No. 704,322. Patented July 8, 1902.

E. G. HARCOURT & M. B. LLOYD.

ELECTRICAL PUSH AND SWITCH.

(Application filed July 9, 1901.)

(No Model.)

FIG. 1.

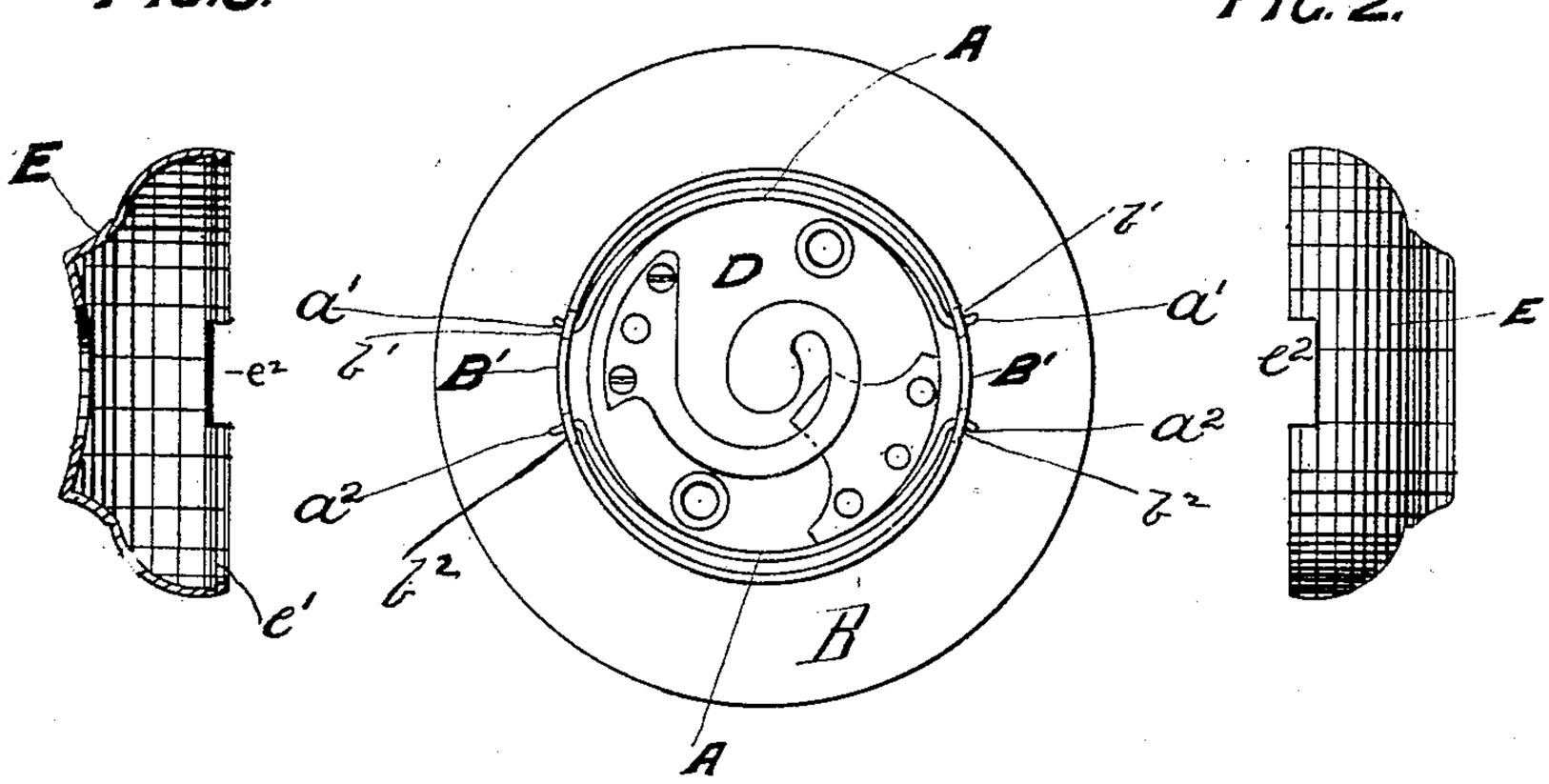
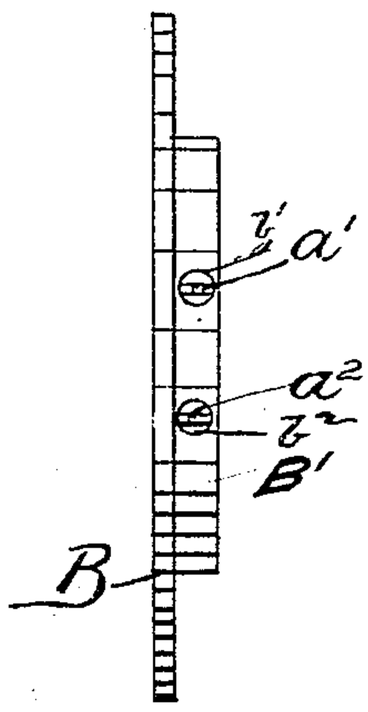


