

(Model.)

I. N. CAPRON & F. H. SADLER.
Detachable Buttons.

No. 230,402.

Patented July 27, 1880.

FIG. 1.

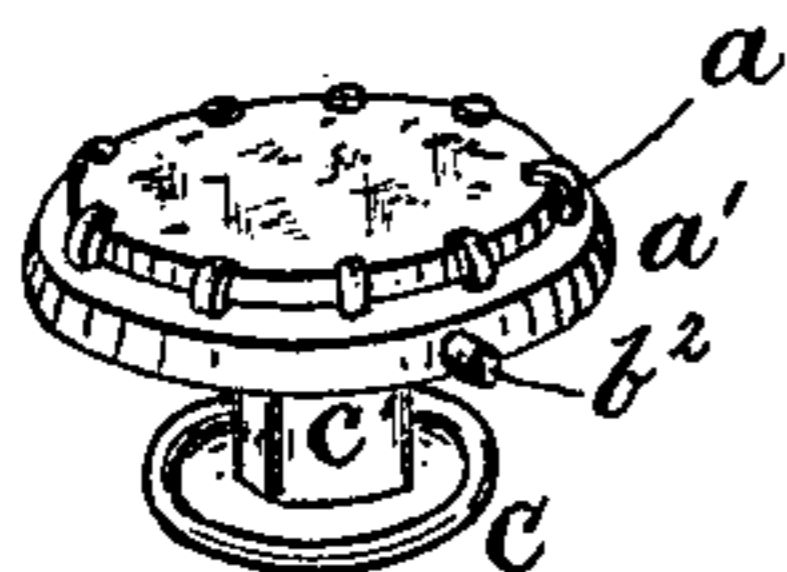


FIG. 2.

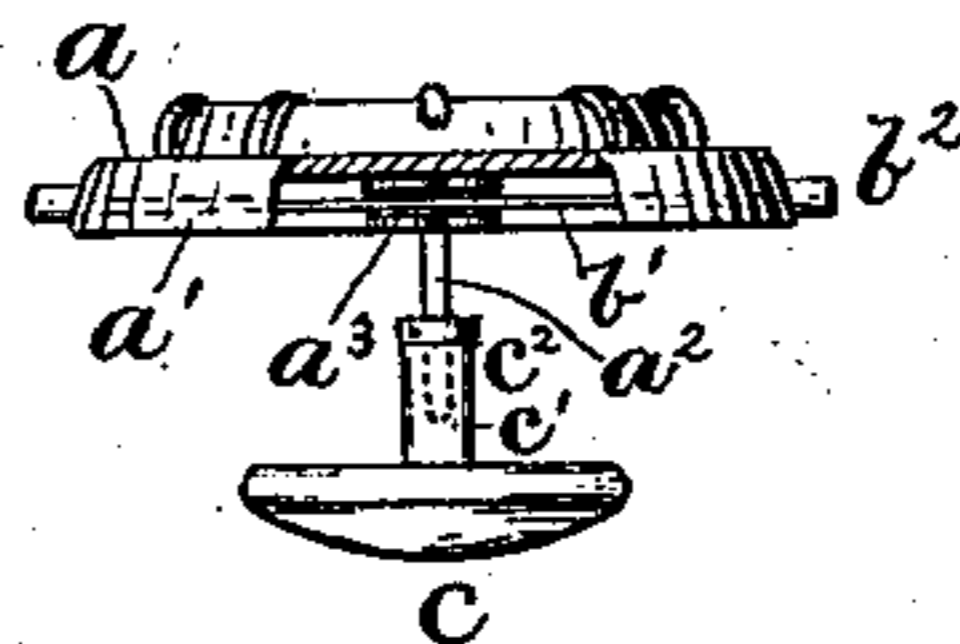


FIG. 3.

