Sept. 29, 1931. F. R. WHITE 1,824,940

BUTTON

Filed Dec. 31, 1930

Fig. 1.

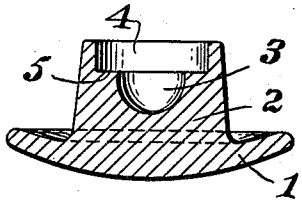


Fig. 2.

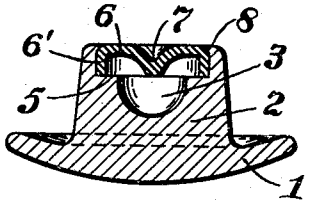


Fig. 3.

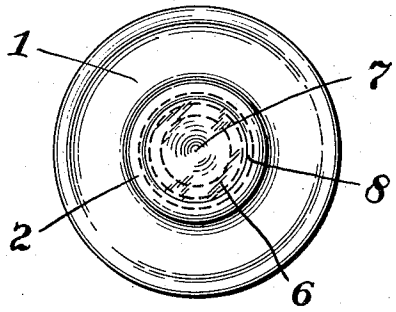


Fig. 4.

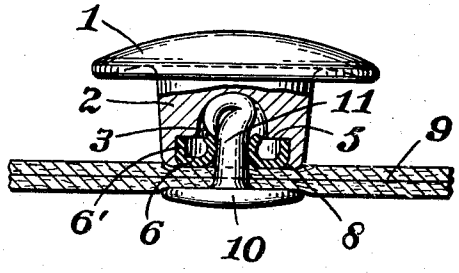


Fig. 5.

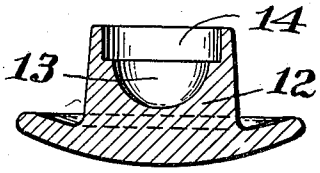


Fig. 6.

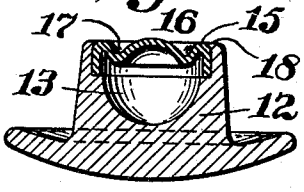


Fig. 7.

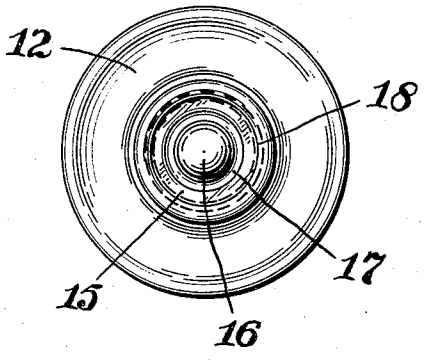
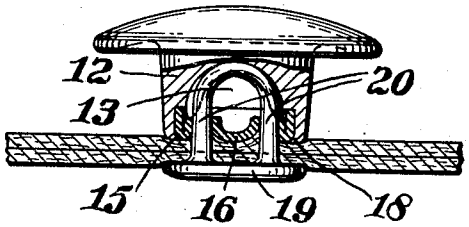


Fig. 8.



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UNITED STATES PATENT OFFICE

FRANKLIN R. WHITE, OF WATERBURY, CONNECTICUT, ASSIGNOR TO THE PATENT BUTTON COMPANY, OF WATERBURY, CONNECTICUT, A CORPORATION OF CONNECTICUT

BUTTON

Application filed December 31, 1930. Serial No. 505,894.

My invention relates to new and useful improvements in buttons, and more particularly to a solid head button which may be formed preferably from a slug of soft steel or other metal cut from rod stock and then pressed into shape by the action of one or more sets of dies. The same is a companion to an application filed herewith of even date and bearing Serial Number 505,893.

Another object of the invention is to form a solid head button preferably of a non-tarnishing soft steel or steel alloy, the button being shaped by the action of suitable dies, after which a small shell will be tightly pressed into a receptive recess and the metal about the walls of the recess pressed slightly inwardly to thus tightly hold the shell in place, so that a tack or suitable fastener, depending on the formation of the shell, may be driven into the shell when it is desired to attach the button to the cloth.

Still another object of the invention is to provide a two-piece button, which is known as the imperforate type, that is, wherein the tack or staple fastener is driven bodily through the metal shell situated in the hub of the button, the center recess of the hub acting as an anvil to deform the tack or staple, so that the button when attached will be held rigidly to the cloth.

As is well known, these forms of buttons are secured in place by attaching machines, that is, the button heads are fed from one hopper while the tacks or staples are fed from another hopper and the action so synchronized that the tack or staple will be driven up through the cloth and into the button head to thus secure the button in place.

With these and other objects in view, the invention consists in certain new and novel arrangements and combinations of parts as will be hereinafter more fully described and pointed out in the claims.

