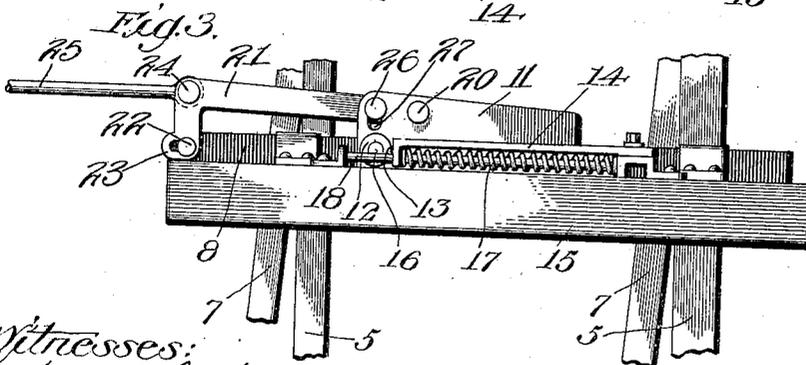
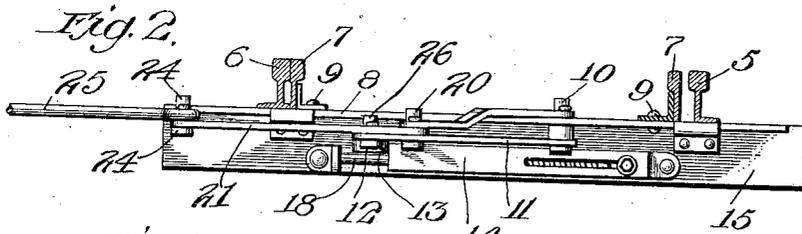
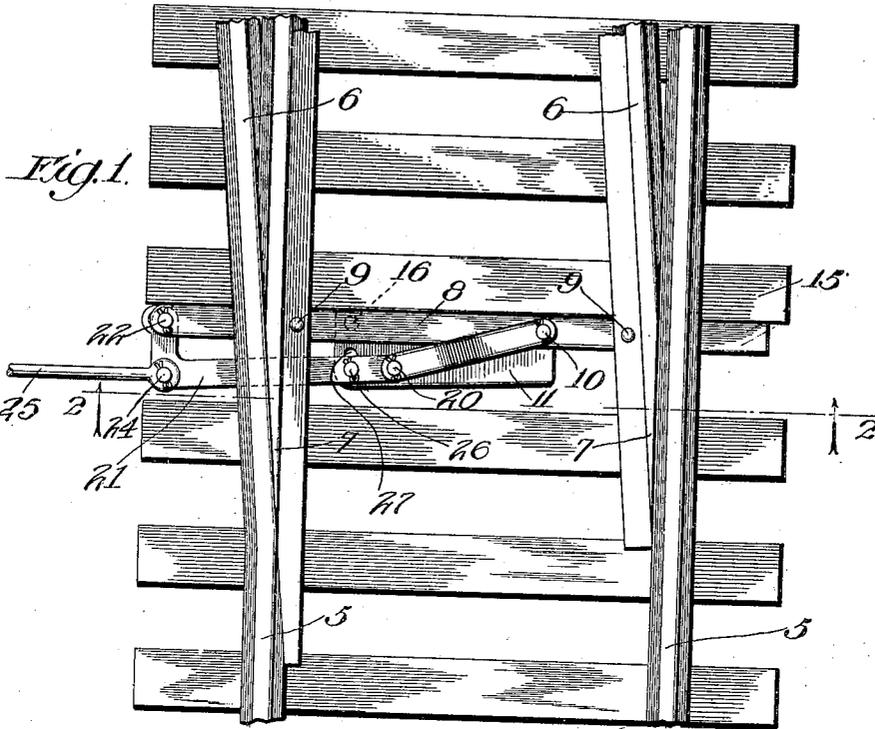


No. 890,013.

PATENTED JUNE 9, 1908.

L. S. ATKINSON.  
RAILWAY SWITCH LOCK.  
APPLICATION FILED SEPT. 4, 1907.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

LLOYD S. ATKINSON, OF LOS ANGELES, CALIFORNIA.

## RAILWAY-SWITCH LOCK.

No. 890,013.

Specification of Letters Patent.

Patented June 9, 1908.

Application filed September 4, 1907. Serial No. 391,327.

*To all whom it may concern:*

Be it known that I, LLOYD S. ATKINSON, a citizen of the United States, residing at Los Angeles, county of Los Angeles, State of California, have invented new and useful Improvements in Railway-Switch Locks, of which the following is a specification.

My invention relates to an apparatus commonly known as a switch-and-lock movement and the object thereof is to provide a mechanism which will automatically lock a railway switch and prevent the same from being thrown in case the operating rod running to the usual switch operating handle is disabled.

