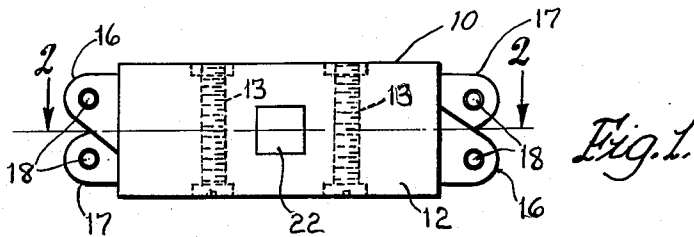
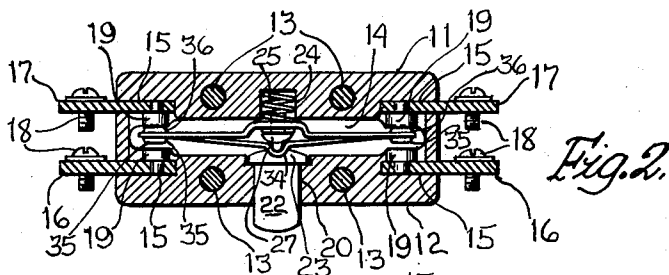
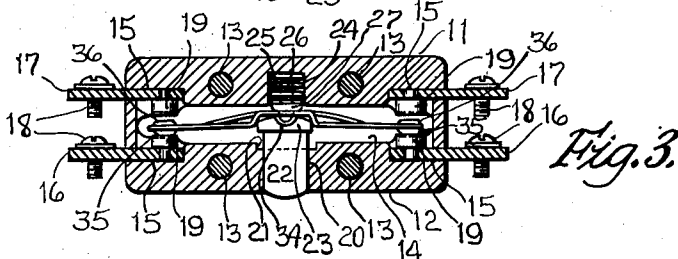
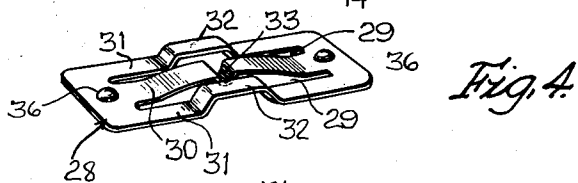
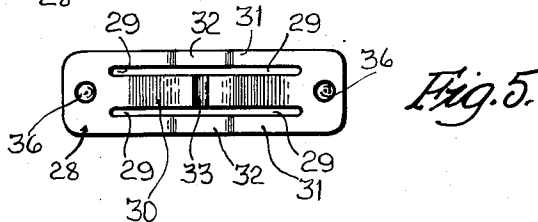


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J. O ROESER
DOUBLE-ACTING SNAP SWITCH

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DOUBLE-ACTING SNAP SWITCH

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1 Claim. (Cl. 200—76)

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This invention relates to new and simplified improvements in double-acting snap switches of the type used for alternately closing two circuits. As such the invention has for its principal object the provision for properly locating and retaining in a properly located position the bridging contact of the switch, the arrangement preventing the bridging contact from becoming displaced as well as providing a positive connection between the bridging contact and the push button of the switch.

Other objects will appear hereinafter.

The invention consists in the novel combination and arrangement of parts to be hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings showing the preferred form of construction, and in which:

Fig. 1 is an elevational view of the push button side of the switch;

Fig. 2 is a sectional detail view taken substantially on line 2—2 of Fig. 1;

Fig. 3 is a sectional detail view similar to Fig. 2 but showing the parts in different position with respect to each other;

Fig. 4 is a perspective view of the bridging contact embodied in the invention;

Fig. 5 is a top plan view of the same.

My improved and simplified double-acting snap switch comprises in its preferred form of construction a central ring 10, on opposite sides of which are arranged plates 11 and 12. The ring 10 and plates 11 are secured together by nut-bearing bolts 13. When secured together the ring and plates provide a housing, the interior of which provides a chamber 14. The ring 10 and plates 11 and 12 are preferably formed of Bakelite or other non-conductive material.

The confronting inner faces of the plates 11 and 12 are provided with recesses 15 into which the end portions of connector fingers 16 and 17 are positioned and held in such position by means of the ring 10 when the plates 11 and 12 are secured thereto by the nut-bearing bolts 13.

