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J. S. ROBERTSON & R. B. RICHARDSON, Jr.

SWITCH STAND.

APPLICATION FILED JAN. 27, 1906.

Fig. 1.

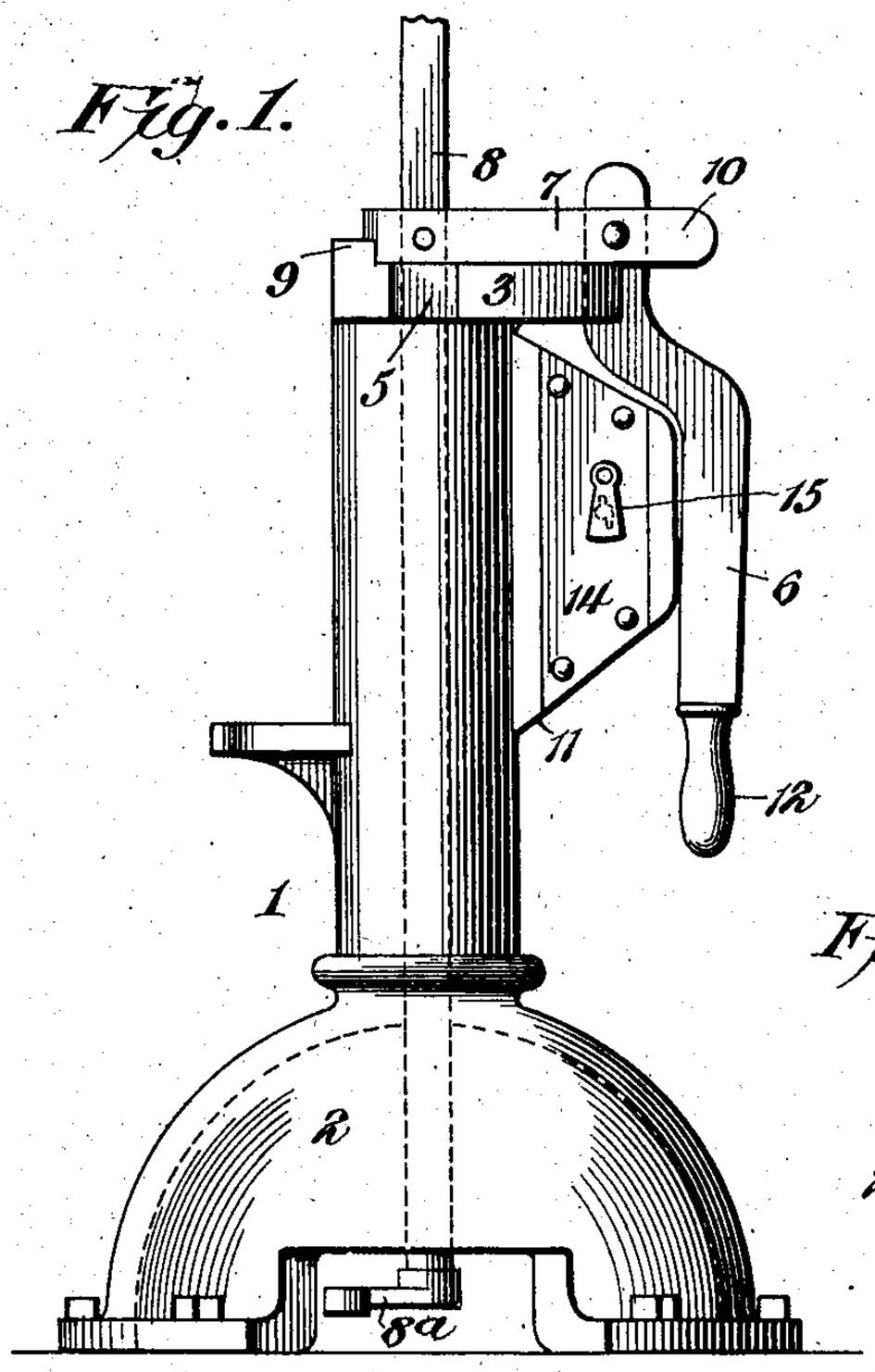


Fig. 3.

