

UNITED STATES PATENT OFFICE.

GEORGE W. SPECHT, OF ALLEGHENY, PENNSYLVANIA, ASSIGNOR OF ONE-HALF TO CORNELIUS EASTHOPE AND CORNELIUS DARBY EASTHOPE, JR.

AUTOMATIC-OPERATING SWITCH.

SPECIFICATION forming part of Letters Patent No. 670,907, dated March 26, 1901.

Application filed December 27, 1900. Serial No. 41,186. (No model.)

To all whom it may concern.

Be it known that I, GEORGE W. SPECHT, a citizen of the United States of America, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Automatic-Operating Switches; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to improvements in that class of railway-switch-operating devices wherein a series of levers and bell-cranks arranged in a slot in the roadway are employed in connection with a tripping mechanism located upon a car to automatically operate the switch; and my improvements consist in the novel details of construction and general arrangement of parts, as will be hereinafter fully described, and pointed out in the claim.

In the accompanying drawings, Figure 1 is a plan view of a railway-switch provided with my improved means for operating the same, the said device being constructed and arranged in accordance with my invention. Fig. 2 is a side sectional elevation of the same, the said section being taken on the line 2 2 of Fig. 1. Fig. 3 is a perspective view of the several connected levers and parts for operating the switch-bar. Fig. 4 is a side elevation of the apparatus located upon the platform of the car, by means of which the motorman operates or turns the switch-bar in either direction. Fig. 5 is a side elevation of the same.

To put my invention into practice with a street-railway consisting of the track or rails 1, the switch-bar 2, pivoted as at 3 or in the usual manner, I form at the center of the said track a box-frame 4, having a removable lid or cover and in which the mechanism for operating the switch-bar is arranged. Connected rigidly to the pivot-pin 3 of the switch-bar 2 is a link or bar 17, the other end of which is connected to a bell-crank 16, arranged in a horizontal position. This crank 16 is connected by a link 15 to a similar crank 19, placed in a vertical position. (See Fig. 3.) This last-mentioned crank 19 is mounted

in suitable bearings 25, and the one end connected to an inclined lever 20, arranged beneath a slot 5, formed in the direction of the length of the track and through which a wheel or roller 10, attached to the car, is made to operate. This inclined lever 20 is mounted in bearings 25', and its rear end attached by means of a link 22 to a similar lever 23, mounted in bearings 25'' at the rear and in line with the aforesaid slot 5.

Attached beneath the platform of the car 13 is a device for operating the two levers 20 and 23, which consists of a wheel 10, mounted in a yoke 9, arranged in a bracket 12 in a manner that the said wheel may be moved vertically by pressure applied to a foot-treadle 8, projecting above the level of the platform 13. A spring 11, arranged about the treadle-shaft 7, serves as a means of recovering the parts and bring the same back to their normal position. This device above mentioned is mounted in a manner that will permit a lateral movement and the same centralized by means of side springs 14. This lateral movement is for the purpose of permitting the wheel 10 to adjust itself as to position to enter the slot 5.

In operation the motorman approaching the switch-bar 2 observes the position of the same, and if it is necessary to throw the said bar to the one side or the other the operator places his foot upon the treadle 8, thereby depressing the wheel 10, and the same entering the slot 5 engages with either of the levers 20 or 25. If the wheel 10 engages with the rear lever 23, the same is depressed and the connecting cranks, levers, and links turn the point of the switch-bar to the left, and thereby open the switch. Should the motorman engage the wheel 10 with the lever 20 to depress the same, the point of the switch-bar 2 is turned toward the right to close the switch, as is obvious from the drawings.

Having thus described my invention, it is obvious that various slight modifications and changes may be made in the general details of construction without departing from the spirit of the invention.

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

A railway-switch-operating device, of the class herein described, consisting of the switch-bar 2 pivotally attached to the link 17, the bell-crank 16 connected thereto, the bar 5 15 connected to said crank and to another 19 arranged at right angles, the inclined lever 20 connected to the last-mentioned crank 19, and a similar lever 23 at the rear, and the said levers 20 and 23 arranged beneath and in line 10 with an open slot 5, formed in the center of

the roadway, in combination with a tripping mechanism operated from the car, substantially as specified.

In testimony whereof I have hereunto affixed my signature in the presence of two subscribing witnesses. 15

GEORGE W. SPECHT.

Witnesses:

JOHN GROETZINGER,

M. HUNTER.