F. R. WHITE.

BUTTON.

APPLICATION FILED FEB. 16, 1920.

1,378,073.

Patented May 17, 1921.

Fig. 1.

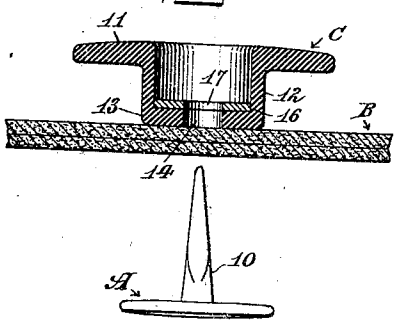


Fig. 2.

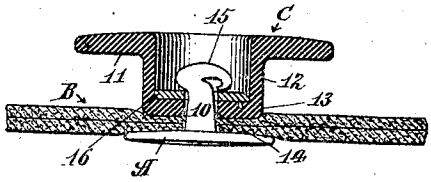


Fig. 3.

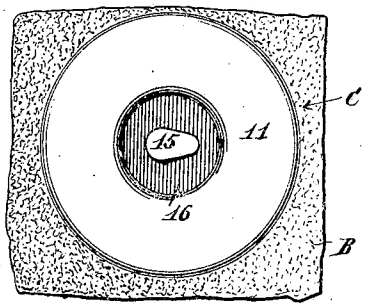


Fig. 4.

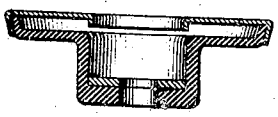


Fig. 5.

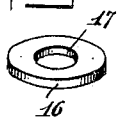


Fig. 6.

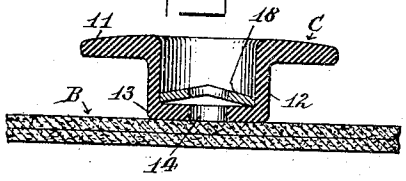
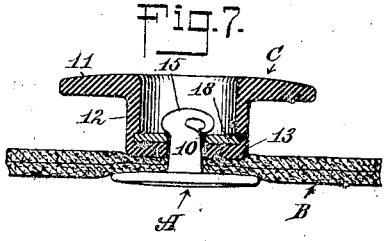


Fig. 7.



INVENTOR

Franklin R. White.

BY

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ATTORNEYS

UNITED STATES PATENT OFFICE.

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

BUTTON.

1,378,073. Specification of Letters Patent. Patented May 17, 1921.

Application filed February 16, 1920. Serial No. 358,882.

To all whom it may concern:

Be it known that I, FRANKLIN R. WHITE, a citizen of the United States, and a resident of Waterbury, in the county of New Haven and State of Connecticut, have made and invented certain new and useful Improvements in Buttons, of which the following is a specification.

My invention relates to buttons, and particularly to that type or class, which are attached to cloth or other material by means of an automatic button machine and to this end include a metallic fastener in the form of a tack and a body portion into which the prong of the fastener is driven and anchored.

Heretofore this type and class of buttons have been entirely composed of metal. I have found, however, that that portion of the button which contacts with the cloth may in time discolor and injure the same, especially under adverse conditions of climate, and where the button is exposed to repeated washings. Further the increasing cost attending the formation of buttons entirely of metal renders the use of other and cheaper substances desirable.

It is accordingly an object of my invention to provide a button wherein the fastener is formed of metal and the body portion of a non-metallic material, such that buttons may be produced and in large quantities and more economically than when composed entirely of metal.

A further object is to provide a button of the type described, wherein the body portion may be pressed, molded, or otherwise formed to the desired shape and configuration and in an economical manner, the body portion having any desired color and of uniform color throughout, so that the button will present a uniform and pleasing appearance throughout the useful life and wear thereof.

A further object is to provide a button, the body portion of which is composed of fiber or other equivalent or non-metallic material, which is substantially chemically inert, sufficiently hard, ductile and coherent as to prevent its breakage in use and preventing the excessive wear thereof.

A further object is to provide a button having the properties previously described and combining therewith a metallic reinforcing plate, preventing undue wear between the metallic fastener and the non-metallic body portion of the button.