Referring now to the drawings showing one preferred form and one modification,

Fig. 1 is a sectional view of the button head and, of course, on an enlarged scale;

Fig. 2 is a side elevation of the button head, partly in section and showing a shell member jammed within the hub and the metal around the shell being pressed inwardly to tightly hold the same in place;

Fig. 3 is a bottom plan view of the same;

Fig. 4 is a view similar to Fig. 2, the button, however, being inverted and a tack fastener driven up into the hub of the button to hold the button in place;

Fig. 5 is a view similar to Fig. 1, the button head being similar to Fig. 1, but with a larger central chamber;

Fig. 6 is a view similar to Fig. 2, showing an imperforate shell for receiving a staple instead of a tack;

Fig. 7 is a view similar to Fig. 3;

Fig. 8 is a view similar to Fig. 4, but showing the staple in place rather than the tack.

Referring now more particularly to the several views, there is shown in Fig. 1 a button head comprising what I term the top portion 1 and the hub 2 in which there is a small central chamber 3 with a recess 4 at one end thereof to form an inner shoulder 5 which, of course, extends completely around the inner wall of the hub.

As previously mentioned, this button head may be formed from rod stock and preferably of a relatively soft non-tarnishable steel, the rod stock being first cut into slugs of sufficient length. It may take one or more operations in a press with suitably formed dies but an automatic press (not shown) may have successive dies for forming the button head into the shape shown.

Now jammed within the recess 4 and resting on the shoulder 5 may be seen a small hard metal shell 6, the rim 6′ of the shell contacting throughout its width with the inner wall of the recess. This shell is preferably depressed centrally, as at 7, as may be seen in Fig. 2. The outer edge 8 of the hub of the button may then be pressed slightly inwardly to extend slightly over the adjacent peripheral edge of the shell to thus more tightly secure the shell in place. The button head is now complete and, as will be seen, consists of but two parts—the shell and the button head proper.

To secure the button to a cloth 9, as shown in Fig. 4, a tack 10 will have its prong 11 driven through the cloth and through the

small shell 6 at its center 7. The prong or bill impinging against the upper wall of the chamber 3 will deflect and deform the prong, so that it will jam down against the inner surface of the shell, as may be readily seen.

Thus, the button will be tightly secured in place and in ordinary usage it will be impossible to pull the tack from the button.

Very often, it is desired to use a staple button rather than a tack button (as they are termed in the art) and in this instance a button head 12 similar to the button head shown in Fig. 1 is used with the exception that the central chamber 13 is somewhat larger in diameter. In a recess 14 is placed a shell 15 but instead of having the shell depressed centrally it will be noticed that in this instance it is slightly domed, as at 16, and a small depressed annulus or ring 17 formed about the dome. The lower edge of the button 18 is then bent slightly inwardly so that it will more tightly hold the shell in place in the same manner as shown in the preferred form.

To secure this button to the cloth, a staple 19 is driven through the shell 15 and the annulus or ring 17 will tend to center the prongs 20 of the staple, so that they will, when driven into the hub, strike the wall of the chamber 13 and be deformed and deflected to thus tightly hold the button in place.

From the foregoing, it will be seen that I have produced a button that is relatively cheap to manufacture, it comprising but the two parts. In the one instance, the central shell is depressed to center a tack fastener and in the other instance there is a dome shell to center the prongs of the staple fastener.

It will be seen that the button is very similar to the one shown in the companion application, but in this instance a shell having the annular rim is used instead of a disk, so that there will be more contacting surface with the inner wall of the button and it is not necessary to crimp the edge of the hub as far over the shell as is necessary to do when the disk is used.

It will be remembered that these button heads are formed of steel and the metal does not flow under the action of dies as does the softer metal, so that the less metal that has to be deformed the easier it is on the dies of the machine.

It will also be understood that I have shown the outer surface of the button as plain but any desired insignia might be pressed in the same if called for by the trade.

Many slight changes may be made without in any way departing from the spirit and scope of the invention.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A solid head button comprising an integral hub provided with a chamber and a recess formed adjacent the chamber, an imperforate shell tightly fitting within said recess and the rim of the shell contacting with the walls of the recess throughout the periphery of the shell, and the shell provided with means to properly position a fastener when the button is to be attached.

2. A button comprising a solid head having an integral hub and a central chamber, the hub having a relatively deep recess adjacent the chamber to thus provide a shoulder, an imperforate shell having a rim equal to the depth of the said recess, said shell tightly held in place, said shell provided with means for centering a fastening member when the same is driven into the imperforate shell, and the walls of the chamber adapted to deflect and deform the fastener member to thereby tightly hold the button in place.

In testimony whereof I affix my signature.

FRANKLIN R. WHITE.