

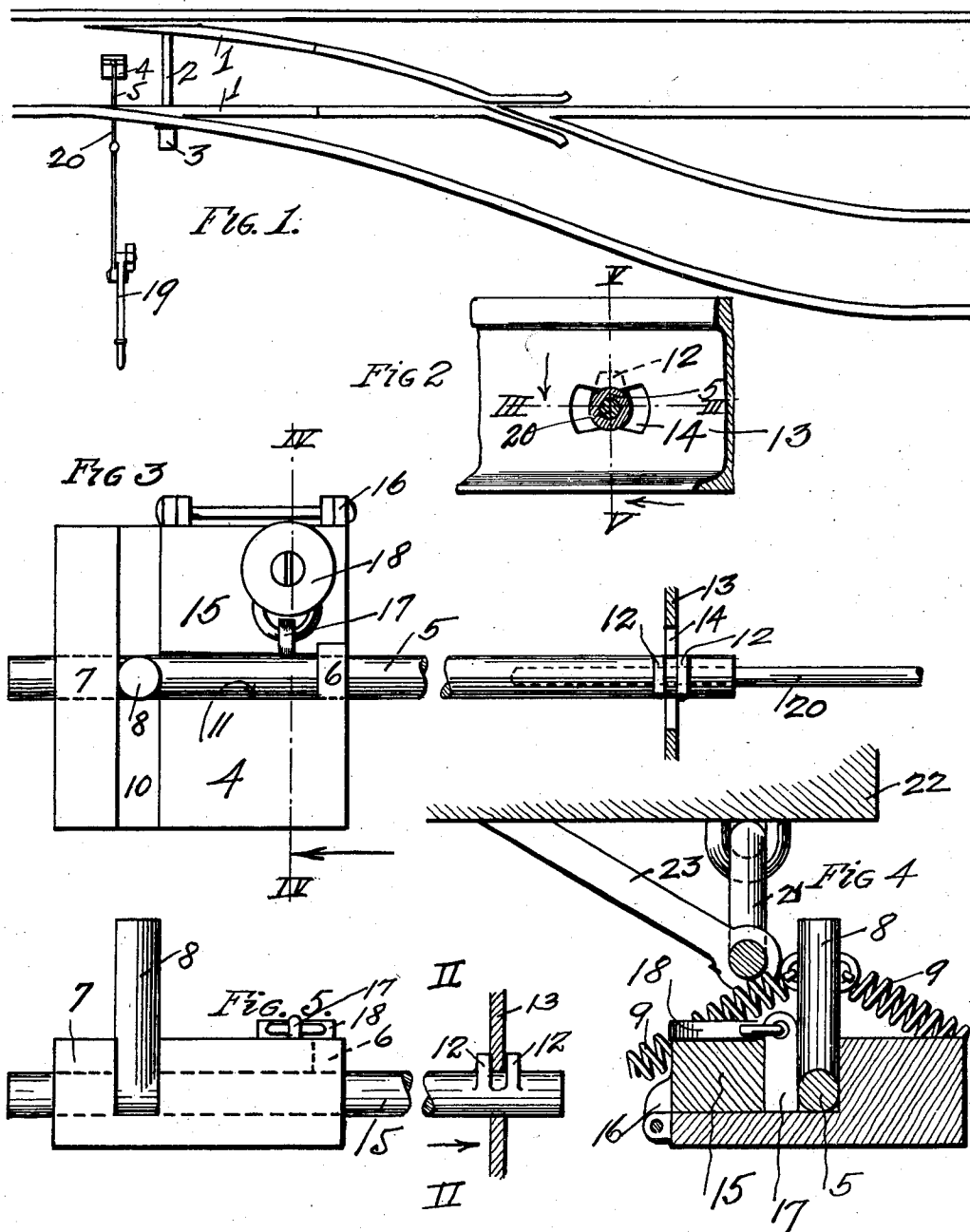
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PATENTED JULY 28, 1903.

W. B. FAZAKERLY.  
RAILWAY SWITCH.

APPLICATION FILED MAR. 7, 1903.

NO MODEL.



Witnesses.

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# UNITED STATES PATENT OFFICE.

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## RAILWAY-SWITCH.

SPECIFICATION forming part of Letters Patent No. 734,527, dated July 28, 1903.

Application filed March 7, 1903. Serial No. 146,606. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM B. FAZAKERLY, a citizen of the United States, residing at Buntyn, Shelby county, State of Tennessee, have invented certain new and useful Improvements in Automatic Railway-Switches, of which the following is a specification.

My invention relates to certain new and useful improvements in automatic railway-switches, and has for its object to provide a construction whereby the switch may be thrown in the ordinary manner and which will be automatically placed for the main track on the approach of an engine. I accomplish this object as will be more fully hereinafter set forth in the drawings, specification, and claims.

Figure 1 is a plan view showing general view of the switch with my apparatus in place. Fig. 2 is a sectional side elevation showing the throwing-bar cut on the line II II of Fig. 5 and showing necessary cut in rail. Fig. 3 is a plan of the operating mechanism of my device, showing rail in section on line III III of Fig. 2. Fig. 4 is a sectional side elevation taken on the line IV IV of Fig. 3 looking in the direction of the arrow. Fig. 5 is a side elevation showing rail in section on line V V of Fig. 2.

