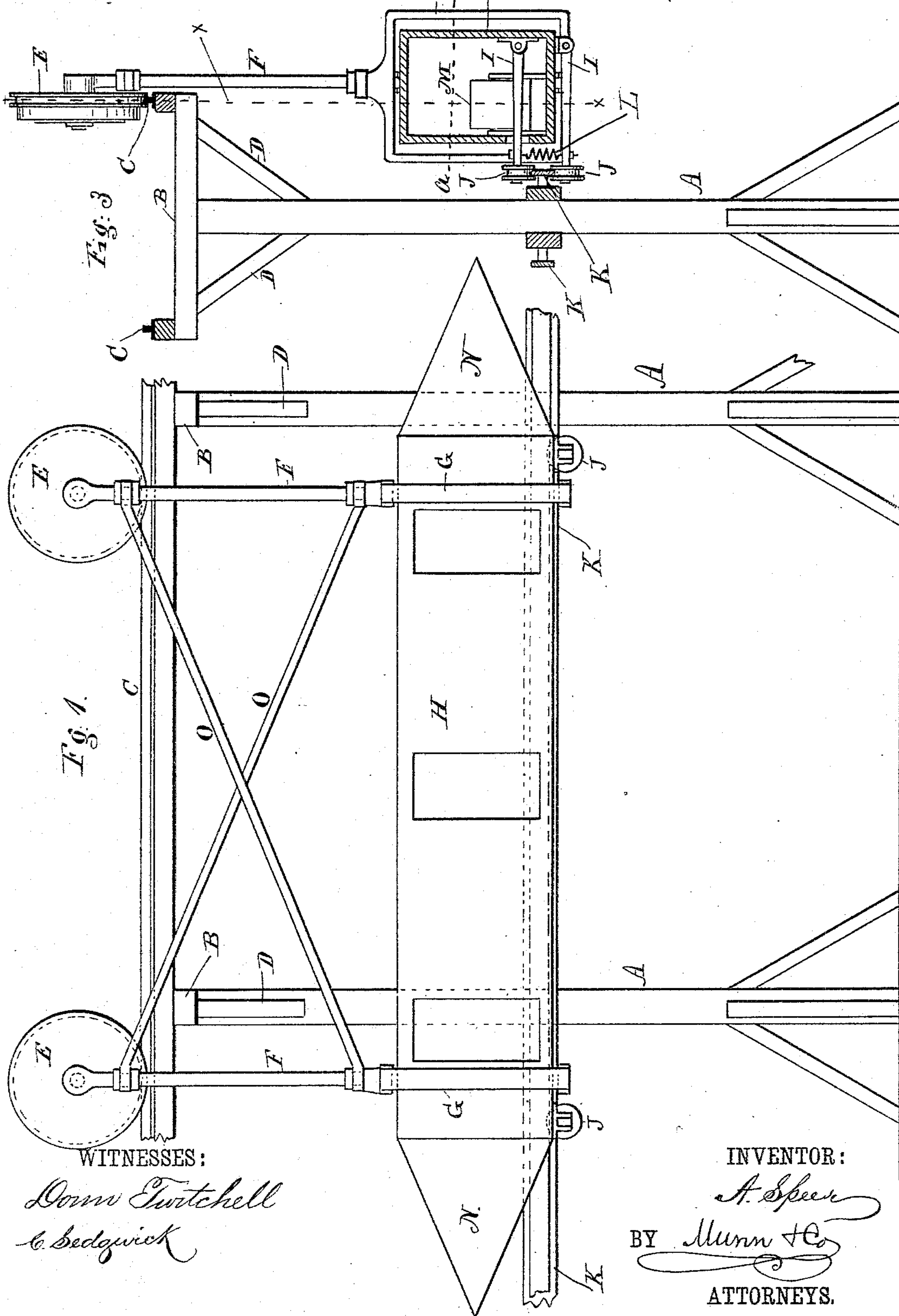


(No Model.)

2 Sheets—Sheet 1.

A. SPEER.  
ELEVATED RAILWAY TRACK AND CAR.  
No. 339,494.  
Patented Apr. 6, 1886.



WITNESSES:

*Donn Twitchell*  
*C. Sedgwick*

INVENTOR:

*A. Speer*

BY *Munn & Co*  
ATTORNEYS.

