

(No Model.)

W. H. BERRIGAN, Jr.
PUSH BUTTON.

No. 504,148.

Patented Aug. 29, 1893.

Fig. 1

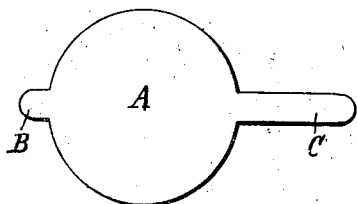


Fig. 2

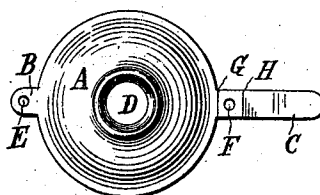


Fig. 3

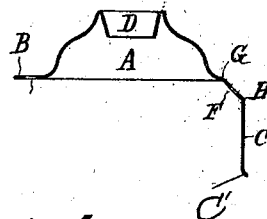


Fig. 4

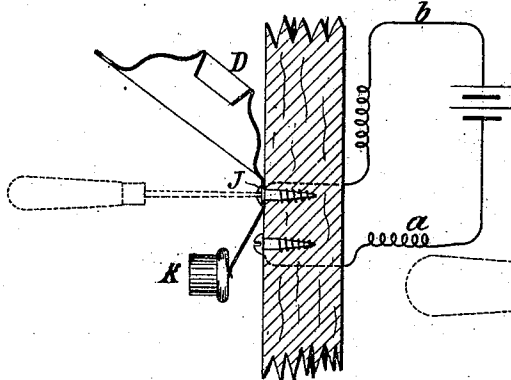


Fig. II.



Fig. 5

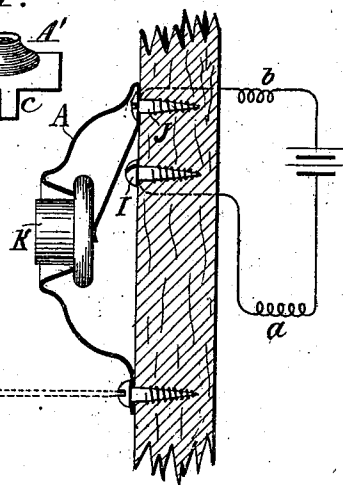


Fig. 6

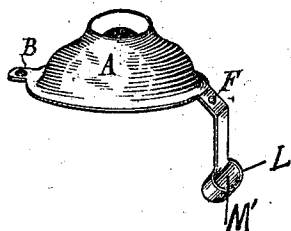


Fig. 7

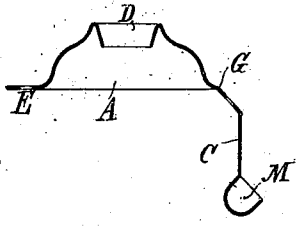


Fig. 8

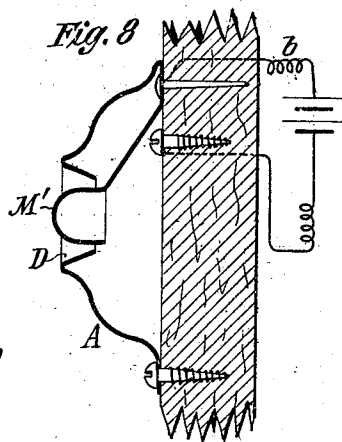


Fig. 9

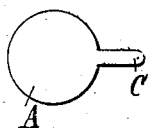
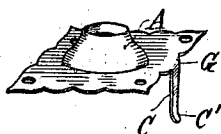


Fig. 10



Witnesses:
Raphael Nitter
Edw E Berrigan.

Inventor
W. H. Berrigan, Jr.

UNITED STATES PATENT OFFICE.

WILLIAM H. BERRIGAN, JR., OF NEW YORK, N. Y.

PUSH-BUTTON.

SPECIFICATION forming part of Letters Patent No. 504,148, dated August 29, 1893.

