B. F. HUBBELL.

BUTTON.

APPLICATION FILED JUNE 23, 1922.

1,434,491. Patented Nov. 7, 1922.

Fig. 1.

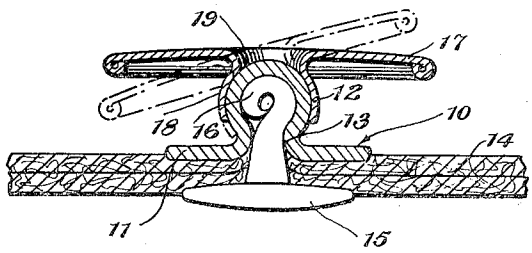


Fig. 2.

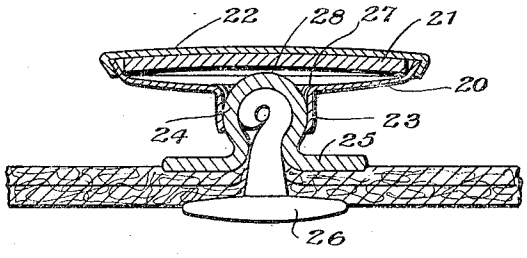
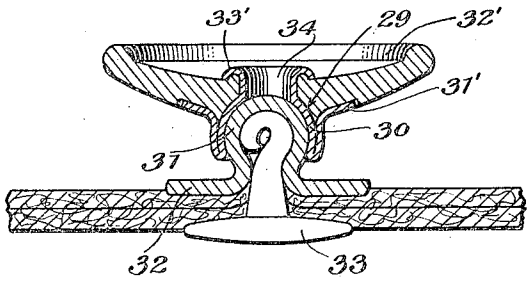


Fig. 3.



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UNITED STATES PATENT OFFICE.

BENJAMIN F. HUBBELL, OF WATERBURY, CONNECTICUT, ASSIGNOR TO THE PATENT BUTTON COMPANY, OF WATERBURY, CONNECTICUT, A CORPORATION OF CONNECTICUT.

BUTTON.

Application filed June 23, 1922. Serial No. 570,328.

To all whom it may concern:

Be it known that I, BENJAMIN F. HUBBELL, 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 flexible or swivel buttons and of the type or style which are secured to cloth or garments by means of a metallic fastener.

The object of my invention is to provide a button of this character wherein the head or top of the button may turn or tilt with respect to the base, and which turning and tilting action takes place about a central axis or central point. I have found that with swivel or flexible buttons as heretofore constructed the head of the button is adapted to twist, turn or tilt about the base of the button in a more or less unconstrained manner and the turning or tilting takes place in a loose way, which often leads to the impression that the top or head of the button has been insecurely fastened in place, and, further, the unrestricted manner in which the head may move also causes the buttons to rattle.

It is accordingly among the objects of my invention to provide a swivel and flexible button wherein the turning and tilting of the button is restricted to a single axis, and, furthermore, the joint or bearing between the head and the base of the button extends over a considerable area and the moving parts are in what is termed surface contact so as to prevent any wear of the moving parts; and, further, the button head is thus held against rattling and all looseness is thus avoided and the button has every appearance and gives every indication of being properly and securely, although flexibly, connected to the base.

A further object is to accomplish the aforementioned ends in a simple and expeditious manner, so that the buttons may be economically manufactured, and to further provide a construction whereby the head or top of the button may be either formed of metal or some inert and non-metallic composition, and with the foregoing and other objects in view, my invention consists in the improved button illustrated in the accompanying drawing and hereinafter described and claimed, and in such variations and modifications thereof as will be obvious to those skilled in the art to which my invention relates, it being understood that changes may be made within the scope of what is claimed without departing from the spirit thereof.

The preferred embodiment of my invention is disclosed in the accompanying drawing, wherein:

Figure 1 is a view in longitudinal section of my improved flexible or tilting button;

Figure 2 is a similar view of a button also embodying the characteristic features of my invention and provided with a closed top;

Figure 3 is a view in longitudinal section of a further modified form of button embodying the characteristic features of my invention and provided with a non-metallic or composition body.

