

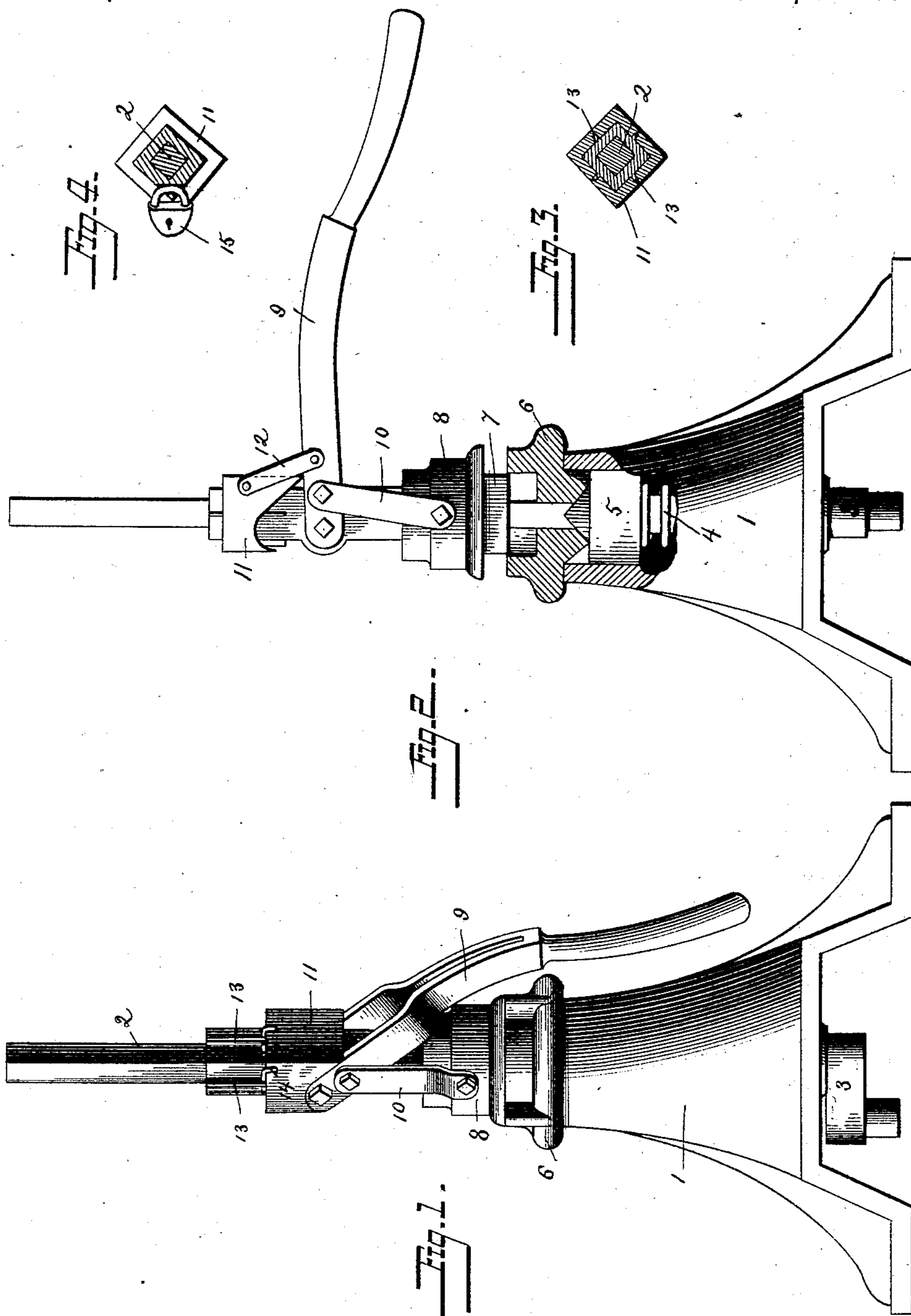
(No Model.)

W. A. REDDING.

SWITCH STAND.

No. 374,269.

Patented Dec. 6, 1887.



Attest:

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UNITED STATES PATENT OFFICE.

WILLIAM A. REDDING, OF NEW YORK, ASSIGNOR TO FRED W. SNOW, OF
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SWITCH-STAND.

SPECIFICATION forming part of Letters Patent No. 374,269, dated December 6, 1887.

Application filed July 14, 1887. Serial No. 244,330. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM A. REDDING, a citizen of the United States, residing in the city of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Switch-Stands, of which the following is a specification.

My invention relates to that class of railway-switch stands in which an operating-lever is used; and by means of which the switch is locked against displacement by locking the lever down; and my invention consists in the means set forth hereinafter for producing this result.

Figure 1 is a side view of a switch-stand embodying by invention, showing the lever in its locked position. Fig. 2 is a similar view, partly in section, showing the lever raised to permit the moving of the switch; and Figs. 3 and 4 are detail sectional views.

In some switch-stands it is common to use a lever for operating the switch, which lever, when in its downward position, holds the parts in place; and it is also common to provide some means for locking the lever in this position to prevent its accidental or unauthorized displacement. It is also common to provide switch-stands with an operating and locking lever, which also have means which permit the automatic operation of the switch by the passing train without unlocking the locked lever.

While my invention is applicable to many and various kinds and styles of switch-stands, I have shown it as applied to one of the latter class of stands, and one in which the automatic mechanism is arranged substantially in the manner shown in Patent No. 320,507, the details of which are illustrated in the drawings, and need not be specifically described herein.

