(No Model.)

W. R. COLE & J. E. WYMAN.

ELEVATED RAILWAY.

No. 356,987. Patented Feb. 1, 1887.

Fig. 2

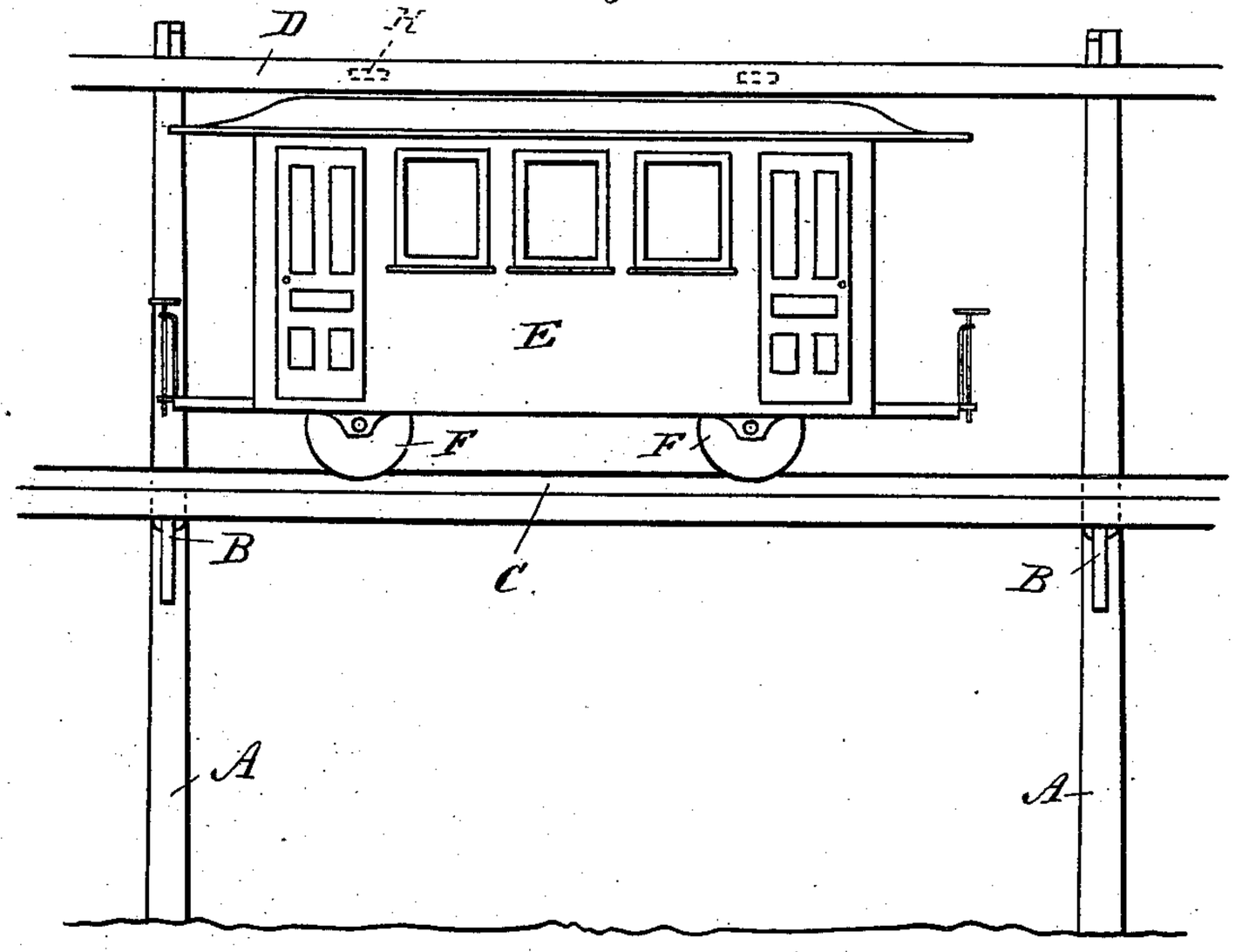
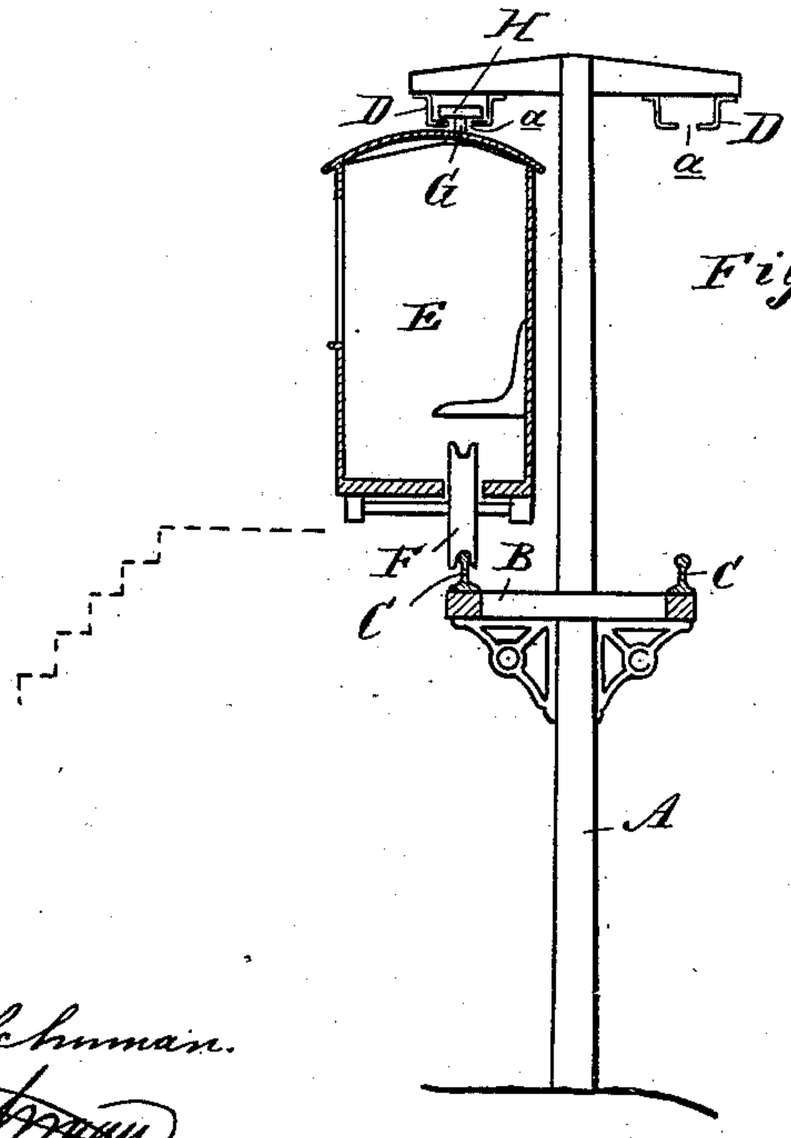


