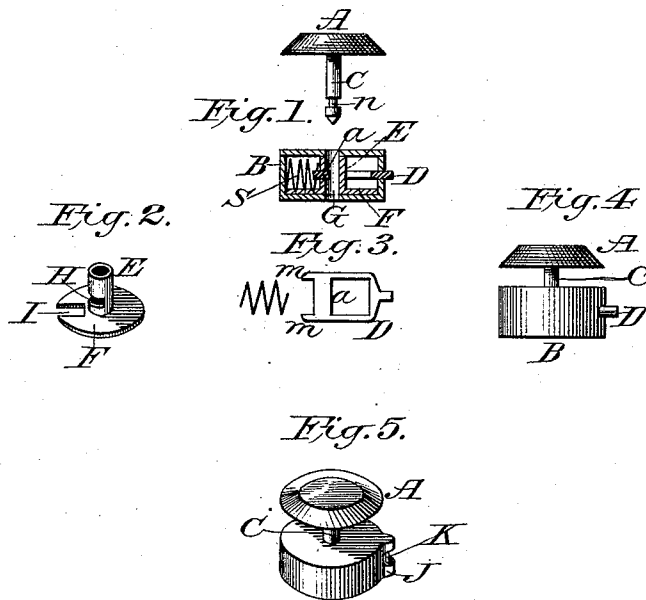


F. E. WILLIAMS.
Button, Stud, &c.

No. 236,200.

Patented Jan. 4, 1881.



Witnesses:
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UNITED STATES PATENT OFFICE.

FRANK E. WILLIAMS, OF BELVIDERE, ILLINOIS.

BUTTON, STUD, &c.

SPECIFICATION forming part of Letters Patent No. 236,200, dated January 4, 1881.

Application filed November 6, 1879.

To all whom it may concern:

Be it known that I, FRANK E. WILLIAMS, of Belvidere, county of Boone, and State of Illinois, have invented a certain new and useful Improvement in Buttons, Studs, &c., of which the following is a specification.

This invention relates to that class of buttons, studs, &c., which consist of two parts held together by a spring-fastening.

In the accompanying drawings, in which similar letters of reference indicate like parts, Figure 1 is a vertical section of my improved button. Figs. 2 and 3 are detail views. Fig. 4 shows the completed button, and Fig. 5 shows a modification of the button.

In Fig. 1, A is the outer disk of a button or stud, to which is affixed the solid post C, pointed at its lower end, and having near its lower end the circumferential groove *n*, which engages with the inner end of pusher D, as will be described.

The construction of the lower hollow disk, B, will be seen by reference to Figs. 1, 2, and 3. In the center of the bottom of disk B is the hole G, of sufficient size to admit the post C of outer disk, A. The hollow post E, the inside diameter of which is the same as that of hole G, has a slot, H, made in one side, at the center, (see Fig. 2,) into which fits the inner end of pusher D, Fig. 3, thus forming catch *a*, Fig. 1, to engage with groove *n* in post C. In order that the hollow post E can be readily placed and soldered exactly over hole G in the disk B, it is soldered into a hole in the center of plate F, which plate fits closely into disk B. The hollow post E is soldered on plate F with slot H toward the notch I, which notch is made in plate F to give more room for the spiral spring S. The plate F, carrying post E, being soldered in place in disk B, the pusher D is inserted, the inner end sliding into slot H, forming the catch *a* in post E, and the other end extending through the side of the disk B far enough to be operated by the finger. The spiral spring S is inserted between the inside of disk B and the catch end of pusher D, thus holding the pusher in place by spring-pressure. The spring S is held in place by the sides of the disk and the lugs *m* on the end of pusher D. The cover to the

disk B, which is also provided with a hole in its center of same diameter as the hole G, and the inside of post E is soldered or otherwise fastened to the top of disk B. It will thus be seen that the catch *a* is in the center of the disk B, and the opening for the post C extending entirely through the disk B, the post C can be introduced and fastened into either side at option. The hollow post E is of sufficient depth to furnish a stiff bearing for the post C.

In a stud the solid post C can be made very small, and, being pointed, can be easily pushed through the small perforations now usually made in shirt-bosoms.

As the inner disk, B, while being adjusted, is under the shirt-bosom and out of sight, the convenience of post C fastening into it on either side will readily be seen.

In order, when desired, to reduce the liability of the inner disk, B, becoming accidentally detached in wearing by pressure of the clothing on pusher D, I have devised a protecting cover for the end of the pusher, so that it can only be operated by the finger-nail. This is shown in Fig. 5. A small rounded hollow projection, J, is made on the side of disk B, across which projection is made a suitable aperture, K, for introduction of the finger-nail to operate the pusher. The outer end of pusher D is bent or shaped to extend into and fill this projection or cover, and is thus protected from all pressure except that of the finger-nail through slit K.

I am aware that buttons have been made with a nail-slit in the side to operate the pusher, and I do not broadly claim such as my invention; but the projecting cover I claim as new and practical.

This improvement is adapted to otherspring-fastenings operated by pushers, such as brace-lets, &c.

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

1. In a button or similar spring-fastening, the combination of the hollow disk B and the projecting pusher cover or protector J, having nail-slit K, as and for the purpose specified.

2. In a button or stud, the combination of

the outer disk, A, having grooved post C, with an inner hollow disk, B, provided with a pusher-bearing device open on both sides to receive the post C, all substantially as described.

- 5 3. The combination, with the inner disk, B, of the hollow post E, slotted as described, with the notched plate F, pusher D, and spring

S, all substantially as and for the purposes herein set forth.

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Witnesses:

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