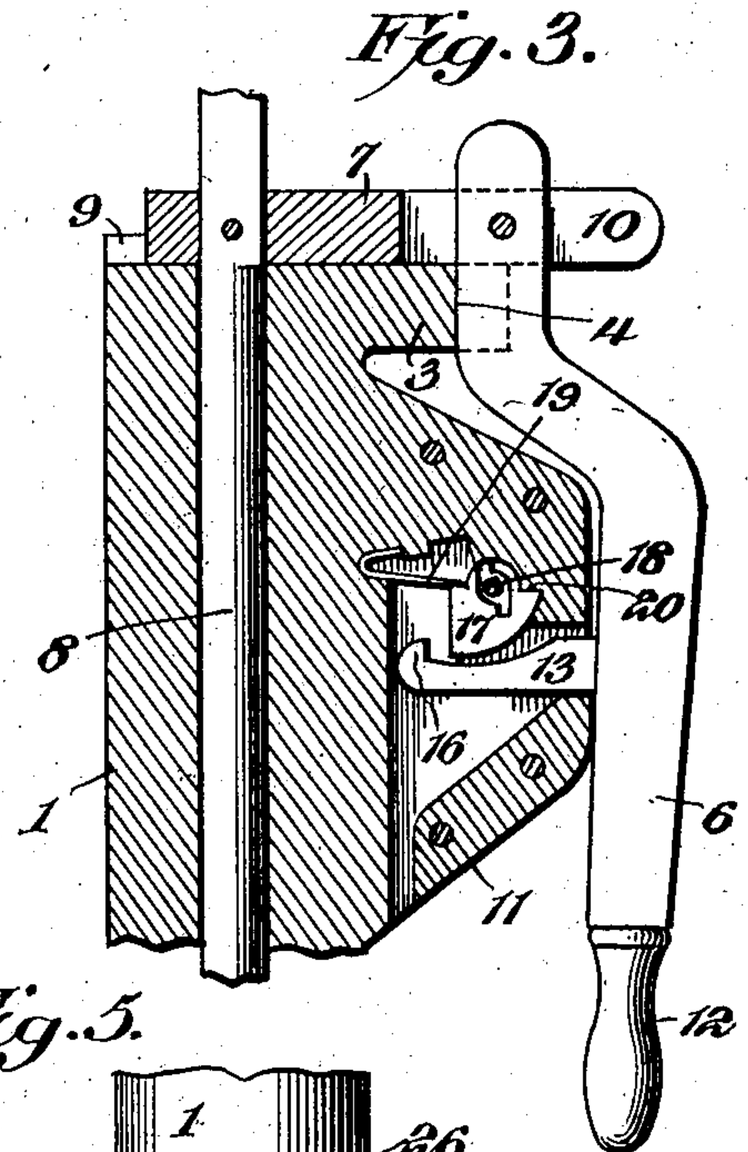


Fig. 5.

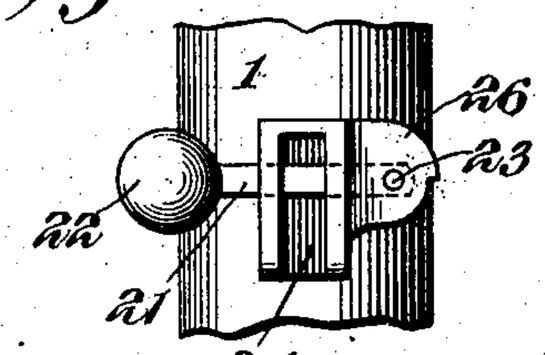


Fig. 4.

