(No Model.)

T. J. WINANS.

BUTTON.

No. 458,512. Patented Aug. 25, 1891.

Fig. 5.

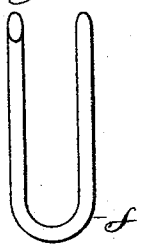


Fig. 6.

Fig. 1.

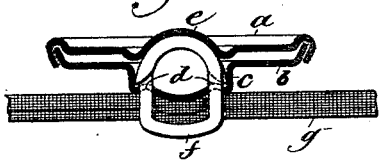


Fig. 4.

Fig. 2.

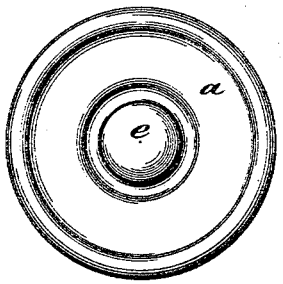
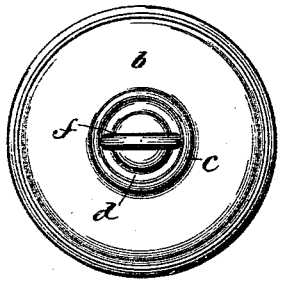


Fig. 3



Attest:
Geo H Botts.
D J Kennedy

Inventor:
Thomas J Winans
by Philipp Phelps & Honey
Attys

UNITED STATES PATENT OFFICE.

THOMAS J. WINANS, OF BINGHAMTON, NEW YORK, ASSIGNOR TO JOSEPH P. NOYES AND JOSEPH KARR NOYES, OF SAME PLACE.

BUTTON.

SPECIFICATION forming part of Letters Patent No. 458,512, dated August 25, 1891.

Application filed May 24, 1890. Serial No. 353,026. (No model.)

To all whom it may concern:

Be it known that I, THOMAS J. WINANS, a citizen of the United States, residing at Binghamton, county of Broome, and State of New York, have invented certain new and useful Improvements in Buttons, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

This invention relates to that class of buttons used on manufactured clothing which are secured in place upon the garment by means other than sewing, as by rivets, staples, and the like. Buttons of this class heretofore used have been constructed in a variety of ways and have been provided with various kinds of devices for their attachment to the garment upon which they are to be used.

The present invention relates particularly to that class of buttons in which the means provided for the attachment of the button to the garment consists of a staple or staples passing through the cloth of the garment and clinched either upon the interior or the outer front surface of the button by means of dies, &c.

It is the object of the present invention to provide a button of this class which can be produced at slight cost and which can be easily and quickly attached to the garment, and to provide a device for the attachment of the button to the garment by which the button will be held securely against movement in its proper position upon the garment.

In the accompanying drawings, Figure 1 is a sectional elevation of a button embodying the present invention, the same being secured upon the garment by the fastening device of the present invention. Figs. 2 and 3 are plan and bottom views, respectively, of the same. Fig. 4 is a view of the fastening-staple in the position it occupies in the button after the button has been secured to the garment; and Figs. 5 and 6 are front and side views, respectively, of the fastening-staple before the same has been introduced into the button and bent to the form shown in Fig. 4.

Referring to said figures, it will be seen that the button herein illustrated consists of two members—viz., the front plate *a* and the back plate *b*—over the front edge of which latter the correspondingly-shaped flanged edge of the front plate *a* is secured in the usual manner, as illustrated in Fig. 1. The back plate *b* is formed with a hub *c*, in the end of which is formed an annular groove *d* or series of depressions near its edge. The front plate *a* is formed with a dome *e*, registering with and of a diameter equal or substantially equal to the diameter of the annular groove *d* or the series of depressions formed in the hub *c*, before described. The purpose of the groove *d* or depressions and the dome *e* will presently appear when the mode of using the fastening device hereinafter referred to is described.

The fastening device of the present invention consists of an ordinary staple *f* of comparatively stiff metal, the legs of which are spread apart a distance equal to the diameter of the annular groove *d* or series of depressions, and the ends of which legs are pointed, as shown, so as to render easy their perforation of the metal of which the back plate *c* is composed.

