

No. 660,673.

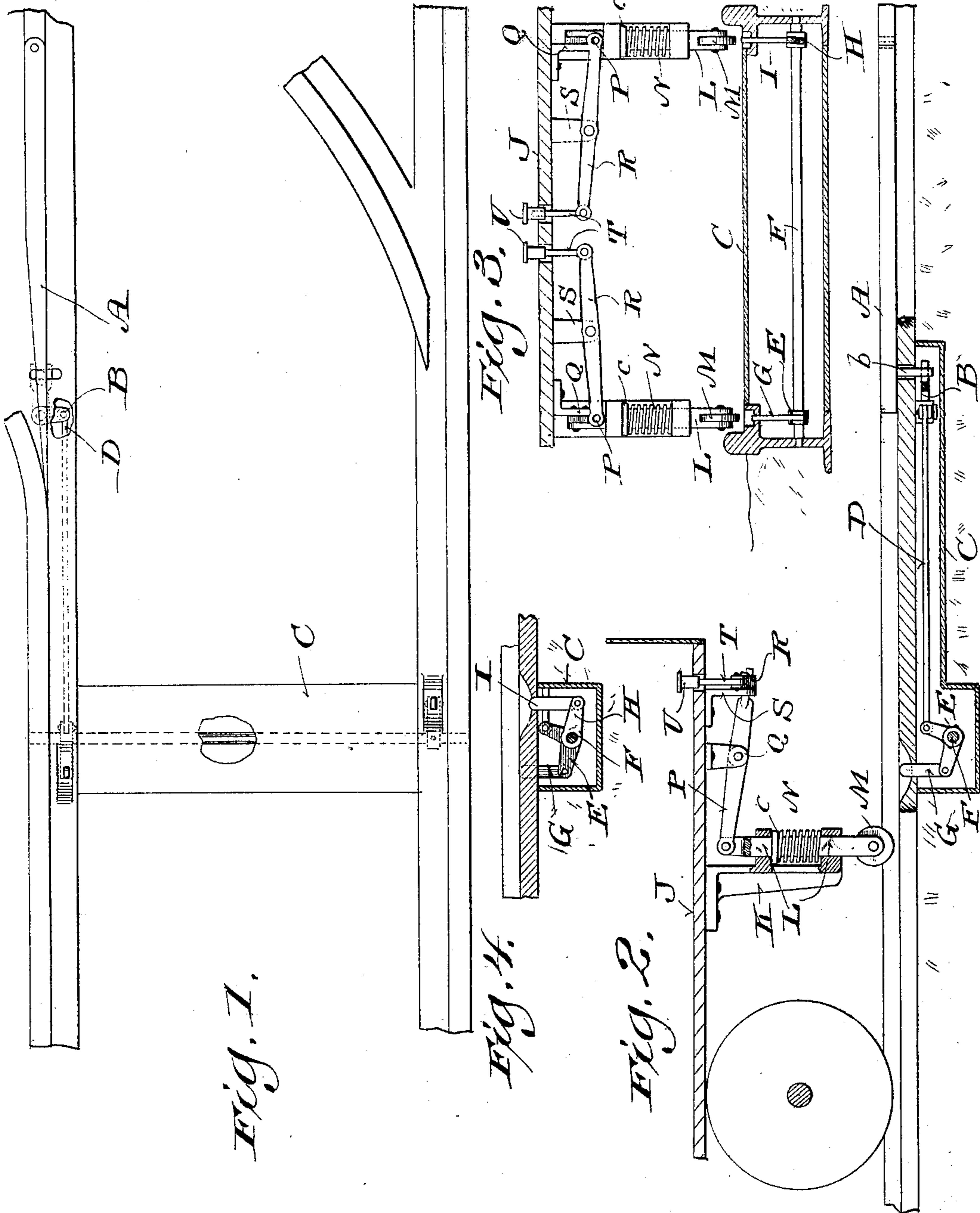
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W. WARNEKE.

RAILWAY SWITCH OPERATING MECHANISM.

(Application filed July 2, 1900.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM WARNEKE, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF THREE-FOURTHS TO PAUL KRUMBHOLZ, JOHN O. KRUMBHOLZ, AND BERNHARD ROSENOW, OF SAME PLACE.

