

(No Model.)

C. RADCLIFFE.
BUTTON.

No. 520,897.

Patented June 5, 1894.

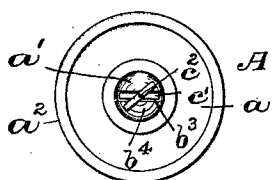


Fig. 1

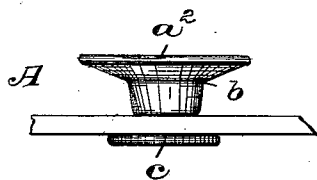


Fig. 2

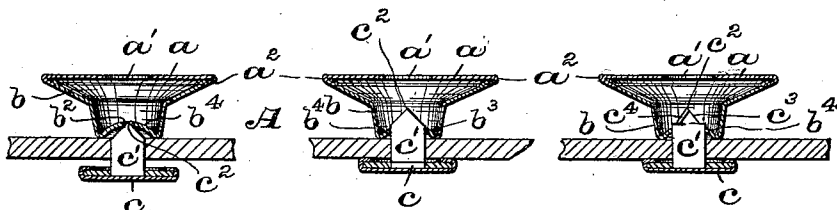


Fig. 3

Fig. 4

Fig. 5

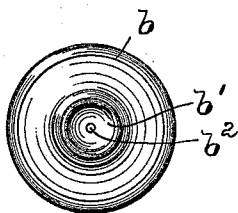


Fig. 6

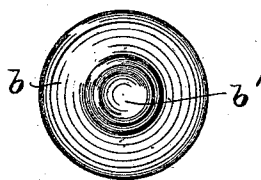


Fig. 7

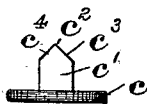


Fig. 8

WITNESSES:

Wm. H. Canfield, Jr.

INVENTOR:

Charles Radcliffe,

BY Fred C. Fraentzel, ATT'Y.

UNITED STATES PATENT OFFICE.

CHARLES RADCLIFFE, OF NEWARK, NEW JERSEY.

BUTTON.

SPECIFICATION forming part of Letters Patent No. 520,897, dated June 5, 1894.

Application filed May 8, 1893. Serial No. 473,403. (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.

My present invention has reference to a novel method of securing the several parts of a button, illustrated and claimed by me in my former Patent No. 474,969, granted May 17, 1892, to the material, and in the present case, I employ in connection with the back-plate of the button, a suitably annealed steel post, which is pointed and which by means of a suitable press or machine is forced through a solid or slightly punctured hub, thereby cutting a proper slot or rectangular opening in the hub, and when the upper portion of said steel post is bent by means of the proper tool, the sides of said opening in the hub will serve as cutters to force themselves into the opposite edges of the post, and thereby form oppositely projecting arms on said post, to cause the completed button to be firmly held on the material and the hub and back-plate of the button to closely hug the material.

The object of the invention therefore is, to dispense with the use of a hub having a previously formed slot or rectangular opening, thereby dispensing with the employment of an extra die, and also to dispense with a post having the previously formed and oppositely projecting holding arms thereon, which dispenses with the use of another die. Furthermore, the post and the hub in this form of button can be secured together without the employment of a "hunter" for hunting the hub or shell of the button and bringing the slot or opening therein into the right position for the reception of the post, thereby doing away with certain portions of the mechanism on button-making machines used on this class of work.

The invention therefore consists in the novel

steps of securing the parts of the button, to wit—first, puncturing the shell or hub by means of the pointed flat post on the back-plate of the button; second, said post by such insertion forming its own opening or slot in the hub, and lastly, said opening or slot in the button producing incisions in the post, to form a complete button.

The invention is illustrated in the accompanying sheet of drawings, in which similar letters of reference are employed to indicate corresponding parts in each of the several views illustrated.