Referring specifically to the several views, wherein similar reference numerals designate corresponding parts throughout, my improved button is formed with a base 10, the same including a substantially flat plate 11 and with the ball-shape hollow anvil head 12. The base is provided with the restricted central opening 13 leading into the hollow anvil 12. The base is adapted to be secured to the cloth or garment 14 by the customary tack fastener 15, preferably driven through the garment material 14 by means of an automatic button attaching machine and with the upper pronged end suitably headed or curled as at 16 within the hollow ball shape anvil 12. A button top or head 17 is formed with the downwardly extending open ball-shape socket 18, which extends around and engages the ball anvil 12 of the base, the side walls of the socket 18 being compressed or spun down upon the ball anvil of the base in any suitable manner so that after the ball 12 has thus been seated and secured within the socket 18 the button top 17 will be mounted for restricted tilting and turning about the center of the ball 12 and with the head thus restricted to movement about a single point or axis the wear upon the contacting surfaces will be uniform and the button will perform efficient service over an extended period of time; and, further, the head will thus be prevented from rattling and miscellaneous turning and twisting and will accordingly have the appearance of being properly fastened and secured in place and that the movements of the head are as designed and not the re-

sult of an improperly secured or imperfectly formed button. The top 17 is provided with the central opening 19, so that the upper die of the button fastening machine (not shown) may rest down upon the ball head 12 and thus prevent the latter from becoming distorted or bent as the prong of the tack fastener 15 is upset therein.

In Figure 2 of the drawing I have illustrated a closed-top button embodying the characteristic features of my invention and wherein the head of the button is formed with the flange 20, die 21 and top 22, the flange 20 and top 22 surrounding and securing the die 21 therebetween. The flange 20 is provided with the downwardly extending hub 23 which is shaped and formed as a ball socket and encompasses and encloses the ball anvil 24 of the button base 25. The tack fastener 26 extends through the garment material and rigidly secures the base of the button in place. The socket 23 is somewhat modified so as to include the upper cylindrical portion 27, and the die 21 is spaced a slight distance from the top 28 of the ball anvil, so that a limited amount of vertical play is provided for the button top. The lower portion of the ball socket 23, however, restrains the turning and tilting motion of the button and thus provides for the surface contact of the relatively moving parts and also prevents any undue rattling or apparently loose connection between the button base and button head.

The further modified form of my invention illustrated in Figure 3 comprehends the use of a button having a non-metallic or composition top and to this end I have provided a metallic holder 29 which is provided with a ball socket portion 30 which is spun or bent around so as to encompass and effect a proper bearing with the ball anvil 31 of the button base 32. The button base as heretofore described is secured to the garment material by a suitable tack fastener 33 which has been headed or upset within the ball anvil of the base. The holding member 29, in addition to including the socket 30, is provided with an upwardly extending flange 31 which receives and supports the composition button head 32 thereon, and the head is properly secured upon the flange 31 by overturning the rim 33 of the holding member down upon the upper wall or surface of the button head 32 and thus securely binding the composition material in place upon the holding member. The holding member is provided with the open hub 34, allowing the die of the button attaching machine (not shown) to pass down therethrough and contact with the upper extremity of the ball anvil of the base and thus provide for the proper upsetting of the prong of the fastener therein.

From the foregoing it will be apparent that I have provided a button which may be economically produced in large quantities and at the same time will be so constructed that the head may turn and tilt to thus facilitate the passage of the head through the usual type of buttonhole; further, will accommodate itself to the direction of pull, and being constrained in its movements will be prevented from rattling and free from all appearance of looseness.

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

1. A button comprising a base, means for attaching the same in place, a button top or head, and a ball and socket swivel connection between said button head and base and providing for the relative turning and rotating of the same.

2. A button of the character described comprising a base provided with a hollow ball adapted to receive a metallic fastener therein for the securement of the base to a garment or other material, a button head provided with a hub formed as a socket extending around and engaging the said ball and effecting a ball and socket joint between said base and head and providing for the relative turning and rotating of the same.

3. A button of the character described comprising a base with a hollow ball carried thereby and having an opening leading into said ball through the bottom of said base, means for securing said base to a garment or other material, a button head having a hub, the side walls thereof in surface contact with the walls of said ball and preventing the detachment of the head from said base, the side walls of the hub and the walls of said ball providing for the turning of the two about a central point and holding the two against relative translation and rattling.

Signed at Waterbury, in the county of New Haven and State of Connecticut, this 20 day of June, A. D. 1922.

BENJAMIN F. HUBBELL.

Witnesses:
E. H. SCHWARTZ,
A. O. SQUIRES.