

No. 873,355.

PATENTED DEC. 10, 1907.

J. C. & J. A. DORAN.
BUTTON.

APPLICATION FILED APR. 5, 1907.

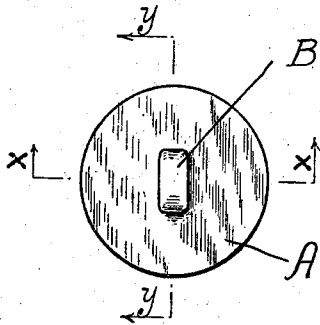


FIG. 1.

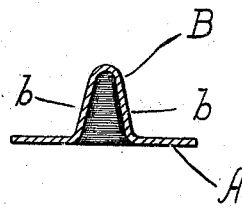


FIG. 2.

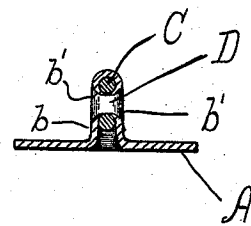


FIG. 3.

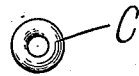


FIG. 7.

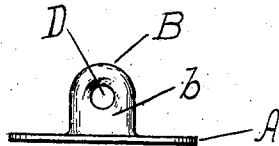


FIG. 4.

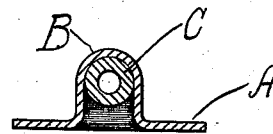


FIG. 5.



FIG. 8.

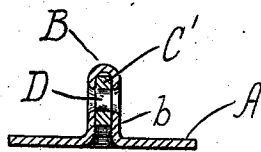


FIG. 6.

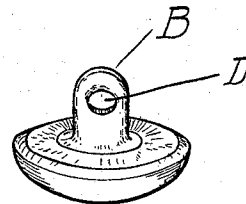


FIG. 9.

WITNESSES.

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JAMES C. DORAN AND JAMES A. DORAN, OF PROVIDENCE, RHODE ISLAND.

BUTTON.

No. 873,355.

Specification of Letters Patent.

Patented Dec. 10, 1907.

Application filed April 5, 1907. Serial No. 366,542.

To all whom it may concern:

Be it known that we, JAMES C. DORAN and JAMES A. DORAN, both citizens of the United States, and both residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Buttons, of which the following is a specification, reference being had therein to the accompanying drawing.

Our invention relates to garment buttons wherein the back plate and shank is shaped up from a single piece of metal, flattened and pierced.

In making a structure of the character above identified it has been found that the expense incurred by breakage of tools, cost of stock, and otherwise, has been excessive, and that the thinness of the pressed shank cut the engaging threads upon military and other buttons subjected to heavy wear.

The essential object of this invention is to overcome the enumerated disadvantages, and consists broadly in introducing into the shank an auxiliary member.

In the drawings which form a part of this specification Figures 1 and 2 are bottom and transverse sectional elevations of a blank after the cupping operation. Fig. 3, a section on line $x x$ of Fig. 1 after the walls of the shank have been pierced and closed upon a ring. Fig. 4, a side elevation of the same. Fig. 5, a section on line $y y$ of Fig. 1 after the insertion and closing in of the ring. Fig. 6, a similar section of the same when a disk is used. Fig. 7, a detail view of a ring. Fig. 8, a similar view of a disk, and Fig. 9, a perspective view of the back plate embodying my invention engaged with a button front.

Like reference characters indicate like parts throughout the views.

To construct the novel button back the center of a blank, A, of thin metal is bent by suitable tools to form a cup, B, oblong in cross section, having its broad walls, b, b , slightly tapering. Into the cup, B, is dropped a ring, C, and the walls, b, b , are then by suitable tools squeezed tightly against the sides of the ring. The walls are then pierced forming a hole of a little less diameter than the diameter of the opening in the ring, and

the margins of the pierced walls inwardly bent around the ring as at b' , thereby completing the eye of thread opening, D. While we prefer to use the ring, C, as the auxiliary member satisfactory results are obtained by using in its place a disk C' . The disk is dropped into the cup, B, and the walls, b, b , of the latter compressed against its opposite faces. Then a tool pierces the walls, b, b , and the disk, C' , thereby forming the eye, D, as shown in Fig. 6. A practical disadvantage of using the disk member is that three walls are presented to the action of the piercing tool, whereby the latter is quickly dulled and often broken.

The structure made as described produces a back plate, A, and integral shank B, whose eye, D, is of sufficient breadth to furnish a broad bearing surface to the engaging threads. The use of the auxiliary member permits the use of very thin metal blanks, which are sufficiently strong to answer the demands of the back plates, without making the shanks so thin as to endanger the engaging threads.

What we claim is,

1. A button back comprising a back plate, a hollow shank integral with the back plate and an annular member fixed within the hollow shank.

2. A button back comprising a back plate, a hollow shank integral with the back plate and provided with transverse perforations, and an annular member fixed within the hollow shank with its open portion concentric with the perforations.

3. A button back comprising a back plate, a hollow shank integral with the back plate and provided with transverse perforations, and an auxiliary member provided with an opening fixed within the hollow shank and having its opening concentric with the perforations.

In testimony whereof we have affixed our signatures in presence of two witnesses.

JAMES C. DORAN.
JAMES A. DORAN.

Witnesses:

HORATIO E. BELLOWS,
WALTER E. GOODWIN.