No. 856,437. PATENTED JUNE 11, 1907.

W. ANDERSON.

SWITCH LOCK.

APPLICATION FILED SEPT. 24, 1906.

2 SHEETS—SHEET 1.

FIG. 5.

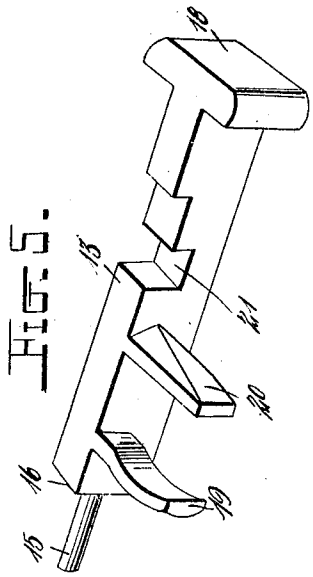


FIG. 6.

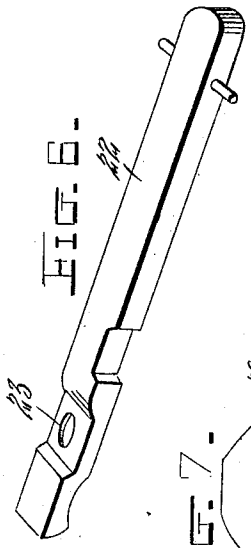


FIG. 7.

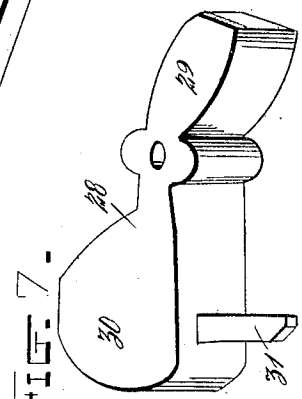


FIG. 4.

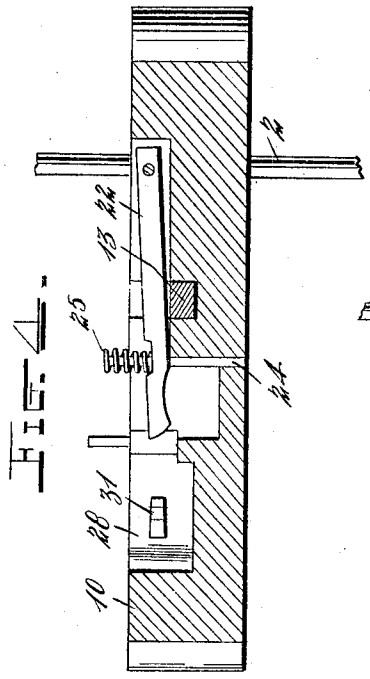
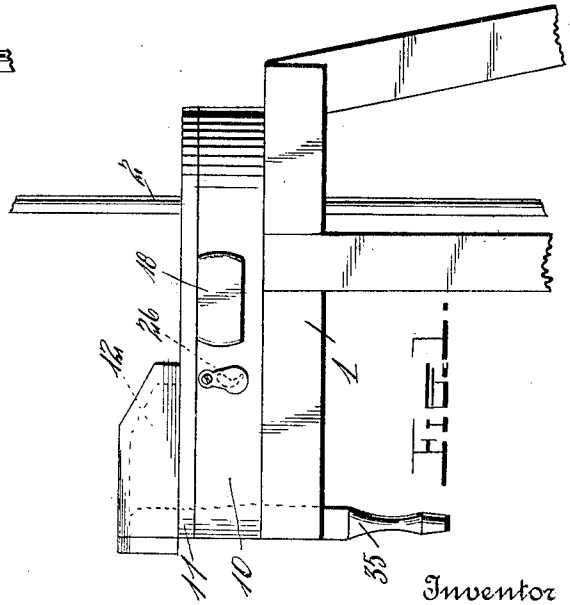


FIG. 3.



Witnesses

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2 SHEETS—SHEET 2.

Fig. 2.

