(No Model.)

P. C. FLOETER.

AUTOMATIC CAR STOPPER FOR DRAWBRIDGES.

No. 572,252. Patented Dec. 1, 1896.

Fig. 1.

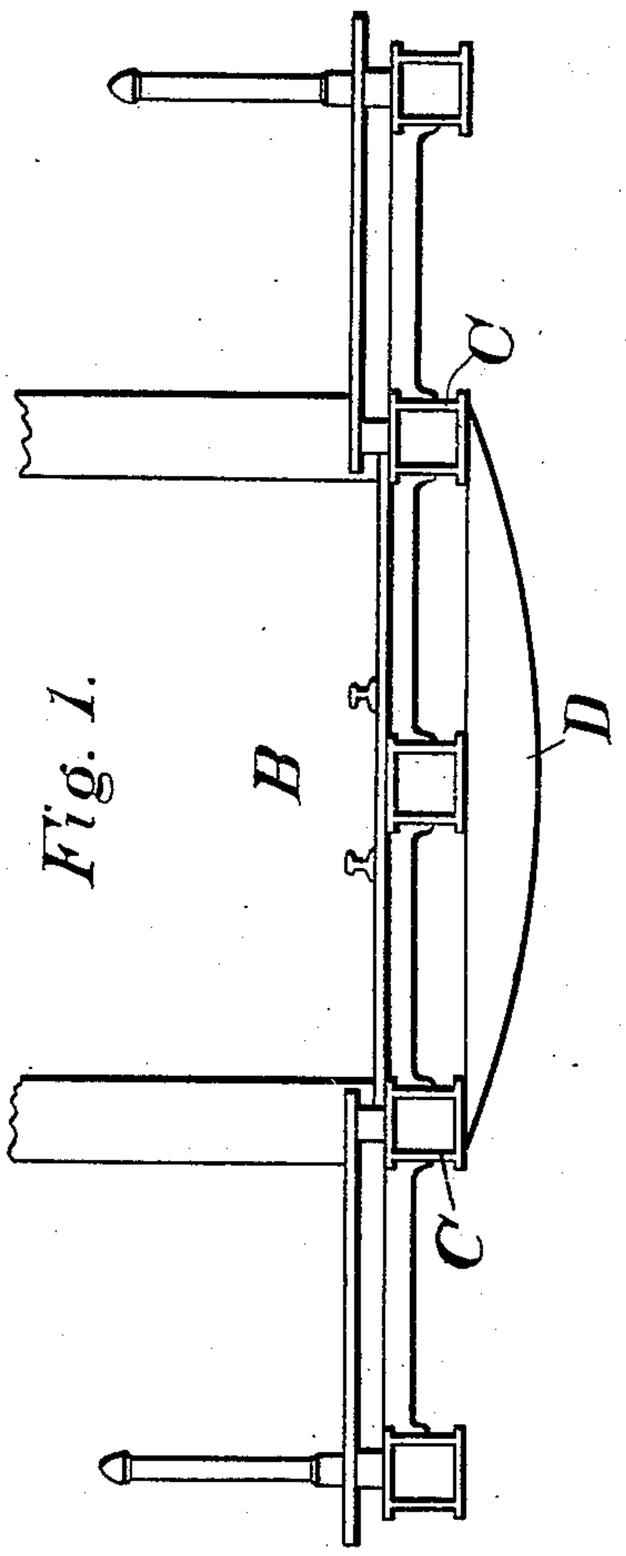
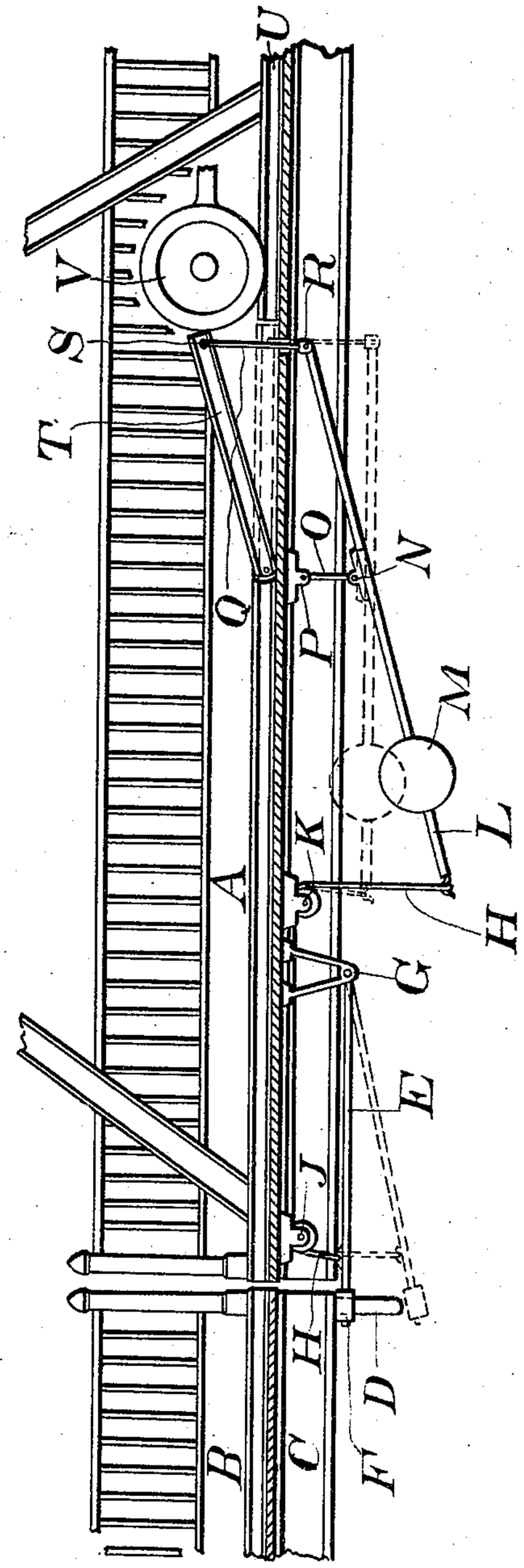


Fig. 2.



