Aug. 22, 1939. L. R. CARLEY 2,170,234

TACK BUTTON

Filed May 17, 1938

Fig. 1.

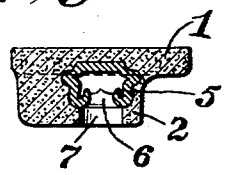


Fig. 2.

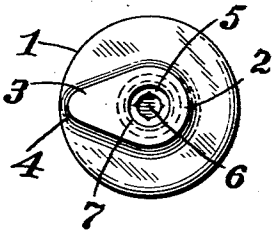


Fig. 3.

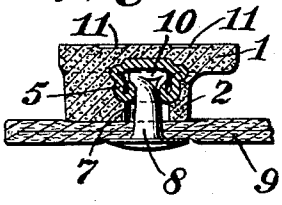


Fig. 4.

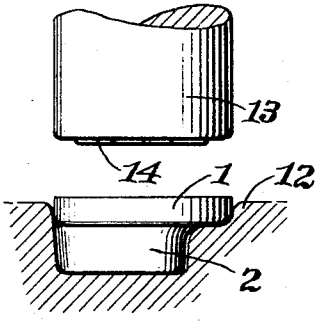


Fig. 5.

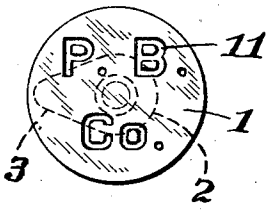


Fig. 6.

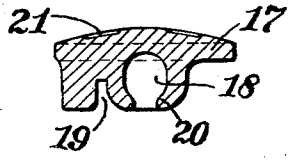


Fig. 8.

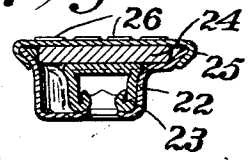


Fig. 7.

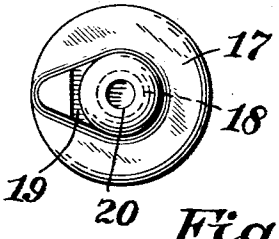


Fig. 9.

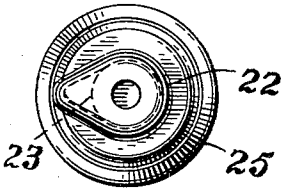


Fig. 10.

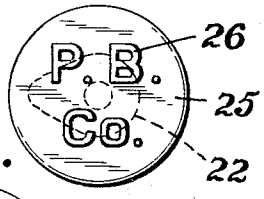


Fig. 11.

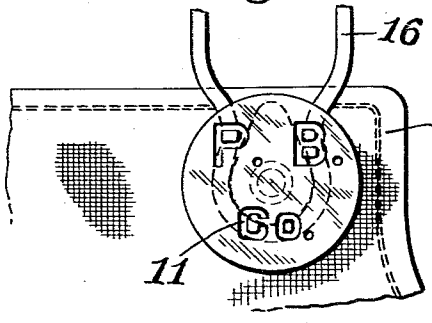
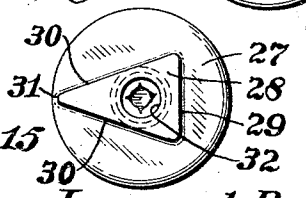


Fig. 12.



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Patented Aug. 22, 1939 2,170,234

UNITED STATES PATENT OFFICE

2,170,234

TACK BUTTON

Leonard R. Carley, Watertown, Conn., assignor to The Patent Button Company, Waterbury, Conn., a corporation of Connecticut

Application May 17, 1938, Serial No. 208,479

8 Claims. (Cl. 40—20)

My invention relates to new and useful improvements in tack buttons, and more particularly to a tack button with a peculiarly shaped hub so that the same may be oriented when fed through a button-attaching machine.

As is well known to those skilled in the art, a tack button is one wherein the button head receives and deforms a tack during the attaching operation to securely hold the button to the cloth.

Tack buttons are used mostly on overalls, work-shirts, work-coats, jumpers, and similar articles, and it is a desirable feature that the button be of such construction as to permit an automatic orientation of the same with respect to the button-attaching machine and the cloth to which the button is to be attached, so that the insignia or trade-mark or other reading matter on the top face of the button will be in a proper readable position. In other words, if the buttons are used on the bib of an overall, it is desirable to have the reading matter in a horizontal position and rightside up.

One of the objects of the present invention, therefore, is to provide a tack button that may be properly oriented before or on reaching the attaching station of a button-attaching machine and there held in its proper position, so that the insignia will be in the desired readable position when attached to the garment.

