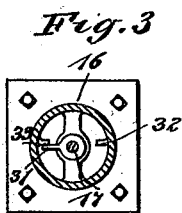
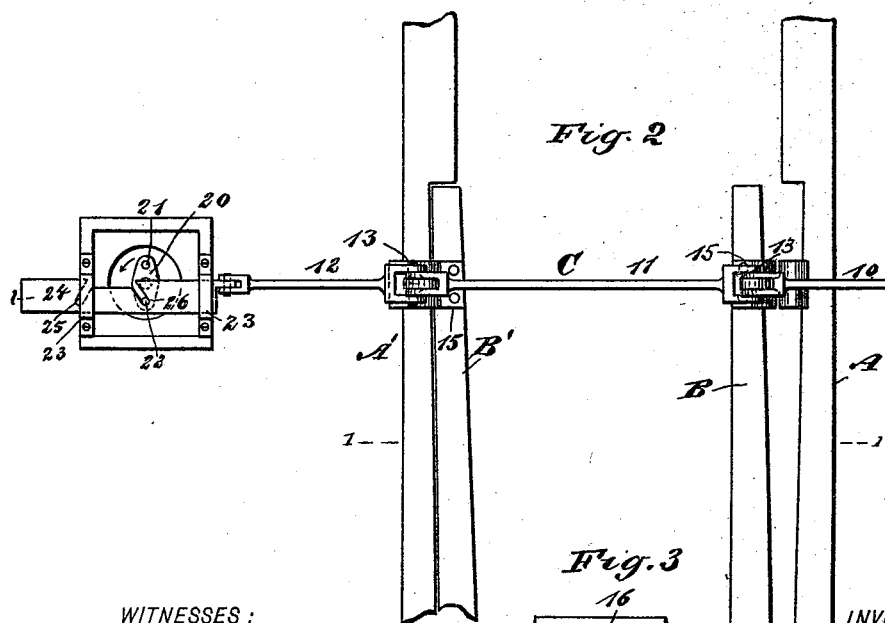
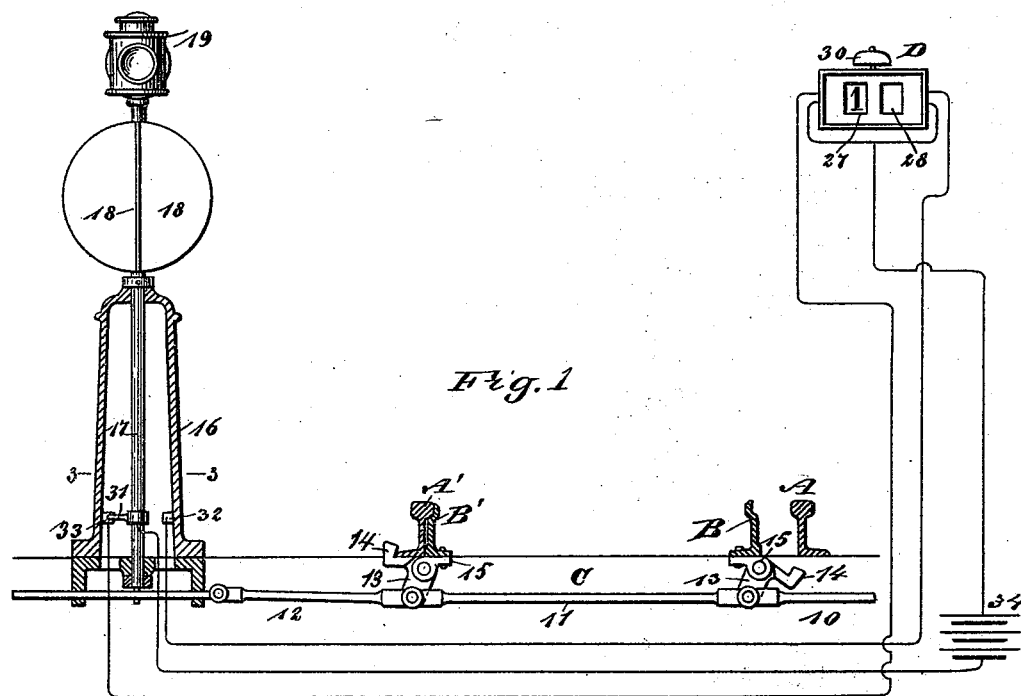


(No Model.)

J. E. SANDELIN.
SAFETY LOCK FOR RAILROAD SWITCHES.

No. 490,616.

Patented Jan. 24, 1893.



WITNESSES:
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SAFETY-LOCK FOR RAILROAD-SWITCHES.

SPECIFICATION forming part of Letters Patent No. 490,616, dated January 24, 1893.

Application filed May 2, 1892. Serial No. 431,393. (No model.)