(No Model.)

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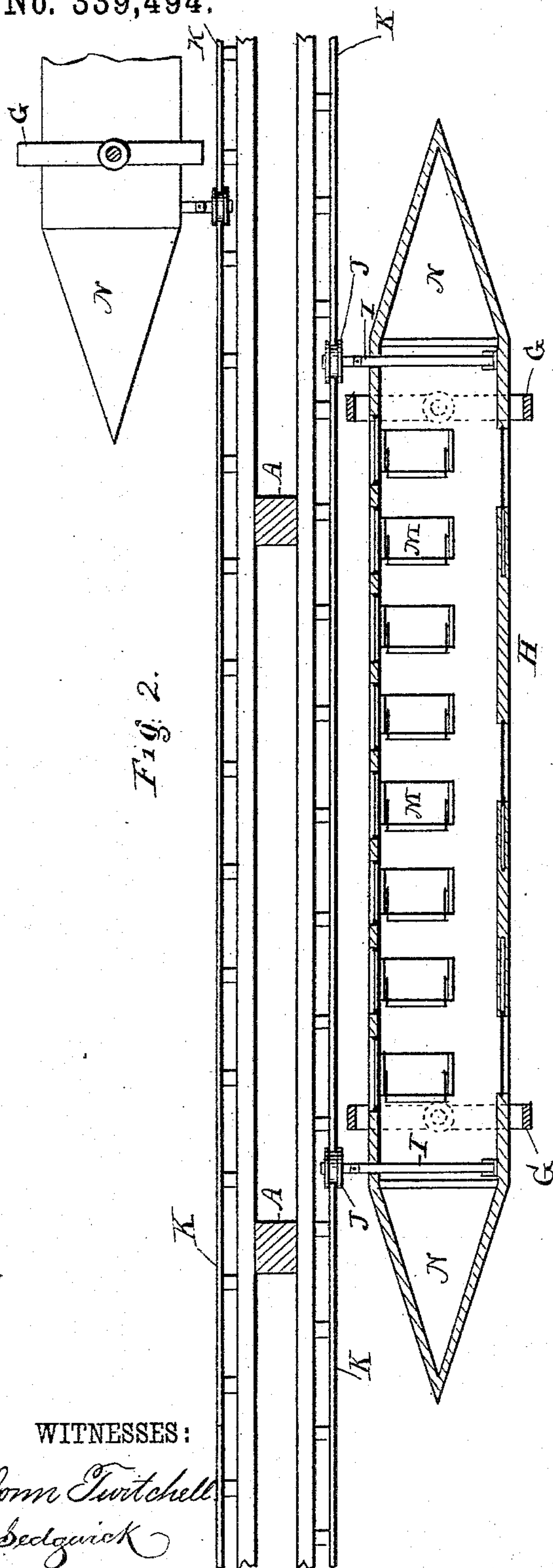


Fig. 2.

