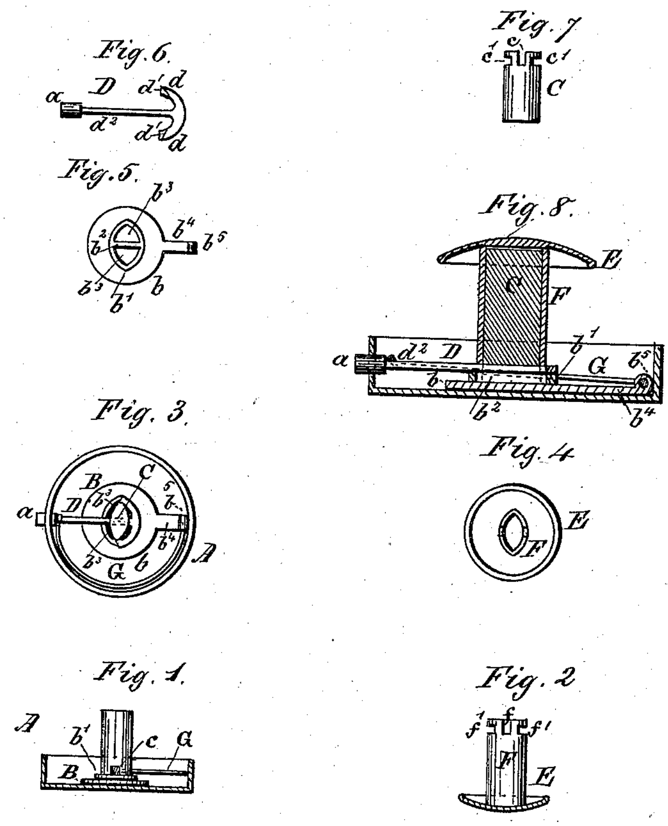
F. P. BARNEY.

Buttons and Studs.

No. 217,318. Patented July 8, 1879.



Witnesses

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FRANK P. BARNEY, OF NORTON, MASSACHUSETTS.

IMPROVEMENT IN BUTTONS AND STUDS.

Specification forming part of Letters Patent No. **217,318**, dated July 8, 1879; application filed June 5, 1879.

To all whom it may concern:

Be it known that I, FRANK P. BARNEY, of Norton, in the county of Bristol and State of Massachusetts, have invented new and useful Improvements in Buttons and Studs, of which the following is a specification.

My invention relates to that class of buttons and studs formed of two parts detachably connected together; and consists in certain novel features of construction, as hereinafter described.

In the accompanying drawings, Figures 1 and 2 are elevations, partly in section, of the two parts or sections of the button, respectively. Figs. 3 and 4 are plan views of the same. Figs. 5, 6, and 7 are detail views; and Fig. 8 is a vertical transverse section of the button or stud complete, all drawn on an exaggerated scale.

Like letters of reference are employed in the above figures of drawings to indicate like parts wherever such may occur.

A represents the button-section proper, which may be made of any desired shape or configuration. B is what is technically termed a "patch," Fig. 5, and consists of a disk or base plate, *b*, having an offset, b^1, of a shape corresponding with that of the post, and is here shown as elliptic in cross-section, though it may be made of other shape. The offset is divided by a central transverse T-shaped bridge-piece, b^2, across the smaller diameter of the offset, forming two cavities or recesses, b^3, for the reception of the post C, which is also recessed in its upper face. The recess *c* of the post is, however, of greater depth than that of the cavities b^3, for a purpose which will be presently explained. When the post C is in position it straddles the bridge b^2, as shown, Fig. 5, and is soldered to the patch B in the recesses b^3 thereof. By means of this arrangement I provide a solid base for attaching the post to the button, and also provide a smooth raised surface, upon which slide the locking devices hereinafter described.