Fig. 1



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UNITED STATES PATENT OFFICE.

WILLIAM R. COLE AND JOHN E. WYMAN, OF DETROIT, MICHIGAN.

ELEVATED RAILWAY.

SPECIFICATION forming part of Letters Patent No. 356,987, dated February 1, 1887.

Application filed October 28, 1886. Serial No. 217,421. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM R. COLE and JOHN E. WYMAN, of Detroit, in the county of Wayne and State of Michigan, have invented new and useful Improvements in Elevated Railways; and we do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

This invention relates to certain new and useful improvements in the construction of railways of that class commonly denominated "elevated railways."

The invention consists in the peculiar construction of a single-rail track, in combination with the means described for supporting the car upon the track and preventing the car from being precipitated to the ground in case of its wheels being accidentally derailed; also, in the peculiar construction of a car especially adapted for running upon such railway, and provided with means for engaging with the necessary parts of the railway structure to prevent the aforesaid precipitation.

Figure 1 is an end view, partly in section, of the improved railway with car in place. Fig. 2 is a side elevation of the same.

In the accompanying drawings, A represents a standard, of which there are a series firmly set upon or in the ground and adapted to carry the superstructure, secured to and projecting from each standard or post in the series, and, as nearly as can be, on the same horizontal plane, is an arm, B, and upon suitable stringers secured to the series of arms at or near their outer extremities the single-rail track C is fastened. To the same standards A, and a suitable distance above the track C, there is secured a box, D, made of iron and extending the whole length of the structure, and having a continuous slot, *a*, or aperture centrally located in the bottom, as shown. It would be preferable, although not absolutely necessary, that this continuous slot be directly over the rail; and this box or any equivalent means for securing a like result may be secured to the standard in any known or convenient manner.

E represents a car having two or more wheels, F, in line, fore and aft, and so arranged upon stub-axles journaled in proper bearings attached to the bottom of the car, in a well-known manner, as to support the car and enable it to run upon the track. To support this car in an upright position strong arms G are secured to the car and project above the same vertically, so as to enter the box D through its continuous slot. Upon the upper ends of these arm-supports G there are suitably-journaled and strongly secured against any accidental displacement the wheels H, the diameter of which is nearly, though not quite, equal to the distance between the two sides of the box, so that when revolving or resting against one side of such box there will be no contact with the opposite side thereof.

We will illustrate more fully the operation by saying that the car is three feet wide, and the seats are arranged along the side of the car which is nearest to the standards. The fore and aft supporting-wheels are placed one foot, or thereabout, from this inner side; hence the arms B need never be more than eighteen inches long to obtain a clearance of six inches between the sides of the car and the standards. When the car is not loaded with passengers in their seats, the tendency of the car would be to tip outwardly from the standards and be precipitated to the ground; but this is prevented by the wheels H resting against the inner side of the outer wall of the box D. When the seats are filled with passengers, the tendency of the car is to tip in the opposite direction; but this is arrested by such wheels H resting against the opposite side of the box. If the car-wheels become derailed, it is prevented from falling to the ground by the wheels H arresting the fall by coming in contact with the bottom of the box and suspending the car by means of the arm-supports G.

Of course, to reduce the danger of derailment to the minimum, guard-rails may be employed, in a well-known manner, secured on one or both sides of the track-rail.

The cars may be propelled by cable, or by electricity, if desired, the structure being peculiarly well adapted to carry the cable or conducting-wire.

Of course in the construction of the car care must be taken to have it strong enough to fill the requisites above mentioned.

We are aware of Patent No. 121,538, and make no claim to the construction shown therein as forming part of our invention. We attach importance to our box D, the two sides of which effectually prevent the tilting of the car in either direction, as above set forth.

What we claim as our invention is—

1. In a railway system, and in combination with a single-rail track, and a box having a continuous slot in the bottom thereof, a car having an arm or arms projecting above its roof and a horizontally-rotating wheel or wheels journaled on said arm or arms, substantially as and for the purposes described.

2. The combination, with the standards and brackets supported thereby, of a rail on said bracket, car E, wheels F, journaled beneath said car substantially in the center of its width, a seat or seats overhanging said wheels, the box D, having two depending sides and slot *a*, the arms G, and the wheels H, carried by said arms and working in said box, substantially as described, and for the purpose specified.

WILLIAM R. COLE.
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Witnesses:
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