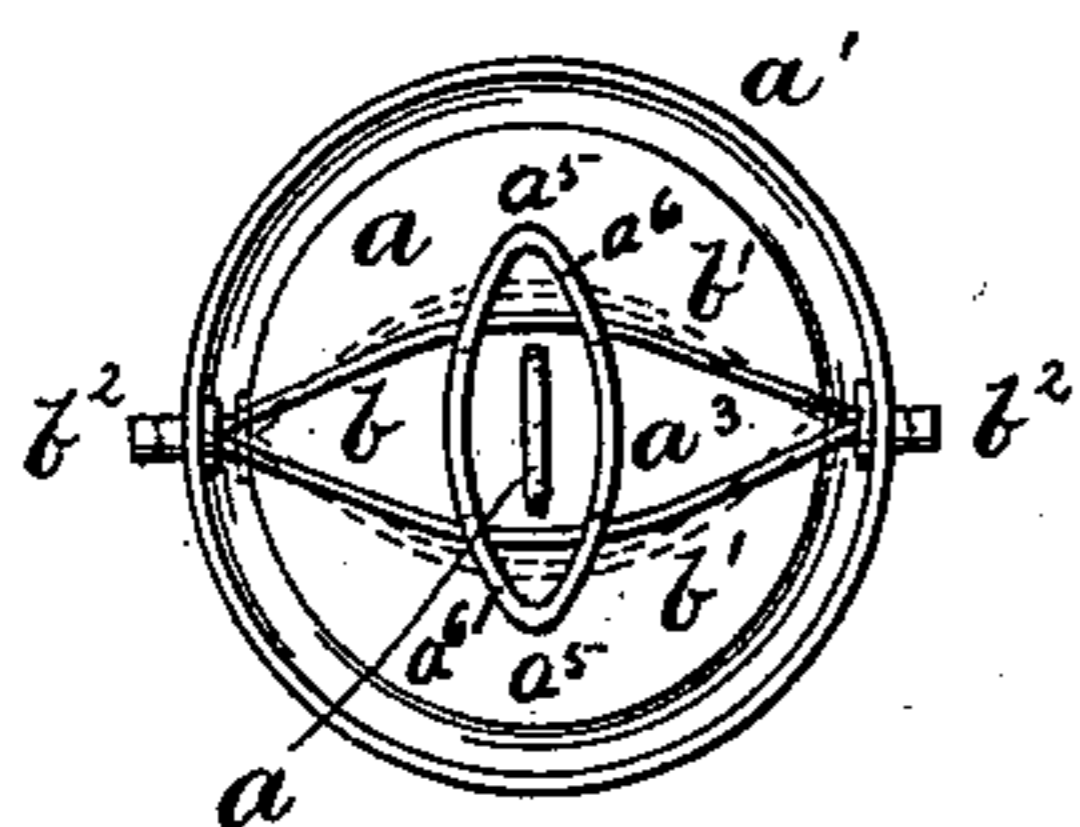


FIG. 4.

