

(No Model.)

C. RADCLIFFE.
BUTTON.

No. 417,939.

Patented Dec. 24, 1889.

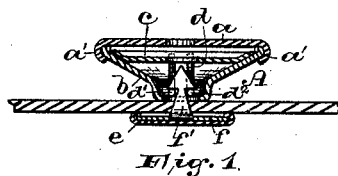


Fig. 1.

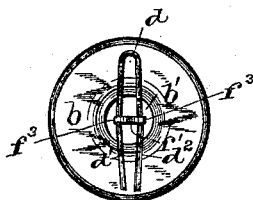


Fig. 2.

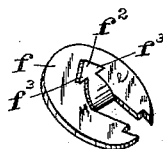


Fig. 3.



Fig. 4.



Fig. 5.

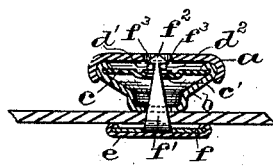


Fig. 6.



Fig. 7.

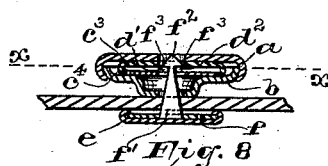


Fig. 8.

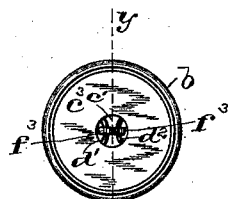


Fig. 9.



Fig. 10.



Fig. 11.



Fig. 12.

WITNESSES:

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UNITED STATES PATENT OFFICE.

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BUTTON.

SPECIFICATION forming part of Letters Patent No. 417,939, dated December 24, 1889.

Application filed March 18, 1889. Serial No. 303,759. (No model.)

To all whom it may concern:

Be it known that I, CHARLES RADCLIFFE, a citizen of the United States, residing at Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Buttons; and I 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 improvements in that class of buttons adapted to be attached or secured to the material without sewing the same thereto by means of thread and a needle; and the invention is further designed to provide a button simple in construction and of great utility and strength, possessing great advantages over buttons of the same class as heretofore made.

The object of the invention is to provide a button consisting of an upper shell or face-plate, a hub or back-plate, and a shoe having a post thereon, said shoe and post being separate from the shell and hub or face-plate, thereby allowing the post on the shoe to be readily forced through the material and inserted through a perforation in the hub or back-plate and engage with a spring-bar arranged within the shell and the back-plate and across, preferably diametrically, the opening in the hub or back-plate, to cause the holding or locking engagement of said post with the spring-bar when in wearing position on the material.

In the drawings herewith accompanying, in which similar letters of reference are employed to indicate corresponding parts in each of the several views, Figure 1 is a vertical section of my improved button, showing the post on the shoe in locked engagement with the spring across the hub or back-plate when the parts have been put together and are secured to the material. Fig. 2 is a plan view of the same with the face-plate removed, and Fig. 3 is a perspective view of the post. Fig. 4 is a side elevation of the spring used in connection with the parts of the button shown in Fig. 1. Fig. 5 is a view similar to Fig. 1, showing a modified form of construction, in

which a straight spring is used and arranged on the top of a plate within the hub or back-plate. Fig. 6 is a plan view of Fig. 5 with the face-plate removed, and Fig. 7 is a sectional view of the plate employed in Fig. 5. Fig. 8 is still another form of construction, in which the spring-bar is placed between two disks or plates arranged within the button. Fig. 9 is a plan view of the same; and Fig. 10 is a section through line *x*, Fig. 8, showing the arrangement of the spring within the button. Fig. 11 is a section through line *y*, Fig. 9, of the lower plate on which the spring is arranged. Fig. 12 is a modified form of post provided with means for securing the same to the spring-bar.

As indicated in the above-described views, A represents the button, which is composed of the face-plate or upper shell *a*, secured to the hub or back-plate *b* by the overlapping edges *a'*, and having a plate or disk *c* arranged within the hub or back-plate, by means of which the cross-bar *d*, which is preferably of spring-wire, is held and secured across the perforation *b'* in the bottom of the back-plate.

Integral with the shoe *e* or separate therefrom, if desirable, is formed or struck up from a plate *f* at a right angle thereto a post *f'*, as shown more clearly in Figs. 1 and 3, which projects up through the perforation *b'* in the hub or back-plate and into the button, said post having a pointed or arrow-shaped head *f²*, provided with projections or prongs *f³ f³* on each side thereof, which pass up between the wires or arms *d' d²* of the spring-bar *d* and engage with said wires or arms, thereby firmly locking with the same and securing the button to the material.

