

(No Model.)

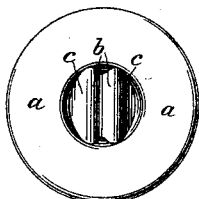
R. J. KYLE.

BUTTON.

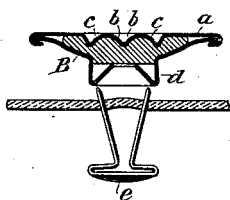
No. 346,112.

Patented July 27, 1886.

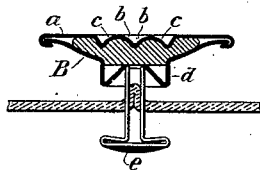
*Fig. 1,*



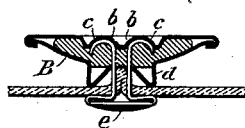
*Fig. 2,*



*Fig. 3,*



*Fig. 4,*



*Fig. 5,*



*Fig. 6,*



Witnesses

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# UNITED STATES PATENT OFFICE.

ROBERT J. KYLE, OF NEW YORK, N. Y.

## BUTTON.

SPECIFICATION forming part of Letters Patent No. 346,112, dated July 27, 1886.

Application filed February 27, 1886. Serial No. 193,430. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT J. KYLE, a citizen of the United States, residing in New York city, in the county and State of New York, have invented a new and useful Improvement in Buttons; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, and to the letters and figures marked thereon, which form a part of this specification.

My invention relates to an improvement in the construction of buttons, and of the device for fastening them to the fabric.

The objects of my invention are to provide a button that can be fastened to the cloth in a firm and durable manner; to provide a fastening device that will not make large holes in the cloth, but that will inclose a considerable portion of the cloth between its arms or prongs, and, lastly, to so construct the button that it will readily admit the fastener.

In the accompanying drawings, Figure 1 is a top view of my improved button. Figs. 2, 3, and 4 are vertical sections of the button and fastening device applied to the cloth. Fig. 5 is a view of the fastening device, and Fig. 6 shows a special form of shank for the button.

Similar letters refer to similar parts in the different drawings.

*a* is the face of the button. This face consists of the outside ring or border, which may be made in any desired form and pattern, and the circular middle portion. This middle portion of the face is curved or bent, as shown in Fig. 1, forming two similar opposite grooves that run parallel with each other. These grooves are nearly semicircular in form, as shown in Figs. 2, 3, and 4. I prefer this form of face, though the form of face shown in my application for Letters Patent No. 185,911 may also be used—that is, where the groove runs entirely around the button in the form of a circle; or, again, a plain face may be used with a disk underneath curved in the manner described.

*B* is the back of the button, provided with a shank, *d*, at its central part. The back and face of the button are attached together in any usual manner. The shank *d* incloses a filling material, which may be made of leather or any suitable substance. The filling material ex-

tends up to the face of the button. There is but a single hole in the base of the shank, and the metal around this hole is bent in so as to form a sort of funnel-shaped mouth for the opening. This funnel-shaped mouth is an essential feature of my invention, as hereinafter shown.

*e* is the staple. (See Figs. 2, 3, 4, and 5.) The staple could be made of plain wire; but I prefer to make it, as shown, with an extended base, and two or more arms projecting from it. The arms are made inclining outward. In Fig. 5 this is accomplished by making a short portion of the arm, near its base, extend inward, and then bending the arm upon itself, so that the rest of it projects upward and outward. Other forms of staples having outwardly-projecting arms or prongs may be used. The arms of the staple are first forced through the cloth. The effect of their being outwardly inclined is that a larger part of the cloth is inclosed and engaged between them than with the ordinary staple. The points of the staple-arms strike the lower part of the inclined sides of the funnel-shaped mouth, and the arms, following these inclined sides, are guided into the hole in the base of the shank and then into the filling material. The arms are so made (see Fig. 5) as to “give,” without bending, enough to enable them to be thus guided into the hole in the buttons. The curved side *b* of the groove in the button’s face commences at such a relative distance from the center of the button that when the arms of the staple have been forced through the filling material their points strike this curved side *b* somewhere near its base, and bend around, following the semicircular curve *b c* outward away from the center of the button, and are thus forced again into the filling material, which forms a bed to receive and hold these arms. The staple-arms are thus bent into the form of complete hooks, every part of which is firmly gripped and held by the filling material, making a perfectly firm joint. The points of the staple-arms are sharpened and may also be barbed. The face and back of the button may be made of any suitable metal, as also the staple.

Fig. 6 shows a form of button that may be used with my fastening device, where, instead of the usual shank, a piece of metal made in the form of a hollow cone with an opening at the

top is attached to the back B, and serves the same purposes as a shank. In this form the filling material is placed between the face and back of the button.

5 What I claim as new, and desire to secure by Letters Patent, is—

1. The combination of a button having a part of its face or of a disk under the face inclined or curved downward to guide or turn the arms of the staple, and a back having in its shank a hole with a funnel-shaped mouth, and a filling material, with a staple having yielding arms inclined upward and outward to inclose a larger portion of the cloth between the arms, substantially as and for the purposes set forth.

2. The combination of a button having its face or a disk under the face curved into two opposite and parallel grooves, so as to bend or turn the arms of the staple, and a back having in its shank a hole with a funnel-shaped

mouth, and a filling material, with a staple having yielding arms inclined upward and outward to inclose a larger portion of the cloth between the arms, substantially as and for the purposes set forth.

3. A staple having two or more yielding arms inclined upward and outward to inclose a larger portion of the cloth between the arms, combined with a button having its face or a disk under the face constructed to turn the staple-arms, and having in its back an opening with a funnel-shaped mouth, against the sides of which the points of the staple-arms strike, and by which the staple-arms are forced toward each other, so as to become parallel, or nearly so, before entering the button, substantially as and for the purposes set forth.

ROBERT J. KYLE.

Witnesses:

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