Referring now to the drawings, in which like numerals refer to the same or corresponding parts in all the views, 1 1 are the ordinary split switch-points connected together, as is usual, 2 showing one of the customary cross-rods.

3 is a casing containing a spring to hold the switch normally closed.

4 is a box carrying the operating-rod 5, which is mounted in bearings 6 and 7 in said box, which bearings permit it to rotate freely and to slide forward if otherwise possible. An arm 8 extends at right angles to this operating-rod and is normally held vertical by tension-springs 9 9. (Shown only in Fig. 4.) The box 4 contains grooves 10, extending outward at right angles to the operating-rod, and therefore parallel with the center line of the track. In depth these grooves extend to the bottom of the operating-rod 5.

11 is a groove at right angles to the grooves 10, permitting longitudinal movement of the operating-rod 5.

12 12 are lugs on the operating-rod 5, extending at right angles to it and having their center line in a plane at right angles to the long diameter of an elongated hole 14 in the rail-web 13 when the arm 8 is vertical. The space between these lugs is just sufficient to accommodate the web 13 of the rail without binding. The hole 14 cut through the rail-web 13 is, as before stated, elongated to permit the lugs 12 to pass when they are turned to either side.

15 is a plate hinged to the box 4 by hinges 16 and normally held down by a staple 17, attached to the said box 4, and by a lock 18. When so held, it forms one side of each of the grooves 10 and 11 and prevents the rod 5 from being turned as long as it is slipped forward or, in other words, as long as the arm 8 is in the groove 11. When unlocked and thrown back, however, the arm 8 may be turned down toward that side and then be slipped forward to engage the lug 12 with the web 13 of the rail.

The switch can be thrown in the usual manner by a switch 19, having a rod 20 loosely mounted within the rod 5. This rod 20 can of course only throw the switch open, the closing being done by the spring.

21 is a loop depending from the under side of the locomotive cow-catcher, a fragmentary section of one piece 22 of which is shown. This loop 21 is preferably hinged, as shown, and braced by a rod 23, which, if desired, may extend up within reach of the engine-driver, so that the said loop may be displaced should it be desired to take a siding.

Referring now to the mode of operating, the switch for main-line track is of course normally closed, but having been supposedly left open by mistake, the switch 19 has been thrown to hold the switch open, and the rod 20 holds the rod 5 at the back of the box 4, with the arm 8 held erect by springs 9. The lugs 12 engage and hold the web 13 of the switch-rail. The train approaching, the loop 21 strikes the arm 8, depresses it into the groove 10, rotates the lugs 12, and thereby disengages them from the rail, allowing the spring to close the switch. When next it is desired to use the siding, the plate 15 is unlocked and the lugs 12 again placed in engagement with the rail 13. The switch can then

be used until an engine fitted with the loop 21 passes, after which the plate must be again unlocked and the lugs reengaged.

It will be noted that the lugs 12 positively 5 hold the switch to when once they have been disengaged, since the switch-rail cannot pass them till they are turned down.

Having now fully described my invention, what I claim, and desire to secure by Letters 10 Patent of the United States, is—

1. In an automatic switch-closing device, the combination with the track and switch rails, and a spring holding the switch closed, of a box located between the switch-rails, 15 grooves in said box forming a T, an operating-rod mounted in said box and extending to and through one of said switch-rails, an arm at right angles to said rod and normally vertical, lugs on said rod and an elongated hole 20 in said switch-rail, substantially as and for the purposes set forth.

2. In an automatic switch-closing device, the combination with the track and switch rails, a spring holding the switch closed, and 25 an elongated aperture in one of said switch-rails, of a box located between said rails, grooves in said box forming a T, an operating-rod rotatably mounted in said box and having a limited longitudinal motion, said rod 30 extending from said box to said apertured rail, and through said aperture, lugs on said rod, an arm extending outwardly from said rod and springs to normally hold said rod in a raised position, substantially as shown and 35 described.

3. In an automatic switch-closing device, the combination with the track and switch rails, and a spring holding the switch closed, of a box located between the switch-rails, 40 grooves in said box forming a T, a removable plate forming one side of two of the grooves, an operating-rod mounted in said box and ex-

tending to and through one of said switch-rails, an arm at right angles to said rod and normally vertical, lugs on said rod and an 45 elongated hole in said switch-rail, substantially as and for the purposes set forth.

4. In an automatic switch-closing device, the combination with the track and switch rails, and a spring holding the switch closed, 50 of a box located between the switch-rails, grooves in said box forming a T, a removable plate forming one side of two of the grooves, an operating-rod mounted in said box and extending to and through one of said switch- 55 rails, an arm at right angles to said rod and normally vertical, lugs on said rod and an elongated hole in said switch-rail, and a lug on the engine to rotate the operating-rod and disengage the switch-rail, substantially as and 60 for the purposes set forth.

5. In an automatic switch-closing device, the combination with the track and switch rails, an elongated aperture in said switch-rail, and a spring normally holding the switch 65 closed, of a box, grooves in said box forming a T, an operating-rod rotatably mounted in said box, and having a limited longitudinal motion, said rod extending to one of said switch-rails and through said elongated aper- 70 ture, lugs on said rod, a switch-throwing device and a rod extending from said switch-throwing device to and having its opposite end supported by and in contact with said operating-rod, substantially as and for the pur- 75 poses set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM B. FAZAKERLY.

Witnesses:

GEO. E. NEUHARDT,  
J. H. WEATHERFORD.