When the buttons are packed ready for use, the spring-bar *d* is arranged within the hub or back-plate *b* across the perforation *b'*, as indicated in Fig. 2, and the plate *c* and the face-plate *a* are clamped down upon the back-plate. The post *f'* on the shoe *e* or on the plate *f* is separate from the top part of the button.

To secure the above-described button to the fabric, the shoe *e*, with the arrow-headed post *f'* thereon, is forced through the material and inserted through the perforation or slot *b'* in the hub or back-plate. The button

and the shoe are then pressed firmly between the thumb and fingers, and the head f^2 on the post passes between the arms of the spring-bar d and the prongs f^3 on the post f' and are caused to engage with and catch over the arms d' and d^2 of the spring d , as has been described.

As illustrated in Fig. 1, the spring or bar d is secured across the opening b' in the hub or back-plate by means of a disk or plate c , which is firmly secured between the upper shell or face-plate and the back-plate, and thereby prevents the spring d from being accidentally forced out of position.

The arrow-head f^2 and the prongs f^3 on the post f' may project through a perforation c' in the disk c , if desirable, and the spring-bar d , arranged across the top of said disk, as will be understood from Figs. 4 and 5. In order to prevent the spring-bar d from being forced out of place, the disk c may be provided with projections c^2 , struck up on said plate, which extend up between the wires d' d^2 , and thereby hold the spring-bar in position, as is clearly illustrated in Fig. 6.

In Figs. 8, 9, and 10 is shown another form of construction, in which the spring is arranged between the plate c and an upper plate or disk c' , which may be provided with overlapping edges c^4 , to firmly secure the two plates together and to hold the spring-bar d in position therebetween.

The plate used in connection with the button shown in Fig. 8 is provided with a depression c^5 , of any desirable shape, and has raised portions c^6 to correspond therewith, and the spring-bar d is also shaped to conform with the depression, in order that the bar may lie therein and across the perforation c' in the plate c , to enable the prongs f^2 to force the wires or arms d' d^2 apart when the button and the shoe are put together on the material and to allow the prongs to engage with the wire arms of the spring-bar and firmly hold the parts of the button together.

As shown in Fig. 12, in lieu of a flat post, I may employ a post which is round or rectangular in cross-section, provided with a groove or grooves therein adapted to engage with the wire arms of the spring-bar in the hub or back-plate. Said post is pointed on the top, in order that the same may readily be forced through the material. It will be understood that the shape and size of the perforation b' in the back-plate must necessarily conform with the cross-section of the post.

I am aware that the form and shape of the spring-bar and the disk c may be varied, and therefore I do not wish to limit myself to the exact forms shown herein.

The improved button herein described has this great advantage, that the wire arms of the spring-bar are constantly pressing against the post f' beneath the prongs on the same, thereby preventing any possibility of the parts of the button from being pulled apart, no matter how great the strain applied thereon. By this arrangement of the parts a button of great strength is secured, and also one that can be readily adjusted.

Having thus described my invention, what I claim is—

1. In a button, the combination, with the shoe e , provided with a disk f , struck up from a blank, with a post f' thereon, having a pointed head f^2 , provided with prongs f^3 , of a button A, consisting, essentially, of a face-plate a , secured to a perforated back-plate b by means of overlapping edges a' on the face-plate, a disk arranged within the back-plate or hub for securing the spring d within said back-plate, bent, as shown, and having arms d' and d^2 with which the prongs on the head of the post f' engage, for the purposes set forth.

2. In a button, the combination, with the shoe e , provided with a disk f , struck up from a blank, with a post f' thereon, having a pointed head f^2 , provided with prongs f^3 , of a button A, consisting, essentially, of a face-plate a , secured to a perforated back-plate b , by means of overlapping edges a' on the face-plate, a disk arranged within the back-plate or hub for securing the spring d within said back-plate, said spring having arms d' and d^2 , with which the prongs on the head of the post f' engage, and means on said disk, such as projections c^2 , for holding the spring-arms in position and preventing the displacement thereof, substantially as and for the purposes set forth.

3. As an improved article of manufacture, the herein-described metallic button, consisting of the face-plate a and the back-plate b , provided with a slotted hub or depression, a cross-bar having spring-arms d' and d^2 , placed in said depression at right angles and across the slot therein, a disk or plate for securing the cross-bar in position, and a shoe provided with a flat post having a pointed or arrow-shaped head adapted to be forced through the material, and having prongs f^3 thereon, adapted to extend through the slot and engage with the spring-arms, for the purposes set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 15th day of March, 1889.

CHARLES RADCLIFFE.

Witnesses:

FREDK. C. FRAENTZEL,
C. SMITHERS.