Application filed April 7, 1892. Serial No. 428,236. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. BERRIGAN, Jr., a citizen of the United States, residing at New York city, in the county and State of New York, have invented a new and Improved Push-Button, of which the following is a full, true, and accurate description.

The object of my invention is to produce a push-button, made in one piece, having the advantages of cheapness, lightness, convenience in packing, and simple adjustment.

Throughout the accompanying drawings similar letters refer to similar parts.

Figure 1, shows a blank of the preferred shape. Fig. 2 shows the said blank struck up and formed into a shell. Fig. 3 shows the shell in cross-section. Fig. 4 shows the first step in affixing said button-shell to any surface, and Fig. 5 shows the final or second step of so affixing it. Fig. 6 shows the form of blank struck up to form both the shell and button proper. Fig. 7 shows such combined blank in cross-section; and Fig. 8 shows it finally attached. Fig. 9 shows another form of blank, and Fig. 10 shows an ornamental shell. Fig. 11 shows a plurality of shells upon a common base.

Heretofore push-buttons have been made in two (or more) parts; a shell and a base, the base being affixed to the surface and then the shell screwed or otherwise fastened onto the base so as to conceal the contacts and fastenings. These forms of buttons have been the cause of much trouble and large expense to manufacturers. By my invention a button can be made having the necessary strength and durability, at a greatly reduced cost of manufacture.

In Fig. 1, is shown a blank for the shell, consisting of the body, A, small lip, B, and extended tongue, C. Fig. 2 shows the blank stamped into the form of a shell, with the opening, D, in the body, the opening, E, in the small lip, and the opening, F, in the extended tongue, the extended tongue being bent at G, H, so that when ready for use the tip, C', will come directly under the opening D. Fig. 3, shows this form of shell in cross-section. Fig. 4 shows the first step of fastening the shell to a surface, and Fig. 5 shows the second or final step of such fastening.

The shell may be made from the blank in

any suitable way or may be formed from a sheet of material, by rolling or other method.

The method of attaching the shell as herein shown to a surface, is as follows: A plug, I, made of such material,—for example, metal,—as will cause it to be a conductor of electricity, is driven into the wall or other surface, N, so as to connect with the wire, a, of the electrical circuit; the shell is placed against the surface, substantially as shown in Fig. 4, with that portion of the tongue C, between the bends, G and H, placed flush with the wall or surface, N, to which the completed push button is to be affixed, so that the tip C' of the tongue C, shall be immediately below the hole, D, when said shell is bent as shown in Fig. 5. A fastening device of electricity conducting material, preferably metal, is passed through the opening, F, and the wall or surface, N, and may be connected with the other wire, b, leading to the battery. The shell is thus partially fastened to the wall or surface, with the tongue, C, projecting immediately above but not touching the fastener, I. The bent tongue, C, being elastic and capable of being depressed, will return to its normal position when pressure is removed. The tongue C, has at the tip C', a button or knob, K, so that when the shell, A, is bent inwardly, and fastened to the wall or surface, through the opening E, in the lip B, said button or knob, K, will project through the opening, D, as shown in Figs. 4 and 5. Upon pressing the button or knob, K, the circuit, I to C—J is closed, and broken upon the removal of the pressure. Of course the portions of the button concealed by the shell need not be improved in appearance, which is an element of cheapness. The fastening-devices, I and J, being concealed may be attached by any suitable means to the wires leading to the battery.

A shell made from another form of blank is shown in Figs. 6, 7, and 8, in which the button proper and the shell are made in one piece, the blank, in this instance, differing from the blank shown in Fig. 1, by being broadened, on tongue, C, at L, Fig. 6. The broadened portion, L, is intended to be depressed at M, Fig. 6, shown on the lip C, by the shaded part, so as to take, when the proper operations are performed, the place of the button K, Fig. 5.

The broadening of the blank at L, permits the knuckle or knob, M, to be made from the lip, C. The shell, shown in Fig. 7, is then, primarily, affixed as shown in Fig. 4, and bent over and lip, B, fastened to the wall or other surface. The knuckle, M, protrudes through the opening, D, in the body of the shell, and thus becomes the button. Upon pressing the knuckle, M, the circuit, I to C--J, is closed, and broken upon pressure being removed, therefrom.

