J. G. WILSON.

Elevated-Railway.

No 165,906. Patented July 20, 1875.

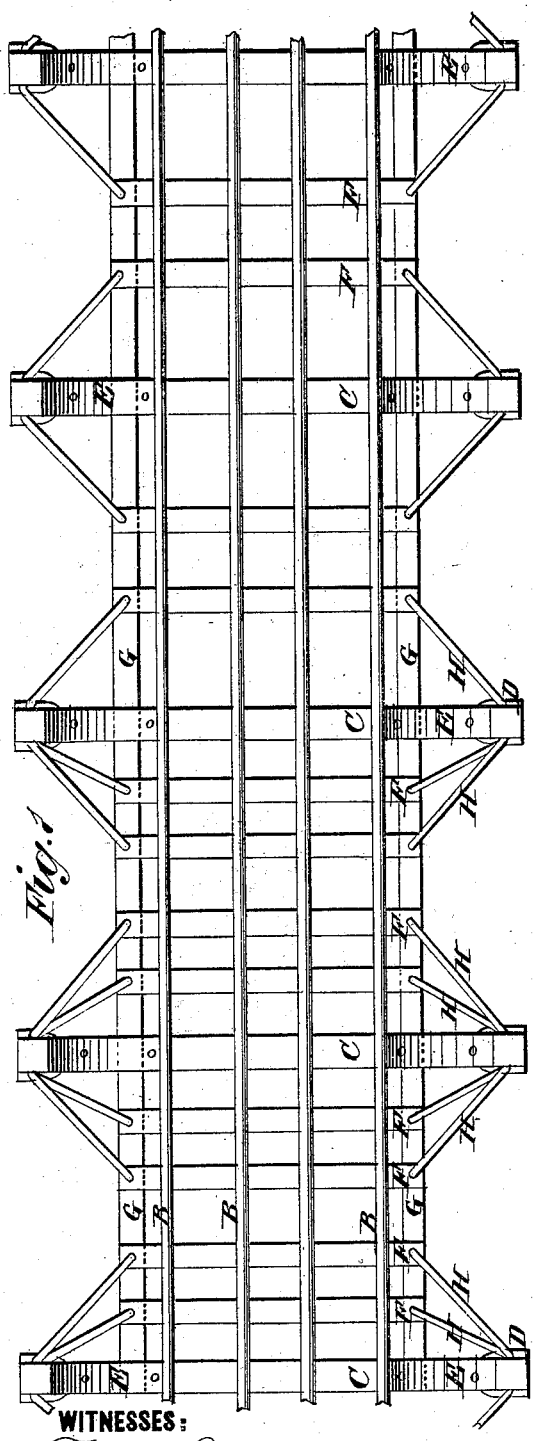

Fig. 1.

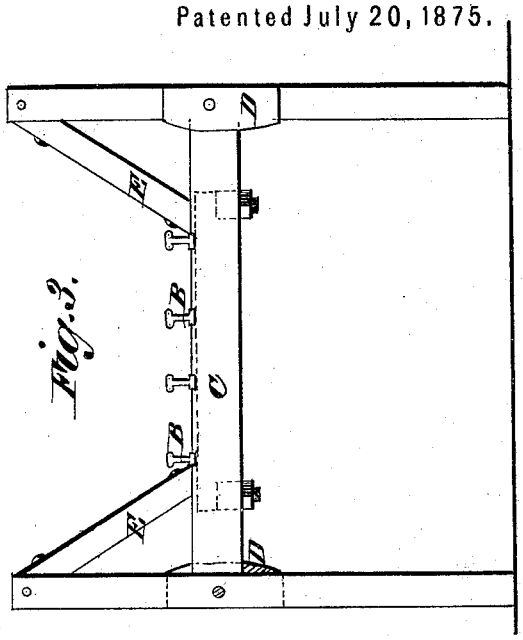

Fig. 3.