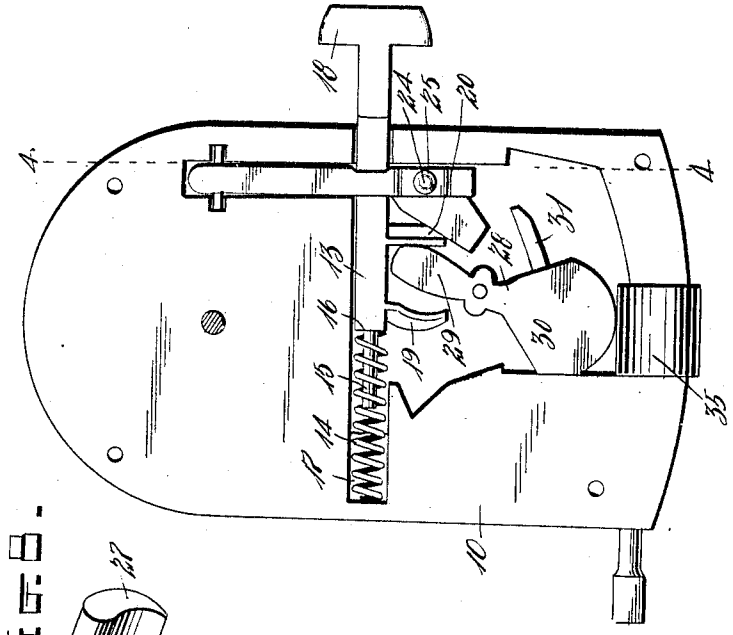
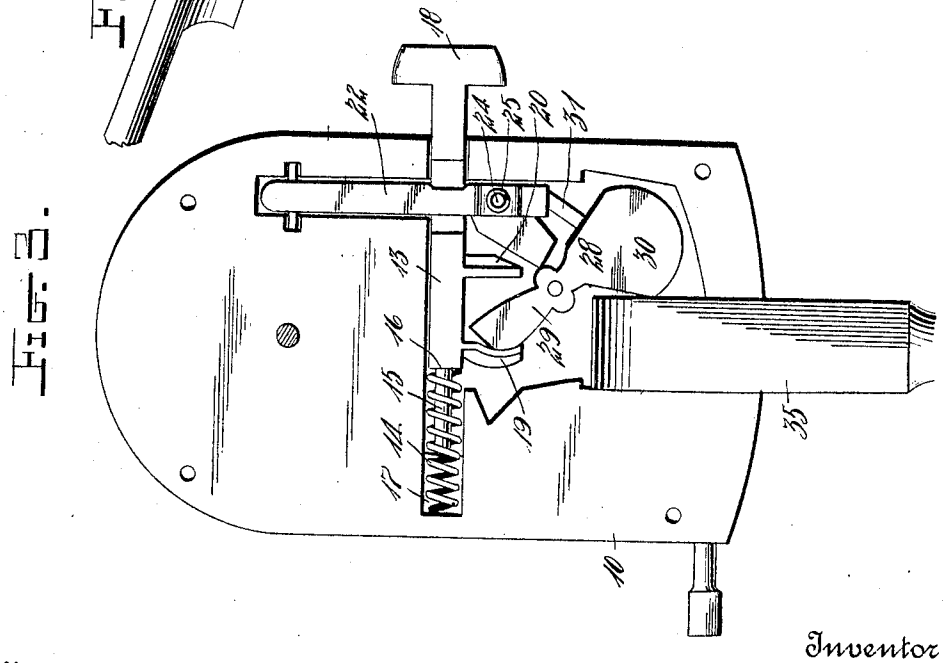


Fig. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

WILLIAM ANDERSON, OF MEMPHIS, TENNESSEE, ASSIGNOR OF FIVE-EIGHTHS TO A. A. STRANGE AND THREE-EIGHTHS TO W. O. WHITE, OF MEMPHIS, TENNESSEE.

SWITCH-LOCK.

No. 856,437. Specification of Letters Patent. Patented June 11, 1907.

Application filed September 24, 1906. Serial No. 335,942.

To all whom it may concern:

Be it known that I, WILLIAM ANDERSON, a citizen of the United States, residing at Memphis, in the county of Shelby and State of Tennessee, have invented certain new and useful Improvements in Switch-Locks; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improved switch lock.

One object of the invention is to provide a switch lock of comparatively simple construction which will reliably hold the lever for moving the switch so that it cannot be moved except by the person who holds the key to the lock.

Another object is to provide a switch lock with a compound lever comprising two members, one of which is always locked against movement when the other is unlocked and vice versa.

In the accompanying drawings in which like reference characters are used to represent corresponding parts Figure 1 represents a side elevation of a switch stand with this improved switch lock applied thereto. Fig. 2 represents a top plan view of the lock casing with the top removed to show the working parts which are in position to lock the switch operating lever against movement. Fig. 3 represents a similar view with the working parts shown in the position which they assume when the switch lever is unlocked. Fig. 4 represents a longitudinal section taken on line 4—4 of Fig. 2. Fig. 5 represents a perspective view of the spring-pressed bolt detached. Fig. 6 represents a perspective view of the locking bar detached. Fig. 7 represents a perspective view of the locking plate detached. Fig. 8 represents a perspective view of the key used to unlock the switch operating lever.

Referring to the drawings for a more particular description of the invention the numeral 10 designates a turn table or lock casing which is rotatably mounted on the upper side of a platform 1 by means of a shaft 2 to which it is fixed. The shaft 2 passes loosely through the platform 1 and is connected at its lower end with a lever for moving the switch points (not shown) and at its top is provided with the usual signal (not shown).

The lock casing 10 is provided with suitably shaped recesses in which are disposed the operating parts, and with a detachable top 11 having a recess or chamber 12 in which one end of a hand lever 35 pivoted to the casing is adapted to move.

