

W. H. BLANEY.  
Buttons and Studs.

No. 218,157.

Patented Aug. 5, 1879.

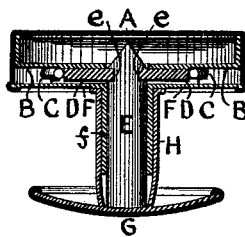


FIG. 1.

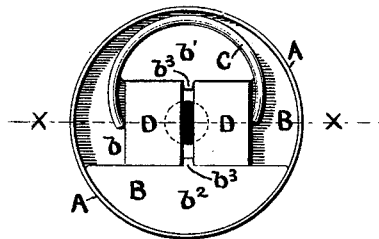


FIG. 2.

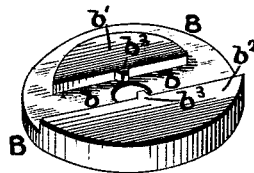


FIG. 3.

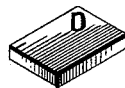


FIG. 4.

WITNESSES.

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FIG. 5.

INVENTOR.

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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN BUTTONS AND STUDS.

Specification forming part of Letters Patent No. **218,157**, dated August 5, 1879; application filed March 29, 1879.

*To all whom it may concern:*

Be it known that I, WILLIAM H. BLANEY, of Attleborough, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Buttons and Studs; and I do hereby declare that the following specification, taken in connection with the accompanying drawings, forming a part of the same, is a full, clear, and exact description thereof.

My invention relates to that class of buttons and studs which are made in two separable parts for convenience of application and removal, one of said parts being composed of a shoe and post, and the other of a head provided with devices which, by the force of a spring, engage the post and lock the parts against separation until said devices are manipulated.

My invention is an improvement on that variety of the class mentioned which employs locking devices engaging a shoulder at the upper end of the post; and my improvements consist, first, in confining the locking devices and actuating-spring entirely within the head of the button or stud, and supporting said devices and spring upon a "cup," which guides the locking-plates, accommodates the spring, and holds it in proper position; second, in simplifying the construction of the locking devices by dispensing with "pushes," which extend beyond the head of the button or stud; and, third, in so forming the upper end of the post that it will operate the locking-plates when the parts of the button or stud are being combined or separated.

Referring to the drawings, Figure 1 represents a collar-button of my improved construction in central vertical section. Fig. 2 shows the locking devices, spring, and cup in position in the shell forming the front of the button-head. Fig. 3 represents the cup in perspective. Fig. 4 shows one of the locking-plates in perspective; and Fig. 5 represents, in perspective, the upper end of the post.

As shown in Figs. 1 and 2, A denotes the front of the button-head. Within this front is placed the cup B, the office of which is to support and guide the locking-plates and the operating-spring, hereinafter described. The upper surface of this cup is indented by a di-

ametrical groove, *b*, which is flanked on either side by the relatively elevated portions *b'* *b''*. The surface of the cup which surrounds the curved boundary of the portion *b'* is depressed to the plane occupied by the groove *b*, and said curved boundary is located at a distance from the edge of the cup to give room for the spring C, which encircles said portion. The ends of this spring engage the edges of a pair of sliding locking-plates, D, which are located in and are guided by the groove *b*, the force of said spring causing the plates to bear against projections *b''* on the portions *b'* *b''*. These projections serve to separate the plates D, as shown in Fig. 2, in order that the end of the post E may enter between said plates, the cup B being perforated centrally to allow of the entrance of said post into the head of the button.

The cup B, spring C, and plates D are confined in the head of the button by a cap-plate, F, which is secured to the front, A, by swaging or burnishing the rim of said front over upon the edge of the cap-plate, as shown in Fig. 1. For the purpose of guiding the post into contact with the plates D, and supporting the button-head in a plane at right angles to the axis of the post when the parts are combined, the cap-plate is provided with a tubular shank, *f*, which surrounds the post, as shown in Fig. 1.

The post E is combined with the shoe G by attaching the post to the disk G and swaging the part G upon said disk; or the shoe may be composed of a single member, G, and the post be soldered thereto, as usual. The upper or free end of the post is wedge-shaped, and is provided with two parallel grooves, *e*, oppositely located, as shown in Figs. 1 and 5. The office of the wedge-shaped end is to separate the locking-plates D when the post is inserted, and the office of the grooves *e* is to engage the said plates, as shown in Fig. 1, and secure the parts of the button together.

The combination of the parts is effected as follows: The post is inserted in the shank *f* until its end comes in contact with the locking-plates. Pressure and rotation are now applied to the parts, causing the wedge-shaped end of the post to enter between the plates, to assume a lever function, and to separate said plates, the grooves *e* passing into the plane occupied by the plates D, which enter the grooves and

secure the parts to each other. In separating the parts pressure is applied in an opposite direction, and when said parts are rotated the lever function is assumed by that part of the post lying between the grooves *e*, which part separates the plates *D* and allows the post to be withdrawn.

A button constructed as above described is adapted to be conveniently applied, provided the shank *f* is passed through the linen first, and the post and shoe then combined with the head. It is customary, however, to insert the post first, and afterward combine the head therewith. In order, therefore, that the linen shall not obstruct the combination of the parts in this order, the post *E* may be surrounded by a sleeve, *H*, which construction allows the parts to be readily combined in said order.

My improvements are equally adapted to sleeve-buttons, collar-buttons, and studs; and in place of the locking devices being located in the head, they may be combined with the shoe portion, and the post attached to the head, if desired.

Having described my invention, what I

claim, and desire to secure by Letters Patent, is—

1. In a head or shoe of a separable button or stud, the combination of the front, *A*, inclosed cup *B*, constructed substantially as described, the spring *C*, locking-plates *D*, and cap-plate *F*, all arranged and adapted to co-operate with the post *E*, substantially as set forth.

2. In a separable button or stud, the combination, with a head provided with the cup *B*, spring *C*, and locking-plates *D*, of a shoe and a post, *E*, having a wedge-shaped end and oppositely-located grooves *e*, substantially as described and shown.

3. In a separable button or stud, the combination, with a head provided with locking devices and having a tubular shank, *f*, of a post, a shoe, and a sleeve, *H*, substantially as and for the purposes specified.

WILLIAM H. BLANEY.

Witnesses:

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WM. A. CADY.