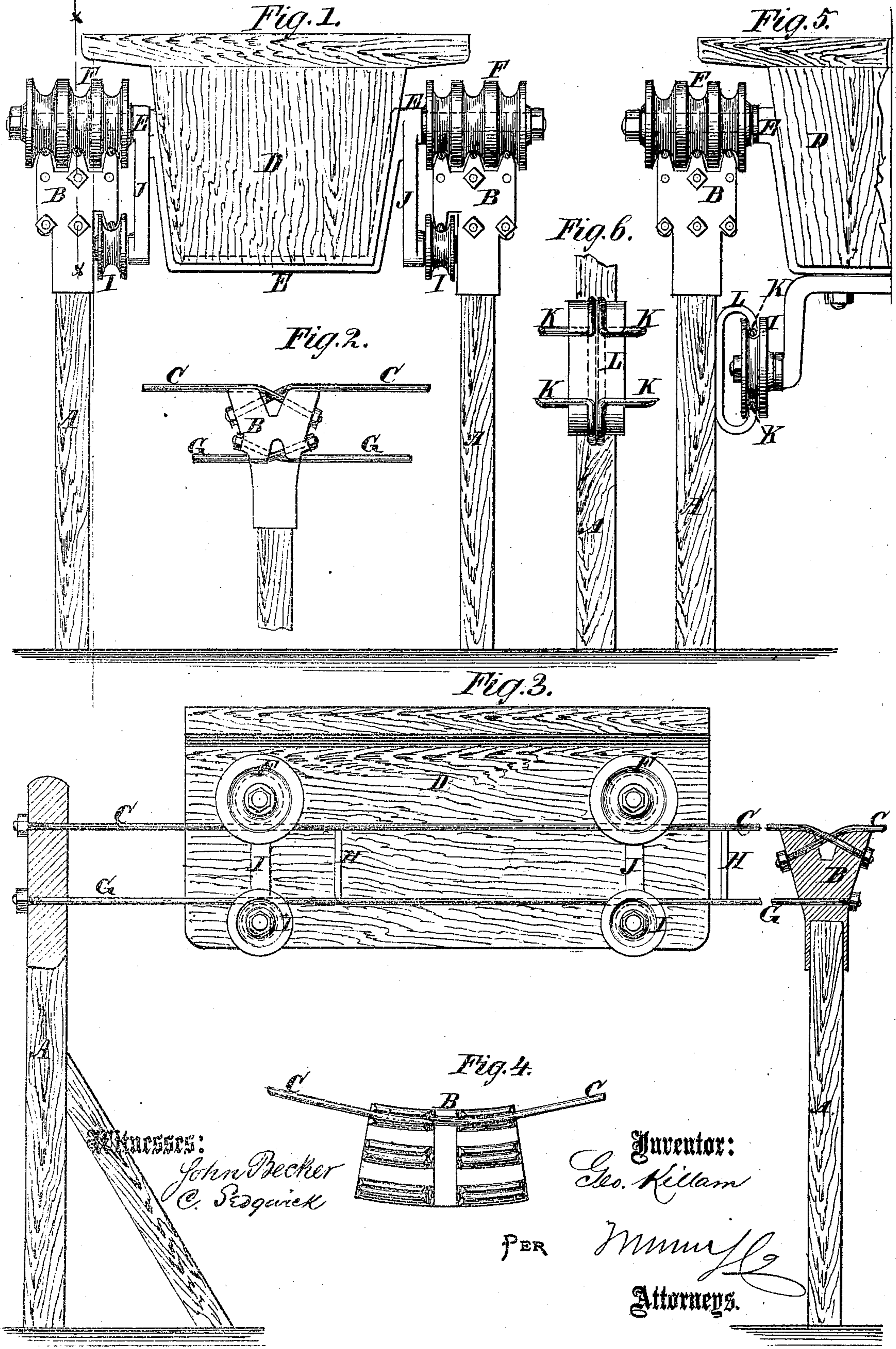


G. KILLAM.

Improvement in Elevated Wire-Ways.

No. 132,586.

Patented Oct. 29, 1872.





# UNITED STATES PATENT OFFICE.

GEORGE KILLAM, OF FORT DODGE, IOWA.