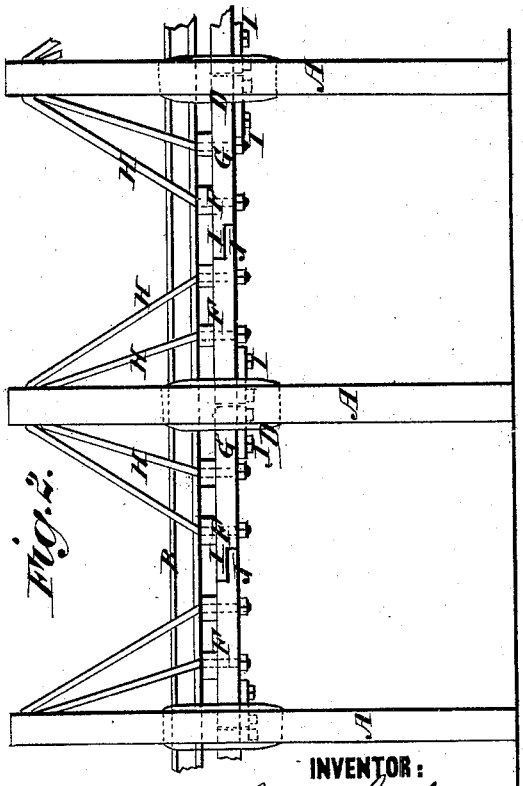

Fig. 2.

WITNESSES:

Francis McArdle.

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UNITED STATES PATENT OFFICE.

JAMES G. WILSON, OF MILLERTON, NEW YORK.

IMPROVEMENT IN ELEVATED RAILWAYS.

Specification forming part of Letters Patent No. **165,906**, dated July 20, 1875; application filed July 10, 1875.

To all whom it may concern:

Be it known that I, JAMES G. WILSON, of Millerton, in the county of Dutchess and State of New York, have invented a new and Improved Elevated Railroad, of which the following is a specification:

The essential feature of my improvement in elevated railroads consists of beams for supporting the rail and their intermediate supporting-stringers, extending from side to side of the roadway, and supported on posts which extend above the beams, and from the top of which strong suspending-bars extend down to the beams outside of the rails to mainly support them by suspension from the top of the posts; and there are also tension-rods extending from the top of the posts to stringers extending from beam to beam, and supporting cross-ties, on which the rails have support between the beams, the said stringers being bolted at the ends to the under side of the beams, and being connected at the middle by a lap-joint to allow for expansion and contraction.

Figure 1 is a top view of my improved elevated railroad. Fig. 2 is a side elevation, and Fig. 3 is an end elevation with a part sectioned.

Similar letters of reference indicate corresponding parts.

A represents the posts, which are to be set up in two rows, one on each side of the street—say, along the curbstones of a street having sixty feet (more or less) roadway—the posts of each line being placed fifty or more feet apart, and being extended ten to fifteen feet above the rails B, which will be fifteen feet or thereabout from the ground. C represents the beams, which extend across the street from post to post to support the rails, the beams being supported on the posts at the ends by the saddles D or other mechanical equivalents, and near the rails being suspended by the strong pieces E from the top of the posts. Between the beams the rails are supported on ties F, which rest on the stringers G, extending from beam to beam, and bolted to them, and also suspended from the top of the posts by tension-rod H going through the ties and the stringers, and secured by nuts below, or any other approved connection may be used. These stringers are connected to the beams by plates or flanges I passing under the beams or in any other suitable way, and bolted to them, and they have a lap-joint at J, secured by a bolt or bolts, so that the necessary movements for expansion and contraction are provided for. Any approved or required number of these cross-ties may be used between the beams, according to the size and strength of the rails.

It will be seen that the road-bed is mainly suspended from the tops of the posts, which is a plan affording the greatest strength for a given amount of material, and it dispenses with under braces and arches, which are expensive and obstruct the light.

The several parts of the structure may be of wood or metal, as preferred.

It is designed to have the suspending-bars E for the beams sufficiently strong and heavy to prevent the posts from springing inwardly by the weight suspended from the top.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination of posts A, beams C, saddles D, and suspenders E, substantially as specified.

2. The combination of posts A, stringers G, independently supported by the tension-rods H, and connected by an expanding lap-joint, as described.

JAMES G. WILSON.

Witnesses:

T. B. MOSHER,

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