

No. 646,766.

Patented Apr. 3, 1900.

R. M. STEWART.

AUTOMATIC SWITCH FOR STREET RAILWAYS.

(Application filed July 22, 1899.)

(No Model.)

2 Sheets—Sheet 1.

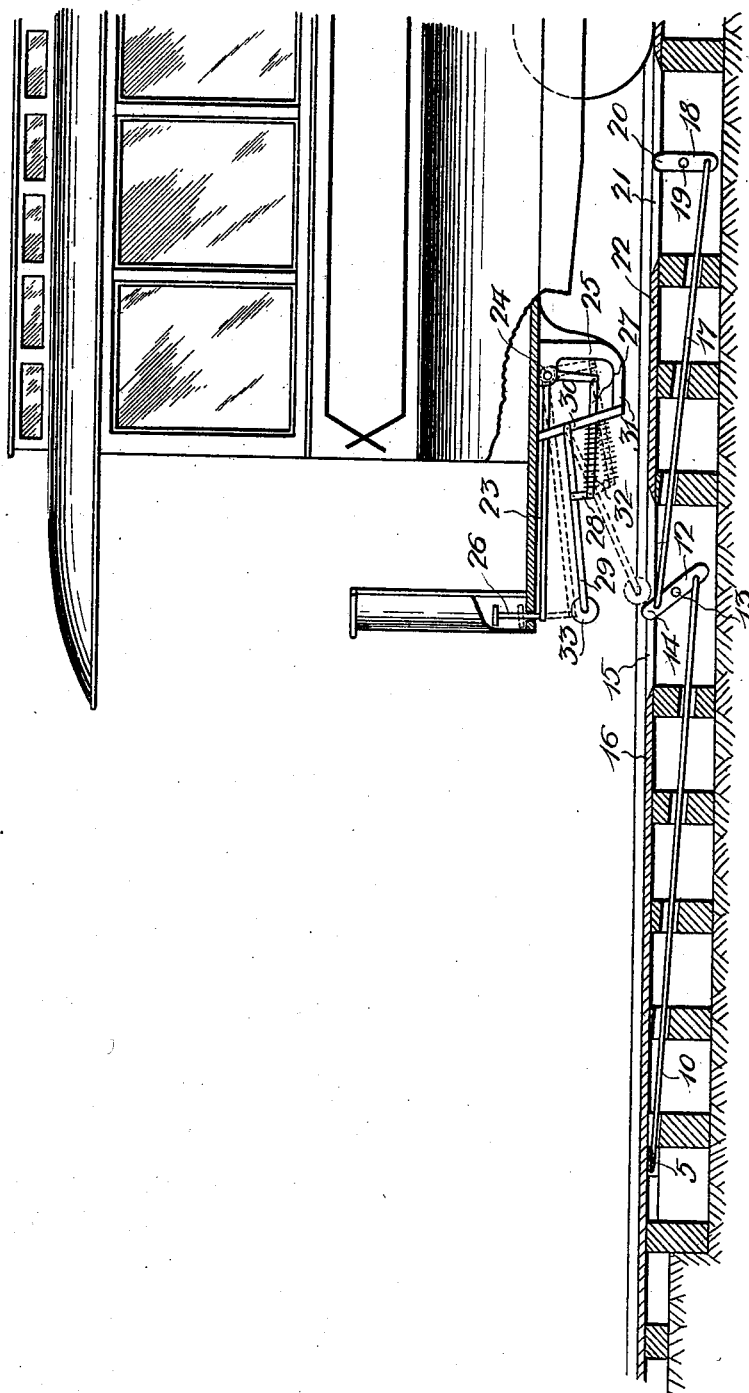


Fig. 1

Witnesses
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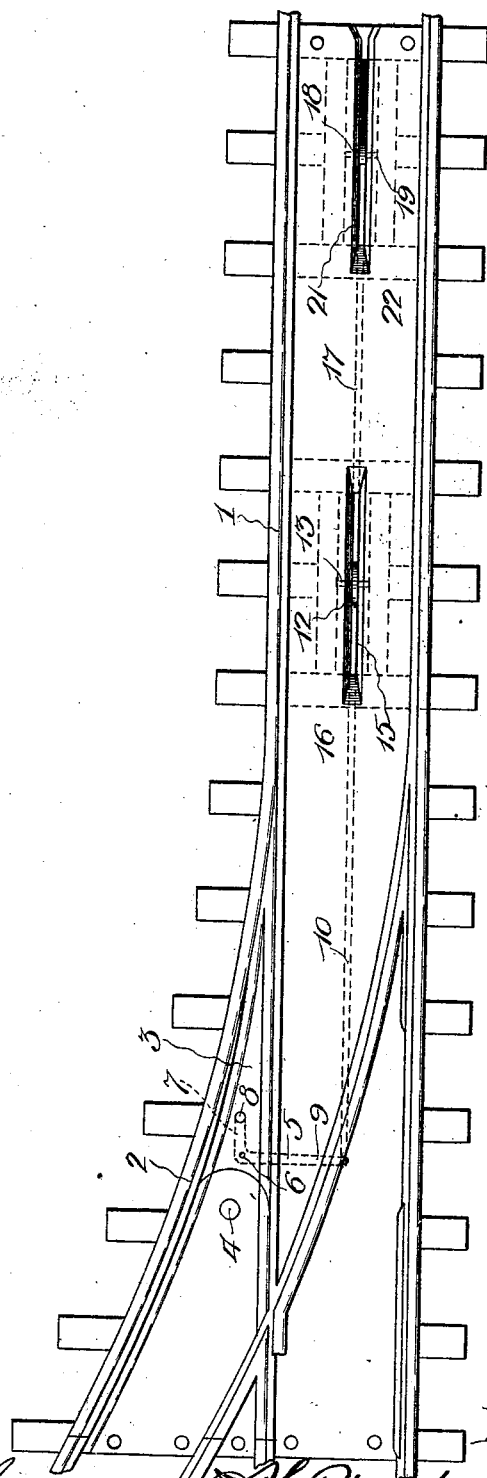
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2 Sheets—Sheet 2.



