(No Model.)

A. E. BURLAND.

AUTOMATIC SWITCH.

No. 587,277. Patented July 27, 1897.

Fig. 1.

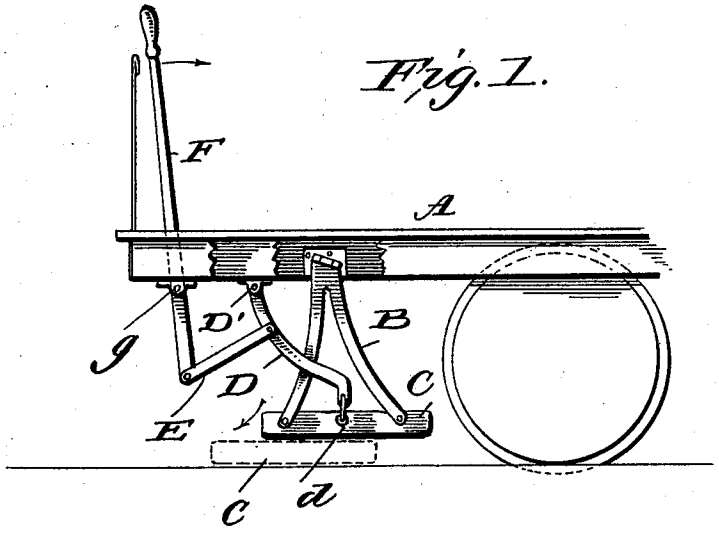
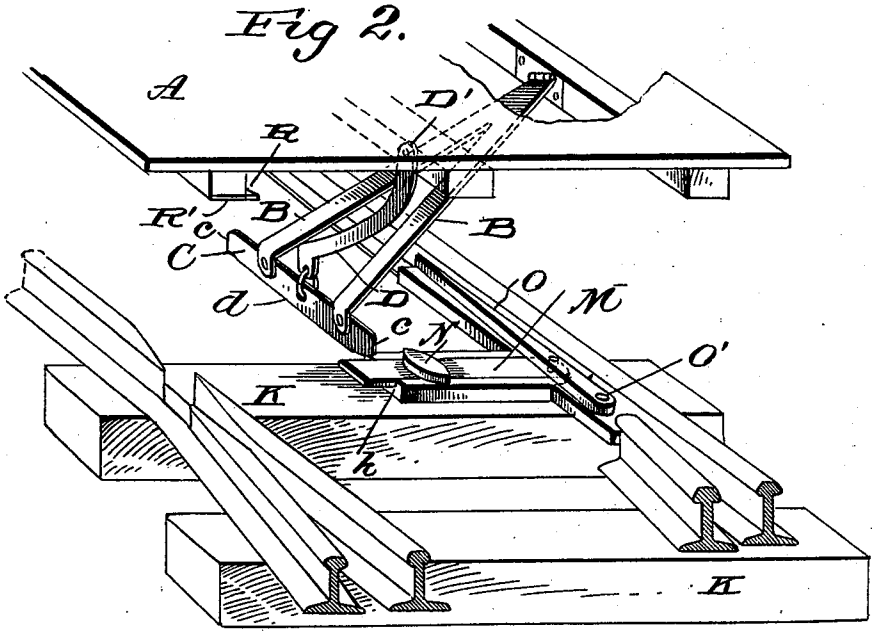


Fig 2.



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UNITED STATES PATENT OFFICE.

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AUTOMATIC SWITCH.

SPECIFICATION forming part of Letters Patent No. 587,277, dated July 27, 1897.

Application filed February 23, 1897. Serial No. 624,641. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR E. BURLAND, a citizen of the United States, residing at Newport, in the county of Newport and State of Rhode Island, have invented certain new and useful Improvements in Automatic Switches; 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.

This invention relates to certain new and useful improvements in switches and means for automatically operating the same as a car passes over the track, and especially to the provision of shoes which are pivoted to the platform of the car and adapted to be actuated by operating-levers to raise and lower the same, so as to contact with a sliding plate which has connection with a switch-point which is pivoted between the main-track rails, whereby the switch may be set by means of the operator causing a shoe to be lowered as the train passes over the sliding plate.

A further part of the invention resides in the pivoting of switch-operating shoes at an inclined angle to the platform of the car and having secured to the said shoes toggle-links, which are in turn pivoted to the operating-levers which are carried on the platform of the car, which shoes are designed to be raised or lowered on opposite sides of a sliding switch-operating plate as it may be desired to open or close the pivoted point.

To these ends and to such others as the invention may pertain the same consists, further, in the novel construction, combination, and adaptation of the parts, as will be hereinafter more fully described, and then specifically defined in the appended claim.

I clearly illustrate my invention in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this specification, and in which drawings—

Figure 1 is a side view of the lever-operating mechanism for operating the shoes pivoted to the bottom of the car. Fig. 2 is a perspective view, with parts broken away, of the sliding plate which is connected to the switch-point and a portion of a car in relative operating position.

Reference now being had to the details of the drawings by letter, A designates the platform of a car, to the side beams of which are hinged the arms B, to the outer end of which arms is secured a shoe C, the inner face and ends of which are inclined, as shown at *c*.

D is a pivoted arm which is secured at its lower end, as at *d*, to the said shoe, and its upper end is pivoted to the plate D′. Secured to the under surface of the platform of the car and pivoted to said arm D is a link E, the opposite end of which is pivoted to the lower end of an operating-lever F, which operating-lever is pivoted to a plate *g* on the platform of the car, the said handle being extended up through an aperture in the floor of the car within convenient reach of the operator.

Secured to a tie K, between the tracks, is a guide-box K′, having slots in opposite ends, as at *k*, through which the sliding plate M is adapted to work. Mounted on the upper surface of the said sliding plate M is an oval-shaped projection or lug N, against the sides of which the said shoe C is adapted to contact when it is desired to move the sliding plate longitudinally. To the outer end of the said plate M is pivoted the switch-point O, which point is pivoted at O′ to a plate forming a part of the frog of the switch. It will thus be seen that as the plate M is caused to move longitudinally the switch-point is opened or closed.

It is my purpose to provide two lever-operating shoes similarly constructed and located on opposite ends of the platform of the car, whereby the switch may be operated from the car moving in opposite directions.

When it is desired to hold the shoes from engagement with the sliding plate connected to the switch-point, it is my purpose to draw the operating-lever forward, so as to engage in an offset R in the plate R′, secured to the platform of the car, which will hold the shoe against the under surface of the platform and above the extension or lug N on the sliding plate M.

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

In combination with the switch-point, the sliding plate connected therewith, with a lug on said plate, of the shoe C, having arms pivoted in the side beams of the platform, of the arm D, secured at its lower end to the said shoe, its upper end pivoted to a plate D′, of the operating-lever F pivoted to a plate on the platform, of the link E pivoted at one end to the operating-lever, and its other end pivoted to the lever D, substantially as shown and described.

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

ARTHUR E. BURLAND.

Witnesses:
CLARENCE A. HAMMETT,
THOMAS G. PECKHAM.