The ends of these connector fingers 16 and 17 carry head-bearing screws 18 by means of which the terminals of conductor wires (not shown) are connected to these connector fingers 16 and 17. The inner end portions of these connector fingers 16 and 17 on opposed faces carry contact heads 19.

An opening 20 is formed in the plate 11, and this opening terminates into an enlarged counterbore 21 formed in the inner face of the plate 12. Slidably arranged in this opening is a push

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button 22 having an enlarged head 23 of a size to fit snugly for free passage into the counterbore 21.

The plate 11 has formed therein a socket 24. Positioned in this socket 24 is an expansion spring 25 which embraces a stud shaft 26. This stud shaft 26 is shorter in length than the depth of the socket 24 so that the head 27 of the stud shaft 26 may pass into the socket 24 in a manner and for the reasons hereinafter set forth.

A bridging contact plate is indicated at 28. This bridging contact plate is preferably formed of a single piece of elongated sheet conductive material having portions struck therefrom to provide parallel slots 29 and to form the intermediate portion of the plate into an actuating spring strip 30. This strip 30 is buckled by forming in the side bars 31 of the plate 28 humps 32 which are pressed out of the plane of the surface of the plate 28 so as to draw the ends of the plate 28 together and thus buckle the actuating strip 30. This actuating strip 30 midway between its opposite ends is provided with a rib 33 substantially U-shaped in cross section and of a size to snugly fit into a transverse groove 34 formed in the push button head 23. The head 27 of the stud shaft 26 provides a reduced bead which fits snugly into the rib 33 whereby to locate the stud shaft properly within the socket 24.

To complete the bridging plate 28 there is provided at opposite ends of such plate on opposite sides thereof, contact heads 35 and 36. The bridging plate 28 is mounted in the chamber 14 in the manner shown in Figs. 2 and 3 with the rib 33 yieldably held by the spring 24 into the groove 34 of the push button 22.

When the bridging plate 28 is in the position shown in Fig. 2, the contact heads 36 will be in engagement with the contact heads of the fingers 17. By applying pressure on the push button 22, the contact plate 28 will be biased in a direction opposite to the movement of the push button 22 so as to dispose the contact heads 35 into contact with the contact heads of the fingers 16. Upon release of the pressure on the push button 22, the spring 24 will move the push button to the position shown in Fig. 2 and bias the bridging plate 28 to the position shown in Fig. 2. In this manner I provide a double-acting snap switch capable of alternately making and breaking two circuits. The rib 33 and groove 34 prevent displacement of the bridging plate 28 from the push button 22 in a longitudinal direction and provide a positive

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connection between the actuating strip 30 and this push button.

A snap switch constructed in accordance with the foregoing description is of a simplified construction and comprises relatively few parts, thereby eliminating the necessity of replacement parts.

It is apparent from the foregoing description that since the contact spring is free to rock about its transverse axis while in the groove of the operating button, it is impossible for one contact to lift before the other because of this self-centering action.

While I have illustrated and described the preferred form of construction for carrying my invention into effect, this is capable of variation and modification without departing from the spirit of the invention. I, therefore, do not wish to be limited to the precise details of construction set forth, but desire to avail myself of such variations and modifications as come within the scope of the appended claim.

Having thus described my invention, what I claim as new and desire to protect by Letters Patent is:

A snap switch of the class described comprising a body providing a chamber in the interior there-

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of, connector fingers extending from within the body and having on their inner end portions contact heads arranged in opposed relation with respect to each other, a socket formed in one wall of the body and communicating with the chamber, an opening formed in an opposite wall of the body and communicating with the chamber, a push button slidably arranged in the opening and having a head portion provided with a transverse groove, a bridging plate having an actuating strip normally biased on one side thereof and having formed between its end portions a transversely extending rib, said rib being adapted to be positioned in said groove, a stud shaft arranged for movement in the socket and having an enlarged head provided with a reduced bead portion engaging in said rib, and an expansion spring bearing on said head of said stud shaft and positioned in said socket, said bridging plate having on opposite sides thereof contact heads adapted to engage the contact heads of said fingers by the biasing action of said plate under the influence of said actuating strip.

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No references cited.