A. W. Cram,

Switch Lock.

No. 109,182. Patented Nov. 15. 1870.

Fig. 1

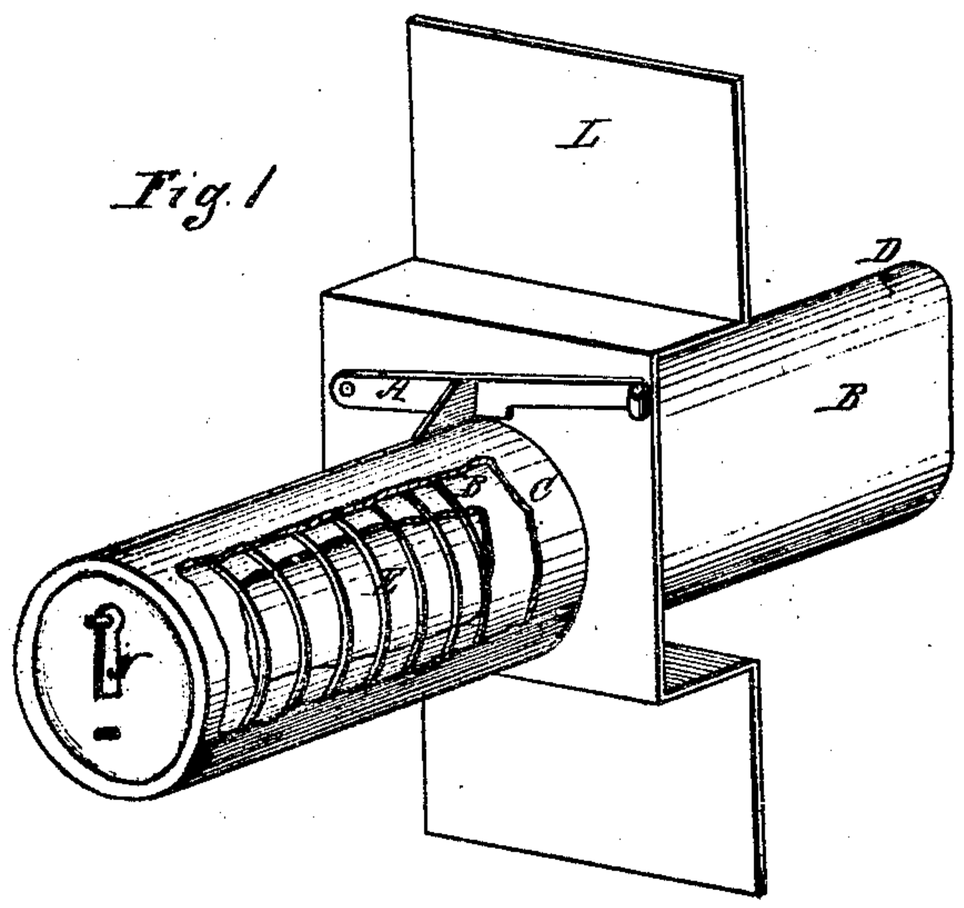
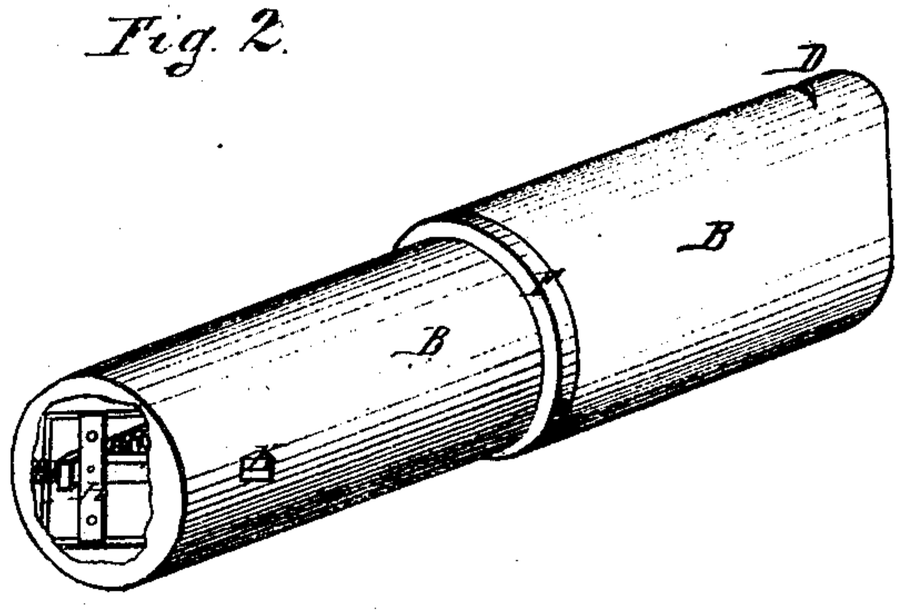


