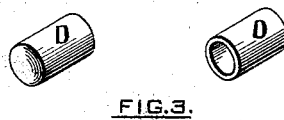
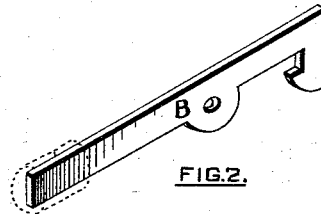
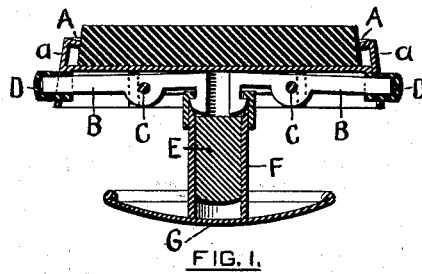


B. J. ANGELL.  
Buttons and Studs.

No. 216,930.

Patented July 1, 1879.



WITNESSES.

*Edson Salisbury Jones.*  
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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN BUTTONS AND STUDS.

Specification forming part of Letters Patent No. **216,930**, dated July 1, 1879; application filed May 7, 1879.

*To all whom it may concern:*

Be it known that I, BENJAMIN J. ANGELL, of Attleborough, in the county of Bristol and State of Massachusetts, have invented a certain new and useful Improvement 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 composed mainly of two separable parts, which parts are held in combination by spring-fastening devices, the said devices being operated by a pusher or pushers extending beyond the rim of the head of the button, so that said pusher or pushers can be pressed by the fingers and the locking devices be operated when the parts of the button are to be separated.

My improvement consists in combining a hollow cylindrical cap having a closed end with the outer end of the pusher, which cap incloses the outer portion of the pusher, which extends beyond the rim of the button and enlarges the area of the pusher end in a form desirable for manipulation by the fingers.

My improvement is applicable to pushers which pass through the rim of the button-head, also to those which pass outwardly below the rim, and to a pusher having a rectangular cross-section, as well as to one whose cross-section is bounded by a circle; but, for the purpose of illustrating my invention, I have chosen a sleeve-button provided with two pushers, rectangular in cross-section, which pass through the rim of the button-head, and each of which has a locking device on its inner end, and a button of that variety in which the width of the pusher lies in a plane occupied by the longitudinal axis of the post. The combined pusher and catch in this variety of buttons is usually punched from sheet metal, and in order that its outer end may have an area sufficient to prevent it from unduly indenting the fingers it has been made, before my invention, of stock thicker and wider than was necessary for strength. Further, the rim of the button-head through which these pushers pass has had to be supplied with rectangular perforations or slots, and the outer por-

tions of the pushers have had to be filed or otherwise dressed to remove the "burr" left on one side by the punching operation, in order that said portions should fit the holes in the rim, and so that the ends would not injure the fingers.

The objects, therefore, of my invention are, by capping the ends of the pushers, as described, to reduce the amount of stock in said pushers and give to the pusher ends a desirable amount and shape of area to produce the perforations in the rim of the button-head if the pushers pass through said rim with a drill, (which can be more cheaply done than by methods heretofore employed and necessitated in this variety of buttons,) and also to give to the pusher ends a more finished and desirable appearance.

My improvement possesses a further advantage in that the pushers proper can be made of cheap or base metal, and the cap be of superior metal or be plated therewith, so that a higher grade article than that in which a base metal pusher end comes to view can be produced without increased expense by my improved construction.

Referring to the drawings, Figure 1 represents a sleeve-button embodying my improvement, in vertical section. Fig. 2 shows a pusher in perspective; and Fig. 3 represents, in perspective, two views of the cap.

A denotes the head of the button, and *a* the rim thereof. B B are the pushers, having catches upon their inner ends, which act as locking devices, and C is the actuating-spring. D D are the hollow cylindrical caps, which are preferably drawn up from a disk of sheet metal and formed into cylindrical tubes, with one end closed, in a manner well known in the art. These caps inclose the outer ends of the pushers, and are secured thereto by solder, or in any preferred manner. E is the stem attached to the button-head. F is the post secured to the shoe, and G is the shoe.

As shown in Fig. 1, the pushers B extend radially outward toward the edge of the button-head, and their outer ends are inclosed within the caps D D, the said caps forming a bearing for the pushers in the rim *a*, which has holes, of a diameter equal to that of the caps, drilled at opposite points.

As above specified, my improvement is equally applicable to pushers which pass outwardly below the rim of the button-head. It is also applicable to pushers which form no part of the locking devices, but simply connect with them, and also to pushers which are of one and the same piece of metal as the locking devices and actuating-spring.

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

In a separable button or stud which is provided with a locking device for engaging the

post, with an actuating-spring and a pusher for operating the locking device, the combination, with the pusher, of a hollow cylindrical cap having a closed end, which cap surrounds and incloses the outer end of the pusher, enlarges the area of the pusher end, and projects outwardly beyond the edge of the button-head, substantially as herein set forth.

BENJAMIN J. ANGELL.

Witnesses:

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