

934,853.

Fig. 1. A perspective view of a mechanical assembly, likely a valve or actuator. The assembly consists of a main body (1) with a central shaft (2) and a handle (3). The handle is connected to a lever (4) which is pivoted on a pin (5). The lever is further connected to a rod (6) which passes through a guide (7) and is secured by a nut (8). The rod is connected to a valve stem (9) which is seated in a valve body (10). The valve body is mounted on a base (11). A dashed line indicates a section line 3-3.

Witnesses:
John Enders.
Chas. H. Bull.

Inventor:
Axel A. Strom,
By J. D. Smith, Lee, Christman & Willis,
Attorneys

UNITED STATES PATENT OFFICE.

AXEL A. STROM, OF AUSTIN, ILLINOIS, ASSIGNOR TO PETTIBONE, MULLIKEN & CO., OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

SWITCH-LEVER LOCK.

934,853.

Specification of Letters Patent. Patented Sept. 21, 1909.

Application filed July 15, 1909. Serial No. 507,856.

To all whom it may concern:

Be it known that I, AXEL A. STROM, a citizen of the United States, residing at Austin, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Switch-Lever Locks, of which the following is a specification.

My invention relates to an improvement in the class of locks employed to cooperate with switch-stands, of the type in which the operating-lever is turned through a vertical plane for throwing the switch and usually carries a weight on its outer end; the lock serving to present to the lever, when thrown, an abutment against its accidental rise.

In the accompanying drawing, Figure 1 is a broken plan view showing a switch-stand equipped with a lock of my improved construction, at each end of the throw of the operating lever, and Fig. 2 is a section on line 2, Fig. 1.

My improved lever-lock is applicable to any construction of switch-stand of the type referred to, but I show it in the accompanying drawing, by way of illustrating its operation, in connection with the switch-stand which forms the subject of my pending application, Serial No. 507,854 filed July 15, 1909, in which the casing 3 containing the switch-operating mechanism, connected with the switch through the medium of a switch-bar indicated at 3^a, is provided in its crown-portion with a cam-slot 4 through which the operating-lever 5 passes from the switch-operating mechanism to which it is fulcrumed, whereby in throwing the lever its engagement with the cam-slot causes it to move in the direction of throwing the switch and thus actuates the switch-throwing mechanism to effect such throw.

The lever-lock is denoted as a whole by the reference-character 6. It consists of a metal bar 7, shown of rectangular shape with a threaded stem 8 on one end and provided with a slot 9 extending inwardly from its opposite end, the slot rendering the bar bifurcated or of the general shape of a tuning-fork; and in the slot is pivotally hung, near the outer end thereof, the abutment 10 for a lever 5. The pivotal abutment 10 is preferably the flat-sided metal body illustrated, rounded at its pivotal end and straight at its free end, which is that presented, in operation, to the switch-lever. The abutment tends, by the manner of hanging it in the

fork, whether the bar 7 be set in a vertical operative position, as it may be, or in the inclined operative position in which it is represented in Fig. 2, to assume by gravity a pendent condition in the slot 6, wherein its longitudinal center coincides with that of the fork thereby to maintain it normally from protruding into the path of the lever 5; and it is prevented from swinging unduly far in either direction by stops 11 and 12, provided respectively on its opposite edges to engage the bar at opposite sides of the slot; and the abutment contains a transverse hole 13 to receive the shackle of a padlock 14.

The position of the locking-device in use may be any suitable point relative to the switch-stand from which the abutment may be turned on its pivotal support to extend its free end into the path of the lever 5. As shown, the device is supported in its preferred inclined position directly upon the switchstand, the bar 7 being seated in an inclined socket 15 formed in a wing of the casing 2, with its stem 8 extending through the base of the socket below the wing and fastened by a nut 16. In Fig. 1, one of the locking-devices is shown at each end of the throw of the lever 5 and it is supported in the manner and position represented in Fig. 2.

For locking down the switch-lever when thrown, the operator turns the abutment 10 from its normal hanging position to extend its free end into the path of rest of the lever and to retain it there he adjusts the padlock 14 into the hole 13, thereby preventing the lever from rising. To permit the lever to be thrown, the operator removes the padlock, when the abutment will automatically turn, by gravity, into its normal hanging position out of the path of the lever.

The characterizing feature of my improvement lies in so constructing the device that when it is placed in operative position the pivotal stop, or abutment, 10 will tend to assume, by gravity, a perpendicular hanging condition, and thus remove itself from obstructing the raising of the switch-lever when the stop is released from the padlock 14, which serves to retain it in the path of the lever after it has been turned by hand into the same.

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

1. A switch-lever lock comprising a slotted

bar, and an abutment pivotally supported on said bar to assume by gravity a hanging position in and in non-projecting relation to the slot thereof, and provided with a hole, for the purpose set forth.

2. A switch-lever lock comprising a slotted bar adapted to be secured in inclined position on a supporting base, and an abutment pivotally supported on said bar to assume by gravity a hanging position in and in non-projecting relation to the slot thereof, and provided with a hole and with stops to engage said bar at opposite sides of the slot therein, for the purpose set forth.

3. A switch-lever lock comprising a bar containing a slot extending into it from one end, said bar terminating at its opposite end in a stem, and an abutment pivotally sup-

ported on the bar to assume by gravity a hanging position in and in non-projecting relation to said slot and provided with a hole, for the purpose set forth.

4. A switch-lever lock comprising a bar containing a slot extending into it from one end, said bar terminating at its opposite end in a stem, and an abutment pivotally supported on the bar to assume by gravity a hanging position in and in non-projecting relation to said slot and provided with a hole and with stops to engage the bar at opposite sides of the slot therein, for the purpose set forth.

AXEL A. STROM.

In presence of—

F. L. BROWNE,
K. E. KLEIN.