

(No Model.)

R. F. ROBINSON & H. M. CROCKEN.

ELEVATED STREET RAILROAD.

No. 395,921.

Patented Jan. 8, 1889.

Fig. 1.

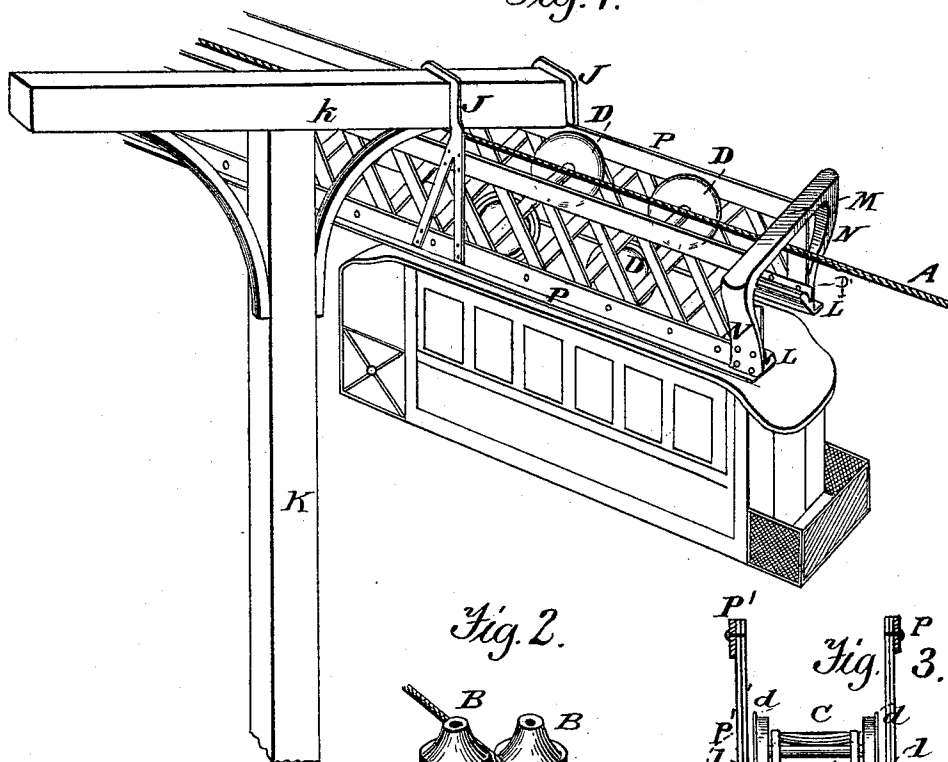


Fig. 2.

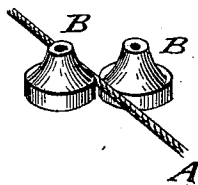
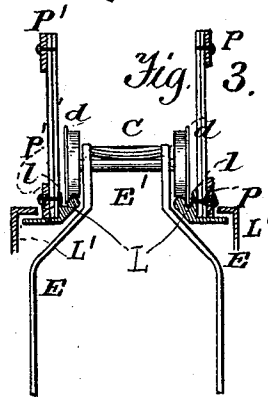


Fig. 3.



Witnesses.

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UNITED STATES PATENT OFFICE.

ROBERT F. ROBISON AND HARRY M. CROCKEN, OF KANSAS CITY, KANSAS;
SAID CROCKEN ASSIGNOR, BY MESNE ASSIGNMENTS, TO HOWARD A.
WILLIAMS, OF SAME PLACE.

ELEVATED STREET-RAILROAD.

SPECIFICATION forming part of Letters Patent No. 395,921, dated January 8, 1889.

Application filed December 27, 1887. Serial No. 259,085. (No model.)

To all whom it may concern:

Be it known that we, ROBERT F. ROBISON and HARRY M. CROCKEN, citizens of the United States, residing at Kansas City, in the county of Wyandotte and State of Kansas, have invented certain new and useful Improvements in Elevated Street-Railroads; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

The special object of the invention is to improve the cable lines of elevated railroads, as hereinafter fully described in connection with the drawings.

Figure 1 of the drawings is a perspective view. Figs. 2 and 3 are detail views of parts hereinafter particularly described.

In the drawings, A represents the cable, which passes between two pulleys, B B, placed just far enough apart to admit the grip, and yet not far enough to let the cable drop down. We use two pairs of truck-wheels with an outside flange, *d*, to prevent the track from spreading. There will be a cross-piece, M, at intervals and a brace, N, on each side of the track-rails L L, to prevent the latter from spreading and bind together the whole superstructure. The rails are suspended from a single column, K, from whose top and on each side thereof extends an arm, *k*, thus allowing for the usual double track. The suspension-straps J pass around the arms *k* and are bolted to the rails L. P and P' are the side railings made of iron straps riveted together, so as to make it self-supporting for some distance. The lattice-work part of our track is preferably made about three feet high and the column high enough to support the structure, so that it will not interfere with the free passage of the usual vehicles and people on the streets below. The track-rails L are securely

bolted to the side rails, P and P', by means of a flange, *l*, passing about four inches to the outer side of said rails P and P', so as to allow a safety-guard, I', to pass over the flange at least one inch above it to guard against an accidental breaking of one of the bars E or of the axles E'.

It will thus be seen that our elevated road is provided with two tracks, on which the wheels run at about three feet apart, with the cable suspended in the middle, above the axles, on the two pulleys. The cable is moved by a stationary engine at some convenient point on the road, and the latter is provided with stations at suitable intervals. Our single row of columns is arranged in the middle of a street, with the arms running out on opposite sides, so as to balance each other, and is securely fastened at the base to a solid piece of masonry properly anchored; or we may use two rows of columns, one on each side of the street where the latter is narrow.

Our structure is cheap, durable, and does not obstruct the streets, while the car is not stopped running because railroad-trains are crossing.

Having thus described all that is necessary to a full understanding of our invention, what we claim as new, and desire to protect by Letters Patent, is—

In an elevated railway, the track-rails made with the two flanges *l* L', in combination with arch cross-braces M N and longitudinal rails P P', the parts M N P P' being fastened to the flanges *l* L', whereby the track-rails are firmly held in position and prevented from lateral displacement.

In testimony whereof we affix our signatures in presence of two witnesses.

ROBERT F. ROBISON.
HARRY M. CROCKEN.

Witnesses:

JOHN W. FERGUSON,
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