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PHILIP C. FLOETER, OF BAY CITY, MICHIGAN.

AUTOMATIC CAR-STOPPER FOR DRAWBRIDGES.

SPECIFICATION forming part of Letters Patent No. 572,252, dated December 1, 1896.

Application filed January 18, 1896. Serial No. 576,040. (No model.)

To all whom it may concern:

Be it known that I, PHILIP C. FLOETER, a citizen of the United States, residing at Bay City, in the county of Bay and State of Michigan, have invented certain new and useful Improvements in Automatic Car-Stoppers for Drawbridges; and I 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.

My invention relates to automatic car-stoppers for drawbridges, and has for its object the raising of a substantial obstruction between or upon the rails of a bridge-railway when the draw is opened and keeping the obstruction elevated until the draw has been closed, thereby preventing a car from accidentally falling from the unguarded end of the track.

The object stated above I accomplish without the aid of springs or complicated mechanism, by providing a pivoted section of one or both rails which may be raised in the path of an approaching car by a lever actuated by a weight, which, in its turn, is raised by band or chain and pulley connection with an auxiliary lever operated by a segment, or single or double inclined planes borne by the draw.

The details of my invention are each fully described and the working of the device explained hereinafter.

Referring to the accompanying drawings, wherein like letters designate like parts throughout the several views, Figure 1 represents an end elevation of the draw, showing the segment attached to the box-beams; and Fig. 2 represents a side view showing the floor of the bridge in section and exhibiting in full lines the position of the parts when the draw has been partly opened, the broken line indicating the positions of the parts when the draw has been completely closed. In this view the draw has been so far closed as to bring the auxiliary lever into contact with the highest portion of the segment.

Considering Fig. 2, A designates the stationary portion of the bridge, and B the draw.

C C mark the beams or girders, to which is fixed in any effective way the segment D. It is within the scope of my invention to fashion this element of my device in the form of either a single or double inclined plane, as may be indicated in special constructions.

E represents the auxiliary lever or arm, pivoted at G to a hanger of ordinary design, attached, as usually arranged, directly to the under surface of the floor of the bridge. At its free end the lever E carries a roller F, suitably held in revoluble connection with the lever.

H designates a band or chain running over pulleys J and K and connected with one extremity of the main lever L. A weight M is attached to or fixed about the main lever, which possesses a fulcrum at N and is pivotally connected by the link O with the hanger P, fixed beneath the floor of the bridge, as shown. The pivotal connection O is not essential, as the main lever may be pivoted directly to a suitable hanger from the floor of the bridge similar to that employed to support the auxiliary lever E. The remaining end of the main lever L is pivotally attached to a rod Q, which passes upward through a suitable aperture in the floor of the bridge, and is provided with a hook or finger designed to engage the orifice S in the web of the pivoted portion T of rail U, borne by the stationary part of the drawbridge.

The operation of my device is as follows: In Fig. 2 the roller F, borne by the auxiliary lever E, is shown at its first point of contact with the segment D, the form of the segment appearing in Fig. 1. Assuming the draw to be in the act of closing, it will be understood that the position has not yet been reached wherein the rails of the tracks upon the fixed and movable portions of the bridge are properly alined for the passage of cars. The closing movement continuing, it is obvious that the unattached end of lever E will be gradually depressed, and by means of the band H the main lever L and weight M will finally be raised into the positions indicated by the broken lines. At the same time the pivoted portion T of the track falls into its regular place in line with the rails, but it is apparent that until the roller F reaches its lowest position and the weight M reaches its highest position there still remains a sub-

stantial obstruction to the passage of a car-wheel V along the rail. It would be impossible, therefore, for the car to proceed while the draw is closing, and by adding to the length of the band H the pivoted portion of the rail, together with the lever and weight operating it, can be removed to any desired distance from the draw. As the draw swings open in either direction the weight M, acting through the connections described, raises both lever E and the pivoted portion of the track, as plainly set out in Fig. 2.

Having thus sufficiently described my invention, what I claim, and desire to protect by Letters Patent, is—

In an automatic car-stopper for draw-bridges, the combination of a draw having a section of railway-track and provided with a suitable segment or inclined plane, a stationary portion of a bridge, a railway-track provided with a pivoted portion, a main lever, L, having a fulcrum and a pivotal connection with the pivoted portion of said track, a weight adapted for attachment to one arm of said main lever, an auxiliary lever having a fulcrum and provided with a roller, F, near one end, means substantially as described whereby the movement of said auxiliary lever may be transmitted to said main lever and weight, as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

PHILIP C. FLOETER.

Witnesses:
HARRY HOOD,
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