(No Model.)

J. F. THAYER & F. A. SMITH, Jr.

BUTTON.

No. 307,240. Patented Oct. 28. 1884.

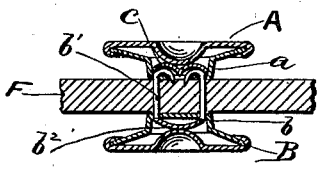

FIG. 1.

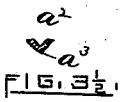

FIG. 3½.

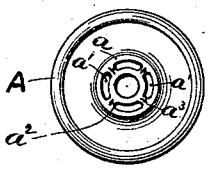

FIG. 3.

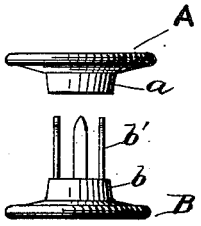

FIG. 2.

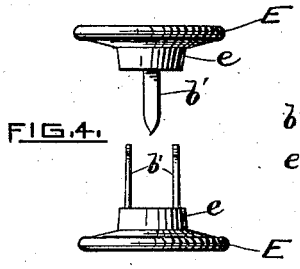

FIG. 4.

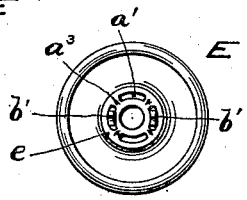

FIG. 5.

WITNESSES:

Charles Greene

Geo. W. Pentice

INVENTORS

James F. Thayer

Franklin A. Smith Jr.

UNITED STATES PATENT OFFICE.

JAMES F. THAYER AND FRANKLIN A. SMITH, JR., OF PROVIDENCE, R. I.

BUTTON.

SPECIFICATION forming part of Letters Patent No. 307,240, dated October 28, 1884.

Application filed August 28, 1884. (No model.)

To all whom it may concern:

Be it known that we, JAMES F. THAYER and FRANKLIN A. SMITH, Jr., citizens of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Garment-Buttons; and we do 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 the letters and figures of reference marked thereon, which form a part of this specification.

Our present invention relates to garment-buttons which are designed to be used on articles requiring a double button—one on each side of the material—such as rubber coats and the like.

Prior to our invention double buttons have been attached to articles of wear by means of rivets or eyelets, the use of which is objectionable, as a hole the full size of the rivet or eyelet is made through the fabric, admitting only a small clamping surface around the hole, rendering the button liable to turn around on the garment and loosen up, and so become worthless for use.

The object of our present invention is to obviate these objections and to provide a double button which is readily and speedily attached and not liable to loosen up and become disengaged.

To this end our invention consists, primarily, of two buttons, one of which is provided with a number of spurs or prongs projecting from the lower surface, said spurs or prongs adapted to be passed through the fabric to which the button is to be attached, the other button provided in its interior with suitable means for receiving and clinching the prongs or spurs of the opposite button when the two are secured together to form a double button, all as will be hereinafter more fully described.

In the accompanying drawings, Figure 1 represents in vertical central section our improved pronged double button secured to the fabric. Fig. 2 is an elevation of the two buttons composing the double button, ready for attachment. Fig. 3 is an inverted plan of the upper half of the button, showing the apertures in its shank adapted to receive the prongs of the lower half of the button. Fig. 3½ is an enlarged cross-section through the metallic tie or bridge which connects said apertures. Fig. 4 is an elevation of a modification of the button, each half having two prongs projecting from the shank or neck. Fig. 5 is an inverted plan of the same.

Similar letters of reference indicate like parts in the several figures.

In carrying out our invention the double button is composed of two buttons, A and B. The upper button, A, is made of sheet metal, and is provided with the shank or neck *a*, the face of which is adapted to rest on the fabric, forming a flat broad bearing-surface. The face of the shank *a* is provided with a central opening, around which a series of apertures, *a'*, are arranged, as shown in Fig. 3. Between these apertures *a'* is formed a metallic tie or bridge, a^3, of a V-shape form, as shown in cross-section in Fig. 3½. These ties or bridges a^3 are thus formed to self-center or guide the prongs of the lower button when secured together. The button A is further provided on the interior of the shank *a* with the clinching-die *c*, as shown in Fig. 1, said die being secured therein and adapted to receive and bend or clinch the prongs of the lower button when attached to fabric. The lower button, B, is provided with a shank or neck portion, *b*, having a broad flat bearing-surface corresponding in size to that of the upper button. The button B is further provided with the prongs *b'*, projecting from the lower face, as shown in Fig. 2, which prongs are made sufficiently malleable to readily bend in attaching the buttons together, and are located in the face of the button-shank corresponding in number and position to the apertures *a'* in the face of the button A.

In attaching our improved double button to garments, &c., we place the upper button, A, in one member of a suitably-organized machine with its face downward, the lower button, B, being retained in the opposite member of the machine with its prongs projecting upward, when a pressure being applied thereto the prongs of the lower button are forced through the fabric and also through the aper-

tures a' of the button-shank a of the opposite button, and on coming in contact with the clinching-die c are thereby bent and clinched through the central opening, as fully shown in Fig. 1, the metallic ties or bridges a^3 guiding the prongs through the apertures a', the buttons will be found to be securely attached, the button A being on one side of the garment, the button B on the opposite side, the fabric rigidly clamped between the faces of the two buttons.

The buttons shown in Fig. 4 are the same as above described with the exception of the prongs b', which are secured to both buttons, the apertures a' and ties or bridges a^3 being alternated with the prong b', as shown in Fig. 5. The method of attachment is substantially the same, the prongs of each button being clinched in the interior of the opposite.

It will be observed that with our improvement the fabric is rigidly clamped between two broad flat surfaces of metal. The prongs in passing through the fabric separate the threads, making no holes therein. The material is thus unharmed, and the button can be readily removed and changed to another position, leaving no unsightly holes, a result which is impossible with any of the rivet or eyelet buttons before mentioned. The buttons are firmly secured to the fabric and are not liable to loosen up, turn around, or become easily disengaged.

The fronts of the buttons may be ornamented or covered with cloth, as may be desired.

We are aware, as before stated, that double buttons have been made and secured to fabric by means of rivets or eyelets; but we are not aware of a double button ever having been before made adapted to be attached to garments by means of prongs or spurs, as herein described.

Having described our invention, we claim—

1. A double button consisting of a front and back, the shank of the former provided with apertures and a suitable clinching device, and the shank of the latter provided with prongs adapted to be inserted through the fabric and clinched within the shank of the front button, substantially as herein set forth.

2. The button A, having the shank or neck portion a, provided with the apertures a' and ties or bridges a^3, and the button B, having a shank or neck portion, b, provided with the prongs or spurs b', combined, arranged, and adapted for use substantially as described.

3. The double button herein described, provided with neck portions having apertures a', ties or bridges a^3, and prongs b', arranged and adapted for use substantially as shown and described.

4. A button having a shank provided in its lower surface with apertures, the latter connected together by convex-shaped ties or bridges, for the purpose of guiding the prongs of a fastening device into said apertures, substantially as described.

5. The double button herein described, consisting of a front and back, the shank of each provided with apertures, prongs, and a clinching device, said prongs adapted to be inserted through the fabric and clinched within said shank, substantially as set forth.

In testimony whereof we affix our signatures in the presence of two witnesses.

JAMES F. THAYER.
FRANKLIN A. SMITH, JR.

Witnesses:
CHARLES GREENE,
E. FISHER.