(No Model.)

C. A. BRYANT.

BUTTON.

No. 482,959. Patented Sept. 20, 1892.

Fig. 1

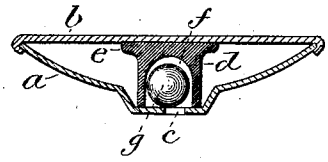


Fig. 2

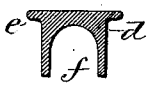


Fig. 3

Fig. 4

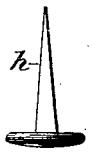


Fig. 5

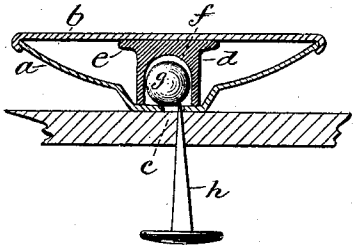


Fig. 6

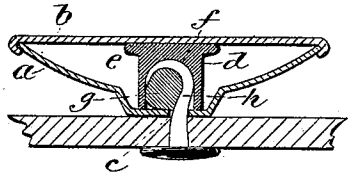


Fig. 7

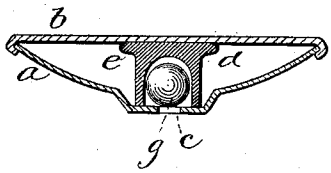
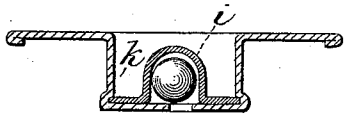


Fig. 8



Witnesses
J. H. Shumway
Lillian S. Kelsey

Charles A. Bryant
Inventor
By attys
Earle & Seymour

UNITED STATES PATENT OFFICE.

CHARLES A. BRYANT, OF WAKEFIELD, MASSACHUSETTS.

BUTTON.

SPECIFICATION forming part of Letters Patent No. 482,959, dated September 20, 1892.

Application filed March 7, 1892. Serial No. 424,035. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. BRYANT, of Wakefield, in the county of Middlesex and State of Massachusetts, have invented a new Improvement in Buttons; and I do hereby declare the following, when taken in connection with accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, a central section of a button, showing the loose ball in side view; Fig. 2, a central section of the anvil detached; Fig. 3, the ball detached; Fig. 4, the tack or fastener detached; Fig. 5, the button as applied to the material, and showing the tack as about to be forced into the recess in the anvil; Fig. 6, the same as Fig. 5 after the fastener has been driven home, and Figs. 7 and 8 modifications.

This invention relates to an improvement in the construction of that class of buttons which are adapted to be attached by means of a fastening device introduced through the material to which the button is to be attached, such device entering and so as to engage with the button proper to secure it in place, the object of the invention being a simple construction, and by which the fastening device may be in the form of a pointed tack; and the invention consists in a button having a central aperture through its back, combined with a hollow anvil set within the button, so that the mouth of the anvil opens toward the said opening in the back of the button, and a ball of lead or similar soft metal arranged free within said anvil, the said soft-metal ball being adapted to operate as a deflector for the point of the tack and to operate in conjunction with the anvil, whereby the portion of the tack within the anvil will embed itself into the surface of the ball, as as more fully hereinafter described.

In Fig. 1 I represent a button of common construction and in which *a* represents the back and *b* the front. The back is struck into the requisite cup or concavo-convex shape and with an aperture *c* in the center of the back. The cap is closed over the edge of the button, so as to unite the cap and back in the usual manner.

Before the two parts are set together the anvil *d* is introduced. This anvil is of cup shape (see Fig. 2) and preferably with a flange *e* around its closed end to give a considerable extent of bearing-surface. The recess *f* in the anvil is considerably larger in diameter than the diameter of the hole *c*, as seen in Fig. 1. The length of the anvil corresponds to the distance between the back and the front of the button, and the depth of the recess in the anvil should be slightly greatly than its diameter. A ball *g*, made of lead or similar soft metal (see Fig. 3) and of a diameter somewhat less than the diameter of the recess *f* in the anvil, is placed in the anvil, as seen in Fig. 1, the anvil set into the back, and preferably with the opening into the anvil eccentric to the aperture *c*. Then the cap is applied and bearing upon the closed end of the anvil serves to secure the anvil in its place and leaves the ball free within the anvil and the surface of the ball exposed through the aperture *c*, as seen in Fig. 1.

The fastening device *h*, by which the button is to be secured, is of pointed-tack shape, (see Fig. 4,) and may be a common tack having a suitable head. The tack is introduced point first from the rear side of the material to which the button is to be applied, (see Fig. 5,) and the button is set over the point of the tack, so that the point may enter the aperture *c* and so as to strike the surface of the ball. The contact of the tack with the soft metal ball engages the tack with the ball, so as to cause the ball to rotate within the anvil, and thereby deflect the point of the tack against the side of the anvil, so that the tack will follow the inner surface of the anvil and around the ball, the soft metal of the ball yielding as the tack embeds itself therein, as seen in Fig. 6, the head of the tack coming to a firm bearing upon the reverse side, while the button comes to a like bearing upon the face side. Thus the button is firmly secured in place. By the arrangement of the soft-metal free ball within the anvil, as described, and that ball nearly filling the recess in the anvil the proper entrance of the point of the tack into the anvil is insured, and engaging as it does with the ball, so as to become firmly attached thereto,

the separation of the two parts without the destruction of one or the other is impossible.

The anvil is, as before stated, preferably arranged with the opening into the recess eccentric to the aperture in the back of the button, and this is in order that the point of the tack may with the more certainty be thrown to one side against the inner surface of the anvil; yet the anvil may be arranged concentrically, as seen in Fig. 7, as little, if any, difficulty would be experienced in such an arrangement.

In that class of buttons in which there is no cap over the face of the button the anvil may be applied as seen in Fig. 8. In this case the anvil *i* is cup-shaped, as in the first illustration, but with a flange around its open edge, and it is set into a recess *k*, formed in the face of the button, so that the flange may make firm engagement with the inner walls of the recess, as clearly illustrated in Fig. 8. The relative position of the anvil and of the ball is the same in this instance as in the foregoing illustrations and description.

I claim—

1. A button having an aperture through its back, combined with a cup-shaped anvil secured within the button, the internal diameter of the cup being greater than the diameter of the aperture in the back of the button, and with a soft-metal ball arranged loosely in the recess in the anvil, substantially as described.

2. A button having an aperture centrally through its back, combined with a cup-shaped anvil, the internal diameter of the cup being greater than the diameter of the aperture in the back of the button, and the anvil secured within the button, the open side of the recess toward the aperture in the back of the button, but eccentric thereto, and a soft-metal ball arranged loosely in the recess in the anvil, substantially as described.

3. A button consisting of a front and a back, the back recessed at the center, and with a central aperture through it, combined with a cup-shaped anvil in length corresponding to the distance between the inside of the back of the button and the inside of the face of the button, the diameter of the recess in the anvil greater than the diameter of the aperture in the back of the button, with a soft-metal ball arranged loosely in the recess of the anvil, substantially as described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

CHARLES A. BRYANT.

Witnesses:
FRANK. H. BRYANT,
EUGENE C. BRYANT.