

No. 682,265.

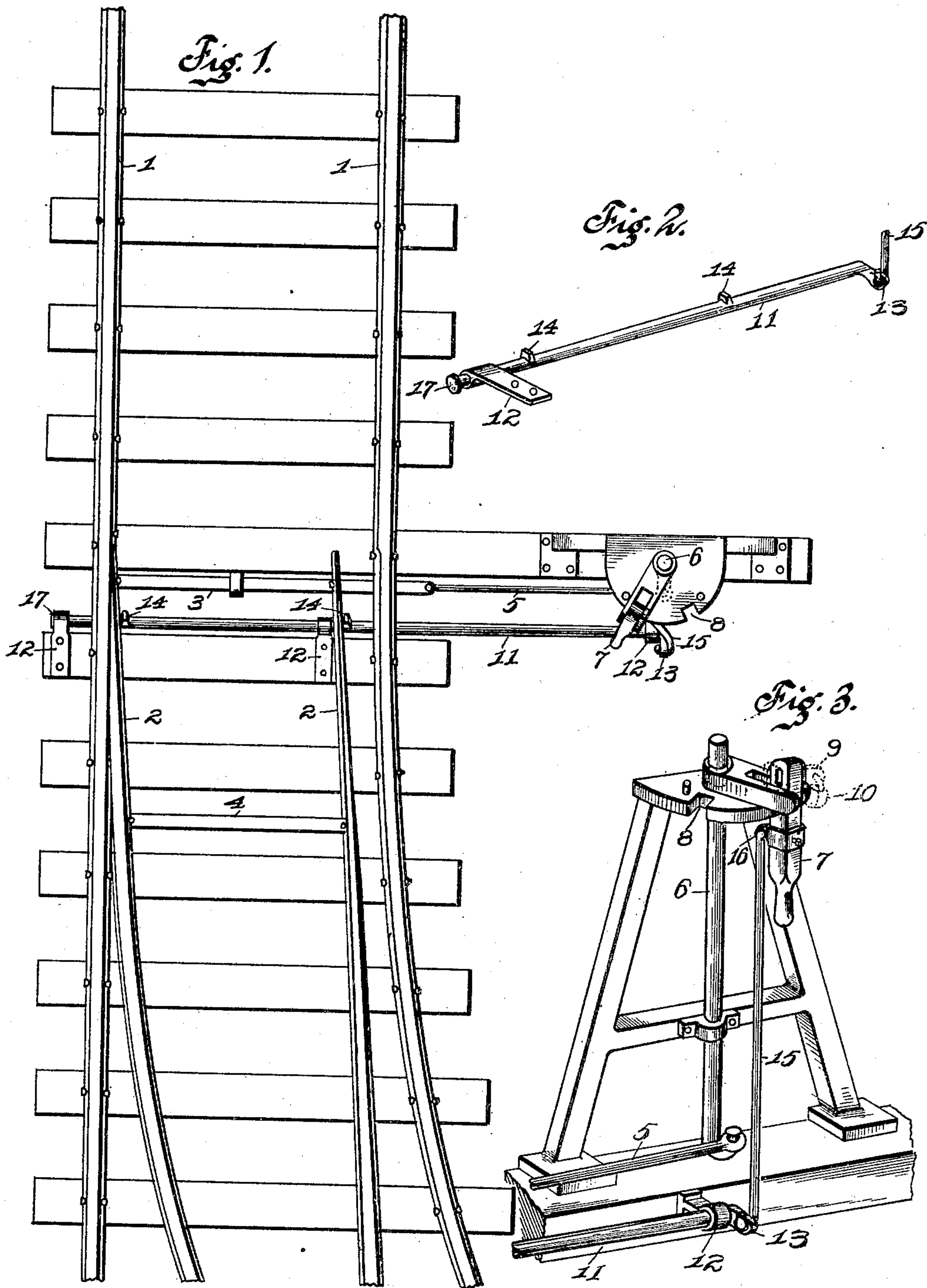
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J. NOBLE.

SAFETY LOCK FOR RAILWAY SWITCHES.

(Application filed Jan. 7, 1901.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

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SAFETY-LOCK FOR RAILWAY-SWITCHES.

SPECIFICATION forming part of Letters Patent No. 682,265, dated September 10, 1901.

Application filed January 7, 1901. Serial No. 42,323. (No model.)

To all whom it may concern:

Be it known that I, JAY NOBLE, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Safety-Locks for Railway-Switches, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to safety-locks for railway-switches; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

The object of this invention is to provide an improved positive locking device for locking the movable parts of a railway-switch, in addition to the customary locking devices heretofore provided, whereby should a bolt or other connection between the switch-stand and the movable rails of the switch become detached said rails will be retained in position by my additional locking devices and accidents to trains, engines, and cars be thereby prevented.