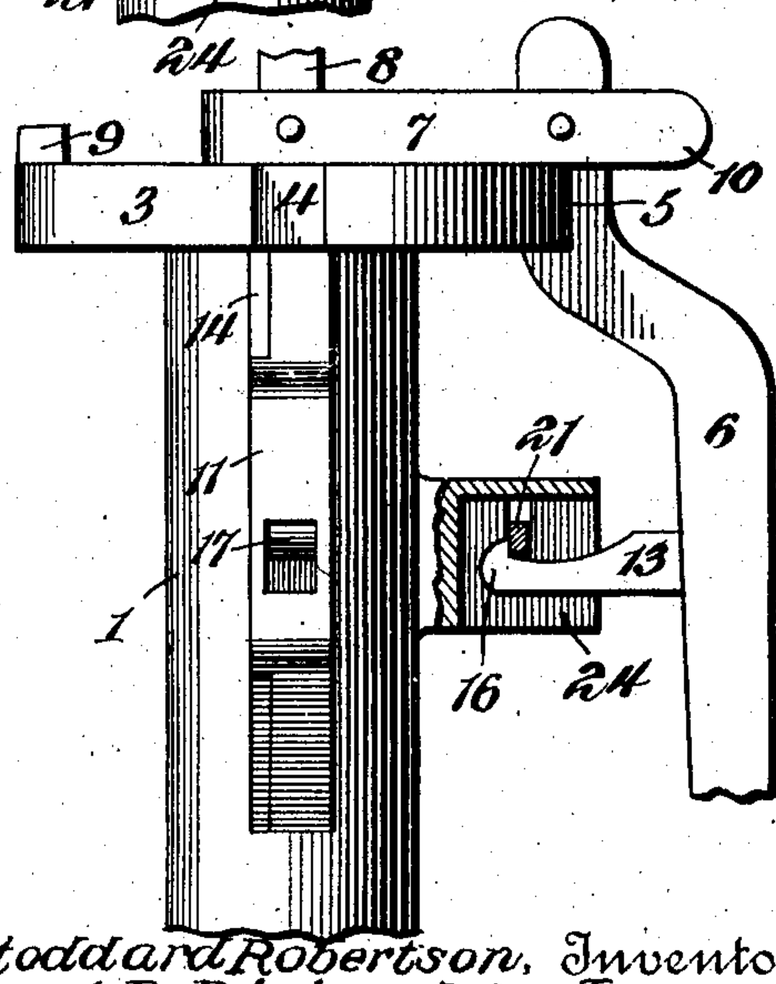
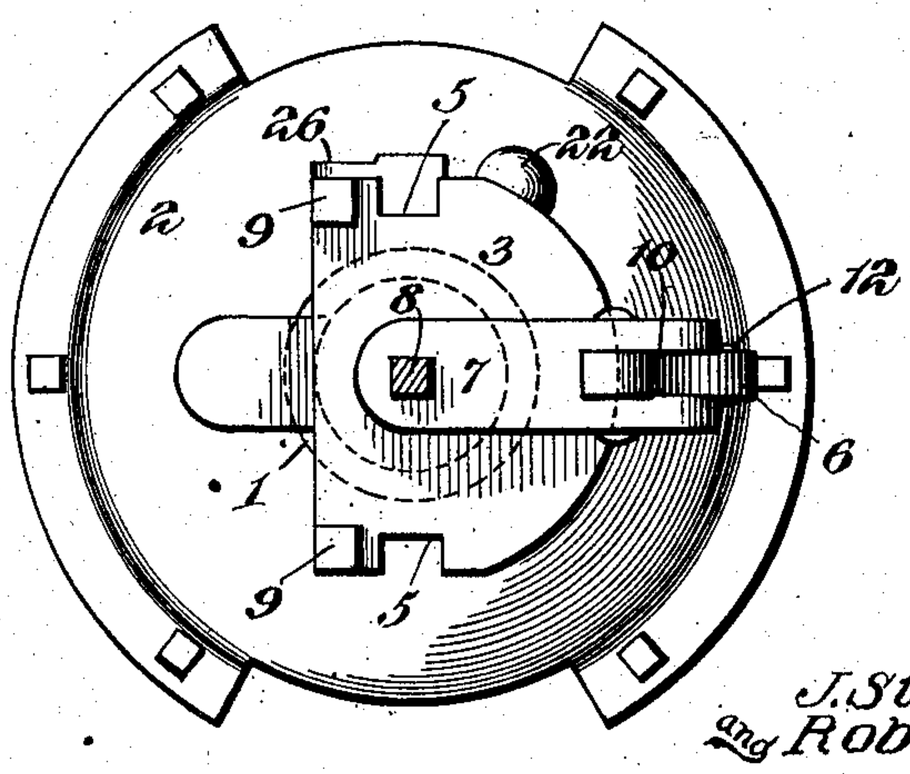


Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES STODDARD ROBERTSON AND ROBERT B. RICHARDSON, JR., OF PADUCAH, KENTUCKY.

SWITCH-STAND.

No. 827,326. Specification of Letters Patent. Patented July 31, 1906.

Application filed January 27, 1906. Serial No. 298,146.

To all whom it may concern:

Be it known that we, JAMES STODDARD ROBERTSON and ROBERT B. RICHARDSON, Jr., citizens of the United States, residing at Paducah, in the county of McCracken and State of Kentucky, have invented a new and useful Switch-Stand, of which the following is a specification.

The invention relates to improvements in switch-stands.

The object of the present invention is to improve the construction of switch-stands, more especially the means for locking the switch-lever to the stand, and to provide a simple and comparatively inexpensive switch-stand having means for permanently locking the switch-lever in its customary position and for temporarily locking the switch-lever when the switch is operated to run a train on a siding or for any other purpose.

With these and other objects in view the invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended, it being understood that various changes in the form, proportion, size, and minor details of construction within the scope of the claims may be resorted to without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a side elevation of a switch-stand constructed in accordance with this invention, the switch-lever being permanently locked. Fig. 2 is a plan view of the same. Fig. 3 is an enlarged sectional view illustrating the construction of the lock for permanently locking the switch-lever. Fig. 4 is a detail elevation, partly in section, illustrating the construction of the latch for temporarily locking the switch-lever. Fig. 5 is a detail front elevation of the latch.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a switch-stand having a substantially circular base 2 and provided at its top with a substantially semicircular cap-plate 3, cast integral with the switch-stand and provided with intermediate and side notches 4 and 5, adapted to be engaged by a switch-lever 6 for locking an arm 7 of a vertical shaft 8 rigid with the switch-stand. The vertical shaft 8, which is journaled in the switch-stand and which is provided at its lower end with a crank 8^a or other suitable means for connecting it with the movable switch-rails, is designed in practice to be equipped at its upper end with a suitable semaphoric device; but the latter may be omitted. The arm 7, which is arranged upon the cap-plate 3, has its oscillatory movement limited by suitable stops 9, consisting of lugs formed integral with and projecting upward from the cap plate or portion 3 at opposite sides thereof. The outer portion 10 of the arm 7 is slotted or bifurcated to receive the switch 6, which is angularly bent, as shown, to clear a lock-casing 11 and which is provided at its lower or outer end with a suitable grip or handle 12. The switch-lever, which is provided with a lock-engaged arm 13, is adapted to be swung upward from the position illustrated in Figs. 1, 3, and 4 to a horizontal position to carry it out of engagement with the top of the switch-stand, and when the switch-lever is in the latter position it is adapted to be swung horizontally to operate the switch.