FIG. 3.

FIG. 2.

FIG. 6

FIG. 4.



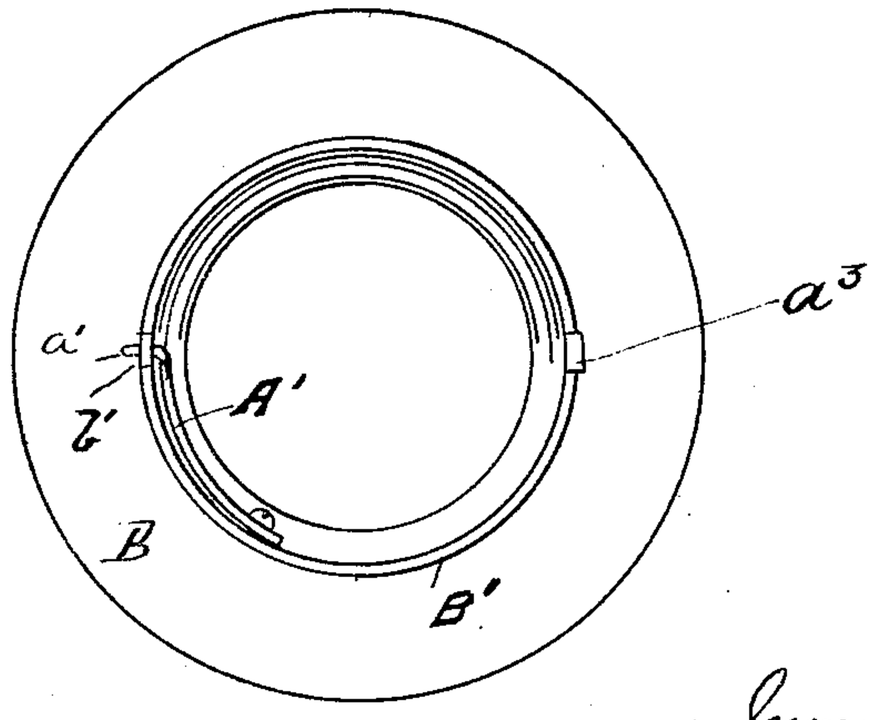
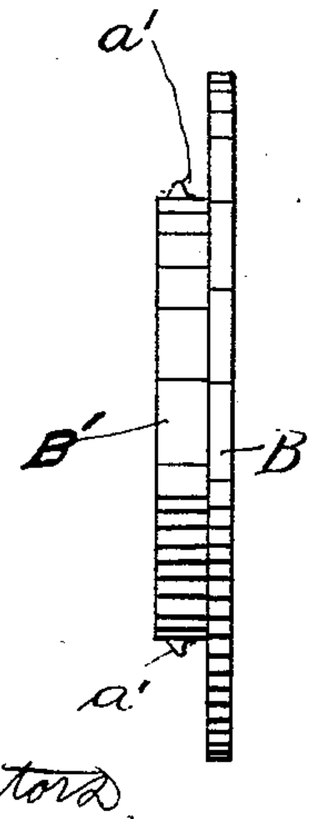


FIG. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

EDGAR GODWIN HARCOURT, OF BIRMINGHAM, ENGLAND, AND MARSHALL BURNS LLOYD, OF MINNEAPOLIS, MINNESOTA.

