

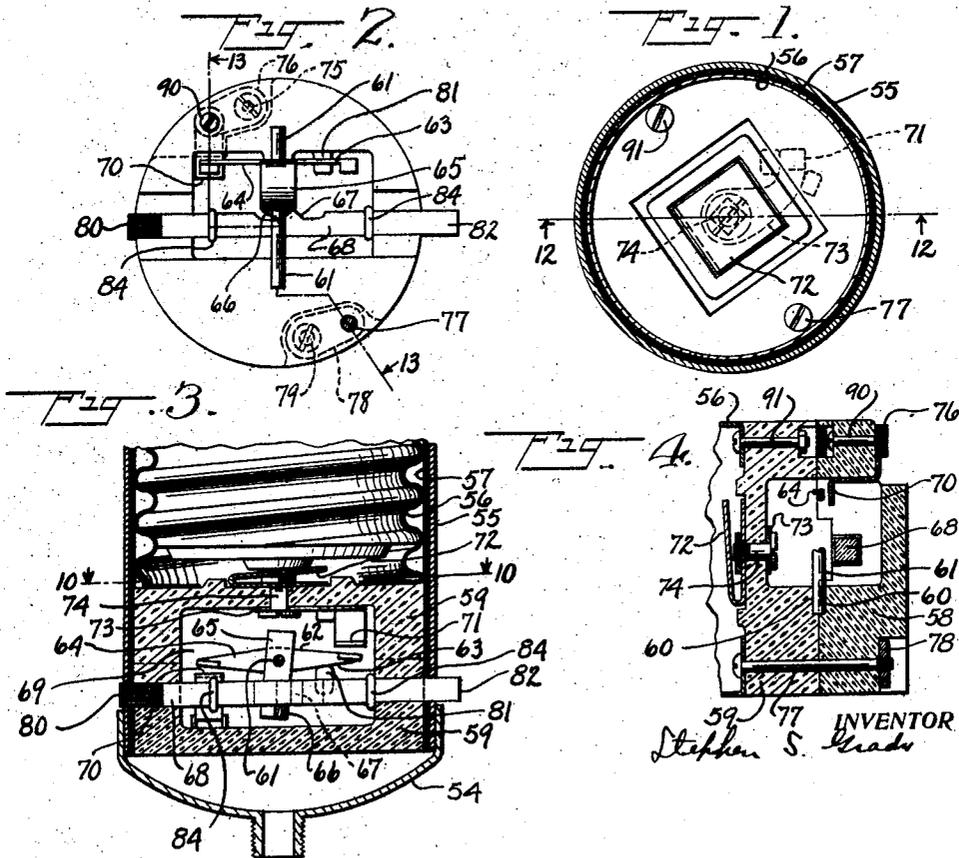
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S. S. GRADY

PUSH BUTTON SWITCH

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# UNITED STATES PATENT OFFICE.

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## PUSH-BUTTON SWITCH.

Application filed March 2, 1923. Serial No. 622,352.

*To all whom it may concern:*

Be it known that I, STEPHEN S. GRADY, a citizen of the United States, residing at Newtonville, in the county of Middlesex and State of Massachusetts, have made certain new and useful Improvements in Push-Button Switches, of which the following is a specification, taken in connection with the accompanying drawings.

My invention relates to a mechanical movement. It also relates to an electric switch wherein the electric contacts are connected and disconnected by a quick, positive snap by my mechanical movement.

My invention relates to an electric push button switch wherein the contacts are operated with a quick, positive snap.

In the accompanying drawings, the same reference numerals refer to similar parts in the several figures.

Fig. 1 is a cross section of my push button switch taken substantially on the line 10—10 of Fig. 3;

Fig. 2 is a plan view of the bottom porcelain with the switch mechanism in place;

Fig. 3 is a vertical section of my push button switch;

Fig. 4 is a vertical section substantially on the irregular section line 13—13 of Fig. 2.

In the illustrative embodiment of my invention shown in the drawing, the usual metallic cap 54, metallic shell 55, screw shell contact 56 and insulating lining 57 are employed. The insulating or porcelain members 58 and 59 are provided with grooves 60, 60 Fig. 4, which when placed together form bearings for the axle or arbor 61. On this same axle or arbor 61 I mount a contact driven member 62 having arms 63, 64 and a spring arm 65, the latter having a convex portion 67 upon the driving member, which in this case is the push button 68. This push button extends through the porcelain 58 and on either side of the electric socket. The chamber 69 is formed in the porcelains 58 and 59 and within this chamber are mounted the contacts 70 and 71, the latter connected with the center contact 72 of the electric light socket through the plate 73 and screw 74.

The current passes from the binding post

75, Fig. 2, through the plate 76 to the fixed contact 70, thence through the arms 64 and 63 of the driven contact member 62 to the fixed contact 71, plate 73, screw 74 to the center contact 72, thence through the lamp or other consuming device, out through the screw shell contact 56, securing screw 77, plate 78 and binding post 79, Fig. 2.

The screw 90 secures the plate 76 and the fixed contact 70 to the porcelain 58. The screw 91 assists in securing the screw shell contact 56 to the porcelain 59.

It will be seen that by pressing on the end 80 of the push button 68 that the convex portion 67 will be caused to move on the convex portion 66 and compress the spring arm 65 of the driven member 62, thereby causing the contact driven member 62 to snap into the position shown in Fig. 3, and rest against the stop 81. To turn the current on in the lamp, or other consuming device, it is merely necessary to press upon the end 82 of the push button 68 and again cause the convex member 67 to move upon the convex member 66 of the spring arm 65, but in the reverse direction. This will cause the contact driven member 61 to rock or snap over into its opposite position from that shown in Fig. 3 so that its arms 63 and 64 will contact with the respective fixed contacts 70 and 71, thereby permitting the current to pass through the lamp or other consuming device. The movement of the push button can be limited in any suitable manner, as by the stops 84, 84 contacting with the interior surface of the chamber 69 formed in the porcelains 58 and 59.

It will be seen that my push button switch is simple, made of few parts that can be cheaply manufactured and that the electrical connections will be made or broken by a quick positive snap.

Having thus described this invention in connection with an illustrative embodiment thereof, to the details of which I do not desire to be limited, what is claimed as new and what is desired to secure by Letters Patent is set forth in the appended claim.

What I claim is:

In a push button switch the combination of two electric contacts mounted in an insulating member, an axle mounted in the in-

insulating member, a rocking contact mounted on the axle and having two arms to connect and disconnect the two electric contacts and also provided with a spring arm having a convex portion, a push button mounted in the insulating member and provided with a convex portion to engage with and operate the convex portion of the rocking contact member to make and break the current in the push button switch.

STEPHEN S. GRADY.

Witnesses:

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GLADYS VAN LOAN.