A locking bolt 13 is mounted to slide transversely in a recess in the casing 10 and a coil spring 14 is disposed on its inner end on a guide pin 15, said spring bearing at one end against a shoulder 16 on the bolt and at its other end against the casing wall and resting on a supporting block 17 in the casing. This bolt is preferably of rectangular form and is provided at its outer end with a head 18 which lies on the outside of the casing across an opening in the side thereof through which the bolt projects. One side of the bolt 13 has short spaced laterally projecting arms 19 and 20, the arm 19 having a slightly concave inner face for a purpose to be described. This bolt also has a stepped notch 21 in its upper face for receiving a locking bar or latch 22. This bar 22 is pivoted at one end in a longitudinal recess formed near one side of the casing at right angles to the bolt recess and extends across the top of the bolt 13 and is provided near its free end with an aperture 23 through which projects a guide pin 24 secured to the bottom of the casing. A coil spring 25 is disposed on said pin 24 above the bar to hold said bar in engagement with the bolt notch 21. The bar or latch 22 preferably has the lower face of its free end beveled for a purpose hereinafter described, and one side thereof is notched to receive the step of the bolt 13. This bar also has a curved recess on its lower face to permit the ready insertion of the key thereunder.

A key chamber is formed beneath the free end of the locking bar or latch 22 and has a key-hole 26 opening through the side wall of the casing through which a key 27 is passed to lift the bar 22 out of engagement with the bolt 13 and permit it to be pushed in to release the locking lever 35 as hereinafter described.

A locking member 28 is pivotally mounted in a recess in the casing and has an arm 29 extending between the lateral arms 19 and 20 of the bolt 13 and at its opposite side is

provided with a segmental plate 30 which is adapted to move in the path of the hand lever 35 and lock it in vertical position in engagement with the platform 1 and prevent the manipulating of the switch. From one side of this plate 30 projects an arm 31 having one side of its free end beveled to engage the side wall of the casing which is preferably curved slightly to engage with said arm whereby the segmental plate 30 is held out of the path of the lever 35. When in this position the beveled side of the arm 29 bears against the concave face of the arm 19 and holds the bolt 13 retracted against the tension of its spring.

When it is desired to manipulate the switch the key 27 is inserted through the key-hole 26 and turned to raise the lock bar 22 out of engagement with the bolt 13 and the bolt is then pushed in until the beveled end of the arm 31 engages the side wall of the casing with the plate 30 out of the path of the lever 35. The lever 35 may then be moved into horizontal position the switch thrown in either direction and the lever again dropped into vertical position in engagement with the platform 1. The switchman has then only to push the bolt inward which causes the arm 31 to slip out of engagement with the casing wall and the spring pressed bolt pushes the arm 29 of the locking member outward and brings the plate 30 into the path of the lever 35 and the locking bar 22 drops into the notch 21 of the bolt when the parts are securely locked against movement until the key is again inserted.

I claim as my invention—

1. A switch lock comprising a casing, a segmental locking plate, a spring-pressed member bearing against one end of said locking plate, a lever pivoted to the casing and having one end engaged by one end of the locking plate, a lock bar pivoted within the casing and adapted to engage the spring-pressed member to lock the same against movement, and a key to lift said lock bar to release said spring-pressed member and locking plate.

2. A switch lock comprising a casing, a lever pivoted to said casing and having one end extending thereinto, a spring-pressed bolt, a locking plate engaging said bolt and projecting normally into the path of said lever, a lock bar for holding said bolt against the tension of its spring, and means to release said bar to release said bolt and locking plate.

3. A switch lock comprising a casing, a lever pivoted to said casing, a spring-pressed bolt mounted to slide in said casing and having spaced laterally projecting arms, a locking member mounted to turn in said casing and having an arm projecting between said lateral arms, an arm carried by said locking member and adapted to project into the path of said lever, a lock bar for holding said bolt in retracted position, and means to raise said bar to release said bolt to permit the locking member arm to be moved out of the path of the lever.

4. A switch lock comprising a casing, a lever pivoted to said casing, a spring pressed bolt mounted to slide in said casing and having spaced laterally projecting arms and a notch in its upper face, a locking member mounted to turn in said casing and having an arm extending between said lateral arms and an arm adapted to project into the path of said lever, a lock bar pivoted at one end and adapted to fit in the notch in said bolt, and means for raising said bar to release said bolt and permit the locking member to be moved out of the path of the lever.

5. A switch lock comprising a casing, a lever pivoted to said casing, a bolt mounted to slide in said casing and having spaced laterally projecting arms and a notch in its upper face, a locking member mounted to turn in said casing and having an arm extending between said lateral bolt arms, a segmental plate carried by said member and adapted to extend into the path of said lever, an arm extending from said plate and having its free end beveled to engage the side wall of the casing, means for locking said bolt against movement, and means for releasing said locking means.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WILLIAM ANDERSON.

Witnesses:
S. S. FALLS,
WILL BOND.