In the manufacture of buttons and studs, as heretofore practiced, the post is soldered or brazed directly to the button, from which it becomes readily detached, especially in buttons of this character, where the handling is rather rougher than with other buttons. The solid post C is further provided, at or near its upper end, and on opposite sides of the central recess, with two recesses, *c'*, one on each side. Their location relatively to the upper face of the offset of the patch is such that the upper edge of the recesses *c'* will be flush with said upper face when the post is attached to the patch, which, in turn, is soldered to the button A.

D is a locking lever or anchor, provided on its inner extremity with the fluke-shaped locking-arms *d*, whose inner extremities are beveled inwardly, as shown at d^1, Fig. 4, to permit of their being pushed out of the way by the stud-sleeve, as presently explained. The stem d^2 of the anchor D passes through the recess *c* of the post and lies upon the bridge b^2; and in order to effect this the said recess is of greater depth than that of the cavities or recesses b^3. In this manner the post C is also made to straddle the locking-anchor and serve as a guide for the latter in its movements to lock or unlock the two parts of the button. The outer end of the anchor-stem passes through the shell of the button A, and may be provided with a small push-knob, *a*.

The other section of the button is composed of the smaller head, E, and the hollow post or sleeve F, which fits onto the post C, and has, like it, a transverse central recess, *f*, and a recess, *f'*, in each of the opposite sides. The location of these recesses *ff'*, as well as their depth or width, coincides with those of the recesses of the post C. Thus, when the sleeve F of section E is slipped over the post C and pushed home, the anchor-locking arms are pushed out of the way by reason of their beveled faces, above alluded to, and the lower end of the sleeve will rest within the cavities of the offset, and, like the post, straddle the anchor-arm and bridge-piece, and as soon as the sleeve is in position the locking-arms of anchor automatically enter the recesses *f'* and *c'* of the sleeve F and post C, respectively, under the impulse of a spring, G, one end of which is attached to a sleeve-bearing, b^5, formed on the outer end of an arm, b^4, of the patch B, the other end of said spring abutting against the shoulder of the enlarged or push piece of the anchor-stem.

It will thus be seen that the patch B per-

forms several very important functions: First, it provides a solid base for the post and facilitates the attachment of the latter to the button; secondly, it provides a raised and perfectly flat surface, upon which the locking devices slide, whether the inner surface of the button be flat or concave, as in the latter case it would simply require an increased thickness in the disk of the patch to fill out the concavity; thirdly, it affords a solid bearing for the sleeve F, and, finally, a bearing for one end of the spring G.

In practice the patch B is made in one piece, struck from sheet metal by means of suitable dies.

Having now described my invention, what I claim is—

1. In a two-part button or stud, the combination, with the section A and a solid post, C, of a patch, B, constructed substantially as described, and adapted to receive the post, as set forth.

2. In a two-part button or stud, the combination, with the section A, post C, and patch B, of the section E and its hollow post F, said patch being adapted to receive the posts C F, substantially as described, for the purpose specified.

3. In a two-part button or stud, the combination, with the section A and its patch or re-enforce B, having an arm or extension, b^4, provided with a bearing, of the spring G and the locking lever or anchor D, substantially as and for the purpose specified.

4. In a two-part button or stud, the section A, patch or re-enforce B, having an offset, b^1, provided with recesses on opposite sides of a transverse or T-shaped bridge, b^2, the post C, having recess c, and adapted to straddle the bridge of the offset, and provided with recesses c' in its opposite sides, the section E and its hollow post F, having recesses $f f'$, and adapted to fit over the post C and straddle the bridge of the patch, and the locking-anchor D, all combined and operating substantially as described, for the purpose specified.

5. In a two-part button or stud, the section A, patch B, recessed post C, section E, hollow recessed post F, the locking-anchor D, and spring G, all combined, constructed, and operating substantially as described, for the purpose specified.

In witness that I claim the foregoing I have hereunto set my hand this 4th day of June, 1879.

FRANK P. BARNEY.

Witnesses:
CHARLES H. ATWOOD,
I. S. WILMARTH.