Although I have described and represented herein those details which I consider best adapted for practical purposes, it is to be understood that form and arrangement of the parts may be modified in many respects which will be suggested by the judgment and experience of persons skilled in the art, without departing from my invention.

While it will be seen from the foregoing description that the object of the lip, B, having the opening E, therein, is to provide a means of finally attaching the button to the surface, yet it will readily be understood that this result may be accomplished by striking a shell from the form of blank shown in Fig. 9, such shell having a flange around its edge with two or more openings to assist the workman in attaching the shell to the surface. Nor do I desire to be understood as limiting myself to shells having the lip B, or even a slight flange, for it will be plain to those versed in the art that my invention covers and includes a shell with an extended base, such as shown in Fig. 10, or a plurality of shells A upon a common base, as shown in Fig. 11, such common base having a number of extended tongues C, to correspond with the number of shells upon it; and, instead of opening, E, a number of openings may be made in the flange around the shell, or in the extended base, to facilitate attachment, and, of course, it will be understood that where a shell having a flanged or an extended base is used, with openings therein, the opening F, in the tongue, C, may be dispensed with.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A blank for push-buttons, consisting of the body, A, lip, B, and tongue, C, substantially as shown and described.

2. A shell for push-buttons, consisting of the body, A, with opening, D, therein, the lip, B, with opening E, therein, and the tongue, C, with the opening, F, therein, and being bent at G, H, substantially as shown and described.

3. A shell for push-buttons, consisting of the body, A, with opening, D, therein, the lip, B, with opening, E, therein, and the tongue, C, with the opening, F, therein, and the tip C', and being bent at H, substantially as shown and described.

4. A blank for push-buttons, consisting of the body, A, lip, B, and the tongue, C, with

broadened portion, L, substantially as described.

5. A shell for push-buttons, consisting of the body, A, with opening, D, therein, the lip, B, with opening, E, therein, the tongue C, with opening, F, therein, being bent at G and H, and having broadened portion, L, depressed into the knuckle, M, substantially as shown and described.

6. A shell for push-buttons, consisting of the body A, with opening, D, therein, the lip, B, with opening E, therein, the tongue, C, with opening, F, therein, and having broadened portion, L, depressed into the knuckle, M, substantially as shown and described.

7. A shell for push-buttons, consisting of body, A, with opening D therein, lip B, and tongue C, substantially as described.

8. A shell for push buttons, consisting of body, A, with opening D therein, and tongue C, the broadened tip of said tongue being depressed into the knuckle, M, substantially as described.

9. A push-button consisting of body, A, with opening D, therein, lip B, with opening, E, therein, and tongue, C, with opening, F, therein, having the said tongue C bent under so that its tip will be below the opening, D, substantially as described.

10. A push-button consisting of body, A, with opening D therein, lip B, with opening, E, therein, and tongue C, with opening, F, therein, the said tongue C, depressed at M to form the knuckle, M, and bent under so as to be below the opening D, to cause the knuckle M to protrude through the opening, D, substantially as described.

11. A push-button consisting of body A, with opening D therein, lip, B, and tongue C, the said tongue bent under so that its tip will be below the opening, D, substantially as described.

12. A push-button consisting of body, A, with opening D therein, lip B, and tongue C, the tip of said tongue being depressed to form a knuckle, M, said tongue bent under so that the said knuckle will protrude through the opening, D, of the body A, substantially as described.

13. A push-button consisting of body A, with opening D therein and tongue C, the said tongue bent under so that its tip will be below the opening, D, substantially as described.

14. A push button consisting of body A, with opening, D, therein, and tongue C, the tip of said tongue being depressed to form a knuckle, said tongue being bent under so that the said knuckle will protrude through the opening, D, of the body, A, substantially as described.

WILLIAM H. BERRIGAN, JR.

In presence of—

JAMES J. COSGROVE,
CONRAD HELLER.