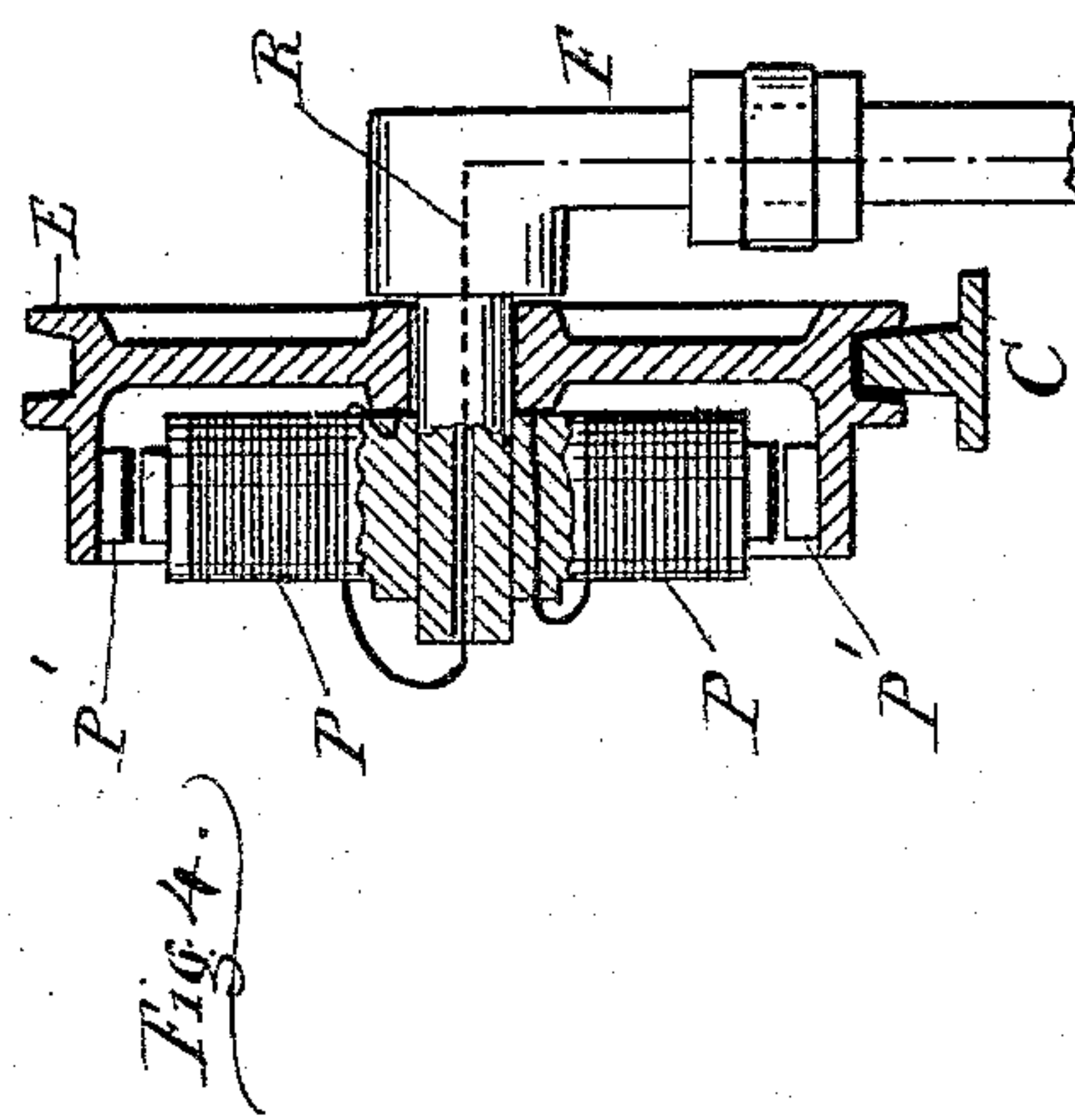


Fig. 4.

WITNESSES:

*Donn Twitchell*  
*L. Sedgwick*

INVENTOR:

*A. Speer*  
BY *Munn & Co*

ATTORNEYS.



# UNITED STATES PATENT OFFICE.

ALFRED SPEER, OF PASSAIC, NEW JERSEY.

## ELEVATED-RAILWAY TRACK AND CAR.

SPECIFICATION forming part of Letters Patent No. 339,494, dated April 6, 1886.

Application filed December 17, 1885. Serial No. 185,996. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED SPEER, of Passaic, in the county of Passaic and State of New Jersey, have invented certain new and useful Improvements in Elevated-Railway Tracks and Cars therefor, of which the following is a full, clear, and exact description.

The invention relates to improvements in elevated-railway tracks and cars therefor; and it consists in the peculiar construction and arrangement of parts, as hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a side elevation of a short section of an elevated track with a single car suspended therefrom. Fig. 2 represents a horizontal longitudinal section through the dotted line *aa* of Fig. 3, showing the guide-rails K secured to either side of the upright posts A, a longitudinal section showing the interior of a car and a top view of a fragment of a second car on the opposite side of the posts to run in an opposite direction. Fig. 3 is an elevation of one of the upright posts with a cross-beam thereon, and represents a cross-section of a car suspended from the journals of the wheels, a yoke surrounding the car to support it, and steady-wheels with a guide-rail to prevent lateral movement or swaying of the car when in rapid motion. Fig. 4 represents a central section of one of the suspension-wheels detached, and provided with the ordinary electric coils and magnets, by which the wheels are to be revolved by a current of electricity applied thereto in any convenient manner.

