L. W. BARNES.
Button.

No. 221,495. **Patented Nov. 11, 1879.**

Fig. 1.

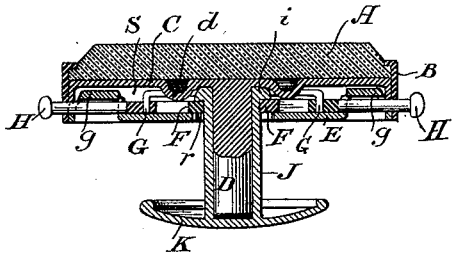


Fig. 2.

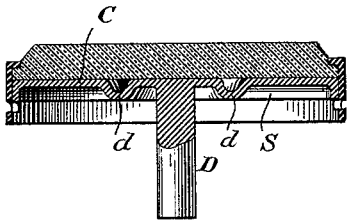


Fig. 3.

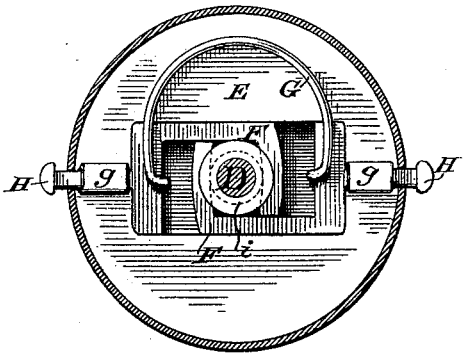


Fig. 4.

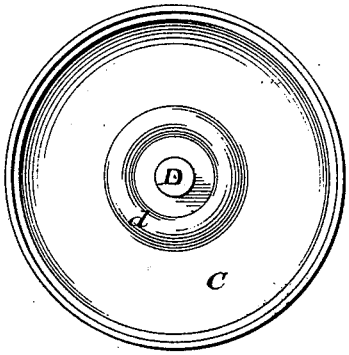


Fig. 5.

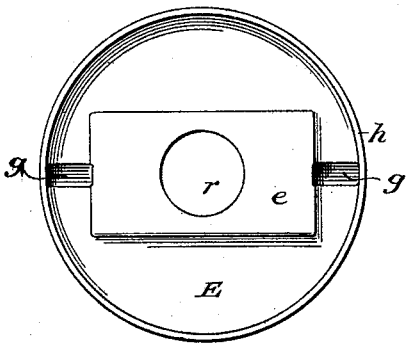
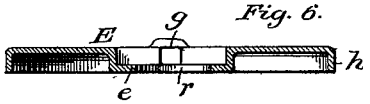


Fig. 6.



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UNITED STATES PATENT OFFICE.

LORING W. BARNES, OF ATTLEBOROUGH, MASSACHUSETTS.

IMPROVEMENT IN BUTTONS.

Specification forming part of Letters Patent No. **221,495**, dated November 11, 1879; application filed October 10, 1879.

To all whom it may concern:

Be it known that I, LORING W. BARNES, of Attleborough, in the county of Bristol and State of Massachusetts, have invented new and useful Improvements in Buttons with Detachable Shanks; and I do hereby declare that the following is a full and exact description of the same.

My invention relates, mainly, to the mode of constructing the button; and it consists in a back plate fashioned with a cell for the locking bolts, and guide-loops for the pushers, all in one piece, and in a front plate, to which the male post is secured, with a circular corrugation or rib concentric therewith to form a recess to receive the head of the tubular shank, and to keep the lock-bolts in place, and leave a free space above the same for the actuating-spring and for the reception of any lint or other obstructing matter, which, if it could not escape, would clog the lock-bolts and render the device inoperative.

That others may fully understand my invention I will particularly describe it, having reference to the accompanying drawings, wherein—

Figure 1 is a central vertical section of my button with parts all assembled. Fig. 2 is a similar section of the bezel and front. Fig. 3 is a front plan of the back plate. Fig. 4 is a plan of the front plate. Fig. 5 is a back plan of the back plate. Fig. 6 is a central transverse section of the back plate.

A is the setting or face of the button, and B is the bezel or rim of the same, which holds and supports the setting and the working parts.

C is the front plate, to the center of which the male stud or post D is securely attached. Behind the plate C is the back plate, E, the outer surface of which forms the visible back of the button, and between the plates C and E the working parts, consisting of the locks F, spring G, and pushers H H, are placed and confined. These moving parts must be placed within certain guides, which will direct their movements and prevent their escape, and I therefore construct the plate E with a depressed cell, *e*, across its center, as shown, particularly in Figs. 5 and 6, and I also, beyond the ends of said cell, form two raised loops, *g g*, beneath which the pushers are placed, and thereby the locks are kept down in place and position at one end. The plate E has a central orifice, *r*, through which the female post enters, and it may also be provided with a peripheral flange, *h*, whereby it may be more securely fastened within the bezel B. This latter is not a necessity, however.

The plate C is provided with a circular rib or corrugation, *d*, concentric with the post D, and the space between said rib and said post forms a cell or recess, within which the head *i* of the female post or shank J is housed when the separable parts of the button are brought together, and the elevation of said rib is such that it rests contiguous to the upper surfaces of the locks F F, and confines and keeps them in place at their inner ends.

The locking ends of the parts F are fashioned to embrace the female post J behind the head *i*, so that when said post is locked in place the parts F have an extended bearing-surface on said head *i*, and this tends to security and durability.

The female post J is fitted to slide over the post D, and the head *i* is beveled on its outer or front face, so as to enter between and force the locks F apart easily. At its outer end the post J is provided with the usual shoe, K.

The wire horseshoe-spring G, having its end bent over and hooked behind the edges of the lock-bolt heads, forces the locking ends of said bolts constantly toward the center and into engagement with the head *i* whenever the latter is presented.

Each of the locks F, with its pusher H, is cut with die and punch from a plate of metal, and forms but a single piece. They are likewise duplicates of each other.

It will be observed that each of the above-described parts, aside from those which are exterior and ornamental, is the product of a machine, and, excepting the necessary soldering about the posts D and J, no manual labor is required to prepare these parts for their final assemblage in the button.

The plates C and E are each struck up complete in a die, and, if desired, may be secured in place with the working parts without solder by turning the back edge of the bezel inward over the edge of the flange *h*.

Attention is also called to the fact that while the lock-bolts F are securely confined in their cell, there is still an open space, S, behind them

between the plates C E, the space occupied in part by the spring G, and into this space any lint or other obstructing matter which finds its way into the cell E may pass and thus be prevented from obstructing the free working of locks F.

Having described my invention, what I claim as new is—

1. The back plate, E, constructed in one piece with the depressed cell *e*, and elevated loops *g g*, combined with the locking-bolts F, substantially as set forth.

2. The lock-bolts and pushers, constructed as described, combined with a plate, E, constructed with a depressed cell, *e*, to receive said lock-bolts, and elevated loops *g* to receive said pushers and confine the same, and the plate C, with the circular rib or corrugation *d*, whereby said locks are confined at their inner ends, substantially as set forth.

3. A button with detachable shank and spring-lock for the same, constructed with two plates, C and E, and suitable guides for the locks F F, said plates being separated, as shown, to leave a space, S, between them in free communication with the space occupied by said locks, for the purpose set forth.

LORING W. BARNES.

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