ELECTRICAL PUSH AND SWITCH.

SPECIFICATION forming part of Letters Patent No. 704,322, dated July 8, 1902.

Application filed July 9, 1901. Serial No. 67,691. (No model.)

To all whom it may concern:

Be it known that we, EDGAR GODWIN HARCOURT, manufacturer, a subject of the King of Great Britain, of Atlas Brass Foundry, Moseley street, Birmingham, in the county of Warwick, England, and MARSHALL BURNS LLOYD, manufacturer, a citizen of the United States of America, of The Lloyd Manufacturing Company, Minneapolis, Minnesota, have invented certain new and useful Improvements in and Connected with Electrical Pushes and Switches, of which the following is a specification.

Our invention has for its object improvements in and connected with electrical pushes and switches, and refers particularly to the attachment of the dome or cover to the base or ring, by which we obviate the necessity for forming a screw-joint, which has hitherto been the customary means used for connecting these two parts together, and substitue at spring-clip, by which means the dome is not liable to become detached from the ring when turned around, as is the case with the screw ones, while the cost of manufacture is reduced.

In order that our invention may be clearly understood and more easily carried into practice, we have appended two sheets of drawings, upon which we have fully illustrated our improvements.

Figure 1 is a front elevation of the base or ring and insulator with the dome removed. Fig. 2 is a side elevation of the dome. Fig. 3 is a section through the dome. Fig. 4 is a side elevation of the base or ring. Fig. 5 is a top edge view of the ring shown in Fig. 1. Fig. 6 is a similar view to Fig. 1, but showing a modified form of spring-catch.

B designates the base, provided with a circular flange B′ on its upper face, and D is the insulator in the bottom of the recess formed by said flange and to which insulator the usual contacts are secured, as shown in Fig. 1.

A A designate two semicircular springs resting loosely against the inner side of the flange B′ at opposite sides thereof and having their ends a' a^2 bent outwardly and extended through the slots or apertures b' b^2, formed in the flange B′. The ends a' a^2 beyond the flange B′ are provided with an upper inclined edge a^3, and so the inclined ends form catches.

E designates the dome, having the usual central opening for the push-button and provided on its inner side, near its lower edge, with an annular groove e', and the lower edge of the dome is further provided with a recess e^2, which intersects the groove e' and is of a length slightly greater than the distance between the two catches a' a^2. It will be seen that by placing the dome E over the flange B′ and pressing it downwardly its lower edge will force the catches a' a^2 inwardly until the groove e' registers therewith, whereupon the catches will enter the groove and hold the dome to the base. By now turning the dome till its recess e^2 comes over two of the catches a' a^2 it may be readily lifted and removed. Obviously one spring only may be employed.

If desired, we may rivet a single spring A′ to the inner wall of the flange B′, (see Fig. 6,) with its catch end a' projecting through an aperture b' in said flange, and directly opposite the aperture we provide the flange on its outer side with a lug a^3. This is preferably done by punching it out of the body of the flange. The dome E may be applied to and removed from the base just as in Figs. 1 to 4.

What we claim is—

1. In a push-button, the combination with the base provided with an apertured flange on its upper side, and a spring-catch projecting through the flange-aperture, of a dome to pass over the said flange and having a groove on its inner side to engage the catch and a recess in its lower edge intersecting the groove; substantially as described.

2. In a push-button, the combination with the base provided with a raised apertured flange, and a curved spring within the flange and having its ends bent outwardly through the flange-aperture to form spring-catches, and the dome having an internal annular groove to engage the catches and a recess in its lower edge intersecting said annular groove; substantially as described.

3. In a push-button, the combination with the base provided with a raised annular flange having opposite pairs of apertures, and two opposed curved springs resting

against the inner wall of the said flange with their ends projecting through the apertures therein and formed as catches, of a dome fitting over the said flange and provided with an internal annular groove receiving said catches and a recess in its lower edge intersecting said groove; substantially as described.

In witness whereof we have set our hands in the presence of two subscribing witnesses.

EDGAR GODWIN HARCOURT.
MARSHALL BURNS LLOYD.

Witnesses:
LEWIS W. GOOLD,
WALTER H. E. BARTLAM.