in the use of a truck, which runs upon the aforesaid rails, and from which the car is suspended by strong wrought-iron bars, the said car thus hanging down so as to be near to the street, and convenient for the entrance and exit of passengers, and so that it can be conveniently drawn by horses.

The invention also consists in the construction and arrangement of a brake by which all the wheels of the truck can be stopped at once and whenever desired.

The main object of this invention is to adapt the horse-railroads to the crowded thoroughfares of cities, so that they, or at least their rails, will be out of the way, and will not hinder the passage of wagons and carts: The posts are out of the way, as they can be set close to the edge of the sidewalk. They can be provided with bars or braces, by which they may be anchored in the adjoining buildings, said bars answering for awning-supports.

Another great advantage of our invention is, that the track can never be covered by snow

or dirt, and that it will thereby be always clear and open to traffic.

It need not particularly be specified that this invention can with equal advantage be adapted to all other kinds of power as well as to horse-power.

A A represent columns or posts, which are set into the ground near the edge of the sidewalk, as shown. They are made of wrought-iron, or of any other suitable material that may be found strong enough for the purposes for which the posts are intended. These posts are at their upper ends provided each with a semicircular, triangular, or curved extension, B, which is so arranged that it holds at its end, or near to the same, a bracket, C, which is opposite to and on the same level with a bracket, D, that is attached to or formed on the post itself, as is clearly shown in Fig. 2. These parts A A are set at suitable distances apart, and support and hold the rails E E, which are placed upon the brackets C and D, as shown. The rails may be laid directly upon these brackets; but where the posts are far apart—as, for instance, at street-crossings—it will be advisable to interpose beds F, which are bars of sufficient strength laid upon the brackets C and D, the rails resting upon beds F, as shown.

India-rubber or other elastic washers, *a a*, may be interposed between the rails E and their beds for the purpose of preventing jerks and sudden motions of the cars. The bars F may be further supported by braces, which connect their under side with the posts, or by other strengthening devices, as may be desired.

At street-crossings, and wherever the posts stand far apart, the same should be connected by a plate, G, which not only braces the posts, but which may also serve to support additional bows, B', as is shown in Fig. 1. These additional bows serve the same purpose as the bows B on the posts—*i. e.*, to uphold the rails. In this case the bracket D must be formed on the inner end of the bow B', and secured to the plate G.

The upper ends of the posts A may be anchored in the buildings which line the sidewalk, along which the railroad is arranged, by means of bars H, which will also serve to support awnings, roof, &c. The posts A A can

even be made strong enough to be provided with bows B on both sides, so that they will be enabled to support a double track.

I is a truck of the smallest practical dimensions. It rests upon four or more wheels, J J, which are mounted on axles K K, the latter having their bearings in the sides of the truck in the ordinary or in any suitable manner. This truck runs on the rails E E, as shown. From it is suspended, by means of strong metal bars L L, a car, M, which is arranged in any suitable manner, with seats, windows, doors, and platforms, as may be desired, but without wheels and axles, it only being a receptacle for passengers or goods. The bars L L are screwed into the platform of the truck, or are otherwise made adjustable, so that the distance between the car and the truck can be regulated at will.

The brake-shoes *b b* are secured to rods *c c*, which are pivoted to cranks *d d*, which project from a horizontal shaft, N, which has its bearings in the truck I, between the axles K K, and parallel with the same. *e* is an upright rod projecting from the car-platform, and connected at its upper end by a chain, *f*, with an arm, *g*, which projects from the shaft N, so that by turning the bar *e* by means of a handle or crank, with which it is provided, the chain *f* will be wound upon it, and the shaft K will be turned so that the brakes will be pressed against the wheels J. When the chain

is slacked by being again unwound from the bar *e*, the brakes are withdrawn from the wheels by a spring, *h*, as is clearly shown in Figs. 1 and 3.

Any other device for operating the device may be employed, if desired, and we do not confine ourselves to any particular construction.

O is a spring, to which the draft hook or bar P is attached, and which serves to prevent jerks or shaking of the car when being suddenly started or stopped. The bars L are or may be so bent that the truck cannot be thrown off the rails. The latter object may also be attained by having a grooved wheel on top of the truck, which runs in or on a rail that is suspended above from the bars B and B', as is indicated in Fig. 2.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

In combination with a railway as above described, having the rails at the extremities of the arches, and the central guiding-rod, the car-truck I, the central guide-wheel, and rods for supporting the car, as herein shown and described.

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Witnesses:

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