A. W. WILLCOX.

SAFETY-LOCKS FOR RAILROAD-SWITCHES.

No. 182,008. Patented Sept. 5, 1876.

Fig. 1.

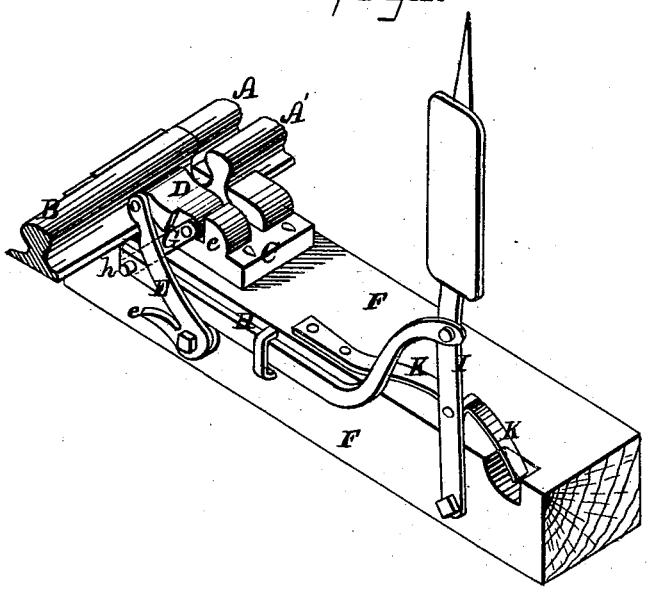
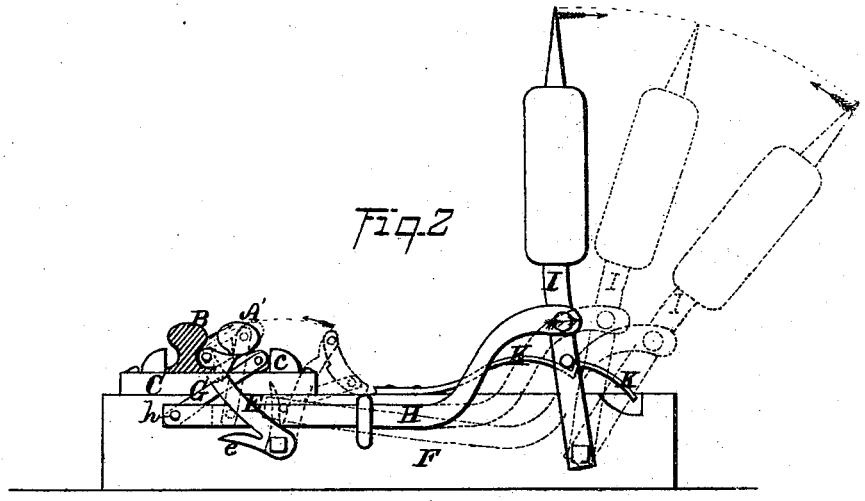


Fig. 2



WITNESSES:

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UNITED STATES PATENT OFFICE.

AARON W. WILLCOX, OF PLYMOUTH, NEW YORK.

IMPROVEMENT IN SAFETY-LOCKS FOR RAILROAD-SWITCHES.

Specification forming part of Letters Patent No. **182,008**, dated September 5, 1876; application filed August 4, 1876.

To all whom it may concern:

Be it known that I, AARON W. WILLCOX, of Plymouth, in the county of Chenango, and in the State of New York, have invented certain new and useful Improvements in Safety-Locks for Railroad-Switches; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing, making a part of this specification, in which—

Figure 1 is a perspective view of my improved device in position for locking a switch-rail in place; and Fig. 2 is a side elevation of the same, the dotted lines showing the relative positions of the operative parts as the locking-block passes from the inner to the outer limit of its motion.

Letters of like name and kind refer to like parts in each of the figures.

My invention is an improvement upon a device for locking the movable rails of railroad-switches in place; and it consists, principally, in the means employed for throwing the locking-block into, and removing the same from, engagement with the switch-rail, substantially as and for the purpose hereinafter specified. It consists, further, in the means employed for locking said block in engagement with said switch-rail, substantially as and for the purpose hereinafter shown.

In the annexed drawing, A and A′ represent the fixed, and B the movable, rail of a switch, which at their ends rest upon and are supported by a chair, C, of ordinary construction, the arrangement being such as to permit said rail B to be moved laterally until its end will coincide with the end of each of said rails A. When moved inward, so as to coincide with the inner rail A, a considerable space is left between the outer side of the rail B and the raised portion or side *c* of the outer side of the chair C, which space is filled so as to firmly lock said rail in position by means of a block, D, that is preferably constructed of metal, is made to closely fill said space, and has its ends rounded, as seen in Fig. 2. Pivoted to one side of the block D, at its inner end, is one end of a bar, E, which from thence extends downward and outward, and has its opposite end pivoted upon the side of the cross-tie F that supports the chair C. To the outer end, at the side of the block D, is pivoted one end of a second bar, G, which from thence extends downward and inward, and has its lower end pivoted upon a rod, H, that extends horizontally outward, and then upward and outward, and has its outer end pivoted to or upon a lever, I, which lever is substantially like the ordinary target-levers of a switch, its lower end being pivoted to or upon the cross-tie F, while its upper end is capable of motion in a vertical plane toward or from the track. Upon the side of the rod H, at the point where the bar G is pivoted thereto, is a stud, *h*, which projects laterally outward, and when said rod is drawn forward by the lever I, engages with the inner edge of the bar E, near its lower end, and moves said bar and the block D forward. Upon reversing the motion of said rod said stud engages with an arm, *e*, which projects upward from the lower end, at the rear edge of said bar E, and returns the latter to its inner position, after which said stud passes over the upper end of said arm, and said rod continues its inward motion until in position once more. During the outward movement of the rod H the outer end of the block D is first raised until above the raised portion *c* of the chair C, after which the movement of the bar E causes said block to be carried upward, outward, and downward to the position shown by the outer dotted lines of Fig. 2, leaving the switch-rail B free to move. Upon moving the lever I inward, the block D is first moved to the position shown by the inner dotted lines of Fig. 2, its inner end being against the side of the rail B, and its outer end elevated at an angle of about forty-five degrees, after which a continuation of the motion of said lever will cause the outer end of said block to be moved downward into engagement with the raised portion *c* of the chair C, so as to lock said rail firmly in place. A spring-catch, K, which engages with a stud, *i*, upon the side of the lever I, and locks the same in place when moved inward, and is arranged to be disengaged by the foot of the operator, completes the apparatus.

If desired, the locking mechanism described may be connected with an operated by the same lever which moves the switch-rail.

Having thus fully set forth the nature and

merits of my invention, what I claim as new is—

1. In combination with the block D, fitted between the side of the rail B and the raised portion *c* of the chair C, the bar E, provided with the arm *e*, the bar G, the rod H, having the stud *h*, and the operating-lever I, said parts being constructed and arranged to operate in the manner and for the purpose substantially as specified.

2. In combination with the operating-lever I, the spring-catch K, arranged in the manner and for the purpose substantially as shown.

In testimony that I claim the foregoing I have hereunto set my hand this 31st day of July, 1876.

A. W. WILLCOX.

Witnesses:

H. G. PRINDLE,

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