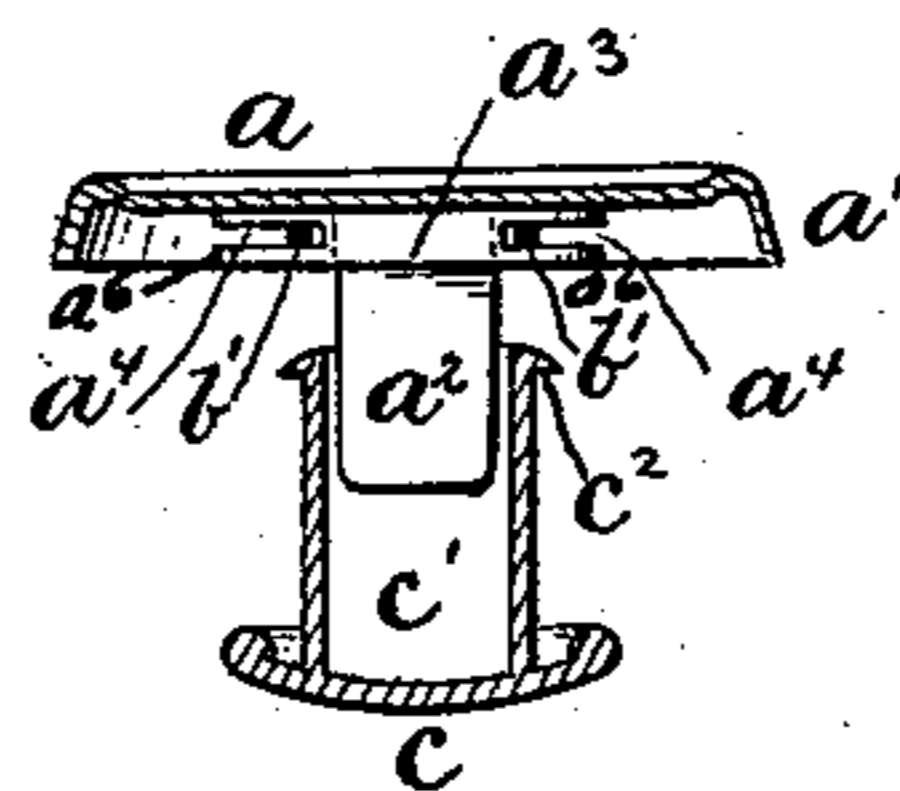
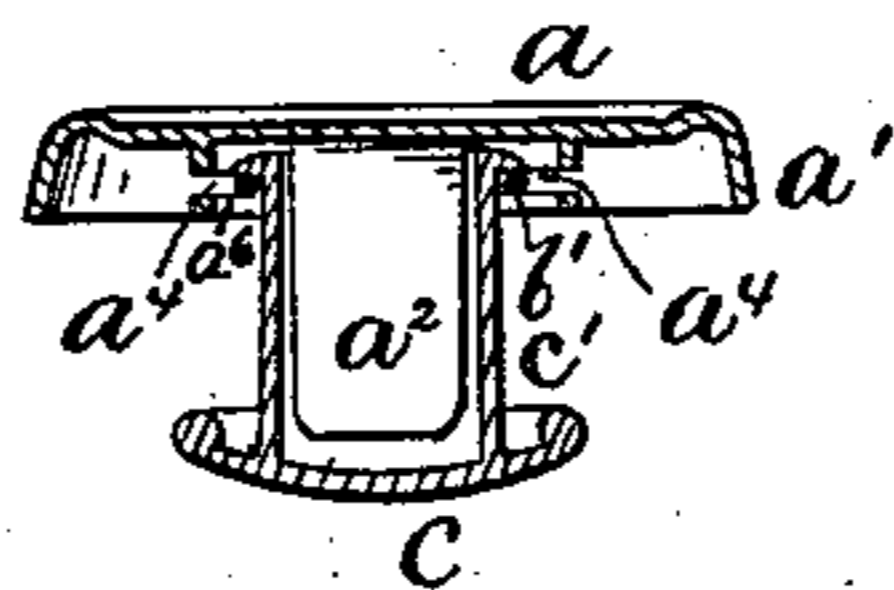


FIG. 5.



Witnesses:

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Inventor

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UNITED STATES PATENT OFFICE.

ISAAC N. CAPRON AND FRANK H. SADLER, OF NORTH ATTLEBOROUGH,
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DETACHABLE BUTTON.

SPECIFICATION forming part of Letters Patent No. 230,402, dated July 27, 1880.

Application filed June 11, 1880. (Model.)

To all whom it may concern:

Be it known that we, ISAAC N. CAPRON and FRANK H. SADLER, citizens of the United States, resident at North Attleborough, in the county of Bristol and State of Massachusetts, have invented certain new and useful Improvements in Detachable Buttons; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to that class of buttons, studs, cuff-buttons, and other articles of jewelry made of two separable parts, so that they can be easily applied to or removed from the clothing.

In the drawings, Figure 1 is a perspective of a cuff-button having our invention therein. Fig. 2 is a side elevation of the same, having a portion of the rim broken away. Fig. 3 is a view of the under side of the disk or plate to which the ornamental device or figure is attached, and Figs. 4 and 5 are vertical sections.

a is a plate or disk, to which the ornamental figure of the button or other article is applied, and it is furnished with a rim, a' , bent downward, as shown. Projecting from the under side is the stem a^2 , made flat by preference, and surrounding this stem and slightly removed therefrom is a projecting flange, a^3 . The space between the stem and the flange is sufficient to admit the flanged upper end of the standard, hereinafter described. The flange a^3 is made of oval shape, as shown, so as to provide extended points a^5 , in which are cut the horizontal slots or guideways a^4 , in which is held the side rods or springs of the elliptical spring-catch b .