The lock-casing, which is cast integral with the switch-stand and which projects therefrom in a vertical plane, is provided with a removable face-plate 14, which is riveted or otherwise secured to the body portion of the casing. The face-plate has a suitable keyhole, which is normally covered by a pivot-guard 15 for protecting the locking mechanism. The front or outer edge of the lock-casing is provided with a suitable entrance-opening which communicates with its interior and through which the arm 13 is adapted to extend. The arm 13, which is integral with the switch-lever, is arranged substantially perpendicular to the latter, and it is provided in its upper edge with a recess forming a shoulder 16 and adapted to receive a spring-actuated catch 17. The catch 17, which is substantially quadrant-shaped, has a segmental extension and is mounted on a suitable pivot 18, which passes through a segmental extension and which is spaced from the opposite edges of the catch. The segmental extension is located at the top of the catch, and the opposite portions of the upper edge of the same form inner and outer shoulders. The inner shoulder is engaged by a spring 19, and the

outer shoulder engages a corresponding shoulder 20, formed by recessing the body portion of the lock and constituting a stop for limiting the outward swing of the lower portion of the catch, whereby the switch-lever is locked against outward movement and is maintained in engagement with the top portion of the switch-stand. The spring, which is substantially U-shaped, has one side shorter than the other and is mounted in a suitable recess of the lock-casing, its free end engaging the inner shoulder of the pivot-catch. The curved edge of the catch is arranged at the outer side facing the opening through which the arm 13 is introduced to enable the arm 13 to automatically lift the catch when the switch-lever is swung downward. As soon as the shoulder 16 passes the catch the latter is thrown downward by the spring 19, and the arm is thereby locked against outward movement. The catch is adapted to be operated by a suitable key to swing its lower portion inwardly and upwardly a sufficient distance to release the arm 13.

The lock is located beneath the intermediate notch of the top portion of the switch-stand for permanently locking the switch-lever, and the latter is temporarily locked, when arranged in the position illustrated in Fig. 4 of the drawings, by means of a pivoted latch 21, consisting of a bar or piece provided at its outer end with a ball or enlargement 22 and having a perforation at its inner end to receive a pin 23 or other suitable pivot. The catch extends across a space or recess 24 of a latch-casing 25, which is substantially inverted-U shaped in cross-section and which extends outwardly from the switch-stand. The opening or space 24 is adapted to receive the arm 13, as clearly shown in Fig. 4, and the latch-lever, which extends across the space 24 and which is adapted to engage the shoulder 16 of the said arm, is mounted in a segmental extension 26, which projects from one of the walls of the latch-case. The latch-casing is provided with alined slots or openings to receive the latch 21, and the ball which constitutes a handle also serves as a weight for maintaining the latch in engagement with the arm of the switch-lever.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. The combination with a switch-stand and a pivotally-mounted switch-lever provided with an arm, of a lock-casing projecting outward from the switch-stand and having an opening arranged to receive the arm, and key-operated means mounted within the casing for engaging the arm to lock the switch-lever, said means including a quadrant-shaped catch having its curved side facing the opening through which the said arm is introduced.

2. The combination of a switch-stand provided with an integral exteriorly-projecting lock-casing, a pivotally-mounted switch-lever having an arm arranged to extend into the lock-casing, and a pivotally-mounted spring-actuated catch arranged within the casing and having its movement limited in one direction by the same, said catch being also arranged to swing into the path of the arm of the lever for locking the latter.

3. The combination of a switch-stand provided with a rigid exteriorly-projecting casing having an interior shoulder, a switch-lever provided with an arm having a shoulder, a pivotally-mounted substantially quadrant-shaped catch located within the casing and arranged to swing into the path of the arm, said catch being provided with inner and outer shoulders, and a spring engaging one of such shoulders for holding the other shoulder in engagement with that of the casing.

4. The combination of a switch-stand provided with an exteriorly-projecting latch-casing having spaced sides, a switch-lever provided with an arm arranged to extend between the sides of the latch-case, and a weighted latch-lever disposed transversely of the casing in position for engaging the arm of the lever.

5. The combination of a switch-stand, an exteriorly-arranged substantially U-shaped latch-casing provided at opposite sides with alined openings, and having a lateral extension located at one of the openings, a latch-lever extending through the said openings, and provided at one end with a weight and pivoted at its other end in the said extension, and a switch-lever provided with an arm for engagement with the latch-lever.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

J. STODDARD ROBERTSON.
ROBERT B. RICHARDSON, Jr.

Witnesses:
W. F. Paxton,
E. R. Bradshaw, Jr.