(No Model.)

M. D. SHIPMAN.

SEPARABLE BUTTON.

No. 439,696. Patented Nov. 4, 1890.

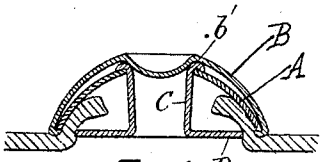


Fig. 5.

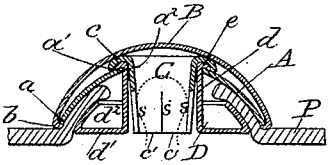


Fig. 1.

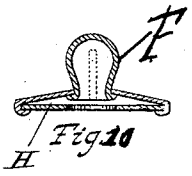


Fig. 10.



Fig. 6.

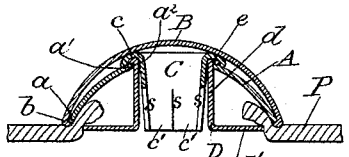


Fig. 2.

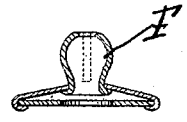


Fig. 11.

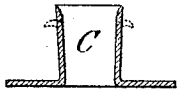


Fig. 7.

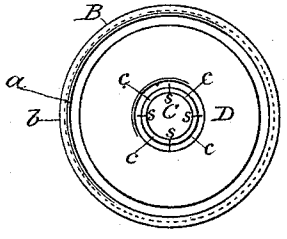


Fig. 3.

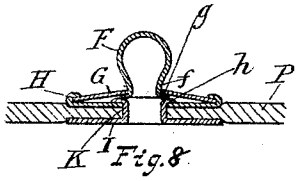


Fig. 8.

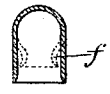


Fig. 9.

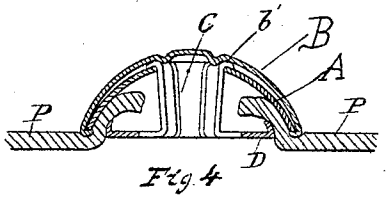


Fig. 4.

Witnesses:
D. F. Gaskelson
Charles E. Brady

Inventor:
Madison D. Shipman

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

MADISON D. SHIPMAN, OF DE KALB, ILLINOIS.

SEPARABLE BUTTON.

SPECIFICATION forming part of Letters Patent No. 439,696, dated November 4, 1890.

Original application filed March 17, 1888, Serial No. 267,448. Divided and this application filed October 14, 1889, Serial No. 326,966. (No model.)

To all whom it may concern:

Be it known that I, MADISON D. SHIPMAN, a citizen of the United States, residing at De Kalb, in the county of De Kalb and State of Illinois, have invented certain new and useful Improvements in Separable Buttons, (being a division of application Serial No. 267,448, filed March 17, 1888;) and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My invention consists in the combinations of devices and elements hereinafter described, and set forth in the claims; and the object of my invention is to provide in the button-head of the separable buttons means by which the inner and outer clamping-pieces, composing part of the button-head, will be securely held together and attached to the fabric, and will hold a tubular form of stud-holding device secured, as hereinafter described, within the button-head, and to provide a sectional and shell form of bulb-like stud, which will be held by the button-head, while the stud itself will be securely attached to the secondary fabric. I attain these objects by the means illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a sectional elevation of the button-head containing the improvements of this invention, with the engaging portion of the stud shown in dotted lines. Fig. 2 is the same without the stud-head, and with a portion of the inner clamping-piece omitted. Fig. 3 is a bottom view of the button-head before being secured to the fabric. Fig. 4 is a sectional view, wherein the stud-holding device and the inner clamping-piece are shown integral. Fig. 5 is the same as Fig. 4, except that the stud-holding device is not slitted. Fig. 6 is a sectional elevation of the stud-engaging tube, made integral with the inner clamping-piece. Fig. 7 shows the stud-holding device and inner clamping-piece integral, as exhibited in Fig. 5. Fig. 8 is a sectional elevation of the improved stud, illustrating the manner in which it is secured to its base and to the secondary fabric by its attaching-eyelet. Fig. 9 is a sectional elevation of the stud-head before its attachment to its base, its subsequent shape being shown in dotted lines. Fig. 10 is a sectional elevation of the stud without its attaching-eyelet and with dotted lines indicating the locality for slits, if desired. Fig. 11 is a view of the same with an opening in the crown, and like indicating-lines projected downwardly therefrom.

The same letters of reference refer to like parts throughout the several views.

In the drawings, A is the outer clamping-piece of the button-head, which is dish-shaped and provided with a central opening a' at its apex.

