

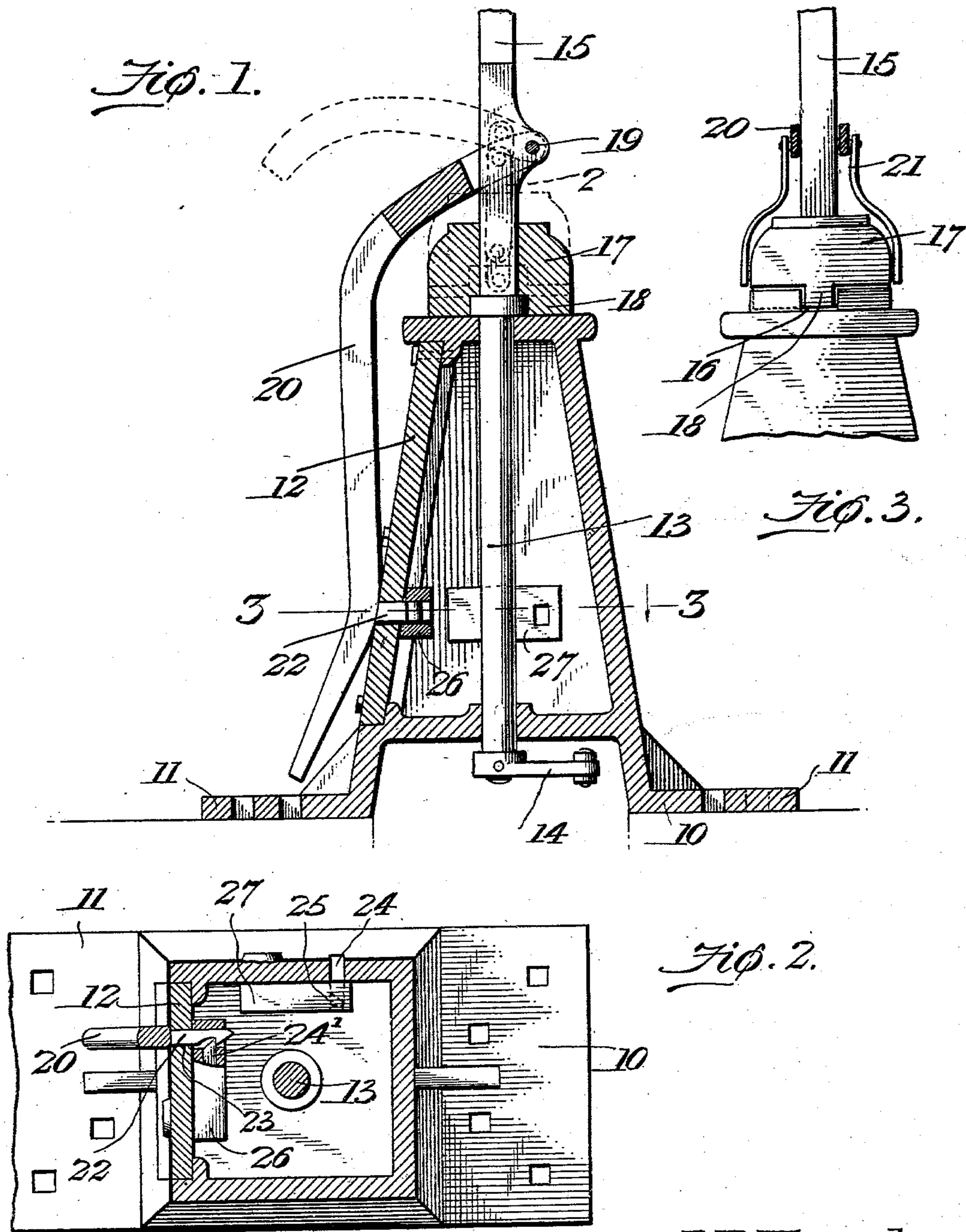
No. 745,590.

PATENTED DEC. 1, 1903.

J. P. FRANKS.  
SWITCH STAND.

APPLICATION FILED SEPT. 18, 1903.

NO MODEL.



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# UNITED STATES PATENT OFFICE.

JOSEPH PERKINS FRANKS, OF WAINRIGHT, GEORGIA.

## SWITCH-STAND.

SPECIFICATION forming part of Letters Patent No. 745,590, dated December 1, 1903.

Application filed September 18, 1903. Serial No. 173,714. (No model.)

*To all whom it may concern:*

Be it known that I, JOSEPH PERKINS FRANKS, a citizen of the United States, residing at Wainright, in the county of Charlton and State of Georgia, have invented a new and useful Switch-Stand, of which the following is a specification.