The spring-catch b is composed of the two flexible rods or bars b' b' , united at their ends and bent outward from each other at their centers, so as to form an elliptical spring, the bars of which are placed in the slots a^4 in the opposite ends of the flange a^3 and on opposite sides of the stem a^2 . On the ends of the

spring b suitable heads or thumb-pieces b^2 b^2 are formed. The thumb-pieces pass through openings in the rim a' , so that they can be easily pressed by the thumb and finger when it is desired to separate the parts of the button or stud.

By pressing on the head-pieces b^2 b^2 the bars b' b' will spring away from each other at their centers. The bars b' b' are held securely in place by the guards a^6 , formed by the slots a^4 , so that they cannot move except horizontally and outward from each other, as indicated in dotted lines in Fig. 3.

c is the base or inner disk, to which is attached the hollow standard c' , which passes outward through the button-hole in the garment. The standard c' slides onto stem a^2 and is held by the spring b .

The inner end of the hollow standard c' is provided with an outwardly-projecting lip, c^2 , which will prevent it from falling out of the button-hole when the disk or plate a is separated from the base c . The flange also furnishes the necessary shoulder, behind which the spring b drops and locks the two parts together. The flange is slightly beveled downward at the points where it comes in contact with the bars b' b' , so that the latter will readily slip over and fasten behind it when the disk and base are being put together. The disk a and standard c' are shown locked together in Fig. 5.

The stem a^2 could be dispensed with in articles of jewelry on which there is no strain when being worn. The spring-rods b' b' , by reason of their being held within the slots a^4 so that they cannot bend outward from the plate a , form a strong and substantial fastening.

In cuff-buttons and similar articles, on which there is a lateral strain when used, the stem a^2 gives greater strength and security against accident.

The depressed rim a' of the disk or plate a gives a substantial support to the ends of the spring b , the thumb-pieces of which are held in suitable holes or bearings. In articles where such rim is not desired or cannot be provided, the ends or thumb-pieces may be left

unsupported, and small stops or loops can be fixed on the under side of the disk to prevent the spring sliding endwise.

It is not necessary to the efficient working of our device that the flange a^3 be made to extend entirely around the stem a^2 . It will be sufficient if there be two flanges at the ends large enough to contain the requisite length of slots a^4 .

The necessary supports or guards a^6 may be provided by means of a wire of suitable form secured to the plate in the place of the extended points a^5 . We prefer to make the flange as hereinbefore described.

If desired, the lip c^2 on the standard c' may be made to extend laterally outward till it will touch the sides of the flange a^3 , and thus make an additional brace for the said standard.

The operation of the device will be readily understood by reference to the drawings and the description hereinbefore given.

What we claim as our invention is—

1. In a separable button, the spring-bars b' b' , united together at both ends, forming thumb-pieces or pushers $b^2 b^2$, and bent outward from each other at their centers, and arranged to operate substantially as and for the purpose set forth.

2. The combination, with the plate a , having the central bearing-flange, a^3 , furnished with slots a^4 in its opposite ends, and the standards c' , provided with lip c^2 , of the elliptical spring b , having its rods b' placed in the slots a^4 and arranged to operate substantially as set forth.

3. The combination, with the plate a , formed with a depressed rim, a' , provided with bearings to support the ends of the spring, and having a central stem, a^2 , and oval flange a^3 , surrounding the stem a^2 and furnished with slots a^4 , and the base c , with its hollow standard c' , provided with lip c^2 , beveled downward, of the elliptical spring b , having its ends provided with thumb-pieces and supported in bearings in rim a' , and having its rods b' held in slots a^4 in flange a^3 on opposite sides of the stem a^2 , substantially as shown and described, and for the purpose specified.

In testimony that we claim the foregoing we have hereunto set our hands and seals this 3d day of June, 1880.

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FRANK H. SADLER. [L. S.]

Witnesses:

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EDWARD A. IRVINE.