A further object is to provide yielding means so that the switch may be opened by trains passing from the switch line onto the main line without the necessity of permanently throwing the same.

I accomplish these objects by means of the device described herein and illustrated in the accompanying drawings in which:—

Figure 1.— is a plan view of a portion of a switch equipped with my improved switch lock. Fig. 2.— is a vertical cross section taken on line 2—2 of Fig. 1. Fig. 3.— is a bottom plan view of the lock.

Referring to the drawings 5 designates the rail of a main track, 6 the rails of a switch track and 7 the switch points adapted to open the connection either to the main line or to the switch line. A draw bar 8 is secured at 9 to each of switch points 6, the switch points being adapted to be moved thereby from one position to the other. In the drawings the switch points are shown in their position to leave the main line open and as hereinbefore stated it is the prime object of my invention to provide a lock which will lock the points in the position shown without depending upon the operating mechanism attached to the draw bar to hold the same.

Pivoted at 10 to draw bar 8 is a plate 11 provided on its lower face with a roller 12 adapted to engage a shoulder 13 on a stop bar 14 mounted on sleeper 15 as shown in Figs. 2 and 3. From the relative position of pivot 16, on which roller 12 is mounted, and pivot 10, which connects plate 11 with draw bar 8, as shown in Fig. 1, it will be manifest that the roller cannot be moved out of engagement with shoulder 13 by any amount of pressure upon the switch point as the tensile pull upon roller 12 through plate 11 is square

against shoulder 13. It will thus be observed that the switch points may only be moved by moving roller 12 out of engagement with shoulder 13 or by moving stop bar 14 to the right against the resilient pressure of coiled spring 17. Stop bar 14 is mounted so as to slide longitudinally on a rod 18 mounted on sleeper 15, being held in its extreme left position by coiled spring 17. This spring affords means whereby the switch point may be momentarily moved so as to allow a train to pass from the switch line to the main line and will immediately move the points to their normal position upon the passage of the train.

Pivotally secured to plate 11 at 20 is a bell crank arm 21 whose outer end is secured to draw bar 8 by a pin 22 which works in a slot 23 in arm 21. Pivotaly secured at 24 to arm 21 is an operating rod 25 which connects with suitable mechanism for moving the same longitudinally. Arm 21 is provided with a pin 26 which operates in a slot 27 in plate 11, allowing of only a limited oscillating movement between the plate and the bar.

In the operation of my device when operating rod 25 is moved toward the right plate 11 will be swung outwardly as pivotal points 24, 27 and 10 are out of line with each other. Roller 12 will thereby be swung clear of stop bar 14 and pin 26 contacting with the end of slot 27 will prevent the further outward swinging of plate 11. The further movement of rod 25 will then move the whole mechanism and with it the switch points to the position to open the switch line. Upon the movement of operating rod 25 in the opposite direction roller 12 will roll along the face of stop bar 14 until the end of the same is reached when it will move into the position shown in the drawings against shoulder 13 and the switch will again be in its locked position.

From the foregoing description it will be observed that I have provided a mechanism whereby the switch points may be securely locked from movement or accidental displacement by any pressure thereon and at the same time which allows of easy movement when operated by the switch operating rod. It will further be noted that my lock does not depend upon any of the mechanism placed at a distance from the track for its efficiency and being therefore self contained is much less liable to become disordered than in any other case.

Having described my invention what I claim as new and desire to secure by Letters Patent is:—

- 5 1. In a switch and lock movement, a draw bar secured to the switch points, a plate pivotally secured to said draw bar, stop means for said plate, and means to swing said plate out of engagement with said stop means and to move said draw bar.
- 10 2. In a switch and lock movement, a draw bar attached to the switch points, a plate pivotally attached to said draw bar, a resilient stop adapted to prevent the movement of said plate to move said draw bar longitudinally, means to swing said plate out of engagement with said stop, and means to limit the swinging motion of said plate.
- 15 3. In a switch and lock movement, a draw bar secured to the switch points, a plate pivotally secured to said draw bar, a roller

mounted on said plate, the central line through said roller and said pivotal point being parallel to the line of motion of said draw bar, a resilient stop adapted to contact with said roller and prevent the longitudinal movement of said draw bar, a bar pivotally connected to said plate, stop means on said bar and said plate adapted to limit the relative swinging motion of the same, and an operating rod pivoted to said bar out of line with the pivot of said plate on said draw bar and of said last named bar on said plate.

In witness that I claim the foregoing I have hereunto subscribed my name this 28th day of August, 1907.

LLOYD S. ATKINSON.

Witnesses:

EDMUND A. STRAUSE,  
OLLIE PALMER.