The manner of attaching the button to the garment is as follows: The legs of the staple *f* are first passed through the cloth *g* of the garment to which the button is to be attached in the position in which it is intended to secure the button thereon. The pointed ends of the legs of the staple are then set into the groove *d* or the depressions and by means of a mallet, hammer, or dies caused to perforate that portion of the hub *c* and to pass into the recess formed between the front and back plates of the button, and upon the application of further force the legs of the staple are further advanced between the front and back plates of the button until they come in contact with the interior surface of the dome *e*, by which they are caused to bend inwardly toward and past each other into the position illustrated in Fig. 1. The legs of the staple *f* will preferably be of such length that when forced into proper position to secure the button to the cloth *g* their ends will abut against the inner sides of the hub *c* and thus strengthen the button and hold it firmly in its proper position upon the garment. The ends of the

staple *f* will preferably be beveled, as shown, in opposite directions, so as to permit of their passing each other upon their movement between the front and back plates of the button into the position illustrated in Fig. 1. During the operation of forcing the staple *f* into the button the dome *e*, usually itself of comparatively stiff metal, may and preferably will be re-enforced by a suitable die correspondingly shaped and placed in position upon the dome *e* during this operation to prevent the distortion or rupture of the dome *e* or other part of the front plate *a* during the passage of the legs of the staple in contact with the inner surfaces of the dome *e* to the position in which they are shown in Fig. 1.

In some cases the front plate *a* may be omitted. In this case, of course, it will be necessary to provide a die suitably shaped to cause the legs of the staple *f* to bend inwardly toward each other and to take the positions in which they are illustrated in Fig. 1. It is to be understood that the back plate *b* and the front plate *a*, instead of being formed as shown and described, the former with the hub *c* and the latter with the dome *e*, may be of many other forms, though those shown and described will in most cases be found preferable. In some cases, also, as I have before intimated, instead of employing the annular groove in the hub of the back plate, a series of depressions may be employed in place thereof, these depressions being arranged upon the hub, similarly to the groove shown, about a common center and performing the function of the annular groove of centering the points of the staples. Such a construction is to be considered the equivalent of the groove. In buttons of this class where the fastening device has been a staple, such as used in the present case, it has been necessary to provide the back plate of the button with perforations, through which the legs of the staple are passed prior to the clinching operation. In these constructions it has been necessary when the button is being secured in position on the garment to bring the holes in the back plate of the button into register with the legs of the staple, which are then driven home in the button-body. This has been objectionable, owing to the labor and loss of time entailed. The provision of the annular groove or series of depressions in the back plate of the button in the present case overcomes this objection, no registering of the staple being necessary, the legs of the staple being centered by the groove or depressions and driven into the back plate at any part of the annular groove or depressions therein with which the two points first make contact, the formation of the hub so sustaining the metal as to permit such perforations without deforming the adjacent parts. Again, by reason of my method of clinching the legs of the staple with their ends returned and brought into pressing contact with the interior of the hub of the back plate a strong and rigid structure is provided, capable of withstanding more than the usual wear and strain to which buttons of this class are ordinarily subjected.

Another advantage incident to the use of a button such as illustrated and described lies in the fact that should the button become detached from the garment by the staple tearing through the cloth the button does not become a loss, but may be resecured to the garment by sewing, the thread used in the sewing being passed through the loop formed of the central portion of the staple projecting beyond the back plate.

What I claim is—

1. The combination, with a staple for securing a button to a garment, of a button the back plate of which is provided with an annular groove guiding and holding the legs of the staple during the attachment of the button, said groove being imperforate throughout and adapted to be pierced by the points of the staple under pressure in any position of the staple circumferentially of the back plate, substantially as described.

2. The combination, with a button back plate having a hub forming a recess upon the front face of the plate, said hub having an annular imperforate guiding and holding groove in its rear face, of a staple passing through the hub at the groove and bent rearward against the front face of the plate, with its points within the recess and the bent portions of its legs crossing each other and being parallel or substantially parallel to the unbent portions thereof, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

THOMAS J. WINANS.

Witnesses:
D. H. CARVER,
F. W. JENKINS.