A in the accompanying drawings represents a series of posts of the required height and placed at proper distances apart, to the ends of which are secured cross-beams B, with braces D, the upper ends of these braces extending outward toward the ends of the cross-beams sufficient to support the stringers and rails C, from which the cars are suspended.

From the axles of the wheels E extend suspension-rods F, to the lower ends of which are fitted yokes G, which surround the body of the car H near its ends, and by which it is supported, as shown in Figs. 2 and 3.

In order to be adapted to turn curves in the track, the yokes G are swiveled either beneath the body of the car, in the usual manner of swiveling trucks thereto, or may be swiveled above the car, if preferred. In this construction the suspension-wheels E are provided with double flanges, one flange on either side of the rail. Within these yokes G is placed the car H, the yokes being located, for convenience, at either end of the car-body, as shown in Figs. 1, 2, and 3.

To the yokes, or to the lower side of the body of the car, near its ends, are fitted two pivoted axles, I, on the outer ends of which are mounted two steady-wheels, J, which are held on either side of a lower guide-rail, K, secured to the posts A with the required pressure by springs L, as shown in Fig. 3. These steady-wheels J are also provided with double flanges the same as the suspension-wheels E. Not to interfere with the passengers on entering or leaving the car, these pivoted axles I and steady-wheels J are located near the ends of the car, as shown. The car being suspended by rods F from the outside of the suspension-wheels E, the seats M are placed on the side of the body next to the posts A and the aisle on the outside, so as to maintain the center of gravity of the car in a perpendicular line from the centers of the suspension-wheels E, as shown by the dotted lines *xx* in Fig. 3.

To present the least resisting-surface to the air when running at a high rate of speed, the ends N of the bodies are pointed or cigar-shaped.

As a convenient and effective means of bracing the upper ends of the suspension-rods F, so as to maintain the wheels E thereon in position, two cross-rods, O O, are provided, which extend from the wheels to the car-body, and are secured thereto, as shown in Fig. 1. In this construction the car is to be propelled by a current of electricity applied through the suspension-wheel E by electric coils P and magnets P', with wires passing through the suspension-rods F and yoke G, to connect with the lower guide-rails, K, to complete the circuit, the dotted lines R showing the circuit-wire. The electric coils P are to be charged with electricity in the usual manner, and the circuit connected and disconnected to stop and start the car by any of the well-known methods.



The manner of generating the electric current and the method of applying it to propel the car being no part of this invention, a detailed description thereof is omitted.

5 Communication with the brake and reversing mechanism above the rails C may be effected by means of a rope, chain, or rod extending down within reach of the conductor, &c., in the car.

10 In warm climates, where liability to clogging by snow and ice is small, the rails C and K may be grooved and the wheels tongued to run therein.

Any motive power may be employed, either  
15 separately or in combination—as steam, electricity, endless cables, &c.

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

20 1. In an elevated railway constructed and operating substantially as herein described, in combination with the suspended cars H, the yielding steady-wheels J and guide-rails K, as and for the purpose set forth.

25 2. In an elevated railway constructed, ar-

ranged, and operating substantially as herein described, the yielding steady-wheels J, mounted upon axles secured to the body of a car or to the yokes, and a guide-rail, K, as and for the purpose set forth.

3. In an elevated railway constructed, arranged, and operating substantially as herein described and shown, in combination with the suspension-wheels E and suspension-rods F, the yokes G, to receive and support the body  
35 of a car, as herein set forth.

4. In an elevated railway, in combination with the suspension-wheels E, suspension-rods F, and car H, the cross-braces O O, constructed and arranged substantially as and for the  
40 purposes set forth.

5. In an elevated suspension-railway, a car suspended in yokes steadied by steadying-wheels working on a guide on the railway structure, substantially as shown and described.  
45

ALFRED SPEER.

Witnesses:

C. SEDGWICK,  
C. L. BURGER.