In said views, Figure 1 is a top view of my improved form of button. Fig. 2 is a side view of the same, attached to the material. Fig. 3 is a vertical section of the several parts of the button, the pointed post on the back-plate being about to puncture the shell or hub of the button. Fig. 4 is a like view, with the said pointed post forced entirely through the shell or hub, and Fig. 5 is a similar view illustrating the several parts of the button in position after the upper portion of the post has been turned and the edges of the opening or slot in the hub or shell have made the incisions in the edges of the post and have formed holding arms or lugs on the post. Fig. 6 is a view of the back of the hub provided with a small hole centrally arranged therein. Fig. 7 is a like view of a hub or shell in which the hole is dispensed with, and Fig. 8 is a side elevation of the post and back-plate.

In said drawings, A indicates the button which is composed of a suitable face-plate or upper shell *a* provided with a central perforation or hole *a'* secured to the hub *b* in the usual manner, by means of the over-lapping edges *a²*. The hub used in this form of construction is of the usual construction except that its inwardly curved portion *b'* is left solid as in Fig. 7, or it may be punctured with a small hole *b²*, as in Fig. 6.

Integral with the shoe or back-plate *c*, or separate therefrom if desirable, is formed or struck up thereon a flat post *c'* provided with the pointed portion *c²* formed by the angular portions *c³* and *c⁴* of said post, as clearly illustrated. Said post is made of suitably annealed or tempered steel, and in order to secure the hereinabove described parts of the button to the fabric, said pointed post is

forced through the cloth and by means of suitable machinery, or a press, the pointed portion of said post is forced through the solid portion b' , or through the hole b^2 in the hub b , thereby forming a rectangular slot or opening b^3 in said curved portion b' of the hub or shell, as will be seen from Figs. 1 and 4. A suitably slotted tool is then inserted through the opening a' in the face-plate a and over the free and pointed end portion of the post c' . A slight turn of said tool, either by hand or by machinery, will tend to twist the upper portion of said post in opposite directions against the edges of the slot or openings b^3 in the hub of the button. Although the said hub is usually made of tin, which is a much weaker metal than the sheet steel post, said edges of the slot or opening b^3 will act like cutters and form incisions in the opposite edges of the post directly above the upper and inner surfaces b^4 of said hub thereby closely drawing the parts together, forcing the back-plate or shoe c tightly against the fabric and causing the securely locked or holding engagement of the several parts of the button on the cloth. It will thus be seen that by this means and method of securing the post to the hub of the button the parts of the button can readily be secured to cloth of different thicknesses; without that the parts of the button are loosely secured to the cloth, which is a very objectionable feature, as this produces rattling of the parts and sometimes causes the back-plate to be pulled entirely through the material, especially when the button is secured to a very thin piece of cloth. By this means I have secured a much cheaper button, as I dispense with the use of a suitable die or other tool for forming the rectangular slot or opening in the shell or hub of the button, said steel post being of sufficient thickness and stiffness to be readily forced through the thickness of metal of which the hub is made, when the several parts of the button are brought together. It is preferable

however, to first puncture the back or curved portion b' of the hub or shell b with a small hole b^2 , whereby the post c' is forced centrally through the metal of the hub.

Having thus described my invention, what I claim is—

1. The herein described method of securing a button to a piece of cloth, which consists in forcing a pointed flat post on a back-plate or shoe of the button through the material, then forcing said pointed post through the hub or shell of the button, and causing said post to form a rectangular slot or opening in said hub, and then twisting the upper portion of said post against the opposite edges of the slot in the hub, said edges thereby forming incisions in the opposite edges of the post, and thereby being forced across said slot in the hub, to cause the holding or locked engagement, substantially as set forth.

2. The herein described method of securing a button to a piece of fabric, which consists in forcing a pointed flat post on a back-plate or shoe of the button through the material, then placing a hub or shell provided with a small central perforation over said post and forcing said pointed post through the hub or shell of the button and causing said post to form a rectangular slot or opening in said hub, and then twisting the upper portion of said post against the opposite edges of the slot in the hub, said edges thereby forming incisions in the opposite edges of the post, and the upper portion of the post thereby being forced across said slot in the hub, to cause the holding or locked engagement, substantially as set forth.

In testimony that I claim the invention set forth above I have hereunto set my hand this 29th day of April, 1893.

CHARLES RADCLIFFE.

Witnesses:

FREDK. C. FRAENTZEL,
WM. H. CAMFIELD, Jr.