## IMPROVEMENT IN ELEVATED WIRE-WAYS.

Specification forming part of Letters Patent No. 132,586, dated October 29, 1872.

*To all whom it may concern:*

Be it known that I, GEORGE KILLAM, of Fort Dodge, in the county of Webster and State of Iowa, have invented a new and useful Improvement in Elevated Railroad, of which the following is a specification:

In the accompanying drawing, Figure 1 is a cross-section of the track of my improved elevated railroad; Fig. 2 is a detail inner side view of a portion of the track, connected with the upper end of one of the supporting-posts; Fig. 3 is a detail longitudinal section of the same taken through the line *xx*, Fig. 1. Fig. 4 is a detail top view of one of the post castings for curves; Fig. 5 is a detail cross-section illustrating a modification of the same; and Fig. 6 is a detail view of the device for supporting the ends of the guide-wires for the lower wheels.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved construction for elevated railroads, which shall be simple and convenient, and at the same time strong, durable, reliable, and safe; and it consists in the construction and combination of various parts, as herein-after more fully described.

The track is supported by two rows of posts, A, the rows being at a distance apart equal to the width of the track, and the posts of each row being at a suitable distance apart. The posts in suitable places may be connected by cross-bars. The upper ends of the posts A are fitted into and are secured to castings B, as shown in Fig. 3. The castings B are made heavy and strong, and are grooved transversely in the middle part of their upper sides with a deep and wide groove, as shown in Figs. 2, 3, and 4. The upper sides of the castings B have two or more grooves formed in them, of such a depth and breadth as to receive the flanges of the wheels of the car. The tops of the ribs between the longitudinal grooves of the castings B are grooved sufficiently to bed the wires C. The ends of the wires are bent downward, are passed through holes in the body of the castings B, and their ends are secured by nuts. The ends of the wires C may, if desired, be turned back, so as to receive their nuts upon the side of the casting upon

which the wires approach. D represents the body of a car, to which are attached the axles E, upon the journals of which the wheels F revolve. The axles E pass beneath the bottom of the car D up along its sides, and project to receive the wheels at such a point that the center of gravity of the car may be considerably below the point of support. The wheels F are made with as many grooves as the castings B have flanges, and with two more flanges than the castings B have grooves, so that each of the wires C may enter a groove of the wheels F. Directly beneath the wires C are placed a second set of wires, G, the ends of which pass through the body of the castings B. H are braces or stays, the lower ends of which are secured to the lower wires G, and their upper ends are secured to the upper wires C, as shown in Fig. 3, so that the upper wires C, upon which the wheels F run, may be supported from the wires G. The shoulder upon the inner side of the castings B, through which the inner wire G passes, is made wide and is grooved longitudinally to receive the flange of the wheel I, as shown in Fig. 1, and is grooved transversely to allow the ends of the wires G to cross each other, as shown in Fig. 2. The wheels I revolve upon the journals of the arms J, which are formed upon the axles E, at or near their upper angle or shoulder, and project into such a position that the wheels I may roll along the lower side of the inner wire G, and thus effectually prevent the wheels F from leaving the wires C.

In the modification shown in Figs. 5 and 6, the wheels I revolve between two independent wires, K, the ends of which are secured to the casting L, which is made, as shown in Figs. 5 and 6, so that it may hold the ends of the wires securely, and at the same time in such a way that the wheels I may readily pass the castings L. For passing around curves the castings B are cast upon an arc of a circle, as shown in Fig. 4, and the posts and castings are arranged so close together as to lead the track in the required direction.

By using three rows of posts, and making the castings for the central row double, a double-track road may be made.

Having thus described my invention, I claim

as new and desire to secure by Letters Patent—

1. The castings B, constructed substantially as herein shown and described, to adapt them to support and connect the ends of the wires C G that form the track, so that the wheels of the cars can readily pass the posts that support the track, as set forth.

2. The arrangement of the arms J and wheels

I, in connection with the axles E, wheels F, wires C G, and castings B, substantially as herein shown and described, and for the purpose set forth.

GEORGE KILLAM.

Witnesses:

J. HUTCHISON,  
JAS. R. STROW.