

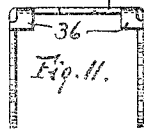
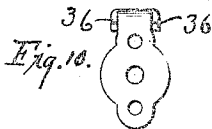
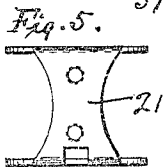
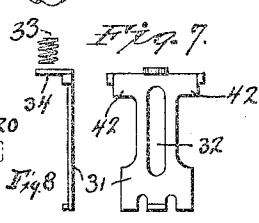
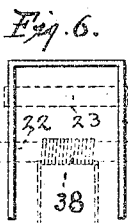
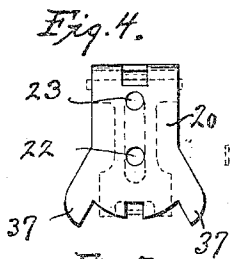
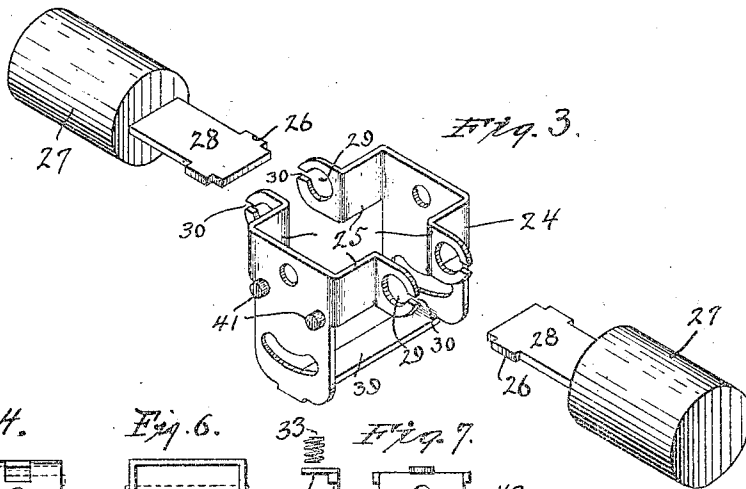
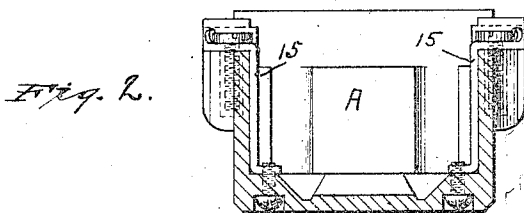
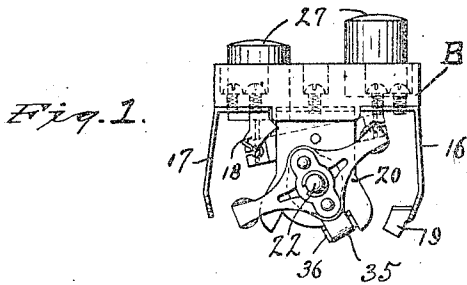
G. B. THOMAS & E. ANDERSON.

PUSH SWITCH.

APPLICATION FILED AUG. 11, 1911..

1,046,899.

Patented Dec. 10, 1912.



Witnesses:
Charles E. Abbott
L. H. Grote

INVENTORS
GEORGE B. THOMAS
ERIC ANDERSON
By their Attorneys
Knowlton & Knowlton

UNITED STATES PATENT OFFICE.

GEORGE B. THOMAS AND ERIC ANDERSON, OF BRIDGEPORT, CONNECTICUT, ASSIGNORS
TO THE PERKINS ELECTRIC SWITCH MANUFACTURING COMPANY, OF BRIDGEPORT,
CONNECTICUT, A CORPORATION OF CONNECTICUT.

PUSH-SWITCH,

1,046,899.

Specification of Letters Patent.

Patented Dec. 10, 1912.

Application filed August 11, 1911. Serial No. 643,607.

To all whom it may concern:

Be it known that we, GEORGE B. THOMAS and ERIC ANDERSON, citizens of the United States of America, residing in the city of Bridgeport, county of Fairfield, State of Connecticut, have invented a certain new and useful Improved Push-Switch, of which the following is a specification.

Our invention relates to push switches, the object of our invention being to improve the same in certain novel features illustrated and hereinafter described.

In the accompanying drawing, Figure 1 is a side elevation of the push switch mechanism mounted upon a removable face plate; Fig. 2 is a vertical section through the switch casing; Fig. 3 is a perspective of the rocking member with the push buttons in position to be attached thereto; Figs. 4, 5 and 6 are respectively a side elevation, inverted plan and edge view of the switch frame; Figs. 7 and 8 are side and edge elevations, respectively, of the detent members; and Figs. 9, 10 and 11 are respectively plan and side elevations at right angles to each other of the switch bar.