B is the outer or inclosing shell made conformable to the exterior part A, so that its periphery may be upset upon the periphery of the outer clamping part, or it may be secured therewith in any suitable manner.

C is the stud-engaging tube. This tube can be secured centrally within the button-head, and it can be separate from the inner clasping-piece D, as shown in Figs. 1 and 2, or integral with such clamping-piece, as shown in Figs. 4 and 5.

In Figs. 1 and 2 the inner clamping-piece D is shown to be made in the form of a flanged eyelet and has the tube portion turned at its upper end outwardly and down over the edge of the central opening a' of the outer clamping-piece A. The flange portion of the eyelet has integral with it the curved rim d^2 for clamping against the under side of the fabric, but in Fig. 2 this curved rim is omitted.

In Figs. 4 and 5 the stud-engaging tube is shown to be integral with the inner clamping-piece D, and is held in place in the button-head by the upper end portion of the stud-holding tube being turned down over the edge of the opening a' in the outer clamping-piece A. In these several forms of construction the stud-engaging tube is held in place with the outer clamping-piece A by clinching over the latter.

In the constructions shown in Figs. 1 and 2 the stud-engaging tube C is placed in position with its tubular portion passed through the

central opening a' of the outer clamping-piece A and with its flanged rim c turned over on the said outer clamping-shell, as shown, with the outer or inclosing shell B resting on the flange portion c of the base of C, and this stud-engaging tube C, together with its attached outer clamping-piece A and outer inclosing-shell B, is shown to be secured to the fabric by the upper edge of the tubular portion d of the inner clamping-piece D, being forced into the central opening a' of the outer clamping-piece A and then turned outwardly over the wall of opening a', when the outer portion of piece D will engage with the lower side of the fabric and with piece A will clamp the fabric so as to hold the button-head united with the same and the stud-engaging tube C securely in place.

In Figs. 4 and 5 the stud-engaging tube C is secured in place by its upper end being forced through the central opening a' and against the adjacent annular concave surface b' of the inclosing-shell B, which is done at the same time the portion D of tube C is being made to clamp against the under side of the fabric P, as shown in these figures.

The stud-engaging tube C may be made elastic by one or more vertical slits s, made through its sides, as shown, which slits will allow the solid portion of metal between them to yield to the pressure of the head of the stud when it is being forced into the button-head or withdrawn from the same.

The stud F is made with a bulb-shaped form, as shown in Figs. 8, 10, and 11, and can be made as shown in Fig. 8, or slitted, as indicated in Figs. 10 and 11. This stud is made at first substantially as shown by full lines in Fig. 9, and subsequently has its lower portion contracted from full lines to that shown by dotted lines in the same figure, and is secured to an annular base G by its lower portion f being passed through the opening g, made in its base G, and clinching against the lower side of said base-piece, substantially as shown in Figs. 8, 10, and 11. Secured to the base-piece G is the clamping-washer H, having a central opening h, which latter is secured to the former by its outer edge being turned down on the outer edge of the piece G, as shown in Fig. 8, or by the reverse, as shown in Figs. 10 and 11.

I is an eyelet clamping the fabric from the lower side and having its tubular portion K passing through the fabric and through the central perforation h in the clamping-washer H, when it is turned outwardly and down on the edge of said perforation by contact with the convex surface of the clinched portion of stud F, thus holding the stud firmly to the contiguous fabric, as shown in Fig. 8.

By the above-described means the button-head is cheaply constructed and its parts securely united, and the button-head securely attached to the fabric, while the stud is simple in construction and is readily attached to its fabric, and is of such construction as to hold securely with the stud-engaging tube in the button-head, and can be readily engaged and disengaged.

What I claim as my invention, and desire to secure by Letters Patent of the United States, is—

1. In a separable button, the combination of the bulb F, provided with the contracted part f, the plate g, provided with central opening G, washer H, provided with central opening h, and the eyelet I, adapted to have its upper end K clinched between the base of the bulb F and the washer H, substantially as shown, and for the purpose described.

2. In a separable button, the combination of the outer clamping-piece A, an outer shell secured thereto, the opposite side clamping-piece D, and the stud-engaging tube C, having its upper end clinched around the opening a' of the outer clamping-piece A, substantially as and for the purpose set sorth.

3. In a separable button, the combination of the outer clamping-piece A, provided with central opening a', the cap B, peripherally interlocked therewith, inner clamping-piece D, stud-engaging tube C, stud F, provided with the contracted part f, plate G, provided with central opening g, washer H, provided with central opening h, and eyelet I, having its upper end clinched between G and H, substantially as shown, and for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

MADISON D. SHIPMAN.

Witnesses:
CHARLES H. SALISBURY,
ISAAC STEVENS.