

(No Model.)

F. S. McGREGORY.
PUSH BUTTON SWITCH.

No. 497,411.

Patented May 16, 1893.

Fig. 1.

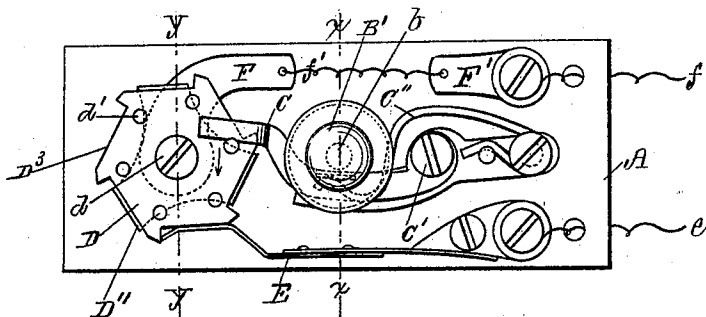


Fig. 2.

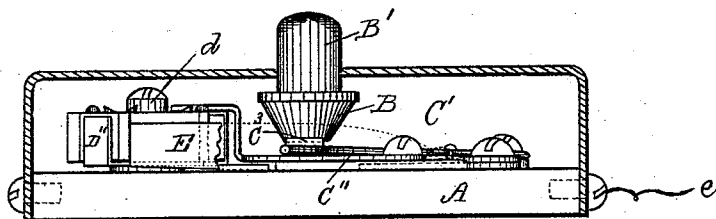


Fig. 3.

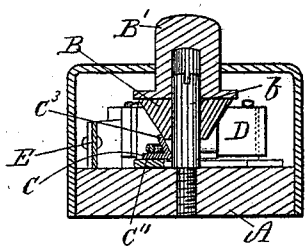
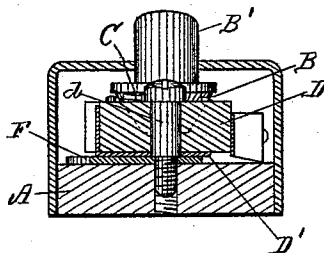


Fig. 4.



Witnesses.

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UNITED STATES PATENT OFFICE.

FRED S. MCGREGORY, OF REVERE, ASSIGNOR TO JOHN M. ORFORD, OF BOSTON
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PUSH-BUTTON SWITCH.

SPECIFICATION forming part of Letters Patent No. 497,411, dated May 16, 1893.

Application filed January 21, 1893. Serial No. 459,300. (No model.)

To all whom it may concern:

Be it known that I, FRED S. MCGREGORY, a citizen of the United States, and a resident of Revere, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Push-Button Switches, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in push button switches for the purpose of opening or closing electric circuits and it is especially well adapted for incandescent electric light purposes, but may to equal advantage be used for other electric appliances where it is desired to close and open the circuit from time to time.

The invention is carried out as follows, reference being had to the accompanying drawings, wherein—

Figure 1 represents a top plan view showing the inclosing case removed. Fig. 2 represents a side elevation. Fig. 3 represents a cross-section on the line X—X shown in Fig. 1; and Fig. 4 represents a cross-section on the line Y—Y also shown in Fig. 1.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

A represents the base of the switch and it is made of some suitable non-conducting material. To the base A is secured a pin *b* upon which is a vertically movable cone or wedge B preferably made of metal, and a press button B' which is preferably made of some non-conducting material.

C is a pawl lever pivoted at C' to the base A and it is held in its normal position shown in Fig. 1 by the influence of a spring C''. The lever C has an inclined projection C³ adapted to contact with the cone or wedge B as shown in Fig. 2.

D is a circuit closing disk or wheel loosely journaled on a pin or stud *d* secured to the base A.

The top of the disk D is provided with slanting ratchet teeth *d'*, *d'* (or a ratchet ring may be used to equal advantage) adapted to be actuated by the pawl lever C when the push button B' is depressed for the purpose of inter-

mittently rotating said disk D in the direction of the arrow shown in Fig. 1.

D' is a metal plate on the under side of the disk D and it is metallically connected to, or made in one piece with, the metal faces D'', D'', D'', of the said disk D.

D³, D³, D³ are alternate non-conducting faces on the disk D as shown in Fig. 1.

It is not essential that the disk D should be made of non-conducting material and provided with alternate metallic faces, as it may to equal advantage be made of metal and provided with alternate non-conducting faces without departing from the essence of my invention.

E is a spring metal sweeper secured in one end to the base A and having its free end pressing against the periphery of the wheel D as shown in the drawings.

e is the circuit wire metallically connected to the sweeper E.

F is a metal plate secured to the base A and metallically connected to the metal portion of the disk D.

The plate F is preferably connected to the circuit wire plate or cup F' by means of a fuse *f'* as shown in Fig. 1.

f is the circuit wire connected to the plate or cup F'.

If so desired, I may dispense with the fuse *f'* and connect the wire *f* directly to the metal plate F without departing from the essence of my invention.

In the position shown in Fig. 1, the circuit is closed by the disk D being so turned that the sweeper E rests against one of the non-conducting faces D³ on said disk. To open the circuit it is only necessary to depress the button B' causing the cone or wedge B to move the pawl lever C in the direction shown by arrow in Fig. 1 by which the disk D is turned sufficiently to cause the sweeper E to be brought against one of the metallic faces D'', causing the circuit to be opened and the wires *e*, *f* metallically connected through the sweeper E, the metal parts of the disk D, the plate F and its connections to the wire *f*. By releasing the pressure on the button B' the lever C is automatically returned to its normal position (Fig. 1) by the influence of the

spring C'' passing over the teeth d'; and in
so doing the lip C³ on said lever C causes the
cone or wedge B and button B' to rise on the
guide pin b thus holding said parts in position
5 ready for being again depressed whenever it
is desired to close the circuit and so on.

Having thus fully described the nature,
construction, and operation of my invention,
I wish to secure by Letters Patent and claim—

10 The herein described push button switch
consisting of a circuit closing disk having al-
ternate metallic and non-metallic faces, an
electrode metallicity connected to said disk
and a yielding spring metal sweeper adapt-

ed to bear against it combined with a spring 15
pressed pawl lever adapted to engage a ratchet
on the circuit closing disk, a movable push
button and cone or wedge for actuating the
pawl lever, substantially as and for the pur-
pose set forth.

20 In testimony whereof I have signed my
name to this specification, in the presence of
two subscribing witnesses, on this 4th day of
April, A. D. 1892.

FRED S. MCGREGORY.

Witnesses:

ALBAN ANDRÉN,

THOS. L. MITCHELL.