This invention relates to improvements in railway switch-stands and locking devices for the target-rod and operating mechanism, the object being to provide an apparatus which will be automatically locked when the switch-operating lever is set into its several positions, the locking means being releasable only by a specially-formed key.

The advantages of the invention, together with further objects, will appear in the annexed description and be specified in the claims following.

In the drawings illustrative of the invention, in which corresponding parts are denoted by like designating characters, Figure 1 is a sectional elevation. Fig. 2 is a transverse section on the line 2 2 of Fig. 1. Fig. 3 is a side elevation of the upper portion of the stand.

The improved device comprises a casing or base member 10, having lateral feet 11 for engagement with the ties or other supports adjacent to the switch-rail to be moved. The stand is hollow and without access thereto from the exterior except by removing one side, as at 12, the interior of the stand being utilized to hold the locking means where it is not only entirely concealed from view, but protected from the weather or from being tampered with by unauthorized persons.

Supported vertically for rotation through the casing or stand 10 is the switch-operating shaft 13, provided on its lower end beneath the stand with a crank-arm 14 and extended at its upper end into a target-rod 15 of the usual form. The target portions and the switch connections are not shown, as they form no part of the present invention.

The upper end of the stand 10 is formed with radiating recesses 16, and slidably disposed upon the rod above the stand is a sleeve 17, having lugs 18 for engagement with the recesses 16. The rod above the stand is preferably square, as shown, and the sleeve fits this square portion, so that while the sleeve is free

to slide longitudinally of the rod it will rotate with it.

The arm 14 is connected in the ordinary manner to the "switch-points" which are to be moved and will be of proper length to move the points the proper distance when the arm is moved one-fourth of a full revolution of the rod 12, and by arranging the recesses 16 and lugs 18 at right angles to each other the arm 14 will be firmly supported in its two positions when the sleeve 17 is alternately "set" in its two positions relative to the stand, as will be obvious.

Pivotally connected at 19 to the rod portion 15 above the sleeve 17 is an operating-lever 20, connected movably to the sleeve by straps 21. By this arrangement it will be obvious when the free end of the lever-arm is elevated the sleeve 17 will be correspondingly elevated by the straps 21, which movement will release the lugs 18 and permit the rod to be rotated to "throw" the switch into either of its two positions, and then when the lever-arm is again lowered the lugs will again engage the recesses and "lock" the switch in its new position.

The lower portion of the lever-arm 20 is provided with a notched arm 22, adapted to pass through an aperture 23 or 24 in the side walls of the stand in position to be engaged by the bolts 24 or 25 of locks inclosed in casings 26 27. By this simple means the lever-arm may be "locked" in either one of its two positions, and by forming the bolts 24 25 and the arm 22 inclined, as shown, the locking will be automatically accomplished, as will be obvious. Each of the locks will be provided with a keyhole, through which the key may be inserted for releasing the arm. By this simple arrangement the switch may be "thrown" into either of its two positions and quickly locked by merely moving the locking-lever into its downward position or permitting it to drop the notched arm, as before described, automatically engaging the locking-bolt concealed within the stand.

This makes a very cheaply-constructed and easily-operated device for the purposes described and may be readily adapted to all the various forms of switches now in use.

Any desired form of lock may be used within the stand and fitted for any form of key and



may be so arranged that one locking means may be employed for action upon the lever-arm in both of its two positions.

Various changes in the form, proportions, 5 and minor details of construction may be resorted to without departing from the principle of the invention or sacrificing any of its advantages.

Having thus described the invention, what 10 is claimed is—

1. The combination with a switch-stand having a closed interior and provided with spaced radial recesses, a target-rod supported for rotation in said stand, a sleeve slidable 15 upon said rod and partaking of its motion and provided with radial lugs for engagement with said radial recesses, a lever-arm connected to move said sleeve longitudinally of said rod, and locking means within said closed 20 switch-stand for engagement with said lever-arm to maintain it in its several positions.

2. The combination with a switch-stand having a closed interior and provided with spaced radial recesses, a target-rod supported 25 for rotation in said stand, a sleeve slidable upon said rod and partaking of its motion and provided with radial lugs for engagement

with said radial recesses, a lever-arm connected to move said sleeve longitudinally of said rod, and having recessed lateral lugs for 30 projection through apertures in said switch-stand, and locks within said stand for engagement with said lugs, substantially as described.

3. The combination with a switch-stand 35 having a closed interior and provided with spaced radial recesses, a target-rod supported for rotation in said stand, a sleeve slidable upon said rod and partaking of its motion and provided with radial lugs for engagement 40 with said radial recesses, a lever-arm pivotally connected with said target-rod and movably connected with said sleeve, and locking means within said stand for engagement with said lever to maintain it in its several posi- 45 tions, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JOSEPH PERKINS FRANKS.

Witnesses:

G. W. HADDOCK,  
J. W. VICKERY.