With the foregoing and other objects in view, which will appear as the description proceeds, my invention resides in the novel button described and in the combination and arrangement of parts and in the details of construction hereinafter described and claimed, the preferred embodiment of my invention being disclosed in the accompanying drawings, wherein—

Figure 1 is a view in vertical longitudinal section of a button and fastener embodying the characteristic features of my invention.

Fig. 2 is a similar view, showing the fastener in place and the button securely anchored to the cloth or other material.

Fig. 3 is a top plan view of the foregoing.

Fig. 4 illustrates a somewhat modified form of button, wherein the head or face is covered by a metallic cap, upon which suitable inscription or design may be incorporated.

Fig. 5 is a detail view in perspective of the metallic reinforcement for the base of the button.

Fig. 6 is a view in vertical longitudinal section of my improved button wherein the metallic reinforcement is slightly dished, so that it is embodied in the side walls of the hub and is anchored in place thereby.

Fig. 7 is a view in vertical longitudinal section, showing the fastener in place.

Referring specifically to the several views wherein similar reference numerals designate corresponding parts throughout, the fastener A is formed with the upstanding prong 10, which is adapted to pierce the cloth or other material B, and engage the body of the button C.

The body of the button is formed of fiber and includes the face or flange 11 open at its center and a downwardly porjecting hub 12, across the lower extremity of which extends the base 13. The base is provided with an opening 14, therein adapted to receive the prong 10, of the fastener therethrough.

The button as thus composed is intended for use with an automatic button attaching machine, and I have found that in this particular type of button, wherein the base is provided with an opening for the reception of the prong of the fastener, that a certain

limited amount of movement and play will take place between the coiled or headed extremity 15 of the fastener, and the inner wall of the base. In order to prevent this slight shifting and relative movement of the fastener and the body of the button, from wearing the latter, I have provided a metallic reinforcing plate or washer 16, the same being formed with an opening 17, extending therethrough.

The body of the button is formed of a fibrous material, such that it may be pressed, molded, or otherwise formed to shape, may be economically produced, and at less cost, than a correspondingly formed metallic button, and with the added advantage and characteristic that the body of the button will not rust or discolor the cloth, will not change appearances due to wear as it is of uniform color throughout, and is sufficiently ductile and plastic, although hard, to prevent its breaking or fracture in use. The button as thus constructed is lighter than those heretofore known and used. The reinforcement 16 is located between the head of the fastener and the base of the button, and accordingly prevents undue wear upon the base of the button.

In some instances I have found it desirable to press the reinforcement directly into the side walls of the hub of the button, and to this end I have provided a reinforcement 18, shown in Figs. 6 and 7, which is slightly dished in form, and of an external diameter when dished approximately equal to the external diameter of the inner wall of the hub of the button. When the dished reinforcement is flattened as shown in Fig. 7, the edges of the reinforcement are embedded in the walls of the non-metallic hub 12 of the button. This securely locks the reinforcement in place, and prevents any wear between the metallic reinforcement and the non-metallic base of the button.

Having thus described my invention, what I claim is:—

1. A button of the character described, comprising a body formed of non-metallic material and including a head, a hub, and a base, the latter being provided with an opening therethrough adapted to receive the prong of a metallic fastener therein and a metallic reinforcement provided with an opening in alinement with the opening of the base and adapted to receive the headed portion of the prong of the fastener thereagainst and project the base from abrasion by the headed portion of the prong.

2. A button of the character described, comprising a body portion including a head, a hub, and a base, provided with an opening therein, said body portion being formed of non-metallic material and a dish shaped metallic reinforcement located within said hub, having an opening therein in alinement with the opening of said base the side edges of said metallic reinforcement adapted to extend into the side walls of the hub as the dish shaped reinforcement is drawn into contact with the base by the metallic fastener.

3. A button of the character described comprising a body portion including a head, a hub and a base formed of non-metallic material, and a metallic reinforcement in said hub, contacting with said base, with the side edges thereof extending within the side walls of the hub, and a metallic fastener extending through the base and contacting with said reinforcement and holding the latter down in contact with the said base.

Signed at Waterbury, in the county of New Haven, and State of Connecticut, this 2nd day of Feb. A. D. 1920.

FRANKLIN R. WHITE.

Witnesses:
LEWIS J. HART,
F. G. PURINTON.