Another object of the invention is to preferably provide a plastic button in which there is located a vise for receiving and deforming a tack, the button being provided with a novel shaped hub, so that it may be oriented either at the attaching station or be held positively while it is being carried from the orienting station to the attaching station.

Still another object of the invention is to provide a button with a novel shaped hub that may also be of what is known as the solid metal type, that is, wherein a slug of metal is shaped in the form of a button head with an integral tack-receiving hub; or the button may be formed of stamped metal, having a die inserted therein to receive the tack.

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

Referring now to the drawing showing a preferred embodiment and two modifications;

Fig. 1 is an enlarged sectional view of my improved plastic type button and showing the vise embedded in the hub thereof to receive and deform a tack;

Fig. 2 is a bottom plan view thereof;

Fig. 3 is a view similar to Fig. 1, but showing the button in its attached condition;

Fig. 4 is a fragmentary view showing a die for holding the plastic button and showing the plunger above the same for embossing the head of the button;

Fig. 5 is a top plan view of the button illustrated in Fig. 1, but showing the embossing as pressed into the button head;

Fig. 6 is a view similar to Fig. 1, showing a slight modification, the button, in this instance, being formed of solid metal;

Fig. 7 is a bottom plan view thereof;

Fig. 8 shows a further modified form, that is, the button formed of sheet metal, a die and an anvil being illustrated in position and a cap with insignia thereon over the button back or shell;

Fig. 9 is a bottom plan view of the same;

Fig. 10 is a top plan view thereof;

Fig. 11 is a fragmentary view showing the bib of an overall and the loop of the shoulder strap engaging the button; and

Fig. 12 is a bottom plan view of another slightly modified form of button.

At the outset, it might be mentioned that this is a companion to an application filed by me of even date herewith for Tack buttons and bearing Serial Number 208,480, wherein for the purposes of orienting, the hub of the button has two parallel sides, while the opposite extremities of the hub are dissimilar; whereas, in the present application in its broadest aspects, the opposite ends of the hub are also dissimilar but the sides are non-parallel.

Referring now for the momenet to the several views, and especially to Figs. 1 to 5, inclusive, there is shown the plastic or molded type button with the body portion or head 1 and the integrally molded hub 2, this hub appearing elongated in bottom plan, with the neck 3 narrowing as it approaches the periphery of the button head, as may be seen at 4 in Fig. 2. Embedded within the body of the hub and centrally of the button head is the metal vise 5, which is perforated, as at 6, the bottom surface of the hub 7 also being open, so that the tack 8 may be registered in the button-attaching machine (not shown) with the button head and then driven through the cloth 9 up into the vise 5 and deformed, as at 10, to hold the button securely to the cloth.

These plastic buttons may have insignia 11

molded in the button head at the time they are molded or preferably they may be fed as shown in Fig. 4 to a die 12 where a plunger 13 with the insignia 14 on the face thereof may be forced into the button head 1, when the same is in a heated condition, and thus emboss the desired insignia on the button head.

The die 12 will be of such formation that the hub of the button head will only register within the die cavity when the button is in the proper position for embossing, so that the embossing will bear the desired positional relationship to the elongated hub. In other words, buttons to be used on a work garment, where the buttonholes are in a horizontal position, such as at the hips, will have the insignia "P. B. Co." arranged horizontally with the longitudinal or major axis of the hub, as shown in Fig. 5. On the other hand, if the buttons are to be used on an overall bib 15, to be engaged by the shoulder strap loop 16, the insignia "P. B. Co." will be embossed at right angles to the major or longitudinal axis of the non-circular hub. Of course, different buttons will be made up with the insignia embossed therein in these several positions and one form will be used in the button-attaching machine when the buttons are to be atached to the bib of the overalls, whereas buttons with the insignia disposed in a different position will be used on the sides of the garment.

It is not necessary that the elongated hub be exactly as shown in Figs. 2, 7, and 9, and reference will shortly be made to a slightly modified form of hub, as shown in Fig. 12.

In Fig. 6, I have shown a button head 17 which is formed of solid metal, having the tack-receiving chamber 18 formed in what might be termed a pear-shaped hub and centrally of the button.

To form this chamber, as also may be noticed in Fig. 7, a slot or cut-away portion 19 is made across the neck of the pear, so that a tool (not shown) may be used to swedge over the neck 20 of the chamber 18 and thus form a restricted opening. Thus, when the tack is deformed up within the chamber 18, similar to the deformation shown in Fig. 3, it cannot pull away from the chamber.