Figure 1 is a plan view of a railway-switch embodying my invention. Fig. 2 is a detail view in perspective of a movable lock-bar detached, and Fig. 3 is a perspective view of a switch-stand and contiguous parts.

The fixed rails of the switch are indicated by the numeral 1, and the usual movable rails by 2, the latter being connected in the usual manner by means of spacing-bars 3 and 4, and the bar 3 has a projecting end to which the connecting-rod 5 is attached, and the outer end of said connecting-rod is secured to the vertical rock-shaft 6 of the switch-stand. The upper end of said rock-shaft 6 is provided with the usual operating-handle 7, which is locked in position in the usual manner by means of its outer section being hinged to its inner section, so that when said outer section is thrown downwardly to engage in one of the series of recesses 8, formed in said switch-stand, the locking-pin 9 may be inserted through the upper projecting slotted portion of said outer section 7 and an ordinary padlock 10 secured thereto, as shown by dotted lines in Fig. 3.

I have hereinbefore described the custom-

ary locking devices and will now proceed to specifically describe one form of an additional lock embraced in my invention.

11 indicates the lock-bar, which may be, as shown, located beneath the rails and arranged to rock in suitable bearings 12 and extending to the switch-stand and there provided with a perforated crank 13. Projecting from said lock-bar are a number of lugs or stops 14 in such relative position that one of them bears against each of the movable switch-rails 2 and normally locks the same against lateral movement.

15 indicates a connecting-rod extending from the perforation in said crank 13 upwardly to the perforated ear 16, carried by the switch-handle 7. Said lock-bar 11 is in the present instance fixed against axial movement in its bearings by reason of a head or projection, such as 17, formed on its outer end and by contact of its crank 13 with the adjacent bearing 12.

The operation is as follows: It will readily be seen that the movable switch-rails 2 have been thrown into the position, as shown in Fig. 1, by movement of the switch-handle 7 to the left. Movement of the switch-handle to the left has, however, been preceded, as is customary, by the elevation of its outer section carrying the connecting-rod 15, and this elevation has partially rotated said lock-bar 11 and thereby removed the said lugs 14 from the path of the said movable switch-rails and has permitted the latter to pass above said lugs to the position as shown in Fig. 1, and upon further movement of said switch-handle until it occupies the position in which it is shown in Fig. 1—that is, with its outer section thrown downwardly—said lock-bar will be returned to its normal position, with its locking-lugs 14 projecting upwardly in the path of said movable switch-rails 2, but upon the opposite side thereof, and thereby locking them securely against lateral movement. It will thus be seen that even should the customary connections between the switch-stand and the movable switch-rails be broken or lost the lugs 14 will form an additional lock, thereby locking the said movable switch-rails and preventing the accidental running of

trains, engines, or cars upon the siding or other undesirable track. It will of course be understood that the location of the locking-lugs 14 in the path of the movable rails 2 is the essence of my invention, and this may be accomplished in any known manner by instruments entirely different from what I have shown in the drawings without departing from the spirit and scope of my invention.

10 The perforations in the crank 13 and the ear 16 are larger than the parts of the connecting-rod 15 which are located in said perforations, so that considerable play is permitted between said parts, and the upper end
15 of said connecting-rod may be moved laterally with the switch-handle.

I claim—

1. The improved railway-switch locking mechanism, comprising the usual switch-stand, a vertically-movable switch-handle, the usual connections between the switch-stand and the movable switch-rails, a rocking lock-bar having locking-lugs projecting therefrom, bearings in which said bar is mounted
25 to rock, and the connecting-rod 15 connecting the said lock-bar to the said switch-handle whereby when the latter is elevated and

lowered, the said lock-bar will be moved axially in its bearings, for the purpose set forth.

2. In a railway-switch, the combination of the fixed rails, the switch-rails, a switch-stand, connections between said switch-stand and said movable rails whereby the same are thrown and held in position, the lock-bar 11 having lugs 14 projecting therefrom, bearings in which said lock-bar is mounted, a crank 13 on said lock-bar, a switch-handle, and a connecting-rod 15 connecting said crank to the said switch-handle, whereby the initial movement of said switch-handle will move said lock-bar and remove said lugs from the path of said movable switch-rails and further movement of said handle will move said switch-rails, and the final movement of said handle will cause said lugs to lock said rails against movement in the opposite direction, substantially as specified.

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

JAY NOBLE.

Witnesses:

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