Fig. 2.



Witnesses.
H. J. Smith
L. Durand

A. W. Cram. Inventor.
by Munn & Co
his Attorneys.

United States Patent Office.

ALONZO W. CRAM, OF ST. LOUIS, MISSOURI.

Letters Patent No. 109,182, dated November 15, 1870.

IMPROVEMENT IN LOCKS FOR RAILROAD-SWITCHES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, ALONZO W. CRAM, of St. Louis, in the county of St. Louis and State of Missouri, have invented a new and useful Improvement in Switch-Locks; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing making a part of this specification, in which—

Figure 1 is a perspective view of plate L, case C, and bolt D; and

Figure 2 is a perspective view of bolt B and its internal mechanism separate from case C.

This invention consists in the combination of a lock mechanism with a plate bent at right angles at two points, so as to form an offset which adapts it to be attached to the swinging lever of a switch mechanism, in order that the lock-bolt may be thrust into one of the holes in the switch-stand so as to lock the switch, and drawn out from the same so as to unlock it.

The invention also consists in a lock-bolt made with a key hole in its outer end, for the purpose of enabling the key to be used in drawing the bolt back after unlocking it.

In the drawing—

L is an iron plate, provided with holes by which to screw it upon the movable bar of a switch.

C is a sleeve, fastened at one end in any suitable manner to the plate L.

B is a bolt, sliding within the sleeve C, and as much longer than the same as may be necessary, in order to project beyond it and enter an orifice in the switch-frame.

F is a circumferential flange on that part of the bolt lying within the case C.

E is a spiral spring surrounding the bolt B, and confined between the flange F and a flange projecting inwardly from the end of the sleeve C, the function of the spring being to throw the bolt outward on the rising of the latch A, into one of the holes in the switch-frame after it has been withdrawn therefrom, for the purpose of moving the switch-bar.

D is a notch near the outer end of the bolt B.

A is a latch, pivoted at one end to the plate L, just over a transverse slot in the outer case C, the funtion of the latch being to hold back the bolt B when the latter is drawn inward far enough to bring the notch D under the latch.

K is a lock-bolt, placed transversely of the bolt B, and projecting a little beyond the side of the same, so as to enter a recess in the inside of the sleeve C, the bolt K being governed by a spring, and serving to lock the the bolt B, and sleeve C together.

N is a key-hole in the end of the bolt B.

H, fig. 2, is a plate inside the bolt B which slides on pins, and is pressed by a spring against the inside of the end of the bolt, so as to close the key-hole.

When the switch-bar is to be moved, the key is placed in the key-hole, and the plate H pushed back by it. Then the key is turned so as to withdraw the bolt K from its recess in the sleeve C, after which, on pulling with the key against the end of bolt B, the latter may be withdrawn from the switch-frame and held by the latch A, dropping into the notch D, as before explained.

The switch having been changed, on simply lifting the latch A the bolt B flies back into the switch-frame.

Having thus described my invention,

What I claim as new, and desire to secure by Letters Patent, is—

1. The sleeve C, bolt B, flange F, and spring E, in combination with the plate F, when the latter is bent at right angles at the points *x x*, so as to form an offset which adapts it to be attached to a switch-bar, substantially as described.

2. The bolt B provided with the key-hole N in its outer end, for the purpose of admitting the key, at a point which enables the bolt to be drawn outward by pulling on the key, substantially as described.

ALONZO W. CRAM.

Witnesses:

HENRY A. FOBES,

S. M. SMITH.