To all whom it may concern:

Be it known that I, JOHAN EMIL SANDELIN, a subject of the King of Sweden and Norway, at present residing at New York city, in the county and State of New York, United States of America, have invented a new and useful Improvement in Safety-Locks for Railroad-Switches, of which the following is a full, clear, and exact description.

My invention is an improvement in safety-locks for the points of switch rails, after they have been set in or out of contact with the main rails.

The invention consists in the novel construction and combination of these several parts, as will be hereinafter fully set forth and pointed out in the claim.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a transverse section through the main rails and the switch points, illustrating the shifting rod and the lock in side elevation, the switch standard being in vertical section and the section being taken practically on the line 1—1 of Fig. 2; Fig. 2 is an inverted plan view of the switch, main rails and tower, as shown in Fig. 1; and Fig. 3 is a horizontal section through the signal tower, the said section being taken practically on the line 3—3 of Fig. 1.

In the drawings the main rails of the track are designated as A and A', and the switch points as B and B'.

The shifting rod C, is constructed in sections and is located beneath the track; the sections are designated as 10, 11 and 12, but any desired number of sections may be employed. These sections are pivotally united, and at the pivot points, between the sections 10 and 11, an angle or elbow lock lever 13, is fulcrumed, the upper or horizontal member of the lever being provided with an upwardly-extending lip 14, and a like lock lever is fulcrumed at the pivotal connection between the sections 11 and 12 of the shifting rod.

Each lock lever has pivotally attached at the junction of its members a plate 15, and these plates are riveted or otherwise secured to the switch points, one to the point B and

the other to the point B'. The horizontal members of the lock levers are so located that they may be engaged with the outer edges of the outer flanges of the main rails, as shown in Fig. 1.

The shifting rod is connected in any suitable or approved manner with hand levers located at the side of the track, or in a suitable switch tower.

I show in the drawings, in connection with my improved locking apparatus, a signaling apparatus, which is not here claimed, but which is hereinafter described, since it will in practice be used in connection with said locking apparatus.

At one side of the track a signal tower 16, is erected; and in this signal tower a vertical signal mast 17, is held to revolve, the mast being provided near its upper end with signal disks 18, and above the disks with a lantern 19. The lower end of the signal mast is connected with the central portion of a shifting plate 20, shown best in the inverted plan view Fig. 2; and this shifting plate at each end is provided with a downwardly-extending pin or lug, one pin being designated as 21 and the other as 22.

In suitable guides 23, located at the base of the signal tower, a trip plate 24, is horizontally located and held to slide. This trip plate is connected at one end with the section 12 of the shifting rod. The inner edge of the trip plate at one end is recessed; and at the end walls of this recess counter recesses 25 and 26, are produced, extending diagonally of the plate yet in opposite directions, as is likewise best shown in the inverted plan view, Fig. 2. These counter recesses are adapted to receive the pins 21 and 22 of the shifting plate 20, and the main recess is adapted as a guide for said pins.

At any desired point, for instance, within the switch tower, an annunciator D, is located, provided, for example, with two panels 27 and 28, at which cards are to appear in proper order, one of which cards may bear the numeral "1" and the other the numeral "2," but any other predetermined numeral, character or design may be thus displayed. The annunciator is provided with an alarm device 30.

The annunciator is operated by the revolving of the signal mast 17, and this mast is pro-

vided with a contact point 31, adapted for alternate engagement with contact points 32 and 33, formed upon the interior of the mast. All of the contact points are in electrical connection with a battery 34 and with the annunciator, the circuit being closed by the point of the signal mast being brought into engagement with either of the points upon the signal tower, the contact between the point upon the signal mast and the point 33 upon the signal tower serving to display a card at the annunciator panel 27, while when a contact is made between the signal mast and the tower point 32 the card at the opposite panel will be displayed.

In the operation of the device, if the shifting rod C, is drawn in direction of the right the left-hand lock lever will be disengaged from the left-hand main track A' at the first movement of the shifting rod, and when this disconnection is being effected, the other lock lever is moving laterally, and, when the switch lever is thrown over to its limit, passes into locking engagement with the right-hand rail, A, thus securing the points, B, B', in the alternative, or opposite position. In other words,

the point, B', passes out of locked contact with the main rail, A', and the point, B, into locking contact with main rail, A. It is obvious that the reverse movement of the switch lever will bring the points, B, B', and locking levers, 13, 14, back to the original position, shown by full lines, Fig. 2.

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

In a railroad switch, the combination, with the main or with the side rails and switch points, of a shifting rod, elbow levers pivotally connected with the shifting rod, said elbow levers being provided with locking lips adapted for engagement with the flanges of the main or of the siding rails, plates secured to the switch points and pivotally connected with the locking levers, and means for reciprocating the shifting rod as shown and described.

JOHAN EMIL SANDELIN.

Witnesses:

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