The switch-stand adopted for illustration may be briefly described as consisting of a hollow body, 1, supporting the target shaft or spindle 2, the lower end of which is provided with the crank 3, which is adapted to be connected with the switch-rod and rails to operate them. This target shaft or spindle 2 is supported in a cross bar or brace, and is surrounded by a spring, 4, which presses upon the block 5, which block is fitted into the

frame of the stand in such a manner as to permit its vertical movement, but to prevent its rotating. The upper edge of this block 5 is provided with teeth or recesses, between or into which fit corresponding teeth or projections upon a disk or block, 6, resting upon the upper portion of the frame of the stand and free to rotate thereon. This disk or block 6 is provided with a rectangular recess, into which fits the similarly-shaped portion 7 of the sliding block 8, and the two form a clutch or holding device to clamp the shaft 2 and the disk or block 6 together. This sliding block 8 is arranged to slide vertically upon the shaft or upon a casing secured to the shaft, and it is connected by means of a link, 10, to the lever 9, pivoted to the shaft. It will thus be seen that when the lever 9 is in its downward position, as shown in Fig. 1, the disk or block 6 and the sliding block 8 are connected together by means of the clutch or locking mechanism, so that they can only move together, and they are held against movement by means of the spring 4 and block 5, as is well understood. When, however, the sliding block 8 is elevated, as shown in Fig. 2, the shaft may be operated by the lever 9 to move the switch without in any way affecting the spring-locked disk or block 6.

The object of my invention is to provide means for securing the lever 9 against unauthorized displacement in the position shown in Fig. 1; and to accomplish this I provide a sliding block, 11, which moves upon the target shaft or spindle 2, or upon a casing secured to said shaft, and when this sliding block 11 is locked in its lowermost position it prevents the movement of the lever 9; but when this sliding block 11 is not locked and the lever 9 is raised the sliding block 11 will move upward on the shaft, or on a casing secured to the shaft, to permit the switch to be operated. This sliding block 11 may be variously shaped or formed; but I have shown a preferred construction in which the lower portion is made of a shape to accurately fit the outline of the pivoted end of the lever 9, as by this construction I get a larger bearing-surface and can therefore hold the lever down more securely. Further than that, when the

lever 9 is raised it bears against the edge of the sliding block 11 and lifts it to the desired distance with very little force. In some instances it is desirable to connect the sliding block 11 directly to the lever 9, as by means of the link 12 or otherwise. This sliding block 11 may be locked in its lowermost position by any suitable means.

I have shown in Figs. 1, 2, and 3 one or more ribs, 13, on the casing, secured to the target-shaft 2, which ribs fit corresponding grooves in the sliding block 11 and serve as additional bearing and guiding surfaces to aid in the free movement of the block, and in these ribs I provide perforations through which the bow of a padlock or a locking-pin, bolt, or other device, 14, may be passed to secure the sliding block 11 in its lowermost position. These ribs may be made on the target-shaft itself when no casing is used on said shaft; but it is preferable to put the ribs on the casing, as shown. It is not, however, essential to my invention that there should be any ribs for this purpose, as the sliding block 11 can be used to accomplish the result herein stated without any bearing or guiding ribs, and in such case can be locked in its lowermost position by the means hereinafter mentioned. I prefer, however, to use one or more ribs, as by that means I obtain the additional bearing and guiding surfaces and can lock the sliding block 11 in its lowermost position by passing the bow of the padlock or the locking pin, bolt, or device 14 through the perforations in such ribs.

In Fig. 4 I have shown means for locking the sliding block 11 in its lowermost position by inserting the hole in the target shaft or spindle 2, or in the casing secured to said shaft, through which hole the locking-bolt or the bow of a padlock, 15, may be passed, and thus securely lock the sliding block 11 in its lowermost position; and when such locking means are used it will readily be observed that it is not necessary to use any rib in the manner hereinbefore stated.

It will be evident from the above that my invention is not limited to the specific kind of

switch-stand shown in the drawings, nor to the exact details of construction of the locking sliding block 11 or to the means for locking the sliding block 11, as various modifications will suggest themselves to those skilled in the art which do not vary in principle from my invention.

What I claim is—

1. The combination, with a switch-stand shaft and operating-lever of a switch-stand, of a sliding block surrounding the shaft and adapted to be locked in position to secure the lever, substantially as described.

2. The combination, with a shaft, with or without casing, and operating-lever pivoted thereto, of the block sliding on the shaft or casing and adapted to engage the lever and to be locked to prevent its movement, substantially as described.

3. The combination of the shaft, with or without casing, and operating-lever pivoted thereto, of a sliding block having a configuration adapted to fit the end of the lever when depressed, and means for securing the sliding block to the shaft or casing, substantially as described.

4. The combination, with a shaft, with or without casing, and an operating-lever pivoted thereto, of a block sliding on the shaft or casing, ribs on the shaft or casing entering corresponding recesses in the block, and means whereby the block may be locked to the shaft or casing, substantially as described.

5. The combination, with a shaft, with or without casing, and an operating-lever pivoted thereto, of a block sliding on said shaft or casing, the link connecting said block and lever, and means for locking said block to the shaft, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WILLIAM A. REDDING.

Witnesses:

HENRY W. AUBÉ,
EDWARD K. AUDERTON.