RAILWAY-SWITCH-OPERATING MECHANISM.

SPECIFICATION forming part of Letters Patent No. 660,673, dated October 30, 1900.

Application filed July 2, 1900. Serial No. 22,256. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM WARNEKE, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee and State of Wisconsin, have invented certain new and useful Improvements in Railway Switch Mechanism; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention has for its object to provide simple economical means whereby railway-track switches may be opened or closed from conveyances run on the tracks; and said invention consists in certain peculiarities of construction and combination of parts hereinafter particularly set forth with reference to the accompanying drawings and subsequently claimed.

Figure 1 of the drawings is a diagram representing a plan view of a railway track-junction and switch mechanism; Fig. 2, a diagram representing a conveyance on the railway provided with means for actuating the switch mechanism, the conveyance and part of said railway being in longitudinal section; Fig. 3, a diagram showing the conveyance and railway in transverse section, the means for actuating the switch mechanism being in front elevation; and Fig. 4, a detail showing a portion of the aforesaid railway and switch mechanism.

Referring by letter to the drawings, A indicates a pivotal switch-point at a track-junction of a railway, and depending from this switch-point, through a slot in the adjacent frog, is shown a lug *b*, engaging the forked end of one arm of a bell-crank B, suspended from said frog in a housing C below the surface of the railway. A link D is shown connecting the other arm of bell-crank B with an arm of another bell-crank E, fast on a rock-shaft F, within housing C, and in pivotal connection with the remaining arm of the latter bell-crank is a push-pin G, that extends up through a slot in the adjacent track-rail to come within a depression of said rail. A crank H is shown fast on shaft F, and in pivotal connection with this crank is a push-pin I, that extends up through a slot in the

track-rail that is opposite the one aforesaid and provided with a depression in which the latter pin has play.

Suspended from the floor J of a conveyance movable on the railway are brackets K, provided with guide-lugs for stems L, that carry antifriction-rollers M, arranged to be brought in contact with the push-pins constituting parts of the actuating mechanism for the switch-point aforesaid, and a spiral spring N is arranged between the lower guide-lug of each bracket and a collar-flange *c* of the corresponding stem. The upper end of each stem is shown in pivotal connection with one end of a lever P, suspended by a hanger Q from the aforesaid conveyance, and the other reduced and rounded end of this lever is loose in an eye in one end of another lever R, suspended by a hanger S from said conveyance to be at a right angle to the lever aforesaid. In pivotal connection with the other end of lever R is a push-pin T, that extends up through an opening in the bottom of the conveyance and is surmounted by a knob U, the latter being preferably detachable from said pin.

From the foregoing it will be readily understood that when either one of pins T is pushed down the corresponding levers R P will be actuated to depress a stem L against resistance of the spiral spring N, surrounding this stem, whereby the antifriction-roller M, carried by said stem, is lowered to have contact with one of the push-pins G or I, as the case may be, constituting part of the actuating mechanism for the aforesaid switch-point. Hence the switch will be automatically opened or closed at the pleasure of the operator of the lever mechanism while the conveyance is in motion.

My invention is particularly designed for street-railway use, the knobs U being arranged to be pressed upon by the feet of drivers or motormen of said cars, and these knobs being detachable from the push-pins T a pair of them may be made to serve with four of the lever mechanisms, there being two of these mechanisms under the platform at each end of a car.

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

5 A pivotal switch-point at a track-junction of a railway, a lug depending from the switch-point through a slot in the adjacent frog, a bell-crank having an arm extremity thereof engaged by the switch-point lug, a rock-shaft below track-surface of the railway provided
 10 with a bell-crank having an arm thereof in link connection with the former bell-crank, a push-pin in connection with the other arm of the rock-shaft bell-crank extending through an opening in an adjacent track-rail,
 15 another crank on the rock-shaft, another push-pin in connection with the latter crank

extending through an opening in the track-rail opposite the one aforesaid, the set of said rock-shaft cranks being such that said push-pins are alternately uppermost, and means 20 in conjunction with a conveyance on said track operative to depress the elevated push-pin.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in 25 the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

WILLIAM WARNEKE.

Witnesses:

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