The present improvements have been illustrated in a switch of the type in which the switch mechanism is carried upon a removable face plate. The switch comprises an insulating casing A, on which are mounted the wire terminals 15 for a double pole switch. The switch mechanism is carried by the face plate B, also of insulating material, having mounted upon it at the opposite ends thereof spring fingers 16—17 which engage the wire terminals frictionally when the face plate is adjusted in position.

The switch contacts 18—19 are preferably formed in one with these spring arms and are thus carried by the face plate. A channeled supporting frame 20, of U-shape, is secured by its web 21 beneath the face plate and the switch mechanism is pivoted upon the spindle 22 mounted between the vertical portions of this frame. A second spindle 23 is mounted in said frame and a rocker bar 24 of bridged construction rotates thereon. The side lugs 25 of this rocker are offset toward each other and perforated to receive the bearing lugs 26 of the stems of the push buttons 27. Preferably the push button stems comprise flat shanks 28 with lateral bearing lugs 26 which may be inserted into

the perforated bearings 29 of the rocker through slots 29 communicating therewith. To assemble the push buttons and rocker, the former are placed in horizontal position and their bearing lugs pass through the slots into the perforations of the rocker, whereupon, when the push button is turned into its normal vertical position, its bearing lug cannot escape from its bearing in the rocker by reason of the fact that these lugs are wider than the slots.

Adjacent the frame 20 on one side, is arranged the vertical detent member 31 guided in sliding engagement therewith by the two spindles 22—23 which pass through the slot 32 therein, and normally pressed into engaging position by the small coil spring 33 which overlies the offset 34. This spring and offset are preferably recessed into the face plate.

The switch bar comprises a bridge member 35 with downturned flanges 36 which serve as engaging members for the detent on the one hand, and as stop lugs impinging against the opposite sides of the forked end 37 of the frame, on the other hand. The usual coil spring 38 on the switch spindle engages with its free ends the opposite sides of the bridge members 39—40 of the rocker bar and switch lever, respectively.

The operation of the switch is readily understood. As the push button is depressed the rocker bar moves on its pivot thereby tensioning the actuating spring. Simultaneously, one of the lugs 41 on the rocker bar engages one of the shoulders 42 of the detent member and raises it against the action of its spring, thereby freeing the switch bar, which, under the influence of the tensioned switch spring, snaps across into its opposite contact position.

We claim as our invention—

1. In a push switch mechanism, a bridged rocker bar having at each end a pair of perforated lugs angled toward each other, in combination with push buttons having stems provided with bearing lugs, said perforated lugs forming bearings for the push buttons and being slotted to permit the bearing lugs on the stems of the push buttons to enter the perforations of said socket lugs, substantially as described.

2. In a push switch mechanism, a bridged rocker arm, a pivot spindle and a switch-

arm spindle piercing the same, a spring pressed detent in sliding engagement with one end of said rocker arm, said detent being centrally slotted to receive said spindles 5 and being held against lateral displacement thereby, and laterally recessed to form engaging shoulders, in combination with pins carried by said rocker arm and engaging the shoulders on opposite sides of said detent 10 to vertically displace the same for the purpose specified, substantially as described.

3. In a push switch mechanism, a bridged rocker bar having pairs of bearing lugs angled toward each other, in combination 15 with push buttons having stems provided with bearing lugs, said rocker bar being perforated to form bearing apertures and being horizontally slotted to permit the bearing lugs on the stems of the push buttons to 20 enter said bearing apertures, said bearing lugs being wider than said slots whereby they are locked in the bearing perforations when the push buttons are in operative position, substantially as described.

25 4. A switch mechanism comprising a bridged switch bar having a pair of lugs offset from the opposite sides of the bridge at each end to form combined detents and stop members, in combination with a frame 30 member recessed to form shoulders against which said switch bar lugs impinge at the ends of the switch stroke in opposite direc-

tions, together with a detent bar and means for moving the same vertically into or out of engagement with the lugs on said switch 35 bar, substantially as described.

5. A switch comprising a rocker and a lever, one of the parts having a slot and the other being shaped to enter said slot 40 when the parts are out of normal operative relation, said parts being adapted to be relatively turned through an angle of approximately ninety degrees to interlock the same whereby when they are in normal operative relation they can not become acci- 45 dentally separated.

6. A switch comprising a rocker and a lever, one of the parts having a slot and the companion part being shaped to enter the slot when the parts are out of normal op- 50 erative relation, said parts being adapted to be relatively turned through an angle of approximately ninety degrees to interlock the same, and the slot having a circular portion to pivotally receive said companion part 55 when said parts are assembled.

In testimony whereof we have signed our names to this specification, in the presence of two subscribing witnesses.

GEORGE B. THOMAS.
ERIC ANDERSON.

Witnesses:

G. W. GOODRIDGE,
A. H. JONES.