Insignia 21 may be stamped in this all-metal button, and by having the elongated hub, the button may likewise be oriented in the button-attaching machine, so that the insignia will appear in a proper position when the button is attached.

In a like manner, in Fig. 8 I have shown how a stamped metal button with the pear-shaped hub may also be utilized. In this instance, a shell or button back 22 will have fitted therein the vise 23, while above this vise may be the anvil 24 and a stamped cap 25 with the insignia 26 thereon. When a button of this type is used, means must be provided for properly positioning the insignia on the cap with relation to the hub, so that the button will be in its properly oriented position at the attaching station, but the means for orienting the cap with relation to the button shell does not form a part of the present invention.

Referring now to Fig. 12, there is shown a slightly modified form of button 27 in bottom plan, that is, a button similar to that shown in Fig. 1, except as to the shape of the hub 28. The hub in this instance is also elongated, but rather than having two arcuate ends, it is formed with a plane surface at one end, as at 29, with the two inwardly extending side walls 30 that meet to form the apices of a triangle, as at 31. The hub opening 32 may be seen and there will be the usual vise fitted within the hub.

This button likewise may be positioned in an orienting machine (not shown), and inasmuch as it is not an equilateral triangle and the insignia will bear a definite relation to this triangle, the button may be properly oriented, so that when attached, it will appear with the insignia in its proper position, similar to the button shown in Fig. 11.

From the foregoing, it will be seen that I have devised a button wherein the hub is elongated with the neck of the hub extending out nearly to the periphery of the button head, which button head together with an orienting mechanism in the button-attaching machine (not shown) makes it possible to feed the buttons to a receiving station (not shown) of the button-attaching machine, so that the insignia will appear in a desired position.

The elongated hub has another advantage in that if the buttonhole is horizontally positioned, the elongated hub should extend in a horizontal position, thus making the walls of the buttonhole hug the hub throughout a greater length than if the hub were round. Again, if the buttonhole is in a vertical position or if the button is to be used with a loop of an overall strap, the major or longitudinal axis of the hub will extend in a vertical position, as shown in Fig. 11, thus providing a greater gripping surface for the loop.

Many slight changes might be made in the construction hereinbefore set forth without departing from the spirit of the invention.

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

1. A tack button having a hub shaped for orienting purposes, the said hub being elongated in bottom plan no two sides of which are parallel, the face of the button having insignia thereon and bearing a definite relation to the major axis of the elongated hub.

2. A tack button having a hub shaped for orienting purposes, the said hub being elongated in bottom plan, the opposite ends of the said elongated hub being dissimilar in size, and the face of the button having insignia thereon bearing a definite relation to the major axis of the elongated hub.

3. A tack button having a hub shaped for orienting purposes, the said hub being elongated in bottom plan and provided with a chamber for receiving a tack, the one end of the hub being nearer to the chamber than the other end of the hub, and the face of the button having insignia thereon bearing a definite relation to the major axis of the elongated hub.

4. A plastic button head having an integral hub on its under surface, the said hub being elongated in bottom plan for orienting purposes, one end of the hub approaching the under periphery of the button head, means embedded within the hub and adapted to receive and deform a tack during a button-attaching operation, and insignia on the button head and bearing a definite relation to the major axis of the said hub.

5. A tack button having insignia on its face and an elongated-shaped hub on its under surface, said hub having a depression formed therein and extending at right angles to the major axis of the hub, the insignia bearing a definite

relation to the major axis of the hub, and the said hub adapted to receive and deform a tack during a button-attaching operation.

6. A tack button having insignia on its face, an elongated-shaped hub on the under surface for orienting purposes, the hub being triangular in bottom plan and the insignia bearing a definite relation to the altitude of the triangle, and the said hub adapted to receive and deform a tack during the button-attaching operation.

7. A button head having insignia on its face and a hub on its under surface of substantially pear shape in bottom plan, the hub extending from about centrally of the button toward the periphery of the button head, the hub having means therein for holding and deflecting a tack during a button-attaching operation, and the insignia on the button head bearing a definite positionable relationship to the elongated hub.

8. A button head having an elongated hub in bottom plan on its under surface, the hub extending from about centrally of the button to a point near the under periphery of the button head, means located in the body of the hub and centrally of the button head for receiving and deforming a tack during a button-attaching operation, and the button head provided with insignia and bearing a definite position with respect to the major axis of the hub.

LEONARD R. CARLEY.