Witnesses

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UNITED STATES PATENT OFFICE.

ROBERT M. STEWART, OF JOHNSTOWN, PENNSYLVANIA, ASSIGNOR TO
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AUTOMATIC SWITCH FOR STREET-RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 646,766, dated April 3, 1900.

Application filed July 22, 1899. Serial No. 724,806. (No model.)

To all whom it may concern:

Be it known that I, ROBERT M. STEWART, a citizen of the United States, residing at Johnstown, in the county of Cambria and State of Pennsylvania, have invented certain new and useful Improvements in Automatic Switches for Street and other Railways; 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.

The invention has relation to automatic switches for street and other railways; and the object is to provide a simple and reliable switch to be conveniently operated from the car.

To this end the invention consists in certain features of construction and combination of parts, which will be hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a longitudinal section of a track and the front end of a car, showing my improved switch in operation, the full lines showing the switch-shifting mechanism in the inoperative position and the dotted lines showing said switch-shifting mechanism in the applied or operative position. Fig. 2 is a top plan view of the switch and track.

In the drawings the same reference characters indicate the same parts of the invention.

1 represents the main track, and 2 the siding. 3 is the switch-rail pivoted on the stud 4, and 5 represents the switch-lever fulcrumed on a stud 6, its shorter longitudinal arm 7 being pivoted to the switch-rail 3 by a bolt 8, while its longer transverse arm 9 extends to the middle of the main track, where it is pivoted to one end of a rod 10, connected to a lever 12, fulcrumed on a bolt 13 a short distance below the level of the road-bed in the slot 15 in the plate 16. The upper end of this lever 12 projects through the slot 15 in the plate 16, and a short distance below its end 14 is pivoted one end of a rod 17, the opposite end of which is pivoted to the lower end of a vertical lever 18, fulcrumed on a bolt 19, its free end 20 projecting through a slot 21 in the plate 22.

23 represents a bell-crank lever fulcrumed

on a bolt 24 in the bracket 25, secured to the lower face of the car-platform near the forward end of the car. The horizontal arm of this bell-crank lever 23 extends forward under the platform, and the front end of said horizontal arm is connected to a treadle 26, projecting upwardly through a suitable opening in the car-platform. A connecting-rod 27 is pivoted at one end to the depending arm of the bell-crank lever 23, and the other end of said rod 27 is connected to a lug 28 on the lever 29, the latter being pivoted at its rear end to a bracket 30, secured to the arm 31 of said bracket 25. The connecting-rod 27 is encompassed by a spiral spring 32, one end of which spring rests against the lug 28, the other end of said spiral spring 32 resting against the contiguous face of the bracket 30. The free end of the lever 29 carries a friction-roller 33, and, as shown in dotted lines in Fig. 1, when the treadle 26 is pressed downward the roller 33 will be thrown into the line of either of the slots 21 or 15 to operate the switch-rail, as may be desired. If the roller be depressed to cause it to come in contact with the upper end of the lever 18, the switch-rail will be thrown to the left, thus causing the moving car to leave the main track and to be switched onto the side track. If, however, the roller 33 be depressed after the car has passed the lever 18 and before it reaches the lever 12, then when the car reaches said lever 12 it will force the upper end of said lever 12 forward, and consequently the switch-rail will be thrown to the right, and the car will continue its journey on the main track.

It will of course be understood that various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

In an automatic switch for railways, the combination with the main track and the side track connecting therewith; of the switch-rail 3 pivoted on the stud 4 located between the rails of the side track near its junction with said main track, of the switch-lever 5

fulcrumed on a stud 6 located between the rails of the side track and the intersecting rail of said main track, the rod 10 connecting said switch-lever 5 with the lower end of
5 the lever 12 beneath the slotted plate 16, the rod 17 connecting the upper end of said lever 12 to the lower end of the lever 18, said levers 12 and 18 being both fulcrumed beneath the slotted plate 16 and projecting into
10 the slots 15 and 21 in said plate 16, and the car provided with the bell-crank lever 23 fulcrumed on the bolt 24 in the bracket 25 secured to the forward end of said car, the lever 29 provided with the friction-roller 33 at

its front end and pivoted at its rear end to 15 the bracket 30 secured to the arm 31 of said bracket 25, and the treadle 26 projected through an opening in the platform-floor and secured to the front end of said bell-crank 22, substantially as and for the purpose set 20 forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT M. STEWART.

Witnesses:

THOS. CUMMINS,
WM. A. FALSTICK.